

MICCAI 2025

28th INTERNATIONAL CONFERENCE ON MEDICAL IMAGE
COMPUTING AND COMPUTER ASSISTED INTERVENTION

23-27 September 2025

DAEJEON, REPUBLIC OF KOREA

From Concept to Clinical | Pan-Asian Connection



PROGRAM BOOK

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WELCOME MESSAGE FROM THE PRESIDENT



Welcome to **MICCAI 2025** in **Daejeon**! I am delighted to join you once again at my favorite meeting, which I have proudly attended since 2001.

If you are returning to **MICCAI**, welcome back. If you are here for the first time, I hope this will be the beginning of a lasting connection with our community.

Over the next five days, we will hear from some of the brightest minds in medical image computing and computer-assisted intervention at this truly international forum of research, education, and scientific excellence. We will reconnect with old friends, make new ones, and celebrate the depth and vitality of our community. I also look forward to experiencing the rich culture of our host country-its history, food, music, and, of course, its science.

My gratitude goes to the MICCAI 2025 Organizing Committee, led by General Chairs Jinah Park, Polina Golland, and Jong Hyo Kim, and Program Chairs James Gee, Archana Venkataraman, Daniel Alexander, Jaesung Hong, Carole Sudre, and Juan Iglesias Gonzalez. Please take a moment to explore the full list of committee members. Alongside the MICCAI Board, officers and staff, the Student Board, Women in MICCAI, RISE, the Mentorship Program, and the Special Interest Groups, they have worked tirelessly to create an outstanding program for what will be the most widely attended MICCAI in history. My heartfelt thanks to everyone involved and to those who traveled far and wide to join us in Dajeon!

MICCAI is a society that serves and engages all members of our community. Expanding access to quality healthcare through scientific innovation should remain our highest goal and I welcome and encourage you to approach me with your suggestions on how to advance this mission. After all, science is what we do best!

From all of us, enjoy MICCAI,
Marius

Marius George Linguraru
President, MICCAI Society

WELCOME MESSAGE FROM THE GENERAL CHAIRS



We are delighted to welcome you to Daejeon, South Korea, for MICCAI 2025. This marks the very first time that the MICCAI conference is held in Korea, and we are thrilled to share this vibrant and dynamic setting with you. We hope you enjoy the rich scientific program, the exchange of innovative ideas, and the engaging atmosphere created by over 3,000 participants joining us this year - a new record in MICCAI's history!

This year also set a new benchmark in submissions, with a 28% increase over last year. We received an impressive number of full paper submissions, 3,677 in total. Following a rigorous double-blind review process, 1,027 papers were accepted for presentation.

These are compiled into 16 volumes of the Lecture Notes in Computer Science (LNCS) proceedings, published by Springer. We sincerely thank our reviewers and the Program Committee for their time, thoughtful evaluations, and unwavering dedication to shaping this year's outstanding scientific program.

In keeping with MICCAI tradition, all accepted papers are presented as posters, which form the core of the MICCAI 2025 program. We encourage you to explore the full breadth of MICCAI topics through the interactive and collaborative discussions these sessions foster. In addition, a selection of papers has been chosen for oral presentations, while others will be highlighted for their exceptional quality, clearly marked on posters so that they stand out to attendees. We believe these presentations will be of great interest to many of you.

Beyond the main conference, we are proud to host a rich and stimulating two-day program of approximately 100 satellite events, including workshops, challenges, and tutorials. This year also features the highly anticipated Lighthouse Challenges. We are grateful to our satellite event chairs and workshop and challenge organizers for curating such a diverse and thought-provoking lineup.

2025 marks a significant milestone for the Clinical Translation in Medical Image Computing and Computer-Assisted Intervention (CLINICCAI) event, which held its 5th edition on September 25. Unlike previous years, CLINICCAI 2025 was organized in close collaboration with the MICCAI Organizing Committee, strengthening the focus on clinical translation and engagement. Open science continues to be a central pillar of the conference, as exemplified by the 2nd Open Data Session held on September 26. We are also excited to introduce the Doctoral Consortium this year, organized by the MICCAI Student Board, providing a dedicated space for PhD students to engage with peers and mentors in the field.

This year's MICCAI centers around two overarching themes:

1. "From Concept to Clinical"

This theme emphasizes the full translational pathway of MICCAI research—from foundational innovation to clinical application. To support this goal, we actively encouraged participation from industry through dedicated panels, presentations, and mentorship programs led by industry leaders in collaboration with the MICCAI Student Board.

2. "Pan-Asian Connections"

This theme underscores the growing collaboration within Asian research communities and MICCAI's continued commitment to inclusion and outreach. Key initiatives include mentorship programs for early-career researchers, covering everything from writing technical papers to navigating the review and rebuttal processes, as well as real-time broadcasts of the conference by selected young researchers across Asia, who also facilitated

local discussions in historically underrepresented countries. MICCAI 2025 also includes focused discussions on healthcare challenges in Asia, with particular attention to underrepresented and developing countries.

This year, we have four keynote speeches that highlight groundbreaking innovations at the intersection of technology and medicine. Prof. Jin Hyung Lee presents a systems-level approach to treating brain disorders by modeling brain function using tools like optogenetics and fMRI. Dr. Ha Hong emphasizes the responsible development of safe and effective AI in healthcare, sharing insights from Medtronic Endoscopy. Prof. Xuanhe Zhao introduces soft, bio-integrated technologies such as wearable ultrasound and robotic systems for stroke treatment, envisioning a future of seamless human-machine integration. Finally, Prof. Curtis Langlotz discusses how AI and machine learning are transforming radiology - from image analysis to clinical reporting-while also addressing key limitations and challenges. We look forward to the valuable insights they will bring to our attendees.

We would like to express our heartfelt thanks to our sponsors for their generous support, which has not only enhanced the overall conference experience but also helped support student participation, an essential part of our community's future. We also extend our sincere appreciation to the City of Daejeon for providing the conference venue and for their generous assistance in making your stay comfortable and productive.

Finally, we offer our deepest gratitude to the entire organizing team. Their dedication, vision, and tireless efforts over the past year have made MICCAI 2025 possible.

We hope that you enjoy both the scientific program and the rich Korean cultural experiences, and that your time in Daejeon is productive, inspiring, and truly memorable.

Once again, welcome to MICCAI 2025!



Jinah Park
General Chair



Polina Golland
General Chair



Jong Hyo Kim
General Chair



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23-27 September 2025 • DAEJEON, REPUBLIC OF KOREA
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ABOUT MICCAI



MICCAI

The MICCAI Society was formed as a non-profit corporation on July 29, 2004, pursuant to the provisions of the Minnesota Non-Profit Corporation Act, Minnesota Statute, Chapter 317A, with legally bound Articles of Incorporation and Bylaws. The official corporate name is The Medical Image Computing and Computer Assisted Intervention Society (“The MICCAI Society”). The organization was founded with a focused professional mission and with member enrollment and benefits. The Society is governed by an elected Board of Directors (the MICCAI Board) with officers, including a President, Executive Director, Secretary and Treasurer.

Society staff coordinators are appointed by the Board to help manage and conduct the various activities of the Society, including membership, publications, public communication and industry relations. The Society’s goals and focus are multi-disciplinary in nature and bring together scientists, engineers, physicians, surgeons, educators and students who contribute to and participate in the mission and activities of the Society.

The history of the Society dates from the early 1990s when three international conferences eventually evolved into a single conference in 1998, and was named the MICCAI (Medical Image Computing and Computer Assisted Intervention) Conference.

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MICCAI 2025 VENUE MAP



DCC1

- Registration Desk
- Main Hall / Parallel Hall
- Satellite Events Rooms
- Nursery Room
- Prayer Room

DCC2

- Exhibition Area
- Poster Area
- Coffee Break / Lunch
- Satellite Events Rooms

HANBIT TOWER

- Gala Dinner Area

IBS SCIENCE CULTURE CENTER

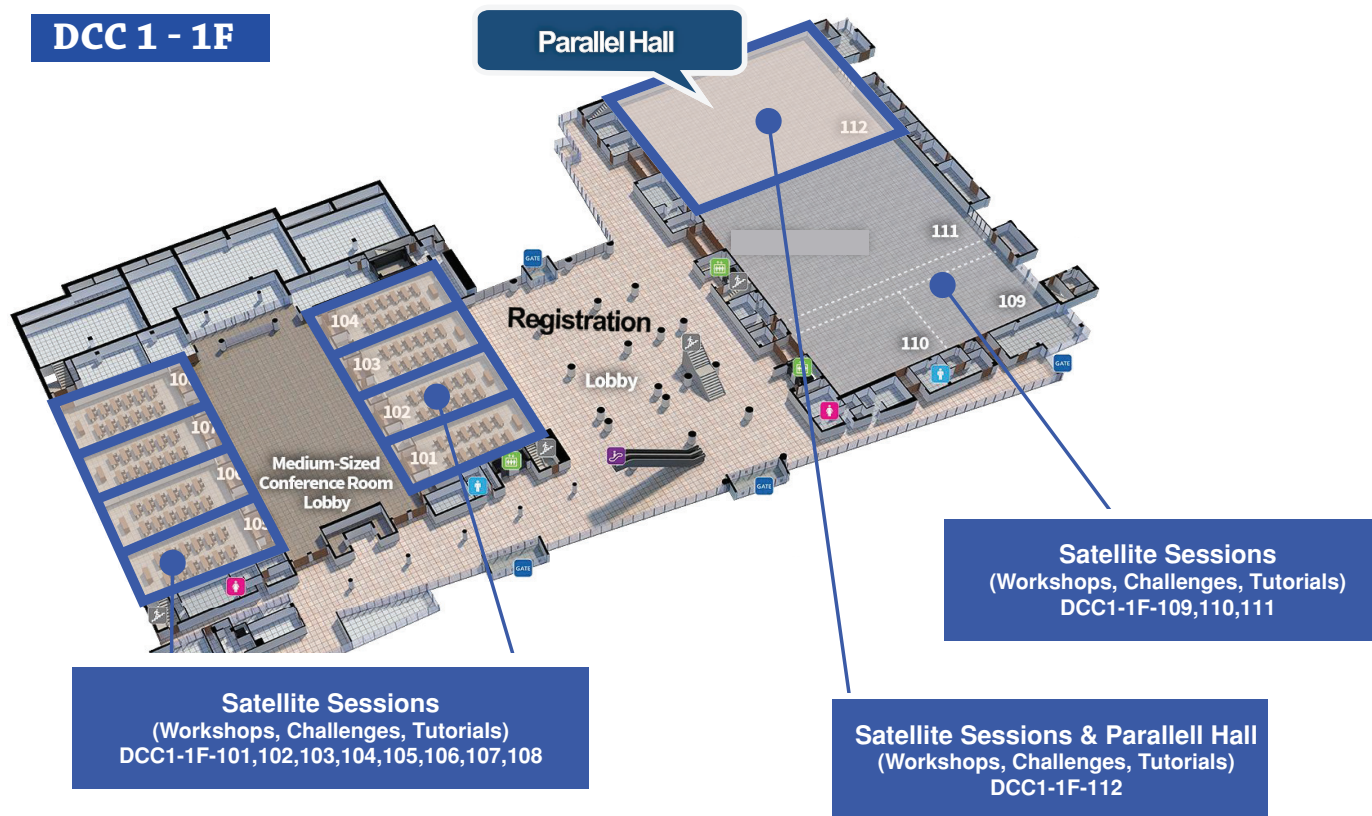
- Satellite Events Rooms



Please note that all buildings and hotels shown on the map are within walking distance.

MICCAI 2025 FLOOR PLAN

DCC 1



MICCAI 2025 FLOOR PLAN

DCC 2

DCC 2 - F1

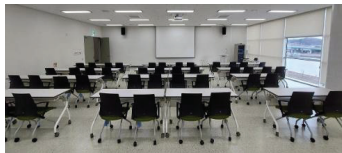
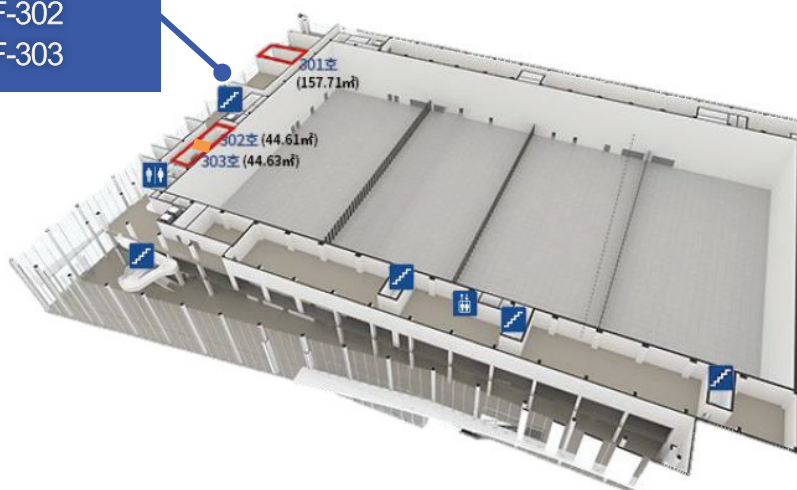


Exhibition, Poster, Coffee Breaks, Lunches
 (Hall 1+2+3+4 / Sep 23-27)

DCC 2 - 3F

Satellite Sessions

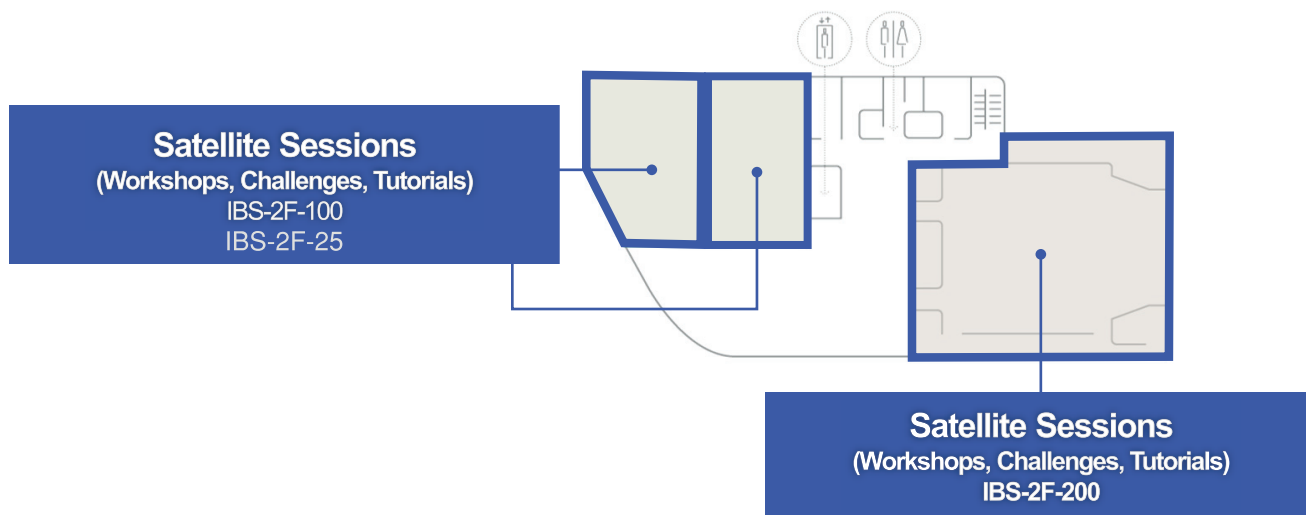
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 DCC2-3F-303



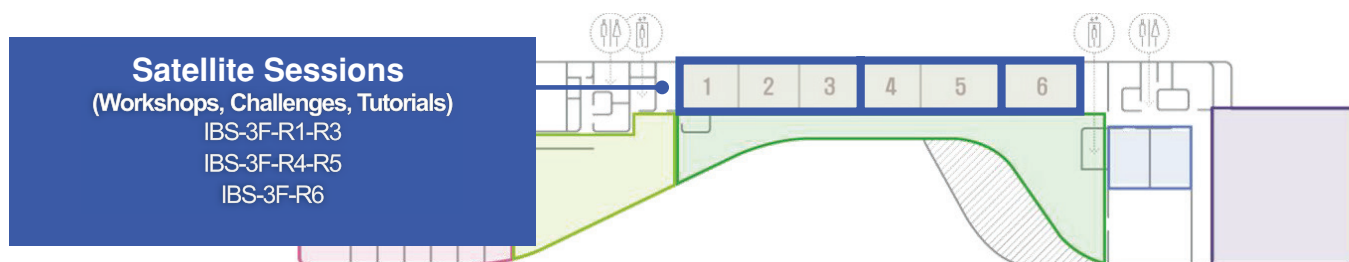
MICCAI 2025 FLOOR PLAN

IBS SCIENCE CULTURE CENTER

2F



3F



PROGRAM OVERVIEW

23 September 2025, Tuesday

08:00 - 10:00	Morning Workshops/Challenges/Tutorials	DCC1 / DCC2 / IBS
10:00 - 10:30	Coffee Break	DCC2
10:30 - 12:30	Morning Workshops/Challenges/Tutorials	DCC1 / DCC2 / IBS
12:30 - 13:30	Lunch Break	DCC2
13:30 - 15:30	Afternoon Workshops/Challenges/Tutorials	DCC1 / DCC2 / IBS
15:30 - 16:00	Coffee Break	DCC2
16:00 - 18:00	Afternoon Workshops/Challenges/Tutorials	DCC1 / DCC2 / IBS

24 September 2025, Wednesday

08:00 - 09:00	Opening Session	DCC1 -Room 201/202 (Main Hall) * <i>Parallell Hall (Live Broadcasting)</i>
09:00 - 10:00	Keynote Session 1 <i>Prof. Jin Hyung Lee</i> <i>AI and the Future of Brain Health</i>	DCC1 -Room 201/202 (Main Hall) * <i>Parallell Hall (Live Broadcasting)</i>
10:00 - 10:30	Coffee Break	DCC2
10:30 - 12:00	Oral & Spotlight Session 1 <i>Augmented Reality and Video Generation</i>	DCC1 -Room 201/202 (Main Hall)
10:30 - 12:00	Oral & Spotlight Session 2 <i>Language Models - Text and Images</i>	DCC1 - Room 112 (Parallel Hall)
12:00 - 13:30	Lunch	DCC2
12:00 - 13:00	WiM Lunch	DCC1 - Room 112 (Parallel Hall)
13:30 - 14:30	Keynote Session 2 <i>Prof. Ha Hong</i> <i>How to Build Responsible AI</i> <i>Solutions for Patient Care</i>	DCC1 - Room 201/202 (Main Hall) * <i>Parallell Hall (Live Broadcasting)</i>

14:30 - 15:30	Oral Session 3 <i>Image Contextualization and Multimodal Fusion</i>	DCC1 - Room 201/202 (Main Hall)
14:30 - 15:30	Oral Session 4 <i>Detection, Segmentation, and Registration</i>	DCC1 - Room 112 (Parallel Hall)
15:30 - 16:00	Coffee Break	DCC2
15:30 - 17:00	Poster Session 1 <i>Augmented Reality and Video Generation / Language Models - Text and Images / Image Contextualization and Multimodal Fusion</i>	DCC2
	MICCAI Doctoral Consortium Poster	
17:00 - 18:30	Oral & Spotlight Session 5 <i>Navigation and Surgical Workflows</i>	DCC1 - Room 201/202 (Main Hall)
17:00 - 18:30	Oral & Spotlight Session 6 <i>Towards Deployment, Bias, Trustworthiness, and Privacy</i>	DCC1 - Room 112 (Parallel Hall)
17:00 - 18:30	Panel - Making Clinical AI a Reality	DCC1 - Room 301
18:30 - 19:30	MSB Panel	DCC1 - Room 105/106
18:30 - 20:00	MICCAI 2025 Outreach Supporters <i>Networking Session</i>	DCC1 - Room 107
19:30 - 20:30	MSB Networking Event	Foyer of DCC1 - 105/106

25 September 2025, Thursday

08:00 - 18:00	CLINICCAI	DCC1 - 3F - Room 301 (The separate program is available online.)
08:30 - 09:30	Oral Session 7 <i>Data Quality, Restoration, and Super-resolution</i>	DCC1 - Room 201/202 (Main Hall)
08:30 - 09:30	Oral Session 8 <i>Explainability and Interpretability</i>	DCC1 - Room 112 (Parallel Hall)

09:30 - 10:30	Keynote Session 3 <i>Prof. Xuanhe Zhao</i> <i>Bioadhesive Ultrasound and Telerobotic Neurointervention</i>	DCC1 - Room 201/202 (Main Hall) * <i>Parallell Hall (Live Broadcasting)</i>
10:30 - 11:00	Coffee Break	DCC2
11:00 - 12:30	Poster Session 2 <i>Detection, Segmentation, and Registration / Explainability and Interpretability / Data Quality and Image Restoration</i>	DCC2
	CLINICCAI Poster	
12:30 - 13:30	Lunch	DCC2
12:30 - 13:30	MSB Thesis	DCC1 - Room 105/106
13:30 - 13:45	Board Candidates Presentation <i>Prof. Xuanhe Zhao</i>	DCC1 - Room 201/202 (Main Hall) * <i>Parallell Hall (Live Broadcasting)</i>
13:45 - 14:30	Lighthouse Challenges Presentation <i>Prof. Xuanhe Zhao</i>	DCC1 - Room 201/202 (Main Hall) * <i>Parallell Hall (Live Broadcasting)</i>
14:30 - 15:30	Oral Session 9 <i>Generalizability and Adaptation</i>	DCC1 - Room 201/202 (Main Hall)
14:30 - 15:30	Oral Session 10 <i>Multimodal and Longitudinal Prediction</i>	DCC1 - Room 112 (Parallel Hall)
15:30 - 16:00	Coffee Break	DCC2
15:30 - 17:00	Poster Session 3 <i>Prediction / Generalizability and Adaptation / Reconstruction and Synthesis in Ultrasound, Microscopy, and Photography</i>	DCC2
17:00 - 18:30	Oral & Spotlight Session 11 <i>Graphs - Learning and Data</i>	DCC1 - Room 201/202 (Main Hall)
17:00 - 18:30	Oral & Spotlight Session 12 <i>Reconstruction and Synthesis</i>	DCC1 - Room 112 (Parallel Hall)
17:00 - 18:30	Sponsors Spotlight Session	DCC1 - Room 105/106
19:00 - 23:00	Gala Dinner	Hanbit Tower

26 September 2025, Friday

08:30 - 09:30	Oral Session 13 <i>Surgical Data Science</i>	DCC1 - Room 201/202 (Main Hall)
08:30 - 09:30	Oral Session 14 <i>Missing Data and Weak Supervision</i>	DCC1 - Room 112 (Parallel Hall)
09:30 - 10:30	Keynote Session 4 Prof. Curtis Langlotz Prof. Xuanhe Zhao <i>Developing and Deploying Machine Learning in the Reading Room</i>	DCC1 - Room 201/202 (Main Hall) * <i>Parallel Hall (Live Broadcasting)</i>
10:30 - 11:00	Coffee Break	DCC2
11:00 - 12:30	Poster Session 4 <i>Deployment, Trustworthiness, and Privacy / Surgical Navigation / Reconstruction and Synthesis in MRI and CT/X-Ray</i>	DCC2
	Open Data Poster	
12:30 - 13:30	Lunch	DCC2
12:30 - 13:30	Rise Lunch	DCC1 - Room 112 (Parallel Hall)
13:30 - 15:00	MICCAI 2025 Theme Special Session 1	DCC1 - Room 201/202 (Main Hall) * <i>Parallel Hall (Live Broadcasting)</i>
13:30 - 15:00	Open Data Initiative	DCC1 - 301
15:00 - 15:30	Coffee Break	DCC2
15:30 - 17:00	Poster Session 5 <i>Surgical Data Science / Graphs / Missing Data and Weak Supervision</i>	DCC2
15:30 - 17:00	MICCAI 2025 Theme Special Session 2	Parallel Hall
15:30 - 17:00	Open Data Initiative	DCC1 - 301
17:15 - 18:30	Awards / Closing Ceremony	DDCC1 - Room 201/202 (Main Hall)

27 September 2025, Saturday

08:00 - 10:00	Morning Workshops/Challenges/Tutorials	DCC1 / DCC2 / IBS
10:00 - 10:30	Coffee Break	DCC2
10:30 - 12:30	Morning Workshops/Challenges/Tutorials	DCC1 / DCC2 / IBS
12:30 - 13:30	Lunch Break	DCC2
13:30 - 15:30	Afternoon Workshops/Challenges/Tutorials	DCC1 / DCC2 / IBS
15:30 - 16:00	Coffee Break	DCC2
16:00 - 18:00	Afternoon Workshops/Challenges/Tutorials	DCC1 / DCC2 / IBS

GENERAL INFORMATION

Registration Desk

The registration desk will be located in the DCC1 Lobby.

The working hours of the registration desk will be as below;

23 September 2025, Tuesday:	07:00-19:30
24 September 2025, Wednesday:	07:00-18:30
25 September 2025, Thursday:	07:00-19:00
26 September 2025, Friday:	07:00-18:00
27 September 2025 Saturday:	07:00-16:30

Exhibition - Opening Hours

DCC2 Building will be used as the exhibition area.

The exhibition Hours are as below;

24 September 2025, Wednesday:	08:00-18:00
25 September 2025, Thursday:	08:00-18:00
26 September 2025, Friday:	08:00-17:00

Lunches and Coffee Breaks for Main Conference

Lunch and coffee breaks are included in the registration and will be served in DCC2 Building.

Coffee Break and Lunch Break times are as follows;

24 September 2025, Wednesday

10:00-10:30	Morning Coffee Break
12:00-13:30	Lunch Break
15:30-16:00	Afternoon Coffee Break

25 September 2025, Thursday

10:30-11:00	Morning Coffee Break
12:30-13:30	Lunch Break
15:30-16:00	Afternoon Coffee Break

26 September 2025, Friday

10:30-11:00	Morning Coffee Break
12:30-13:30	Lunch Break
15:00-15:30	Afternoon Coffee Break

Lunches and Coffee Breaks for Satellite Events

Lunch and coffee breaks are included in the satellite event registration and will be served in DCC2 Building.

Coffee Break and Lunch Break times are as follows;

23 September 2025, Tuesday

10:00-10:30 Morning Coffee Break
 12:30-13:30 Lunch Break
 15:30-16:00 Afternoon Coffee Break

27 September 2025, Saturday

10:00-10:30 Morning Coffee Break
 12:30-13:30 Lunch Break
 15:30-16:00 Afternoon Coffee Break

Name Badges

Please always wear your name badges. Only MICCAI 2025 participants wearing official name badges will be allowed to access the conference site and attend the scientific and social programs.

Internet Access Wifi access is available through the conference halls.

Wireless Name: MICCAI 2025
 Password: Miccai25

Poster Presentations

Poster area will be located at DCC2 Building. All accepted papers are to be presented as posters at the conference. Posters should be hung half an hour before the session starts and taken down at the end of the day. Posters that are not taken down will be collected by us and sent for recycling.

Poster Identifiers

Each poster is assigned a unique identifier. The **color** of the identifier indicates which **session** the poster belongs to.

Paper Highlights

“Paper Highlights” spotlight research that either were recognized by the program committee as meriting special recognition or contributed towards the MICCAI 2025 Pan-Asian and Clinical Translation thematic foci.

Poster Session Overview

Poster Session	Color	Day	Time
Poster Session 1	White	Wednesday	15:30 PM -17:00 PM
Poster Session 2	Orange	Thursday	11:00 AM -12:30 PM
Poster Session 3	Blue	Thursday	15:30 PM - 17:00 PM
Poster Session 4	Green	Friday	11:00 AM -12:30 PM
Poster Session 5	Brown	Friday	15:30 PM - 17:00 PM
CLINICCAI Posters	Pink	Thursday	11:00 AM -12:30 PM

KEYNOTE SPEAKER 1



PROF. JIN HYUNG LEE

Date: 24 September Wednesday • 09:00 - 10:00

Location: DCC1-Room 201/202 (Main Hall)

Chair: Jinah Park

AI and the Future of Brain Health

Neurological and psychiatric disorders are dramatically increasing in prevalence due to aging population and social isolation. However, to date, there is no cure for any of the brain disorders. The goal of brain disorder treatments is to restore the brain's function. Therefore, a key challenge is to quantify the brain function underlying behavior. Once the brain function algorithms underlying behaviors of interest can be quantitatively defined, minimizing the normal and diseased brain function difference can be defined as the objective function for the brain disorder treatment. The variables then can be optimized to minimize the objective function. In order to quantify the brain function algorithms underlying behavior, cell type specific whole brain function measurements are necessary. We utilize optogenetics combined with fMRI (ofMRI) to enable such measurements. Through computational modeling of ofMRI data, the functional interactions among different regions of the brain was then quantified. In combination with electrophysiological measurements, we further model brain function at a cellular level. In order to further understand the circuit, pathology relationship, we also utilize brain clearing methods to longitudinally quantify and model pathology. Through these efforts, we aim to enable systematic design of therapeutic interventions necessary for the treatment of brain disorders.

BIO

Jin Hyung Lee, PhD is an Associate Professor of Neurology and Neurological Sciences, Bioengineering, Neurosurgery, and Electrical Engineering (Courtesy) at Stanford University. Dr. Lee received her Bachelor's degree from Seoul National University and Masters and Doctoral degree from Stanford University, all in Electrical Engineering. She is a recipient of the 2008 NIH/NIBIB K99/R00 Pathway to Independence Award, 2010 NIH Director's New Innovator Award, 2010 Okawa Foundation Research Grant Award, 2011 NSF CAREER Award, 2012 Alfred P. Sloan Research Fellowship, 2012 Epilepsy Therapy Project award, 2013 Alzheimer's Association New Investigator Award, 2014 IEEE EMBS BRAIN young investigator award, 2017 NIH/NIMH BRAIN grant award, and 2018 Lina 50+ Award Grand Prize, and 2019 NIH Director's Pioneer Award. As an Electrical Engineer by training with Neuroscience research interest, her goal is to analyze, debug, and engineer the brain circuit through innovative technology.

KEYNOTE SPEAKER 2



DR. HA HONG

Date: 24 September Wednesday • 13:30 - 14:30

Location: DCC1-Room 201/202 (Main Hall)

Chair: Jong Hyo Kim

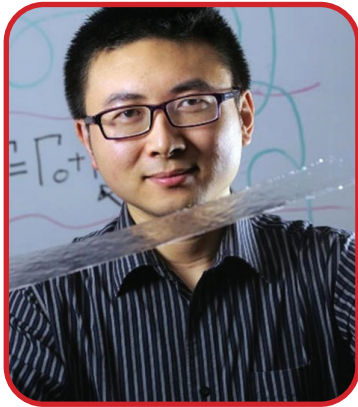
How to Build Responsible AI Solutions for Patient Care

With recent advances in artificial intelligence (AI), the potential to positively impact medicine and aid patients is higher than ever before. However, not all AI solutions are created equal, and it is crucial to develop safe and effective AI solutions responsibly. Join this session to discover how. We will provide an overview of AI strategies, best practices, and recent innovations from Medtronic Endoscopy.

BIO

Ha is an industry leader in artificial intelligence with a track record of inventing and delivering breakthrough technologies in the medical device field. As the Chief AI Officer at Medtronic Endoscopy, he oversees AI R&D and strategy, emphasizing building responsible AI solutions for patient care. Before joining Medtronic, he was a founding team member and the Chief Architect at Caption Health, which GE HealthCare acquired. At Caption, he led the R&D, including the development of the first commercially available AI navigation system for cardiac ultrasound examination. He has a Ph.D. in Medical Engineering and Medical Physics from the Harvard-MIT Health Sciences and Technology Program and a B.S. in Physics from the Korea Advanced Institute of Science and Technology.

KEYNOTE SPEAKER 3



PROF. XUANHE ZHAO

Date: 25 September Thursday • 09:30 - 10:30

Location: DCC1-Room 201/202 (Main Hall)

Chair: Polina Golland

Bioadhesive ultrasound and telerobotic neurointervention

Whereas human tissues and organs are mostly soft, wet, and bioactive, machines are commonly hard, dry, and abiotic. Merging humans and machines is of imminent importance in addressing grand societal challenges in health, environment, sustainability, security, education and happiness in life. However, merging humans and machines is extremely challenging due to their fundamentally contradictory properties. At MIT Zhao Lab, we invent, understand, and facilitate the translation of soft materials to merge humans and machines. In this talk, I will discuss two examples related to medical imaging and imaging-guided intervention:

Bioadhesive ultrasound capable of continuously imaging diverse human organs over 48 hours; Soft neurovascular robot capable of remotely and promptly treating stroke patients I will conclude the talk with a vision for future human-machine convergence- aided by and synergized with modern technologies such as artificial intelligence synthetic biology and precision medicine.

BIO

Xuanhe Zhao is the Uncas and Helen Whitaker Professor at MIT. The mission of Zhao Lab is to advance science and technology between humans and machines to address grand societal challenges in health and sustainability. Dr. Zhao is a Humboldt Research Award winner. He has been a Clarivate Highly Cited Researcher since 2018. He co-founded three startup companies based on technologies developed in Zhao Lab. Bioadhesive ultrasound, based on Zhao Lab's work published in Science, was named one of TIME Magazine's Best Inventions of the year in 2022. SanaHeal Inc., based on Zhao Lab's work published in Nature, was awarded the 2023 Nature Spinoff Prize. Over 15 patents from Zhao Lab have been licensed by companies and have contributed to FDA-approved and widely used medical devices globally.

KEYNOTE SPEAKER 4



**PROF. CURTIS
LANGLOTZ**

Date: 26 September Friday • 09:30 - 10:30

Location: DCC1-Room 201/202 (Main Hall)

Chair: Joon Beom Seo

Developing and Deploying Machine Learning in the Reading Room

Learning Objectives

- Review the latest research in the development of clinical decision support tools for radiologists
- Predict how machine learning methods will change the practice of medicine using current examples
- Describe how large language models will affect medical imaging
- Assess the shortcomings of machine learning that may limit its applicability in medical imaging

Abstract

Machine learning is an incredibly powerful tool for building computer vision systems that support the work of radiologists. Over the last decade, AI and machine learning methods have revolutionized the analysis of digital images, leading to high interest and explosive growth in the use of these methods to analyze clinical images and text. These promising techniques create systems that perform some image interpretation tasks at the level of expert radiologists. Systems are now being developed for image reconstruction, imaging quality assurance, imaging triage, computer-aided detection, computer-aided classification, and radiology report drafting. The systems have the potential to provide real-time assistance to radiologists and other imaging professionals, thereby reducing diagnostic errors, improving patient outcomes, and reducing costs. We will review the origins of AI and its applications to medical imaging and show examples of recent research that suggests how AI and large language models may change the practice of medicine. We will also review key shortcomings and challenges that may limit the application of these new methods.

BIO

Dr. Langlotz is Professor of Radiology, Medicine, and Biomedical Data Science, and Senior Associate Vice Provost for Research at Stanford University. His NIH-funded laboratory develops machine learning methods to improve the accuracy and efficiency of medical image interpretation. He also serves as Senior Fellow at Stanford's Institute for Human-Centered Artificial Intelligence and Director of the Center for Artificial Intelligence in Medicine and Imaging (AIMI Center), which supports over 200 faculty at Stanford who pursue interdisciplinary machine learning research to improve clinical care.

MICCAI 2025 THEME SPECIAL SESSIONS

MICCAI 2025 is proud to present two Theme Special Sessions under the overarching theme of *Pan-Asian Connection*, highlighting regional innovation and the translational impact of medical AI across Asia. Both sessions take place on **Friday, September 26, 2025**.

Special Session 1: Challenges and Opportunities of Medical AI in Asia

Friday, September 26, 13:30–15:00

Location: DCC 1 - 2F 201/202 (Parallel Hall)

Chairs: Jong Hyo Kim (Seoul National University), James Gee (University of Pennsylvania)

This session brings together experts from across Asia to share perspectives on advancing healthcare AI in diverse contexts:

- **Chang Min Park** (Seoul National University, Korea)
- **Kazuma Kobayashi** (University of Tokyo, Japan)
- **Dinggang Shen** (Shanghai United Imaging Intelligence & ShanghaiTech University, China)
- **Steven Wong Bak Siew** (National University of Singapore, Singapore)
- **Bold Bayarbaatar** (Mongolian University of Science and Technology, Mongolia)
- **Bishesh Khanal** (Nepal Applied Mathematics and Informatics Institute for Research, Nepal)

Talks will explore real-world deployment of AI solutions, opportunities for collaboration across Asian healthcare systems, and the unique challenges of building generalizable and trustworthy medical AI. The session will conclude with an interactive panel discussion.

Special Session 2: How Government Funding Shapes the AI Ecosystem – The KHIDI Case from Concept to Clinical Translation

Friday, September 26, 15:30–17:00

Chairs: Kyu-Hwan Jung (Sungkyunkwan University), Stephen Aylward (NVIDIA)

This session showcases the pivotal role of government support in accelerating the journey of AI technologies from research concepts to clinical and commercial adoption. Featuring speakers **Shin Tae Kang** (KHIDI), **Semyeong Jang** (Coreline Soft), **Jaeil Kim** (BeamWorks Inc.), **Wi-Sun Ryu** (JLK AI R&D Center), and **Tae Young Shin** (Synergy A.I.), the session highlights success stories of Korea's national initiatives and their impact on fostering innovation, commercialization, and patient-centered healthcare solutions.

Together, these Theme Special Sessions emphasize MICCAI's commitment to global collaboration and demonstrate how regional strengths can contribute to the advancement and adoption of medical AI worldwide.

OPEN DATA

The MICCAI Open Data initiative returns for its second edition, continuing its mission to foster collaboration and inclusivity in medical imaging research. As medical machine learning advances, the availability of diverse, representative, and high-quality datasets remains crucial to addressing global healthcare challenges.

Building on the success of the first edition, this year's Open Data session emphasizes underrepresented populations and diseases, addressing critical gaps in existing public datasets. The initiative aligns with the principles of FAIR data and Data-centric AI, recognizing that good models begin with good data.

Program Highlights

- 8 public datasets spanning a range of imaging modalities: CT, MR, Endoscopy, Microscopy, and more
- Poster & Oral Sessions presenting the accepted datasets
- Keynote Lecture by *Dr. Hieu Pham* entitled **“Open Data for Medical Imaging: Collection, Standardization, and Sharing of Large-Scale Annotated Datasets”**
- Panel Discussion exploring open data and the future of the initiative at MICCAI

The Open Data session invites the community to engage in discussions on how medical imaging datasets can be shared and utilized to reduce disparities, promote inclusivity, and accelerate innovation in healthcare AI.

Date: 26 September 2025

Time: 13:30 PM - 15:00 PM

Location: DCC 1- 3F 301



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COMPUTING AND COMPUTER ASSISTED INTERVENTION**
23-27 September 2025 • DAEJEON, REPUBLIC OF KOREA
From Concept to Clinical | Pan-Asian Connection

CLINICCAI PROGRAM

CLINICCAI, a distinctive program within MICCAI, brings together healthcare practitioners and technical experts to explore how innovations in medical imaging, 3D printing, robotics, deep learning, and related technologies can translate into tangible value for patients and healthcare systems.

In this fifth edition of CLINICCAI at MICCAI 2025, the program will feature three scientific sessions with 20 oral presentations spanning diverse clinical applications. A dedicated panel discussion will explore the journey from identifying unmet needs to implementing innovative solutions. In addition, 20 scientific posters will be displayed at DCC 2 (please refer to the presentation list in the latter part of the Program Book).

Date & Time: September 25 (Thursday), 2025 & 8 AM to 6:30 PM

Location: DCC 1 (Room #301)

Program Highlights

- Oral and poster sessions across three scientific tracks: (1) Diagnostic Imaging & Pathology AI, (2) Multimodal & Systems-Level / Foundational-Model AI, and (3) Surgical & Interventional AI
- Panel Discussion exploring “From Idea to Product” featuring six experts spanning clinical, engineering, industry, policy, and legal perspectives

Beyond the academic program, CLINICCAI 2025 provides a unique platform to network, exchange ideas, and forge collaborations that accelerate the clinical translation of AI in healthcare.

MICCAI 2025 PANELS

This year MICCAI is introducing panel discussions as part of the main program. With the focus on clinical translation in the conference, both the panels will revolve around discussions with clinicians on where they need most help with AI as well as the nitty gritty details of building such medical AI products.

Date: September 24, 2025

Time: 5:00PM - 6:30PM

Location: DCC1 – Room 301

Moderator:

Dr. Vidur Mahajan, Chief Executive Officer of CARPL.ai

Topic: Making Clinical AI a Reality

Description: This panel discussion will be a discussion from a clinical perspective on how to use AI tools and what benefits they are seeing. The panelists in this session will be all clinicians who are either building or using regulatory approved AI applications in clinical practice. The conversation will be less about the creation of AI, and more about the operationalizing of it and stories of real-world impact.

Panelists:

1. **Dr. Steven Wong**, Director of Hyperacute Care at Sengkang General Hospital and previously Chair of Radiology
2. **Dr. Brandon B. Suh**, Chief Executive Officer at Lunit
3. **Dr. Choi Jin-Wook**, Chief Medical Officer at Purple.ai and Chief of the Neuroradiology Section at Ajou University Hospital

Date: September 25, 2025

Time: 5:00PM - 6:30PM

Location: DCC1 – Room 301

Moderators:

Prof. Joon Beom Seo, Professor of Radiology at Asan Medical Center and former president of Korean Society of AI in Medicine

Prof. Jonghye Woo, Associate professor of Radiology at Harvard Medical School.

Topic: CLINICCAI Panel: From idea to product

Description: This panel discussion will provide an overview of the whole journey from clinical unmet need to medical AI products. It will be focused on the how and what of building products for use in real clinical practice. The session will inspire the audience to start building these tools.

Panelists:

1. **Dr. Joe Yeong**, Director of ImmunoPathology at Singapore General Hospital.
2. **Prof. Jonghye Woo**, Associate professor of Radiology at Harvard Medical School.
3. **Prof Kyuhwan Jung**, Associate Professor at the Samsung Advanced Institute for Health Sciences and Technology (SAIHST) and former CTO of VUNO Inc
4. **Prof. Ozanan Meireles**, Associate Professor of Surgery, Duke University School of Medicine
5. **Mr. Jason Seo**, Head of Global business development at Coreline Soft
6. **Prof. Pietro Mascagni**, Surgeon at Catholic University of Sacred Heart Rome and Co-founder and Chief Medical Officer, Scialytics SAS

SPONSORSHIP SPOTLIGHT

Date: Thursday, September 25

Time: 17:00 – 18:00

Location: DCC1 • Room: DCC1 105/106

Chairs: Dr. Mohammad Yaqub and Dr. KwangGi Kim

The groundbreaking progress in medical imaging and computer-assisted intervention is powered by a vibrant synergy between academic research and industrial innovation. This special session is dedicated to our valued sponsors, who are at the forefront of translating cutting-edge algorithms into powerful tools that shape the future of healthcare. Join us to hear directly from these leaders as they share their latest research breakthroughs, development journeys, and vision for the next generation of technologies that will define our field.

Program

Time	Description	Speaker(s)
17:00 – 17:05	Introduction	Chairs
17:05 – 17:20	Talk by Lunit: Conquer Cancer Through AI: From Screening to Treatment	Donggeun Yoo
17:20 – 17:35	Talk by MTS: AI-Alpa Platform: A Comprehensive Solution for Conquering Cancer, from Diagnosis to Prediction	Jangwon Seo
17:35 – 17:40	Talk by Damo Academy: Cancer and acute disease screening via non-contrast CT and deep learning	Ke YAN
17:40 – 17:45	Talk by Samsung Medison: Next-Generation Ultrasound: AI and Advanced Processing for Clinical Impact	Unmin Bae
17:45 – 18:00	Q&A	Chairs



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MICCAI 2025 YOUNG RESEARCHERS EXCELLENCE TRAINING PROGRAM

This program offers online mentoring and small group training to guide young researchers through the entire MICCAI paper preparation process—from paper design and writing to presentation—viewed from both author and reviewer perspectives.

Pre-conference activities: Thanks to the impressively large number of mentor applications, 50 mentors and 51 mentees were matched, thus allowing almost 1:1 matching. About 40% of mentees are affiliated with Pan-Asian countries (South/Southeast Asia, Central Asia, and the Middle East Asia regions), which have been less represented in MICCAI history. The matching criteria included the relevance of research areas between mentors and mentees and their local time zones to ease their meeting coordination. The matched mentor-mentee contacted each other and scheduled their meetings based on the mentees' MICCAI 2025 submission goal, such as the main conference, workshops, or satellite events.

During the Conference - In collaboration with the MICCAI Student Board (MSB), we host Mentor-Mentee In-Person Meetup and Networking at **6:30 PM on Wednesday, September 24th**, at the MSB Networking Event. If you are a mentor or mentee for this program or are interested in engaging with them, please join the event!



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MICCAI 2025 OUTREACH SUPPORTERS PROGRAM

The Outreach Supporters Program was launched as part of MICCAI 2025, serving as a stepping stone to strengthen engagement across Asia. The program aims not only to encourage greater participation from East Asia but also to extend opportunities and benefits to under-represented countries in South and Southeast Asia as well as Central Asia. In total, five supporters were selected to serve as ambassadors.

Pre-conference activities: Supporters have been publicizing MICCAI 2025 across Pan-Asian countries through online platforms, with the goal of raising awareness and encouraging young researchers of under-represented countries to engage with the MICCAI community.

During the Conference: We are pleased to invite you to the **Outreach Networking Session** at MICCAI 2025.

- **Date & Time:** September 24, 2025, 18:30
- **Location:** DCC1-1F-107, Daejeon Convention Center, Korea
- **Chairs:** Prof. Nassir Navab, Prof. Seong Tae Kim

In this session, the supporters will introduce the current landscape of medical AI in their countries, share their outreach experiences, and discuss future plans to contribute to their local research communities while strengthening ties with the MICCAI society. If you are interested in connecting with them, please join the Networking Session to encourage and celebrate their contributions to the community.

CHALLENGES AT MICCAI 2025

Chair: Michal Kozubek

Presenters:

- Lena Maier-Hein (President of the MICCAI Special Interest Group (SIG) for Challenges)
- Nicholas Heller (Chair of the 2025 Challenge Committee)
- Organizers of the MICCAI 2025 Lighthouse Challenges

Challenges have become a driving force within the MICCAI community, with steadily growing impact on scientific progress, clinical relevance, and global collaboration. This plenary session, jointly organized by the MICCAI Special Interest Group (SIG) for Challenges & the MICCAI 2025 Challenge Team will highlight the evolving role of challenges in shaping the field and their contribution to advancing medical imaging AI.

Program highlights include:

- An overview of past SIG activities, including **surprising research insights from large-scale analyses of challenges**
- **A sneak peek into upcoming SIG initiatives** designed to benefit the entire MICCAI community
- **An overview of the MICCAI 2025 challenges**, spanning diverse modalities, tasks, and clinically meaningful applications
- **Recognition of excellence** through the Best Challenge Reviewer Award
- The announcement of the **Lighthouse Challenge winners** and presentation of the most important **research insights from the lighthouse challenge flagship efforts**.

This session will celebrate the growing influence of MICCAI challenges while looking ahead to future opportunities for shaping benchmarks, fostering collaboration, and driving impactful research.

WOMEN IN MICCAI

The Women in MICCAI (WiM) initiative is thrilled to bring an inspiring lineup of events to MICCAI 2025! This year's program is designed to celebrate, support, and empower women in the field, while fostering meaningful connections across the community.

WiM Luncheon Event

September 24, Wednesday, 12:00–13:00, DCC1 – Room 112 (Parallel Hall)

Women in MICCAI invite you to a warm and welcoming networking event and panel discussion open to all attendees. This year's panel discussion theme is “**Lean In: Women in Science, Leadership, and AI Health**” and will be followed by an open-floor Q&A. We're excited to welcome leading scientists to our panel and look forward to hearing their insights on the challenges and opportunities faced by female researchers, including leadership and management development, staying technically sharp, and navigating career crossroads. Meet the panelists who will be sharing their stories and insights with us:

- Lena Maier-Hein, Professor, German Cancer Research Center
- Anqi Qiu, Professor, Hong Kong Polytechnic University
- Valentina Salvatelli, Senior Applied Researcher, Microsoft Research, Cambridge
- Weibing Zhao, Associate Professor, Shenzhen MSU-BIT University
- Hyunjoo Lee, Assistant Professor, Harvard Medical School
- Jhimli Mitra, Principal Scientist, GE HealthCare Technology and Innovation Center

Join us for a unique chance to connect, exchange experiences, and engage in conversations that matter to female scientists and allies alike. This event is open to all! However, lunch boxes and specially designed WiM gifts are limited to the first 200 people who registered in advance.

Registration link: <https://forms.gle/ub99LM7QZu5BNpSJ8>

WiM x MICCAI Student Board Networking & Mentorship Event

September 24, Wednesday, 19:30–20:00, Foyer of DCC1 - 105/106

In collaboration with the MICCAI Student Board, Women-in-MICCAI (WiM) Networking Roundtables offer small-group, mentor-led conversations on career development and women's issues in a supportive setting. This interactive session connects students and early-career researchers with experienced WiM mentors for meaningful conversations. Each table is hosted by two invited mentors, leaders from academia or industry, who guide discussion using three brief, experience-based prompts. WiM tables are designed to elicit actionable guidance, build meaningful connections, and invite open, candid conversation.

Join us at the WiM mentorship round tables to meet with the mentors to answer your questions in all aspects from career development to decision making:

- Weibing Zhao, Shenzhen MSU-BIT University
- Anqi Qiu, Hong Kong Polytechnic University
- Linwei Wang, Rochester Institute of Technology
- Zhang, Miaomiao, University of Virginia

WiM Awards at the Closing Ceremony

September 26, Friday, 17:15–18:30, DDCC1 - Room 201/202 (Main Hall)

Don't miss the announcement of two prestigious awards: the **WiM Best Oral Presentation Award** and the **WiM Best Paper for AI Democratization**. These honors highlight outstanding achievements by women researchers, from excellence in public speaking to advancing accessible AI. Attendees are invited to join the closing ceremony to celebrate the awardees for their achievements.

We can't wait to see you at these events—come celebrate, connect, and be inspired with WiM at MICCAI 2025!

RISE EVENT

Bridging the Radiological Divide: A Personal Journey Toward Equitable Diagnostics

Organised by **RISE-MICCAI**, this special session is an integral part of our mission to **propel inclusiveness and geographic diversity within the MICCAI community**. We are dedicated to strengthening the presence of minority researchers from Low- and Middle-Income Countries (LMICs), empowering them to become the research leaders of tomorrow. By fostering a strong global research network, we strive to close gaps in health and imaging research worldwide.

This one-hour talk will be delivered by **Professor Mutsvangwa**, a distinguished scholar in data science and biomedical engineering. As Head of the Data Science Department at IMT-Atlantique and Adjunct Associate Professor at the University of Cape Town (UCT), he has built a career at the forefront of medical image reconstruction and the use of AI to tackle complex healthcare challenges. His research is driven by a commitment to interdisciplinary innovation, with a particular emphasis on advancing equitable healthcare solutions in resource-limited settings.

In his talk, Professor Mutsvangwa will share his personal journey toward bridging the radiological divide. He will draw on his extensive experience in AI research capacity-building in Africa and his impressive record of securing over EUR 2.7 million in research funding, to illustrate how trustworthy AI can be developed for equitable health outcomes. This session will provide attendees with invaluable insights into creating AI solutions that are not only scientifically rigorous but also socially impactful.

Date: 26 September 2025

Time: 12:30 PM - 13:30 PM

Location: DCC 1 - 1F-112

MICCAI STUDENT BOARD ACTIVITIES

The MICCAI Student Board (MSB) warmly invites participants to join a variety of activities at MICCAI 2025. These events are designed to support the scientific growth, professional development, and community spirit of students and early-career researchers in the field.

A. Scientific Activities

MSB EMERGE Workshop Initiative

September 25, 12:30 PM - 1:30 PM

Now in its second edition, the EMERGE workshop is a student-led initiative that gives early-career researchers (within two years of PhD graduation) the chance to present projects where they are primary investigators, typically as first and/or last authors. The event highlights student leadership in both research and organization, creating an environment for scientific exchange, feedback, and mentorship. Selected works will be invited for extension in MELBA journal. Thanks to NVIDIA's sponsorship, prizes totalling USD 600 and a DGX Spark workstation will be awarded.

MICCAI Doctoral Consortium Poster Session

September 23, 3:30 PM - 5:00 PM

The first MICCAI Doctoral Consortium highlights the work of PhD students and recent graduates. Posters will remain on display throughout the main conference, giving attendees the chance to explore doctoral research in depth. All accepted reports will be published in the Springer LNCS MICCAI Doctoral Symposium volume. Participants will also be featured in the MICCAI Emerging Scholars Collection, a dedicated digital showcase hosted by the MSB and MICCAI Society, to increase their visibility among potential employers.

MICCAI 3MT-style PhD Thesis Madness Competition

September 25, 0:30 PM - 1:30 PM during lunch - Location: DCC 1 - 1F-105/106

As part of the Doctoral Consortium, this high-energy session invites selected doctoral students to present their thesis in just three minutes. The event offers a lively snapshot of the diversity and creativity of PhD research at MICCAI. It will be held as a lunch event, with lunch provided at the venue. Awards for the best posters and presentations will be presented at the closing ceremony.

B. Professional and Educational Activities

14th MICCAI Academia & Industry Event

September 23, 6:30 PM - 8:30 PM

A long-standing tradition of the Student Board, the Academia & Industry Event combines a moderated panel discussion with structured networking to support professional development. The evening begins with a panel discussion on academic and industrial research careers, featuring Stephen Aylward (NVIDIA), Lena Maier-Hein (DKFZ), Faisal Mahmood (Harvard Medical School), Tom Vercauteren (King's College London & Hypervision Surgical), and Mohammad Yaqub (MBZUAI). This is followed by a speed-networking session that gives participants the chance to meet 30+ experts and peers in an open, friendly setting. New this year, the MSB is partnering with Women in MICCAI (WiM) to provide women-centered mentorship opportunities during the event. Drinks and refreshments will be available.

11th MICCAI Educational Challenge

September 25, during lunch

The MICCAI Educational Challenge has been organized annually by the Student Board since 2014 to create and share resources for newcomers to the field. Contributions include tutorials, guides, and videos, which are made freely available through the MEC website and the MICCAI Educational Initiative YouTube channel. At MICCAI 2025, teasers of the top six submissions will be shown during a lunch session, with public voting open throughout the conference. Thanks to the support of the MICCAI Board, prizes totalling USD600 will be awarded to up to three winners at the closing ceremony.

C. Social and Sports Activities

Morning Runs

September 24, 6:30-7:30 AM; September 25, 7:00-8:00 AM

Start the day with light exercise and conversation. We will meet outside the conference venue and head out together for a short run, organized in collaboration with the Daejeon Tourism Organization. All are welcome to join.

MICCAI Soccer Game

September 26, 6:30 PM, Smart Futsal Ground

The traditional MICCAI soccer game returns with 5-vs-5 matches on two courts. Participants will assemble near the conference venue and walk together to the nearby futsal ground. Registration is required.

Taste & Traditions - An Evening Tour of Korean Flavors

September 27, 6:30-9:00 PM

An evening tour featuring tastings at a traditional Korean market, nostalgic games such as Dalgona and Ddakji, a dinner of local dishes, and a walk along Sky Road. Includes a small gift from the famous Sung Sim Dang Bakery, transport, and travel insurance. Registration is required.

Discover Daejeon's Science & Heritage - A Full Day Tour

September 28, 9:00 AM - 6:30 PM

A full-day guided tour exploring Daejeon's science and cultural landmarks, including the National Science Museum, Dongchundan Historical Park, Uam Historical Park, and Daedong Sky Park. The tour includes a traditional lunch, morning snacks, a cultural gift, transport, and travel insurance. Registration is required.

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ORGANIZATION

**ORAL AND SPOTLIGHT
PRESENTATIONS**

ORAL AND SPOTLIGHT PRESENTATIONS

Oral & Spotlight Session 1: Augmented Reality and Video Generation Wednesday, September 24, 2025, 10:30 to 12:00 Main Hall - DCC1 Building - Room 201/202 Session Chairs: Ruogu Fang, University of Florida, United States Cheng Ouyang, University of Oxford, United Kingdom	Oral & Spotlight Session 2: Language Models - Text and Images Wednesday, September 24, 2025, 10:30 to 12:00 Dual Track Hall - DCC1 Building - Room 112 Session Chairs: Ke Zou, National University of Singapore, Singapore Keewon Shin, University of Ulsan, Asan Medical Center, Republic of Korea
<u>Spotlight Presentations:</u> 3D Dynamic Prediction of Missing Teeth in Diverse Patterns via Centroid-prompted Diffusion Model Authors: Zongrui Ji, Na Li, Peng Xue, Yi Dong, Lei Ma Speaker: Lei Ma, Tongji University, China Multi-expert collaboration and knowledge enhancement network for multimodal emotion recognition Authors: Kun Wang, Junyong Zhao, Liying Zhang, Qi Zhu, Daoqiang Zhang Speaker: Kun Wang, Nanjing University of Aeronautics and Astronautics, China MedGround-R1: Advancing Medical Image Grounding via Spatial-Semantic Rewarded Group Relative Policy Optimization Authors: Huihui Xu, Yuanpeng Nie, Hualiang Wang, Ying Chen, Wei Li, Junzhi Ning, Lihao Liu, Hongqiu Wang, Lei Zhu, Jiyao Liu, Xiaomeng Li, Junjun He Speaker: Huihui Xu, Shanghai AI Lab, China tHPM-LDM: Integrating Individual Historical Record with Population Memory in Latent Diffusion-based Glaucoma Forecasting Authors: Yuheng Fan, Jianyang Xie, Yimin Luo, Yanda Meng, Savita Madhusudhan, Gregory Y.H. Lip, Li Cheng, Yalin Zheng, He Zhao Speaker: Yuheng Fan, University of Liverpool, United Kingdom Lymphoma Prognosis with Lesion-Anatomy Context Fusion and Attention-Based Multi-Lesion Aggregation Authors: Song Zhang, Jiajin Zhang, Liheng Qiu, Wei Liu, Dakai Jin, Le Lu, Shenmiao Yang, Ke Yan Speaker: Ke Yan, DAMO Academy, Alibaba Group, China Occlusion-free 4D Gaussians for Open Surgery Videos Using Multi-Camera Shadowless Lamps Authors: Yuna Kato, Shohei Mori, Hideo Saito, Yoshifumi Takatsume, Hiroki Kajita, Mariko Isogawa Speaker: Mariko Isogawa, Keio University, Japan	<u>Spotlight Presentations:</u> DiffAtlas: GenAI-fying Atlas Segmentation via Image-Mask Diffusion Authors: Hantao Zhang, Yuhe Liu, Jiancheng Yang, Weidong Guo, Xinyuan Wang, Pascal Fua Speaker: Hantao Zhang, EPFL, Switzerland Guiding Registration with Emergent Similarity from Pre-Trained Diffusion Models Authors: Nurislam Tursynbek, Hastings Greer, Başar Demir, Marc Niethammer Speaker: Marc Niethammer, UCSD, United States Global and Local Vision-Language Alignment for Few-Shot Learning and Few-Shot OOD Detection Authors: Jie Yan, Xiaoyuan Guan, Wei-Shi Zheng, Hao Chen, Ruixuan Wang Speaker: Jie Yan, Sun Yat-sen University, China UniMRG: Refining Medical Semantic Understanding Across Modalities via LLM-Orchestrated Synergistic Evolution Authors: Hongyan Xu, Arcot Sowmya, Ian Katz, Dadong Wang Speaker: Hongyan Xu, University of New South Wales, Australia HyperPath: Knowledge-Guided Hyperbolic Semantic Hierarchy Modeling for WSI Analysis Authors: Peixiang Huang, Yanyan Huang, Weiqin Zhao, Junjun He, Lequan Yu Speaker: Peixiang Huang, The University of Hong Kong, Hong Kong SAR Towards Robust Medical Image Referring Segmentation with Incomplete Textual Prompts Authors: Qijie Wang, Xian Lin, Zengqiang Yan Speaker: Xian Lin, Huazhong University of Science and Technology, China

Oral Presentations:

Intelligent Virtual Sonographer (IVS): Enhancing Physician-Robot-Patient Communication

Authors: Tianyu Song, Feng Li, Yuan Bi, Angelos Karlas, Amir Yousefi, Daniela Branzan, Zhongliang Jiang, Ulrich Eck, Nassir Navab

Speaker: Tianyu Song, Technical University of Munich, Germany

Ophora: A Large-Scale Data-Driven Text-Guided Ophthalmic Surgical Video Generation Model

Authors: Wei Li, Ming Hu, Guoan Wang, Lihao Liu, Kaijing Zhou, Junzhi Ning, Xin Guo, Zongyuan Ge, Lixu Gu, Junjun He

Speaker: Wei Li, Shanghai Jiao Tong University, China

HieraSurg: Hierarchy-Aware Diffusion Model for Surgical Video Generation

Authors: Diego Biagini, Nassir Navab, Azade Farshad

Speaker: Diego Biagini, Technical University of Munich, Germany

Unsupervised Cardiac Video Translation Via Motion Feature Guided Diffusion Model

Authors: Swakshar Deb, Nian Wu, Frederick H. Epstein, Miaomiao Zhang

Speaker: Swakshar Deb, University of Virginia, United States

HoloPointNet: A Deep Learning Framework for Efficient 3D Point Cloud Holography

Authors: Ankit Amrutkar, Ahmet Nazlioglu, Björn Kampa, Volkmar Schulz, Johannes Stegmaier, Markus Rothermel, Dorit Merhof

Speaker: Ankit Amrutkar, RWTH Aachen University, Germany

Augmented Reality-based Guidance with Deformable Registration in Head and Neck Tumor Resection

Authors: Qingyun Yang, Fangjie Li, Jiayi Xu, Zixuan Liu, Sindhura Sridhar, Whitney Jin, Jennifer Du, Jon Heiselman, Michael Miga, Michael Topf, Jie Ying Wu

Speaker: Qingyun Yang, Vanderbilt University, United States

Oral Presentations:

Historical Report Guided Bi-modal Concurrent Learning for Pathology Report Generation

Authors: Ling Zhang, Boxiang Yun, Qingli Li, Yan Wang

Speaker: Ling Zhang, East China Normal University, China

WSI-Agents: A Collaborative Multi-Agent System for Multi-Modal Whole Slide Image Analysis

Authors: Xinheng Lyu, Yuci Liang, Wenting Chen, Meidan Ding, Jiaqi Yang, Guolin Huang, Daokun Zhang, Xiangjian He, Linlin Shen

Speaker: Xinheng Lyu, University of Nottingham Ningbo China, China

RAPTOR: Generative AI for Parsing Colorectal Cancer Referrals to Streamline Faster Diagnostic Standard Pathways

Authors: Sofiat Abioye, Shazad Ashraf, Junaid Qadir, Adam Byfield, Anusha Jose, William Poulett, Ben Wallace, Adil Butt, Colm Forde, Marcus Mottershead, Simon Fallis, Andrew Beggs, Aneel Bhangu, Lukman Akanbi, Muhammad Bilal

Speaker: Sofiat Abioye, Birmingham City University, United Kingdom

TRRG: Towards Truthful Radiology Report Generation with Cross-modal Disease Clue Enhanced Large Language Models

Authors: Yuhao Wang, Yue Sun, Tao Tan, Chao Hao, Yawen Cui, Xinqi Su, Weichen Xie, Linlin Shen, Zitong Yu

Speaker: Yuhao Wang, University of Science and Technology of China, China

A Multimodal Contrastive Learning for Detecting Aortic Dissection on 3D Non-Contrast CT with Anatomy Simplification

Authors: Duoer Zhang, Wenbo Xiao, Chen Jiang, Yuxuan Qiu, Zhan Feng, Hong Wang, Yefeng Zheng, Wentao Zhu

Speaker: Duoer Zhang, Zhejiang Lab, China

LEAVS: An LLM-based Labeler for Abdominal CT Supervision

Authors: Ricardo Bigolin Lanfredi, Yan Zhuang, Mark Finkelstein, Praveen Thoppey Srinivasan Balamuralikrishna, Luke Krembs, Brandon Khoury, Arthi Reddy, Pritam Mukherjee, Neil M. Rofsky, Ronald M. Summers

Speaker: Ricardo Bigolin Lanfredi, National Institutes of Health, United States

Oral Session 3: Image Contextualization and Multimodal Fusion Wednesday, September 24, 2025, 14:30 to 15:30 Main Hall - DCC1 Building - Room 201/202 Session Chairs: Tanveer Syeda-Mahmood, IBM Research & Stanford University, United States Yutong Xie, MBZUAI, United Arab Emirates	Oral Session 4: Detection, Segmentation, and Registration Wednesday, September 24, 2025, 14:30 to 15:30 Dual Track Hall - DCC1 Building - Room 112 Session Chairs: Johannes C. Paetzold, Cornell University, United States Zhe Xu, The Chinese University of Hong Kong, Hong Kong SAR
Multimodal Fusion Network with Distribution-based Tumor-Marker Imputation for Multi-Origin Metastatic Cervical Lymphadenopathy Classification Authors: Rui Li, Chunyan Li, Xi Lin, Jinfeng Xu, Fang Li, Yao Lu Speaker: Rui Li, Sun Yat-sen University, China A Holistic Time-Aware Classification Model for Multimodal Longitudinal Patient Data Authors: Tobias Susetzky, Huaqi Qiu, Rickmer Braren, Daniel Rueckert Speaker: Tobias Susetzky, Technical University of Munich, Germany Deep Association Multimodal Learning for Zero-shot Spatial Transcriptomics Prediction Authors: Yijing Zhou, Yadong Lu, Qingli Li, Xinxing Li, Yan Wang Speaker: Yijing Zhou, East China Normal University, China Blood Pressure Assisted Cerebral Microbleed Segmentation via Meta-matching Authors: Junmo Kwon, Jonghun Kim, Taehyeon Kim, Sang Won Seo, Hwan-ho Cho, Hyunjin Park Speaker: Junmo Kwon, Sungkyunkwan University, Republic of Korea FoundBioNet: A Foundation-Based Model for IDH Genotyping of Glioma from Multi-Parametric MRI Authors: Somayeh Farahani, Marjaneh Hejazi, Antonio Di Ieva, Sidong Liu Speaker: Somayeh Farahani, Macquarie University, Australia	Automated Characterization of Myocardial Scar Topological Patterns for Ventricular Tachycardia Screening Authors: Xicheng Sheng, Yang Zhang, Lei Li, Bailiang Chen, Freddy Odille, Xiahai Zhuang Speaker: Lei Li, National University of Singapore, Singapore Fit Pixels, Get Labels: Meta-Learned Implicit Networks for Image Segmentation Authors: Kushal Vyas, Ashok Veeraraghavan, Guha Balakrishnan Speaker: Kushal Vyas, Rice University, United States HybridMamba: A Dual-domain Mamba for 3D Medical Image Segmentation Authors: Weitong Wu, Zhaohu Xing, Jing Gong, Qin Peng, Lei Zhu Speaker: Weitong Wu, The Hong Kong University of Science and Technology (Guangzhou), China Abnormality-Driven Representation Learning for Radiology Imaging Authors: Marta Ligeró, Tim Lenz, Georg Wölflein, Omar S. M. El Nahhas, Daniel Truhn, Jakob Nikolas Kather Speaker: Marta Ligeró, EKFZ for Digital Health & TU Dresden, Germany MARSeg: Enhancing Medical Image Segmentation with MAR and Adaptive Feature Fusion Authors: Jeonghyun Hwang, Seungyeon Rhee, Minjeong Kim, Thanaporn Viriyasaranon, Jang-Hwan Choi Speaker: Jeonghyun Hwang, Ewha Womans University, Republic of Korea

Oral & Spotlight Session 5: Navigation and Surgical Workflows

Wednesday, September 24, 2025, 17:00 to 18:30
 Main Hall - DCC1 Building - Room 201/202

Session Chairs:

Yueming Jin, National University of Singapore, Singapore
 Leo Joskowicz, The Hebrew University, Israel

Spotlight Presentations:

Towards Automated Pediatric Dental Development Staging: A Dataset and Model

Authors: Peng Wang, Along He, Anli Wang, Zhenhuan Zhou, Xiaohang Guan, Tao Li

Speaker: Peng Wang, Nankai University, China

Sequence-Independent Continual Test-Time Adaptation with Mixture of Incremental Experts for Cross-Domain Segmentation

Authors: Dunnyuan Xu, Yuchen Yuan, Donghao Zhou, Xikai Yang, Jingyang Zhang, Jinpeng Li, Pheng-Ann Heng

Speaker: Dunnyuan Xu, The Chinese University of Hong Kong, Hong Kong SAR

ProgreSpine: Inherently Explainable Prototypical Regression for Spine Age Estimation

Authors: Roozbeh Bazargani, Saqib Basar, Sam Hashemi, Siavash Khallaghi

Speaker: Sam Hashemi, Prenuvo Inc, Canada

MixStyleFlow: Domain Generalization in Medical Image Segmentation using Normalizing Flows

Authors: Reza Safdari, Mohammad-Ali Nikouei Mahani, Mohamad Koohi-Moghadam, Kyongtae Tyler Bae

Speaker: Reza Safdari, The University of Hong Kong, Hong Kong SAR

Deep Learning Framework for Managing Inter-Reader Variability in Background Parenchymal Enhancement Classification for Contrast-Enhanced Mammography

Authors: Elodie Ripaud, Clément Jailin, Pablo Milioni de Carvalho, Laurence Vancamberg, Isabelle Bloch

Speaker: Elodie Ripaud, GE HealthCare, France

FedCLAM: Client Adaptive Momentum with Foreground Intensity Matching for Federated Medical Image Segmentation

Authors: Vasilis Siomos, Jonathan Passerat-Palmbach, Giacomo Tarroni

Speaker: Vasilis Siomos, City St. George's, University of London, United Kingdom

Oral & Spotlight Session 6: Towards Deployment, Bias, Trustworthiness, and Privacy

Wednesday, September 24, 2025, 17:00 to 18:30
 Dual Track Hall - DCC1 Building - Room 112

Session Chairs:

Hongwei Bran Li, National University of Singapore, Singapore
 Qingjie Meng, University of Birmingham, United Kingdom

Spotlight Presentations:

VesselVerse: A Dataset and Collaborative Framework for Vessel Annotation

Authors: Daniele Falcetta, Vincenzo Marciano, Kaiyuan Yang, Jon Cleary, Loïc Legris, Massimiliano Domenico Rizzaro, Ioannis Pitsiorlas, Hava Chaptoukaev, Benjamin Lemasson, Bjoern Menze, Maria A. Zuluaga

Speaker: Daniele Falcetta, EURECOM, France

Query-Level Alignment for End-to-End Lesion Detection with Human Gaze

Authors: Yan Kong, Zhixiang Peng, Yuan Yin, Yonghao Li, Jiangdong Cai, Sheng Wang, Qian Wang, Yuqi Fang, Caifeng Shan

Speaker: Yuqi Fang, Nanjing University, China

Bias and Generalizability of Foundation Models across Datasets in Breast Mammography

Authors: Elodie Germani, Ilayda Selin-Türk, Fatima Zeineddine, Charbel Mourad, Shadi Albarqouni

Speaker: Shadi Albarqouni, University of Bonn, Germany

Training-free Test-time Improvement for Explainable Medical Image Classification

Authors: Hangzhou He, Jiachen Tang, Lei Zhu, Kaiwen Li, Yanye Lu

Speaker: Hangzhou He, Peking University, China

A flexible deep learning framework for survival analysis with medical data

Authors: Gabriele Campanella, Ida Häggström, Lucas Kook, Torsten Hothorn, Thomas J. Fuchs

Speaker: Ida Häggström, Chalmers University of Technology, Sweden

MELON: Multimodal Mixture-of-Experts with Spectral-Temporal Fusion for Long-Term Mobility Estimation in Critical Care

Authors: Jiaqing Zhang, Miguel Contreras, Jessica Sena, Andrea Davidson, Yuanfang Ren, Ziyuan Guan, Tezcan Ozrazgat-Baslanti, Tyler J. Loftus, Subhash Nerella, Azra Bihorac, Parisa Rashidi

Speaker: Subhash Nerella, University of Florida, United States

Oral Presentations:

Towards Markerless Intraoperative Tracking of Deformable Spine Tissue

Authors: Connor Daly, Elettra Marconi, Marco Riva, Jinendra Ekanayake, Daniel S. Elson, Ferdinando Rodriguez y Baena
Speaker: Connor Daly, Imperial College London, United Kingdom

Multi-modal Representations for Fine-grained Multi-label Critical View of Safety Recognition

Authors: Britty Baby, Vinkle Srivastav, Pooja P. Jain, Kun Yuan, Pietro Mascagni, Nicolas Padoy
Speaker: Britty Baby, University of Strasbourg, France

MedAgentSim: Self-Evolving Multi-Agent Simulations for Realistic Clinical Interactions

Authors: Mohammad Almansoori, Komal Kumar, Hisham Cholakkal
Speaker: Mohammad Almansoori, Mohamed bin Zayed University of Artificial Intelligence, United Arab Emirates

EndoMamba: An Efficient Foundation Model for Endoscopic Videos via Hierarchical Pre-training

Authors: Qingyao Tian, Huai Liao, Xinyan Huang, Bingyu Yang, Dongdong Lei, Sebastien Ourselin, Hongbin Liu
Speaker: Qingyao Tian, Institute of Automation, Chinese Academy of Sciences, China

Half-SAM: SAM-based Haustral Fold Detection In Colonoscopy with Debris Suppression and Temporal Consistency

Authors: Mayank Golhar, Luojie Huang, Nicholas J. Durr
Speaker: Mayank Golhar, Johns Hopkins University, United States

SAMSA: Segment Anything Model enhanced with Spectral Angles for Hyperspectral Interactive Medical Image Segmentation

Authors: Alfie Roddan, Tobias Czempel, Chi Xu, Daniel S. Elson, Stamatia Giannarou
Speaker: Alfie Roddan, Imperial College London, United Kingdom

Oral Presentations:

Maverick: Collaboration-free Federated Unlearning for Medical Privacy

Authors: Win Kent Ong, Chee Seng Chan
Speaker: Win Kent Ong, Universiti Malaya, Malaysia

Variational Visible Layers: A Practical Framework for Uncertainty Estimation

Authors: Zeinab Abboud, Herve Lombaert, Samuel Kadoury
Speaker: Zeinab Abboud, Polytechnique Montreal, Canada

On the Interplay of Human-AI Alignment, Fairness, and Performance Trade-offs in Medical Imaging

Authors: Haozhe Luo, Ziyu Zhou, Shelley Zixin Shu, Aurélie Pahud de Mortanges, Robert Berke, Mauricio Reyes
Speaker: Haozhe Luo, University of Bern, Switzerland

Mutual Information Regularization for Fairness-aware Deep Imaging Representations

Authors: Amir Reza Sadri, Thomas DeSilvio, Satish E. Viswanath
Speaker: Amir Reza Sadri, Case Western Reserve University, United States

Adaptive Frame Selection for Gestational Age Estimation from Blind Sweep Fetal Ultrasound Videos

Authors: Tanya Akumu, Marawan Elbatel, Victor M. Campello, Richard Osuala, Carlos Martin-Isla, Ignacio Valenzuela, Xiaomeng Li, Bishesh Khanal, Karim Lekadir
Speaker: Tanya Akumu, University of Barcelona, Spain

Toward Medical Deepfake Detection: A Comprehensive Dataset and Novel Method

Authors: Shuaibo Li, Zhaoxu Xing, Hongqiu Wang, Pengfei Hao, Xingyu Li, Zekai Liu, Lei Zhu
Speaker: Shuaibo Li, The Hong Kong University of Science and Technology (Guangzhou), China

Oral Session 7: Data Quality, Restoration, and Super-resolution

Thursday, September 25, 2025, 8:30 to 9:30
 Main Hall - DCC1 Building - Room 201/202

Session Chairs:

Charles Delahunt, Global Health Labs, United States
 Kyung Sung, University of California, Los Angeles (UCLA), United States

Directional Adaptive Shuffle-Based Visual State-Space Models for Medical Image Restoration

Authors: Simon C. K. Chan, Lulin Shi, Bingxin Huang, Terence T. W. Wong

Speaker: Simon C. K. Chan, The Hong Kong University of Science and Technology, Hong Kong SAR

Advancing Medical Representation Learning Through High-Quality Data

Authors: Negin Baghbanzadeh, Adibvafa Fallahpour, Yasaman Parhizkar, Franklin Ogidi, Shuvendu Roy, Sajad Ashkezari, Vahid Reza Khazaie, Michael Colacci, Ali Etemad, Arash Afkanpour, Elham Dolatabadi

Speaker: Negin Baghbanzadeh, York University, Canada

BayeSMM: Robust Deep Combined Computing Tackling Heavy-tailed Distribution in Medical Images

Authors: Yuanye Liu, Ruoxuan Zhen, Shangqi Gao, Xinzhe Luo, Xin Gao, Qingchao Chen, Xiahai Zhuang

Speaker: Yuanye Liu, Fudan University, China

TESLA: Test-time Reference-free Through-plane Super-resolution for Multi-contrast Brain MRI

Authors: Yoonseok Choi, Sunyoung Jung, Mohammed A. Al-masni, Ming-Hsuan Yang, Dong-Hyun Kim

Speaker: Yoonseok Choi, Yonsei University, Republic of Korea

Robust Deep Learning for Myocardial Scar Segmentation in Cardiac MRI with Noisy Labels

Authors: Aida Moafi, Danial Moafi, Evgeny M. Mirkes, Gerry P. McCann, Abbas S. Alatrany, Jayanth Ranjit Arnold, Mostafa Mehdipour Ghazi

Speaker: Aida Moafi, University of Leicester, United Kingdom

Oral Session 8: Explainability and Interpretability

Thursday, September 25, 2025, 8:30 to 9:30
 Dual Track Hall - DCC1 Building - Room 112

Session Chairs:

Hao Chen, Hong Kong University of Science and Technology, Hong Kong SAR
 Zulqarnain Gilani, Edith Cowan University, Australia

An Anatomical Significance-Aware Architecture for Explainable Myocardial Infarction Prediction via Multi-Task Learning

Authors: Jiachuan Peng, Marcel Beetz, Abhirup Banerjee, Min Chen, Vicente Grau

Speaker: Jiachuan Peng, University of Oxford, United Kingdom

Uncertainty-Supervised Interpretable and Robust Evidential Segmentation

Authors: Yuzhu Li, An Sui, Fuping Wu, Xiahai Zhuang

Speaker: An Sui, Fudan University, China

Automated Detection of BK Virus in H&E Whole-Slide Images Using Weakly-Supervised Deep Learning and Interpretable Morphological Biomarkers

Authors: Sharifa Sahai, Ana D. Ramos-Guerra, Cristina Almagro-Pérez, Guillaume Jaume, Andrew Zhang, Helmut Rennke, Astrid Weins, Juan E. Ortuño, Maria J. Ledesma-Carbayo, Faisal Mahmood

Speakers: Sharifa Sahai, Harvard Medical School and Ana D. Ramos-Guerra, Universidad Politécnica de Madrid, Spain

X-SiT: Inherently Interpretable Surface Vision Transformers for Dementia Diagnosis

Authors: Fabian Bongratz, Tom Nuno Wolf, Jaume Gual Ramon, Christian Wachinger

Speaker: Fabian Bongratz, Technical University of Munich, Germany

Latent Motion Profiling for Annotation-free Cardiac Phase Detection in Adult and Fetal Echocardiography Videos

Authors: Yingyu Yang, Qianye Yang, Kangning Cui, Can Peng, Elena D'Alberty, Netzahualcoyotl Hernandez-Cruz, Olga Patey, Aris T. Papageorghiou, J. Alison Noble

Speaker: Yingyu Yang, University of Oxford, United Kingdom

Oral Session 9: Generalizability and Adaptation Thursday, September 25, 2025, 14:30 to 15:30 Main Hall - DCC1 Building - Room 201/202 Session Chairs: Peirong Liu, Johns Hopkins University, United States Guotai Wang, University of Electronic Science and Technology of China, China	Oral Session 10: Multimodal and Longitudinal Prediction Thursday, September 25, 2025, 14:30 to 15:30 Dual Track Hall - DCC1 Building - Room 112 Session Chairs: Jang-Hwan Choi, Ewha Womans University, Republic of Korea Chenyu You, Stony Brook University, United States
tCURLoRA: Tensor CUR Decomposition Based Low-Rank Parameter Adaptation and Its Application in Medical Image Segmentation Authors: Guanghai He, Wangang Cheng, Hancan Zhu, Xiaohao Cai, Gaohang Yu Speaker: Guanghai He, Shaoxing University, China	Multi-scale Attention-based Multiple Instance Learning for Breast Cancer Diagnosis Authors: Mariana Mourão, Jacinto C. Nascimento, Carlos Santiago, Margarida Silveira Speaker: Mariana Mourão, Institute for Systems and Robotics, Instituto Superior Técnico, Portugal
Reverse Imaging for Wide-spectrum Generalization of Cardiac MRI Segmentation Authors: Yidong Zhao, Peter Kellman, Hui Xue, Tongyun Yang, Yi Zhang, Yuchi Han, Orlando Simonetti, Qian Tao Speaker: Yidong Zhao, Delft University of Technology, the Netherlands	Parameterized Diffusion Optimization enabled Autoregressive Ordinal Regression for Diabetic Retinopathy Grading Authors: Qinkai Yu, Wei Zhou, Hantao Liu, Yanyu Xu, Meng Wang, Yitian Zhao, Huazhu Fu, Xujiang Ye, Yalin Zheng, Yanda Meng Speaker: Qinkai Yu, University of Exeter, United Kingdom
Frequency Strikes Back: Boosting Parameter-Efficient Foundation Model Adaptation for Medical Imaging Authors: Son T. Ly, Hien V. Nguyen Speaker: Son T. Ly, University of Houston, United States	Attention-Based Multimodal Deep Learning Model for Post-Stroke Motor Impairment Prediction Authors: Rukiye Karakis, Kali Gurkahraman, Georgios D. Mitsis, Marie-Hélène Boudrias Speaker: Rukiye Karakis, Sivas Cumhuriyet University, Turkey
Tied Prototype Model for Few-Shot Medical Image Segmentation Authors: Hyeongji Kim, Stine Hansen, Michael Kampffmeyer Speaker: Hyeongji Kim, The Arctic University of Norway, Norway	DISCLOSE the Neurodegeneration Dynamics: Individualized ODE Discovery for Alzheimer's Disease Precision Medicine Authors: Wooseok Jung, Joonhyuk Park, Won Hwa Kim Speaker: Joonhyuk Park, Pohang University of Science and Technology, Republic of Korea
Sparsely Labeled fMRI Data Denoising with Meta-Learning-Based Semi-Supervised Domain Adaptation Authors: Keun-Soo Heo, Ji-Wung Han, Soyeon Bak, Minjoo Lim, Bogyong Kang, Sang-Jun Park, Weili Lin, Han Zhang, Dinggang Shen, Tae-Eui Kam Speaker: Keun-Soo Heo, Korea University, Republic of Korea	From Pixels to Prognosis: A Multi-Modal Attention-based Framework for Visceral Adipose Tissue Estimation Authors: Arooba Maqsood, Afsah Saleem, Marc Sim, David Suter, Simone Radavelli-Bagatini, Jonathan M. Hodgson, Richard L. Prince, Kun Zhu, William D. Leslie, John T. Schousboe, Joshua R. Lewis, Syed Zulqarnain Gilani Speaker: Arooba Maqsood, Edith Cowan University, Australia

Oral & Spotlight Session 11: Graphs - Learning and Data

Thursday, September 25, 2025, 17:00 to 18:30
 Main Hall - DCC1 Building - Room 201/202

Session Chairs:

Angelica Aviles-Rivero, Tsinghua University, China
 Jelmer Wolterink, University of Twente, the Netherlands

Spotlight Presentations:

PathVG: A New Benchmark and Dataset for Pathology Visual Grounding

Authors: Chunlin Zhong, Shuang Hao, Junhua Wu, Xiaona Chang, Jiwei Jiang, Xiu Nie, He Tang, Xiang Bai

Speaker: Shuang Hao, Huazhong University of Science and Technology, China

Endoscopic Artifact Inpainting for Improved Endoscopic Image Segmentation

Authors: Zhangyuan Yu, Chenlin Du, Hongrui Liang, Xiuqi Zheng, Zeyao Ma, Mingjun Wu, Mingwu Ao, Qicheng Lao

Speaker: Qicheng Lao, Beijing University of Posts and Telecommunications, China

DEFUSE-MS: Deformation Field-Guided Spatiotemporal Graph-Based Framework for Multiple Sclerosis New Lesion Detection

Authors: Mostafa Salem, Salma Hassan, Vijay Ram Kumar Papineni, Ayman Elsayed, Mohammad Yaqub

Speaker: Mostafa Salem, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates

Bipartite Patient-Modality Graph Learning with Event-Conditional Modelling of Censoring for Cancer Survival Prediction

Authors: Hailin Yue, Hulin Kuang, Jin Liu, Junjian Li, Lanlan Wang, Mengshen He, Jianxin Wang

Speaker: Hailin Yue, Central South University, China

Stronger Together: Registering Preoperative Imagery, LUS, and MIS Liver Images

Authors: Mohammad Mahdi Kalantari, Erol Ozgur, Mohammad Alkhatib, Navid Rabbani, Yamid Espinel, Richard Modrzejewski, Bertrand Le Roy, Emmanuel Buc, Youcef Mezouar, Adrien Bartoli

Speaker: Mohammad Mahdi Kalantari, Clermont-Auvergne INP, France

A Novel Streamline-based diffusion MRI Tractography Registration Method with Probabilistic Keypoint Detection

Authors: Junyi Wang, Mubai Du, Ye Wu, Yijie Li, William M. Wells III, Lauren J. O'Donnell, Fan Zhang

Speaker: Junyi Wang, UESTC, China

Oral & Spotlight Session 12: Reconstruction and Synthesis

Thursday, September 25, 2025, 17:00 to 18:30
 Dual Track Hall - DCC1 Building - Room 112

Session Chairs:

Cosmin I. Bercea, Technical University of Munich, Germany
 Chuyang Ye, Beijing Institute of Technology, China

Spotlight Presentations:

Cross-view Generalized Diffusion Model for Sparse-view CT Reconstruction

Authors: Jixiang Chen, Yiqun Lin, Yi Qin, Hualiang Wang, Xiaomeng Li

Speaker: Jixiang Chen, The Hong Kong University of Science and Technology, Hong Kong SAR

Hallucination-Aware Multimodal Benchmark for Gastrointestinal Image Analysis with Large Vision-Language Models

Authors: Bidur Khanal, Sandesh Pokhrel, Sanjay Bhandari, Ramesh Rana, Nikesh Shrestha, Ram B. Gurung, Cristian Linte, Angus Watson, Yash R. Shrestha, Binod Bhattarai

Speaker: Binod Bhattarai, University of Aberdeen, United Kingdom

Veriserum: A dual-plane fluoroscopic dataset with knee implant phantoms for deep learning in medical imaging

Authors: Jinhao Wang, Florian Vogl, Pascal Schütz, Saša Čuković, William R. Taylor

Speaker: Jinhao Wang, ETH Zürich, Switzerland

Unisyn: A Generative Foundation Model for Universal Medical Image Synthesis across MRI, CT and PET

Authors: Yulin Wang, Honglin Xiong, Kaicong Sun, Jiameng Liu, Xin Lin, Ziyi Chen, Yanzhe He, Qian Wang, Dinggang Shen

Speaker: Yulin Wang, ShanghaiTech University, China

Inter-class separability loss for weakly supervised mutually exclusive multiclass segmentation of brain tumor lesions

Authors: Vivek Dhamale, Vaanathi Sundaresan

Speaker: Vivek Dhamale, Indian Institute of Science, Bangalore, India

Facial Appearance Prediction with Conditional Multi-scale Autoregressive Modeling for Orthognathic Surgical Planning

Authors: Jungwook Lee, Xuanang Xu, Daeseung Kim, Tianshu Kuang, Hannah H. Deng, Xinrui Song, Yasmine Soubra, Rohan Dharia, Michael A.K. Liebschner, Jaime Gateno, Pingkun Yan

Speaker: Jungwook Lee, Rensselaer Polytechnic Institute, United States

Oral Presentations:

Cerebrovascular Diseases Screening from Color Fundus Photography via Cross-View Fusion and Graph-Based Discrimination

Authors: Congyu Tian, Shihao Zou, Xiangyun Liao, Cheng Chen, Chubin Ou, Jianping Lv, Shanshan Wang, Weixin Si
Speaker: Shihao Zou, Shenzhen Institutes of Advanced Technology, China

Multi-Modal Graph-Based Machine Learning for Predicting Surgical Outcome in Epilepsy Patients

Authors: Artur Arturi Aharonyan, Syeda Abeera Amir, Nunthasiri Wittayanakorn, Marius George Linguraru, Chima Oluigbo, Syed Muhammad Anwar
Speaker: Artur Arturi Aharonyan, Childrens National Hospital, United States

SG2VID: Scene Graphs Enable Fine-Grained Control for Video Synthesis

Authors: Ssharvien Kumar Sivakumar, Yannik Frisch, Ghazal Ghazaei, Anirban Mukhopadhyay
Speaker: Ssharvien Kumar Sivakumar, TU Darmstadt, Germany

GLCP: Global-to-Local Connectivity Preservation for Tubular Structure Segmentation

Authors: Feixiang Zhou, Zhuangzhi Gao, He Zhao, Jianyang Xie, Yanda Meng, Yitian Zhao, Gregory Y.H. Lip, Yalin Zheng
Speaker: Feixiang Zhou, University of Liverpool, United Kingdom

pyOpenNFT: an Open-Source Python Framework for ML-based Real-time fMRI and EEG-fMRI Neurofeedback

Authors: Ekaterina Antipushina, Nikita Davydov, Riccardo De Feo, Evgeny Prilepin, Artem Nikonorov, Yury Koush
Speaker: Ekaterina Antipushina, Skolkovo Institute of Science and Technology, Russia

GPU Accelerated Modeling of Cortical Radial and Tangential Connectivity Changes in Neurodegeneration

Authors: Hongbo Zhang, Xinyu Nie, Jiaxin Yue, Yuan Li, John Ringman, Yonggang Shi
Speaker: Hongbo Zhang, University of Southern California, United States

Oral Presentations:

VesselGPT: Autoregressive Modeling of Vascular Geometry

Authors: Paula Feldman, Martin Sinnona, Claudio Delrieux, Viviana Siless, Emmanuel Iarussi
Speaker: Paula Feldman, Universidad Torcuato Di Tella, Argentina

ClipGS: Clippable Gaussian Splatting for Interactive Cinematic Visualization of Volumetric Medical Data

Authors: Chengkun Li, Yuqi Tong, Kai Chen, Zhenya Yang, Ruiyang Li, Shi Qiu, Jason Ying-Kuen Chan, Pheng-Ann Heng, Qi Dou
Speaker: Chengkun Li, The Chinese University of Hong Kong, Hong Kong SAR

InstructX2X: An Interpretable Local Editing Model for Counterfactual Medical Image Generation

Authors: Hyungi Min, Taeseung You, Hangyeul Lee, Yeongjae Cho, Sungzoon Cho
Speaker: Hyungi Min, Seoul National University, Republic of Korea

UFO-3: Unsupervised Three-Compartment Learning for Fiber Orientation Distribution Function Estimation

Authors: Xueqing Gao, Rizhong Lin, Jianhui Feng, Yonggang Shi, Yuchuan Qiao
Speaker: Xueqing Gao, Tongji University, China

3D Acetabular Surface Reconstruction from 2D Pre-operative X-ray Images using SRVF Elastic Registration and Deformation Graph

Authors: Shuai Zhang, Jinliang Wang, Xu Wang, Sujith Konan, Danail Stoyanov, Evangelos B. Mazomenos
Speaker: Shuai Zhang, University College London, United Kingdom

Speech Audio Generation from Dynamic MRI via a Knowledge Enhanced Conditional Variational Autoencoder

Authors: Yaxuan Li, Han Jiang, Yifei Ma, Shihua Qin, Jonghye Woo, Fangxu Xing
Speaker: Yaxuan Li, The University of Hong Kong, Hong Kong SAR

Oral Session 13: Surgical Data Science

Friday, September 26, 2025, 8:30 to 9:30
 Main Hall - DCC1 Building - Room 201/202

Session Chairs:

Vinkle Srivastav, IHU Strasbourg, University of
 Strasbourg, France
 Mobarak I. Hoque, University of Manchester, United
 Kingdom

Endo-FASt3r: Endoscopic Foundation Model Adaptation for Structure from Motion

Authors: Mona Sheikh Zeinoddin, Mobarak I. Hoque, Zafer
 Tandogdu, Greg L. Shaw, Matthew J. Clarkson, Evangelos B.
 Mazomenos, Danail Stoyanov

Speaker: Mona Sheikh Zeinoddin, UCL Hawkes Institute,
 University College London, United Kingdom

RadGS-Reg: Registering Spine CT with Biplanar X-rays via Joint 3D Radiative Gaussians Reconstruction and 3D/3D Registration

Authors: Ao Shen, Xueming Fu, Junfeng Jiang, Qiang Zeng, Ye
 Tang, Zhengming Chen, Luming Nong, Feng Wang, S. Kevin Zhou

Speaker: Ao Shen, Hohai University, China

Memory-Augmented SAM2 for Training-Free Surgical Video Segmentation

Authors: Ming Yin, Fu Wang, Xujiang Ye, Yanda Meng, Zeyu Fu

Speaker: Ming Yin, University of Exeter, United Kingdom

Endo3R: Unified Online Reconstruction from Dynamic Monocular Endoscopic Video

Authors: Jiaxin Guo, Wenzhen Dong, Tianyu Huang, Hao Ding,
 Ziyi Wang, Haomin Kuang, Qi Dou, Yun-Hui Liu

Speaker: Jiaxin Guo, The Chinese University of Hong Kong, Hong
 Kong SAR

Mamba Guided Boundary Prior Matters: A New Perspective for Generalized Polyp Segmentation

Authors: Tapas K. Dutta, Snehashis Majhi, Deepak Ranjan Nayak,
 Debesh Jha

Speaker: Deepak Ranjan Nayak, Malaviya National Institute of
 Technology Jaipur, India

Oral Session 14: Missing Data and Weak Supervision

Friday, September 26, 2025, 8:30 to 9:30
 Dual Track Hall - DCC1 Building - Room 112

Session Chairs:

Cheng Chen, The University of Hong Kong, Hong
 Kong SAR
 Dmitry Dylov, The Skolkovo Institute of Science and
 Technology, Russia

ReCo-I2P: An Incomplete Supervised Lymph Node Segmentation Framework Based on Orthogonal Partial- instance Annotation

Authors: Litingyu Wang, Ping Ye, Wenjun Liao, Shichuan Zhang,
 Shaoting Zhang, Guotai Wang

Speaker: Litingyu Wang, University of Electronic Science and
 Technology of China, China

Tree-based Semantic Losses: Application to Sparsely- supervised Large Multi-class Hyperspectral Segmentation

Authors: Junwen Wang, Oscar Maccormac, William Rochford,
 Aaron Kujawa, Jonathan Shapey, Tom Vercauteren

Speaker: Junwen Wang, King's College London, United Kingdom

Towards Globally Predictable k-Space Interpolation: A White-box Transformer Approach

Authors: Chen Luo, Qiyu Jin, Taofeng Xie, Xuemei Wang, Huayu
 Wang, Congcong Liu, Liming Tang, Guoqing Chen, Zhuo-Xu Cui,
 Dong Liang

Speaker: Chen Luo, Inner Mongolia University, China

Anatomical Graph-based Multilevel Distillation for Robust Alzheimer's Disease Diagnosis with Missing Modalities

Authors: Fei Liu, Huabin Wang, Mohamed Hisham Jaward,
 Shiuan-Ni Liang, Huey Fang Ong, Jiayuan Cheng

Speaker: Fei Liu, Monash University Malaysia, Malaysia

DC-Seg: Disentangled Contrastive Learning for Brain Tumor Segmentation with Missing Modalities

Authors: Haitao Li, Ziyu Li, Yiheng Mao, Zhengyao Ding,
 Zhengxing Huang

Speaker: Haitao Li, Zhejiang University, China

**POSTER
PRESENTATIONS
LIST**

POSTER PRESENTATIONS LIST

Poster Session 1: Augmented Reality and Video Generation / Language Models - Text and Images / Image Contextualization and Multimodal Fusion

Wednesday, September 24, 2025, 15:30 - 17:00

Poster Hall (DCC 2)

- | | |
|-----------------|--|
| A1 (Wed-PM) | Intelligent Virtual Sonographer (IVS): Enhancing Physician-Robot-Patient Communication |
| Paper Highlight | <i>Authors: Tianyu Song, Feng Li, Yuan Bi, Angelos Karlas, Amir Yousefi, Daniela Branzan, Zhongliang Jiang, Ulrich Eck, Nassir Navab</i>
<i>Presenters: Tianyu Song and Feng Li, Technical University of Munich, Germany</i> |
| A6 (Wed-PM) | HoloPointNet: A Deep Learning Framework for Efficient 3D Point Cloud Holography |
| Paper Highlight | <i>Authors: Ankit Amrutkar, Ahmet Nazlioglu, Björn Kampa, Volkmar Schulz, Johannes Stegmaier, Markus Rothermel, Dorit Merhof</i>
<i>Presenter: Ankit Amrutkar, RWTH Aachen University, Germany</i> |
| A11 (Wed-PM) | HieraSurg: Hierarchy-Aware Diffusion Model for Surgical Video Generation |
| Paper Highlight | <i>Authors: Diego Biagini, Nassir Navab, Azade Farshad</i>
<i>Presenter: Diego Biagini, Technical University of Munich, Germany</i> |
| A16 (Wed-PM) | Occlusion-free 4D Gaussians for Open Surgery Videos Using Multi-Camera Shadowless Lamps |
| Paper Highlight | <i>Authors: Yuna Kato, Shohei Mori, Hideo Saito, Yoshifumi Takatsume, Hiroki Kajita, Mariko Isogawa</i>
<i>Presenter: Mariko Isogawa, Keio University, Japan</i> |
| A21 (Wed-PM) | ReSurgSAM2: Referring Segment Anything in Surgical Video via Credible Long-term Tracking |
| | <i>Authors: Haofeng Liu, Mingqi Gao, Xuxiao Luo, Ziyue Wang, Guanyi Qin, Junde Wu, Yueming Jin</i>
<i>Presenter: Haofeng Liu, National University of Singapore, Singapore</i> |
| A26 (Wed-PM) | RT-GAN: Recurrent Temporal GAN for Adding Lightweight Temporal Consistency to Frame-Based Domain Translation Approaches |
| | <i>Authors: Shawn Mathew, Saad Nadeem, Arie Kaufman</i>
<i>Presenter: Saad Nadeem, Memorial Sloan Kettering Cancer Center, United States</i> |
| A31 (Wed-PM) | Topology-Constrained Learning for Efficient Laparoscopic Liver Landmark Detection |
| | <i>Authors: Ruize Cui, Jiaan Zhang, Jialun Pei, Kai Wang, Pheng-Ann Heng, Jing Qin</i>
<i>Presenter: Ruize Cui, The Hong Kong Polytechnic University, Hong Kong SAR</i> |
| A36 (Wed-PM) | PR-ENDO: Physically Based Relightable Gaussian Splatting for Endoscopy |
| | <i>Authors: Joanna Kaleta, Weronika Smolak-Dyżewska, Dawid Malarz, Diego Dall'Alba, Przemysław Korzeniowski, Przemysław Spurek</i>
<i>Presenters: Joanna Kaleta and Weronika Smolak-Dyżewska, Jagiellonian University, Poland</i> |

- A41 (Wed-PM) **Hierarchical Feature Learning for Medical Point Clouds via State Space Model**
Authors: Guoqing Zhang, Jingyun Yang, Yang Li
Presenter: Guoqing Zhang, Tsinghua Shenzhen International Graduate School, China
- A46 (Wed-PM) **Two-Stage Generative Model for Intracranial Aneurysm Meshes with Morphological Marker Conditioning**
Authors: Wenhao Ding, Kangjun Ji, Simão Castro, Yihao Luo, Dylan Roi, Choon Hwai Yap
Presenter: Wenhao Ding, Imperial College London, United Kingdom
- A51 (Wed-PM) **EG-Net: An Edge-Guided Network for Rigid Registration of Laparoscopic Low-Overlap Point Clouds**
Authors: Wenbin Wu, Yifan Gao, Yixiu Wang, Jiayi Zhang, Yiming Zhao, Xin Gao
Presenter: Wenbin Wu, University of Science and Technology of China, China
- A56 (Wed-PM) **Noise-Controllable Complex-Valued Diffusion Model for k-Space Data of Hyperpolarized 129Xe Lung MRI Generation**
 Paper Highlight *Authors: Linxuan Han, Sa Xiao, Muhong Li, Jinghan Liu, Xin Zhou*
Presenter: Linxuan Han, Huazhong University of Science and Technology, China
- A61 (Wed-PM) **Reconstructing 3D Hand-Instrument Interaction from a Single 2D Image in Medical Scenes**
Authors: Miao Xu, Xiangyu Zhu, Jinlin Wu, Ming Feng, Zelin Zang, Hongbin Liu, Zhen Lei
Presenter: Miao Xu, Hong Kong Institute of Science, China
- A66 (Wed-PM) **LiteTracker: Leveraging Temporal Causality for Accurate Low-latency Tissue Tracking**
Authors: Mert Asim Karaoglu, Wenbo Ji, Ahmed Abbas, Nassir Navab, Benjamin Busam, Alexander Ladikos
Presenter: Mert Asim Karaoglu, ImFusion GmbH and Technical University of Munich, Germany
- A71 (Wed-PM) **SFPFR: Self-supervised Facial Paralysis Face Reconstruction Under Few Views**
Authors: Yaru Qiu, Xinru Wang, Jianfang Zhang, Bo Liu, Peng Bai, Yuanyuan Sun
Presenter: Jianfang Zhang, Qingdao University of Science and Technology, China
- A76 (Wed-PM) **Hypergraph Tversky-Aware Domain Incremental Learning for Brain Tumor Segmentation with Missing Modalities**
Authors: Junze Wang, Lei Fan, Weipeng Jing, Donglin Di, Yang Song, Sidong Liu, Cong Cong
Presenter: Junze Wang, Northeast Forestry University, China
- A81 (Wed-PM) **Real-Time SLAM-Based Correction and 3D Visualization for Fluorescence Lifetime Imaging**
Authors: Murali Krishnamoorthy, Haoyin Zhou, Katherine Frazee, Rahul Pal, Jayender Jagadeesan, Anand T. N. Kumar
Presenter: Anand Kumar, Mass Eye and Ear & Harvard Medical School, United States
- A86 (Wed-PM) **Structure-Aware Cross-Modal Prompt Tuning for Autonomous Bronchoscopic Navigation**
Authors: Hao Fang, Zhuo Zeng, Jianwei Yang, Wenkang Fan, Xiongbiao Luo
Presenter: Hao Fang, Xiamen University, China

- A91 (Wed-PM) **Sparsely Annotated Medical Image Segmentation via Cross-SAM of 3D and 2D Networks**
Authors: Huaqiang Su, Zaiyi Liu, Lisha Yao, Sunyun Li, Hun Lin, Guoliang Chen, Xin Chen, Haijun Lei, Baiying Lei
Presenter: Huaqiang Su, Shenzhen University, China
- A96 (Wed-PM) **EndoPlanar: Deformable Planar-based Gaussian Splatting for Surgical Scene Reconstruction**
Authors: Thatphum Paonim, Chayapon Sasnarukkit, Natawut Nupairoj, Peerapon Vateekul
Presenter: Thatphum Paonim, Chulalongkorn University, Thailand
- A101 (Wed-PM) **BridgeSplat: Bidirectionally Coupled CT and Non-Rigid Gaussian Splatting for Deformable Intraoperative Surgical Navigation**
Authors: Maximilian Fehrentz, Alexander Winkler, Thomas Heiliger, Nazim Haouchine, Christian Heiliger, Nassir Navab
Presenter: Maximilian Fehrentz, Technical University of Munich & Hospital of LMU Munich, Germany
- A106 (Wed-PM) **From Sight to Skill: A Surgeon-Centered Augmented Reality System for Ureteroscopy Training**
Authors: Jumanh Atoum, Fangjie Li, Ayberk Acar, Nicholas L. Kavoussi, Jie Ying Wu
Presenter: Jumanh Atoum, Vanderbilt University, United States
- A111 (Wed-PM) **NAVIUS: Navigated Augmented Reality Visualization for Ureteroscopic Surgery**
Authors: Ayberk Acar, Jumanh Atoum, Peter S. Connor, Clifford Pierre, Carisa N. Lynch, Nicholas L. Kavoussi, Jie Ying Wu
Presenter: Ayberk Acar, Vanderbilt University, United States
- A116 (Wed-PM) **Augmented Reality-based Guidance with Deformable Registration in Head and Neck Tumor Resection**
 Paper Highlight *Authors: Qingyun Yang, Fangjie Li, Jiayi Xu, Zixuan Liu, Sindhura Sridhar, Whitney Jin, Jennifer Du, Jon Heiselman, Michael Miga, Michael Topf, Jie Ying Wu*
Presenter: Qingyun Yang, Vanderbilt University, United States
- A121 (Wed-PM) **3D Dynamic Prediction of Missing Teeth in Diverse Patterns via Centroid-prompted Diffusion Model**
 Paper Highlight *Authors: Zongrui Ji, Na Li, Peng Xue, Yi Dong, Lei Ma*
Presenter: Lei Ma, Tongji University, China
- A126 (Wed-PM) **Towards Patient-Specific Deformable Registration in Laparoscopic Surgery**
Authors: Alberto Neri, Nazim Haouchine, Veronica Penza, Leonardo S. Mattos
Presenter: Alberto Neri, Istituto Italiano di Tecnologia, Italy
- A131 (Wed-PM) **F2PASeg: Feature Fusion for Pituitary Anatomy Segmentation in Endoscopic Surgery**
Authors: Lumin Chen, Zhiying Wu, Tianye Lei, Xuexue Bai, Ming Feng, Yuxi Wang, Gaofeng Meng, Zhen Lei, Hongbin Liu
Presenter: Zhiying Wu, Hong Kong Institute of Science & Innovation, Chinese Academy of Sciences, Hong Kong SAR

- A136 (Wed-PM) **CSAP-Assist: Instrument-Agent Dialogue Empowered Vision-Language Models for Collaborative Surgical Action Planning**
Authors: Jie Zhang, Mengya Xu, Yiwei Wang, Qi Dou
Presenter: Mengya Xu, The Chinese University of Hong Kong, Hong Kong SAR
- A141 (Wed-PM) **Unsupervised Cardiac Video Translation Via Motion Feature Guided Diffusion Model**
Authors: Swakshar Deb, Nian Wu, Frederick H. Epstein, Miaomiao Zhang
Presenter: Swakshar Deb, University of Virginia, United States
- A146 (Wed-PM) **Temporal Differential Fields for 4D Motion Modeling via Image-to-Video Synthesis**
Authors: Xin You, Minghui Zhang, Hanxiao Zhang, Jie Yang, Nassir Navab
Presenter: Xin You, Technical University of Munich, Germany & Shanghai Jiao Tong University, China
- A151 (Wed-PM) **FEAT: Full-Dimensional Efficient Attention Transformer for Medical Video Generation**
Authors: Huihan Wang, Zhiwen Yang, Hui Zhang, Dan Zhao, Bingzheng Wei, Yan Xu
Presenter: Zhiwen Yang, Beihang University, China
- A156 (Wed-PM) **Fairness-Aware vCDR-Controlled Generation for Glaucoma Diagnosis**
Authors: Ziheng Wang, Shuran Yang, Wen Chen, Zhen Zhang, Mengyu Wang, Feixiang Zhou, Yu Tian, Meng Wang, Yitian Zhao, Yalin Zheng, Yanda Meng
Presenter: Ziheng Wang, University of Exeter, United Kingdom
- A161 (Wed-PM) **CA-SAM2: SAM2-based Context-Aware Network with Auto-Prompting for Nuclei Instance Segmentation**
Authors: Hanbin Huang, Hongliang He, Liying Xu, Xudong Zhu, Siwei Feng, Guohong Fu
Presenter: Hanbin Huang, Soochow University, China
- A166 (Wed-PM) **Adaptation of Multi-modal Representation Models for Multi-task Surgical Computer Vision**
Authors: Soham Walimbe, Britty Baby, Vinkle Srivastav, Nicolas Padoy
Presenter: Soham Walimbe, BITS Pilani Goa Campus, India
- A171 (Wed-PM) **Ophora: A Large-Scale Data-Driven Text-Guided Ophthalmic Surgical Video Generation Model**
Authors: Wei Li, Ming Hu, Guoan Wang, Lihao Liu, Kaijing Zhou, Junzhi Ning, Xin Guo, Zongyuan Ge, Lixu Gu, Junjun He
Presenter: Wei Li, Shanghai Jiao Tong University, China
- A176 (Wed-PM) **BaMCo: Balanced Multimodal Contrastive Learning for Knowledge-Driven Medical VQA**
Authors: Ziya Ata Yazıcı, Hazım Kemal Ekenel
Presenter: Ziya Ata Yazıcı, Istanbul Technical University, Turkey
- A181 (Wed-PM) **Text-Guided Multi-Instance Learning for Scoliosis Screening via Gait Video Analysis**
Authors: Haiqing Li, Yuzhi Guo, Feng Jiang, Thao M. Dang, Hehuan Ma, Qifeng Zhou, Jean Gao, Junzhou Huang
Presenter: Junzhou Huang, The University of Texas at Arlington, United States

- A186 (Wed-PM) **RadAlign: Advancing Radiology Report Generation with Vision-Language Concept Alignment**
Authors: Difei Gu, Yunhe Gao, Yang Zhou, Mu Zhou, Dimitris Metaxas
Presenter: Difei Gu, Rutgers University, United States
- A191 (Wed-PM) **Dia-LLaMA: Towards Large Language Model-driven CT Report Generation**
Authors: Zhixuan Chen, Luyang Luo, Yequan Bie, Hao Chen
Presenter: Zhixuan Chen, The Hong Kong University of Science and Technology, China
- A196 (Wed-PM) **SPEC-CXR: Advancing Clinical Safety through Entity-Level Performance Evaluation of Chest X-ray Report Generation**
Authors: Jung Oh Lee, Junwoo Cho, Junha Kim, Laurent Dillard, Tom van Sonsbeek, Arnaud A. A. Setio, Hyeonsoo Lee, Donggeun Yoo, Taesoo Kim
Presenter: Junwoo Cho, Lunit. Inc, Republic of Korea
- A201 (Wed-PM) **Phrase-grounded Fact-checking for Automatically Generated Chest X-ray Reports**
Authors: Razi Mahmood, Diego Machado-Reyes, Joy Wu, Parisa Kaviani, Ken C.L. Wong, Niharika D'Souza, Mannudeep Kalra, Ge Wang, Pingkun Yan, Tanveer Syeda-Mahmood
Presenter: Razi Mahmood, Rensselaer Polytechnic Institute, United States
- A206 (Wed-PM) **Multi-Agent Collaboration for Integrating Echocardiography Expertise in Multi-Modal Large Language Models**
Authors: Yi Qin, Dinusara Sasindu Gamage Nanayakkara, Xiaomeng Li
Presenter: Yi Qin, The Hong Kong University of Science and Technology, China
- A211 (Wed-PM) **Thread the Needle: Genomics-guided Prompt-bridged Attention Model for Survival Prediction of Glioma based on MRI Images**
Authors: Yi Zhong, Xubin Zheng, Xiongri Shen, Jiaqi Wang, Leilei Zhao, Zhenxi Song, Zhiguo Zhang
Presenter: Yi Zhong, Harbin Institute of Technology, China
- A216 (Wed-PM) **Towards Robust Medical Image Referring Segmentation with Incomplete Textual Prompts**
 Paper Highlight
Authors: Qijie Wang, Xian Lin, Zengqiang Yan
Presenter: Xian Lin, Huazhong University of Science and Technology, China
- A221 (Wed-PM) **OFF-CLIP: Improving Normal Detection Confidence in Radiology CLIP with Simple Off-Diagonal Term Auto-Adjustment**
Authors: Junhyun Park, Chanyu Moon, Donghwan Lee, Kyungsu Kim, Minho Hwang
Presenter: Junhyun Park, Daegu Gyeongbuk Institute of Science and Technology, Republic of Korea
- A226 (Wed-PM) **ViTexNet: Vision-Text Guided Dynamic Convolution Network for Medical Image Segmentation**
Authors: Rahul Bhardwaj, Utkarsh Yashwant Tambe, Debanga Raj Neog
Presenter: Rahul Bhardwaj, Indian Institute of Technology Guwahati, India

- A231 (Wed-PM) **More performant and scalable: Rethinking contrastive vision-language pre-training of radiology in the LLM era**
Authors: Yingtai Li, Haoran Lai, Xiaoqian Zhou, Shuai Ming, Wenxin Ma, Wei Wei, S. Kevin Zhou
Presenter: Yingtai Li, University of Science and Technology of China, China
- A236 (Wed-PM) **Longitudinal anatomical attention maps for recognizing diagnostic errors from radiologists' eye movements**
Authors: Anna Anikina, Diliara Ibragimova, Tamerlan Mustafae, Claudia Mello-Thoms, Bulat Ibragimov
Presenter: Anna Anikina, University of Copenhagen, Denmark
- A241 (Wed-PM) **Diff-RRG: Longitudinal Disease-wise Patch Difference as Guidance for LLM-based Radiology Report Generation**
Authors: Hannah Yun, Junyeong Maeng, Eunsong Kang, Heung-Il Suk
Presenter: Hannah Yun, Korea University, Republic of Korea
- A246 (Wed-PM) **Vector-Quantization-Driven Active Learning for Efficient Multi-Modal Medical Segmentation with Cross-Modal Assistance**
Authors: Xiaofei Du, Haoran Wang, Manning Wang, Zhijian Song
Presenter: Xiaofei Du, Fudan University, China
- A251 (Wed-PM) **Multi-subject Orthogonal Sparse Matrix Decomposition Method for Extracting Individual Brain Functional Networks**
Authors: Xingyu He, Vince D. Calhoun, Theo G. M. van Erp, Yuhui Du
Presenter: Xingyu He, Shanxi University, China
- A256 (Wed-PM) **PathoPrompt: Cross-Granular Semantic Alignment for Medical Pathology Vision-Language Models**
 Paper Highlight *Authors: Runlin Huang, Haohui Liang, Hongmin Cai, Weipeng Zhuo, Wentao Fan, Weifeng Su*
Presenter: Runlin Huang, Beijing Normal-Hong Kong Baptist University, China
- A261 (Wed-PM) **Automated Detection of Abnormalities in Zebrafish Development**
Authors: Sarath Sivaprasad, Hui-Po Wang, Anna-Lisa Jäckel, Jonas Baumann, Carole Baumann, Jennifer Herrmann, Mario Fritz
Presenter: Sarath Sivaprasad, CISPA Helmholtz Center for Information Security, Germany
- A266 (Wed-PM) **Reducing Variability of Multiple Instance Learning Methods for Digital Pathology**
Authors: Ali Mammadov, Loïc Le Folgoc, Guillaume Hocquet, Pietro Gori
Presenter: Ali Mammadov, LTCI, Télécom Paris, Institut Polytechnique De Paris, France
- A271 (Wed-PM) **Enhancing Radiology Report Interpretation through Modality-Specific RadGraph Fine-Tuning**
Authors: Haoyue Guan, Yuwei Dai, Shadi Afyouni, Alec Kain, Wen-Chi Hsu, Jiashu Cheng, Sophie Yao, Yuli Wang, Jing Wu, Rishitha Pulakhandam, Lin-mei Zhao, Chengzhang Zhu, Zhicheng Jiao, Craig Jones, Harrison Bai
Presenter: Harrison Bai, Johns Hopkins University, United States

- A276 (Wed-PM) **Trustworthy Few-Shot Transfer of Medical VLMs through Split Conformal Prediction**
Authors: Julio Silva-Rodríguez, Ismail Ben Ayed, Jose Dolz
Presenter: Julio Silva-Rodríguez, ÉTS Montréal, Canada
- A281 (Wed-PM) **Exposing and Mitigating Calibration Biases and Demographic Unfairness in MLLM Few-Shot In-Context Learning for Medical Image Classification**
Authors: Xing Shen, Justin Szeto, Mingyang Li, Hengguan Huang, Tal Arbel
Presenter: Tal Arbel, McGill University, Canada
- A286 (Wed-PM) **Teaching pathology foundation models to accurately predict gene expression with parameter efficient knowledge transfer**
Authors: Shi Pan, Jianan Chen, Maria Secrier
Presenter: Shi Pan, University College London, United Kingdom
- A291 (Wed-PM) **PMIL: Prompt enhanced Multimodal Integrative analysis of fMRI combining functional connectivity and temporal Latency**
Authors: Hyounghsin Choi, Jonghun Kim, Jiwon Chung, Bo-yong Park, Hyunjin Park
Presenter: Hyounghsin Choi, Sungkyunkwan University, Republic of Korea
- A296 (Wed-PM) **Resolving the Overlap of Macrovascular and Microvascular Flow Components in Digital Subtraction Angiography for Cerebral Reperfusion Assessment**
Authors: Chengchuan Wu, Catherine Davey, Gagan Sharma, Felix Ng
Presenter: Chengchuan Wu, The University of Melbourne, Australia
- A301 (Wed-PM) **FluoroSAM: A Language-promptable Foundation Model for Flexible X-ray Image Segmentation**
Authors: Benjamin D. Killeen, Liam J. Wang, Blanca Iñigo, Han Zhang, Mehran Armand, Russell H. Taylor, Greg Osgood, Mathias Unberath
Presenter: Benjamin Killeen, Johns Hopkins University, United States
- A306 (Wed-PM) **Pathology-aware Virtual H&E Staining of Section-free Thick Tissues with Semantic Contrastive Guidance**
Authors: Jintaek Oh, Lulin Shi, Terence T. W. Wong
Presenter: Jintaek Oh, The Hong Kong University of Science and Technology, Hong Kong SAR
- A311 (Wed-PM) **Unleashing the Power of LLMs for Medical Video Answer Localization**
Authors: Junbin Xiao, Qingyun Li, Yusen Yang, Liang Qiu, Angela Yao
Presenter: Junbin Xiao, National University of Singapore, Singapore
- A316 (Wed-PM) **Refining Cervical Cell Classification with Cytological Knowledge and Optimal Attribute Descriptor Matching**
Authors: Manman Fei, Zhenrong Shen, Mengjun Liu, Zhiyun Song, Yusong Sun, Xu Han, Zelin Liu, Haotian Jiang, Lu Bai, Qian Wang, Lichi Zhang
Presenter: Manman Fei, Shanghai Jiao Tong University, China
- A321 (Wed-PM) **Med-BiasX: Robust Medical Visual Question Answering with Language Biases**
Authors: Huanjia Zhu, Yishu Liu, Chengju Zhou, Guangming Lu, Bingzhi Chen
Presenter: Yishu Liu, Harbin Institute of Technology, China
- Paper Highlight

A326 (Wed-PM)	HyperPath: Knowledge-Guided Hyperbolic Semantic Hierarchy Modeling for WSI Analysis
Paper Highlight	<i>Authors: Peixiang Huang, Yanyan Huang, Weiqin Zhao, Junjun He, Lequan Yu</i> <i>Presenter: Peixiang Huang, The University of Hong Kong, Hong Kong SAR</i>
A331 (Wed-PM)	XOCT: Enhancing OCT to OCTA Translation via Cross-Dimensional Supervised Multi-Scale Feature Learning
	<i>Authors: Pooya Khosravi, Kun Han, Anthony T. Wu, Arghavan Rezvani, Zexin Feng, Xiaohui Xie</i> <i>Presenter: Pooya Khosravi, University of California, Irvine, United States</i>
A336 (Wed-PM)	MedVLM-R1: Incentivizing Medical Reasoning Capability of Vision-Language Models (VLMs) via Reinforcement Learning
	<i>Authors: Jiazhen Pan, Che Liu, Junde Wu, Fenglin Liu, Jiayuan Zhu, Hongwei Bran Li, Chen Chen, Cheng Ouyang, Daniel Rueckert</i> <i>Presenter: Jiazhen Pan, Technical University of Munich, Germany</i>
A341 (Wed-PM)	DualPrompt-MedCap: A Dual-Prompt Enhanced Approach for Medical Image Captioning
	<i>Authors: Yining Zhao, Mukesh Prasad, Ali Braytee</i> <i>Presenter: Yining Zhao, The University of Technology Sydney, Australia</i>
A346 (Wed-PM)	Surface-based Multi-Axis Longitudinal Disentanglement Using Contrastive Learning for Alzheimer's Disease
	<i>Authors: Jianwei Zhang, Yonggang Shi</i> <i>Presenter: Yonggang Shi, University of Southern California, United States</i>
A351 (Wed-PM)	BiasICL: In-Context Learning and Demographic Biases of Vision Language Models
	<i>Authors: Sonnet Xu, Joseph D. Janizek, Yixing Jiang, Roxana Daneshjou</i> <i>Presenter: Sonnet Xu, Stanford University, United States</i>
A356 (Wed-PM)	Meta-analysis guided multi-task graph transformer network for diagnosis of neurological disease and cognitive deficits
Paper Highlight	<i>Authors: Jing Xia, Yi Hao Chan, Jagath C. Rajapakse</i> <i>Presenter: Jing Xia, Nanyang Technological University, Singapore</i>
A381 (Wed-PM)	This EEG Looks Like These EEGs: Interpretable Interictal Epileptiform Discharge Detection With ProtoEEG-kNN
	<i>Authors: Dennis Tang, Jon Donnelly, Alina Jade Barnett, Lesia Semenova, Jin Jing, Peter Hadar, Ioannis Karakis, Olga Selioutski, Kehan Zhao, M. Brandon Westover, Cynthia Rudin</i> <i>Presenter: Dennis Tang, Duke University, United States</i>
B1 (Wed-PM)	Blood Pressure Assisted Cerebral Microbleed Segmentation via Meta-matching
Paper Highlight	<i>Authors: Junmo Kwon, Jonghun Kim, Taehyeon Kim, Sang Won Seo, Hwan-ho Cho, Hyunjin Park</i> <i>Presenter: Junmo Kwon, Sungkyunkwan University, Republic of Korea</i>
B6 (Wed-PM)	A Holistic Time-Aware Classification Model for Multimodal Longitudinal Patient Data
Paper Highlight	<i>Authors: Tobias Susetzky, Huaqi Qiu, Rickmer Braren, Daniel Rueckert</i> <i>Presenter: Tobias Susetzky, Technical University of Munich, Germany</i>

- B11 (Wed-PM) **Multimodal Fusion Network with Distribution-based Tumor-Marker Imputation for Multi-Origin Metastatic Cervical Lymphadenopathy Classification**
 Paper Highlight *Authors: Rui Li, Chunyan Li, Xi Lin, Jinfeng Xu, Fang Li, Yao Lu*
Presenter: Rui Li, Sun Yat-sen University, China
- B16 (Wed-PM) **tHPM-LDM: Integrating Individual Historical Record with Population Memory in Latent Diffusion-based Glaucoma Forecasting**
 Paper Highlight *Authors: Yuheng Fan, Jianyang Xie, Yimin Luo, Yanda Meng, Savita Madhusudhan, Gregory Y.H. Lip, Li Cheng, Yalin Zheng, He Zhao*
Presenter: Yuheng Fan, University of Liverpool, United Kingdom
- B21 (Wed-PM) **Multi-expert collaboration and knowledge enhancement network for multimodal emotion recognition**
 Paper Highlight *Authors: Kun Wang, Junyong Zhao, Liying Zhang, Qi Zhu, Daoqiang Zhang*
Presenter: Kun Wang, Nanjing University of Aeronautics and Astronautics, China
- B26 (Wed-PM) **MrTrack: Register Mamba for Needle Tracking with Rapid Reciprocating Motion during Ultrasound-Guided Aspiration Biopsy**
Authors: Yuelin Zhang, Qingpeng Ding, Long Lei, Yongxuan Feng, Raymond Shing-Yan Tang, Shing Shin Cheng
Presenter: Yuelin Zhang, The Chinese University of Hong Kong, Hong Kong SAR
- B31 (Wed-PM) **Cycle Context Verification for In-Context Medical Image Segmentation**
Authors: Shishuai Hu, Zehui Liao, Liangli Zhen, Huazhu Fu, Yong Xia
Presenter: Shishuai Hu, Northwestern Polytechnical University, China
- B36 (Wed-PM) **Adaptive Spatial Transcriptomics Interpolation via Cross-modal Cross-slice Modeling**
Authors: Ningfeng Que, Xiaofei Wang, Jingjing Chen, Yixuan Jiang, Chao Li
Presenter: Ningfeng Que, University of Dundee, United Kingdom
- B41 (Wed-PM) **MNM: Multi-level Neuroimaging Meta-analysis with Hyperbolic Brain-Text Representations**
Authors: Seunghun Baek, Jaejin Lee, Jaeyoon Sim, Minjae Jeong, Won Hwa Kim
Presenter: Seunghun Baek, Pohang University of Science and Technology, Republic of Korea
- B46 (Wed-PM) **Dual Correlation-aware Mamba for Microvascular Obstruction Identification in Non-contrast Cine Cardiac Magnetic Resonance**
Authors: Yige Yan, Jun Cheng, Xulei Yang, Shuang Leng, Ru San Tan, Liang Zhong, Jagath C. Rajapakse
Presenter: Yige Yan, Nanyang Technological University, Singapore
- B51 (Wed-PM) **Multi-Agent Reasoning for Cardiovascular Imaging Phenotype Analysis**
 Paper Highlight *Authors: Weitong Zhang, Mengyun Qiao, Chengqi Zang, Steven Niederer, Paul M. Matthews, Wenjia Bai, Bernhard Kainz*
Presenter: Weitong Zhang, Imperial College London, United Kingdom

- B56 (Wed-PM) **PRETI: Patient-Aware Retinal Foundation Model via Metadata-Guided Representation Learning**
Authors: Yeonkyung Lee, Woojung Han, Youngjun Jun, Hyeonmin Kim, Jungkyung Cho, Seong Jae Hwang
Presenter: Yeonkyung Lee, Yonsei University, Republic of Korea
- B61 (Wed-PM) **MicroMIL: Graph-Based Multiple Instance Learning for Context-Aware Diagnosis with Microscopic Images**
Authors: JongWoo Kim, Bryan Wong, Huazhu Fu, Willmer Rafell Quiñones Robles, Young Sin Ko, Mun Yong Yi
Presenter: Bryan Wong, Korea Advanced Institute of Science & Technology, Republic of Korea
- B66 (Wed-PM) **High-Precision Mixed Feature Fusion Network Using Hypergraph Computation for Cervical Abnormal Cell Detection**
Authors: Jincheng Li, Danyang Dong, Menglin Zheng, Jingbo Zhang, Yueqin Hang, Lichi Zhang, Lili Zhao
Presenter: Jincheng Li, Nantong University, China
- B71 (Wed-PM) **Co-Seg: Mutual Prompt-Guided Collaborative Learning for Tissue and Nuclei Segmentation**
Authors: Qing Xu, Wenting Duan, Zhen Chen
Presenter: Qing Xu, University of Nottingham, United Kingdom
- B76 (Wed-PM) **MG-UNet: A Memory-Guided UNet for Lesion Segmentation in Chest Images**
Authors: Shuaipeng Ding, Mingyong Li, Chao Wang
Presenter: Shuaipeng Ding, Chongqing Normal University, China
- B81 (Wed-PM) **Hybrid-View Attention Network for Clinically Significant Prostate Cancer Classification in Transrectal Ultrasound**
Authors: Zetian Feng, Juan Fu, Xuebin Zou, Hongsheng Ye, Hong Wu, Jianhua Zhou, Yi Wang
Presenter: Zetian Feng, Shenzhen University, China
- B86 (Wed-PM) **Lymph Node Metastasis Classification with Prototype-guided Multiple Instance Aggregation and Heterogeneous Feature Fusion**
Authors: Haoshen Li, Tashan Ai, Yirui Wang, Zhanghexuan Ji, Qinji Yu, Le Lu, Bin Dong, Li Zhang, Xianghua Ye, Kuaili Zhao, Dakai Jin
Presenter: Haoshen Li, Peking University, China
- B91 (Wed-PM) **Global and Local Contrastive Learning for Joint Representations from Cardiac MRI and ECG**
Authors: Alexander Selivanov, Philip Müller, Özgün Turgut, Nil Stolt-Ansó, Daniel Rueckert
Presenter: Alexander Selivanov, Technical University of Munich, Germany
- B96 (Wed-PM) **EdgeANet: A Transformer-based Edge Representation Learning Network for Canine X-ray Verification**
Authors: In-Gyu Lee, Jun-Young Oh, Hyewon Choi, Tae-Eui Kam, Namsoon Lee, Sang-Hwan Hyun, Euijong Lee, Ji-Hoon Jeong
Presenter: Jun-Young Oh, Chungbuk National University, Republic of Korea

- B101 (Wed-PM) **Learning Concept-Driven Logical Rules for Interpretable and Generalizable Medical Image Classification**
 Paper Highlight *Authors: Yibo Gao, Hangqi Zhou, Zheyao Gao, Bomin Wang, Shangqi Gao, Sihan Wang, Xiahai Zhuang*
Presenter: Yibo Gao, Fudan University, China
- B106 (Wed-PM) **A Curvature-Guided Diffeomorphic Mesh Deformation Framework for Lifespan Brain Cortical Surface Reconstruction**
 Paper Highlight *Authors: Lin Teng, Shen Zhao, Feng Shi, Dinggang Shen*
Presenter: Lin Teng, ShanghaiTech University, China
- B111 (Wed-PM) **RadiomicsRetrieval: A Customizable Framework for Medical Image Retrieval Using Radiomics Features**
Authors: Inye Na, Nejung Rue, Jiwon Chung, Hyunjin Park
Presenter: Inye Na, Sungkyunkwan University, Republic of Korea
- B116 (Wed-PM) **DGMIR: Dual-Guided Multimodal Medical Image Registration based on Multi-view Augmentation and On-site Modality Removal**
Authors: Gao Le, Yucheng Shu, Lihong Qiao, Lijian Yang, Bin Xiao, Weisheng Li, Xinbo Gao
Presenter: Gao Le, Chongqing University of Posts and Telecommunications, China
- B121 (Wed-PM) **XFMamba: Cross-Fusion Mamba for Multi-View Medical Image Classification**
Authors: Xiaoyu Zheng, Xu Chen, Shaogang Gong, Xavier Griffin, Greg Slabaugh
Presenter: Xiaoyu Zheng, Queen Mary University of London, United Kingdom
- B126 (Wed-PM) **Accurate and Efficient Fetal Birth Weight Estimation from 3D Ultrasound**
Authors: Jian Wang, Qiongying Ni, Hongkui Yu, Ruixuan Yao, Jinqiao Ying, Bin Zhang, Xingyi Yang, Jin Peng, Jiongquan Chen, Junxuan Yu, Wenlong Shi, Chaoyu Chen, Zhongnuo Yan, Mingyuan Luo, Gaocheng Cai, Dong Ni, Jing Lu, Xin Yang
Presenter: Qiongying Ni, Shenzhen University, China
- B131 (Wed-PM) **HAGE: Hierarchical Alignment Gene-Enhanced Pathology Representation Learning with Spatial Transcriptomics**
Authors: Thao M. Dang, Haiqing Li, Yuzhi Guo, Hehuan Ma, Feng Jiang, Yuwei Miao, Qifeng Zhou, Jean Gao, Junzhou Huang
Presenter: Thao M. Dang, The University of Texas at Arlington, United States
- B136 (Wed-PM) **TemSAM: Temporal-aware Segment Anything Model for Cerebrovascular Segmentation in Digital Subtraction Angiography Sequences**
Authors: Liang Zhang, Xixi Jiang, Xiaohuan Ding, Zihang Huang, Tianyu Zhao, Xin Yang
Presenter: Liang Zhang, Huazhong University of science and technology, China
- B141 (Wed-PM) **C²MAOT: Cross-modal Complementary Masked Autoencoder with Optimal Transport for Cancer Segmentation in PET-CT Images**
Authors: Jiaju Huang, Shaobin Chen, Xinglong Liang, Xiao Yang, Zhuoneng Zhang, Yue Sun, Ying Wang, Tao Tan
Presenter: Jiaju Huang, Macao Polytechnic University, China

- B146 (Wed-PM) **Omni-Fusion of Spatial and Spectral for Hyperspectral Image Segmentation**
Authors: Qing Zhang, Guoquan Pei, Yan Wang
Presenter: Qing Zhang, East China Normal University, China
- B151 (Wed-PM) **TMSE: Tri-Modal Survival Estimation with Context-aware Tissue Prototype and Attention-Entropy Interaction**
Authors: Ruofan Zhang, Mengjie Fang, Shengyuan Liu, Zipei Wang, Jie Tian, Di Dong
Presenter: Ruofan Zhang, CAS Key Laboratory of Molecular Imaging, Institute of Automation, Chinese Academy of Sciences, China
- B156 (Wed-PM) **MiCo: Multiple Instance Learning with Context-Aware Clustering for Whole Slide Image Analysis**
Authors: Junjian Li, Jin Liu, Hulin Kuang, Hailin Yue, Mengshen He, Jianxin Wang
Presenter: Junjian Li, Central South University, China
- B161 (Wed-PM) **Top-Down Attention-based Multiple Instance Learning for Whole Slide Image Analysis**
Authors: Daniel Reisenbüchler, Ruining Deng, Christian Matek, Friedrich Feuerhake, Dorit Merhof
Presenter: Daniel Reisenbüchler, University of Regensburg, Germany
- B166 (Wed-PM) **MambaMER: Adaptive EEG-Guided Multimodal Emotion Recognition with Mamba**
Authors: Xiangle Ping, Wenhui Huang, Yuanjie Zheng
Presenter: Wenhui Huang, Shandong Normal University, China
- B171 (Wed-PM) **Location-Aware Parameter Fine-Tuning for Multimodal Image Segmentation**
Authors: Sicong Gao, Maurice Pagnucco, Yang Song
Presenter: Yang Song, The University of New South Wales, Australia
- B176 (Wed-PM) **SAMASK-CLTR : A spatial-aware mask guided learning model for benign and malignant tumor classification in ABUS**
Authors: Peirong Xu, Luoqian Zhu, Jingkun Chen, Xin Qian, Yue Sun, Lingyun Bao, Tao Tan
Presenter: Peirong Xu, Macao Polytechnic University, China
- B181 (Wed-PM) **A Composite Alignment-Aware Framework for Myocardial Lesion Segmentation in Multi-sequence CMR Images**
Authors: Yifan Gao, Shaohao Rui, Haoyang Su, Jinyi Xiang, Lianming Wu, Xiaosong Wang
Presenter: Yifan Gao, University of Science and Technology of China, China
- B186 (Wed-PM) **Small Lesions-aware Bidirectional Multimodal Multiscale Fusion Network for Lung Disease Classification**
Authors: Jianxun Yu, Ruiquan Ge, Zhipeng Wang, Cheng Yang, Chenyu Lin, Xianjun Fu, Jikui Liu, Ahmed Elazab, Changmiao Wang
Presenter: Jikui Liu, Shenzhen Polytechnic University, China
- B191 (Wed-PM) **Knowledge Bridges the Intent Gap: Contextual Fusion in Medical Fine-Grained Segmentation**
Authors: Hengyuan Zhang, Peng Qiao, Wenyu Li, Yan Jia, Yong Dou
Presenter: Hengyuan Zhang, National University of Defense Technology, China

- B196 (Wed-PM) **CENet: Context Enhancement Network for Medical Image Segmentation**
Authors: Afshin Bozorgpour, Sina Ghorbani Kolahi, Reza Azad, Ilker Hacihaliloglu, Dorit Merhof
Presenter: Afshin Bozorgpour, University of Regensburg, Germany
- B201 (Wed-PM) **Predicting Femoral Head Collapse Risk in Osteonecrosis Using Label Tokenization: A Multi-Modality Survival Analysis Approach**
Authors: Ganping Li, Yoshito Otake, Yuito Kameda, Keisuke Uemura, Kazuma Takashima, Hirokazu Mae, Sotaro Kono, Hidetoshi Hamada, Seiji Okada, Nobuhiko Sugano, Yoshinobu Sato
Presenter: Yoshinobu Sato, Nara Medical University, Japan
- B206 (Wed-PM) **Anatomy-Aware Frequency-Attention Transformer Networks for Liver Couinaud CT/MR Segmentation**
Authors: Wenkang Fan, Hao Fang, Rui Li, Yanduan Lin, Chao An, Xiongbiao Luo
Presenter: Wenkang Fan, Xiamen University, China
- B211 (Wed-PM) **Self-Supervised Multiview Xray Matching**
Authors: Mohamad Dabboussi, Malo Huard, Yann Gousseau, Pietro Gori
Presenter: Mohamad Dabboussi, Milvue - Telecom Paris, France
- B216 (Wed-PM) **Time-Contrastive Pretraining for In-Context Image and Video Segmentation**
Authors: Assefa Wahd, Jacob Jaremko, Abhilash Hareendranathan
Presenter: Assefa Wahd, University of Alberta, Canada
- B221 (Wed-PM) **EEG-DINO: Learning EEG Foundation Models via Hierarchical Self-Distillation**
Authors: Xujia Wang, Xuhui Liu, Xi Liu, Qian Si, Zhaoliang Xu, Yang Li, Xiantong Zhen
Presenter: Xujia Wang, United Imaging Healthcare, Co., Ltd, China
- B226 (Wed-PM) **Diffusion-based Virtual Staining from Polarimetric Mueller Matrix Imaging**
Authors: Xiaoyu Zheng, Jing Wen, Jiaxin Zhuang, Yao Du, Jing Cong, Limei Guo, Lin Luo, Chao He, Hao Chen
Presenter: Xiaoyu Zheng, Hong Kong University of Science and Technology, Hong Kong SAR
- B231 (Wed-PM) **Meta-Learning Physics-Informed Neural Networks for Personalized Cardiac Modeling**
Authors: Maryam Toloubidokhti, Ryan Missel, Shichang Lian, Linwei Wang
Presenter: Linwei Wang, Rochester Institute of Technology, United States
- B236 (Wed-PM) **Hierarchical Self-Supervised Adversarial Training for Robust Vision Models in Histopathology**
Authors: Hashmat Shadab Malik, Shahina Kunhimon, Muzammal Naseer, Fahad Shahbaz Khan, Salman Khan
Presenter: Hashmat Shadab Malik, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates
- B241 (Wed-PM) **CATVis: Context-Aware Thought Visualization**
 Paper Highlight
Authors: Tariq Mehmood, Hamza Ahmad, Muhammad Haroon Shakeel, Murtaza Taj
Presenter: Hamza Ahmad, Forman Christian College University, Pakistan

- B246 (Wed-PM) **PDF-Net: Prototype-Aware Dynamic Fusion Network for Nasopharyngeal Carcinoma T-staging Classification with Epstein-Barr Virus DNA**
Authors: Wantong Lu, Xu Han, Yibo Wei, Zanting Ye, Lijun Lu
Presenter: Wantong Lu, Southern Medical University, China
- B251 (Wed-PM) **Attention-Guided Vector Quantized Variational Autoencoder for Brain Tumor Segmentation**
Authors: Danish Ali, Ajmal Mian, Naveed Akhtar, Ghulam Mubashar Hassan
Presenter: Danish Ali, The University of Western Australia, Australia
- B256 (Wed-PM) **Frequency-enhanced Multi-granularity Context Network for Efficient Vertebrae Segmentation**
Authors: Jian Shi, Tianqi You, Pingping Zhang, Hongli Zhang, Rui Xu, Haojie Li
Presenter: Jian Shi, Dalian University of Technology, China
- B261 (Wed-PM) **IKAN: Interactive KAN with Modulation Fusion for Medical Image Segmentation**
Authors: Sihan Liu, Tonghua Wan, Yuxin Cai, Shengcai Chen, Bo Hu, Yan Wan, Wu Qiu
Presenter: Sihan Liu, Huazhong University of Science and Technology, China
- B266 (Wed-PM) **Wavelet-driven Decoupling and Physics-informed Mapping Network for Accelerated Multi-parametric MR Imaging**
Authors: Ruilong Dan, Kaicong Sun, Yichen Zhou, Minqiang Jia, Yuxuan Liu, Han Zhang, Xiaopeng Zong, Dinggang Shen
Presenter: Ruilong Dan, ShanghaiTech University, China
- B271 (Wed-PM) **Pre-to-Post Operative MRI Generation with Retrieval-based Visual In-Context Learning**
Authors: Bogyeong Kang, Sang-Jun Park, Minjoo Lim, Myeongkyun Kang, Keun-Soo Heo, Ji-Hye Oh, Hyun Jung Lee, Tae-Eui Kam
Presenter: Bogyeong Kang, Korea University, Republic of Korea
- B276 (Wed-PM) **Physics-Informed Neural ODEs for Temporal Dynamics Modeling in Cardiac T1 Mapping**
Authors: Nuno Capitão, Yi Zhang, Yidong Zhao, Qian Tao
Presenter: Nuno Capitão, University of Porto, Portugal
- B281 (Wed-PM) **CBrain: Cross-Modal Learning for Brain Vigilance Detection in Resting-State fMRI**
Authors: Chang Li, Yamin Li, Haatef Pourmotabbed, Shengchao Zhang, Jorge A. Salas, Sarah E. Goodale, Roza G. Bayrak, Catie Chang
Presenter: Sarah E. Goodale, Vanderbilt University, United States
- B286 (Wed-PM) **RegScore: Scoring Systems for Regression Tasks**
Authors: Michal K. Grzeszczyk, Tomasz Szczepański, Pawel Renc, Siyeop Yoon, Jerome Charton, Tomasz Trzciński, Arkadiusz Sitek
Presenter: Michal K. Grzeszczyk, Sano Centre for Computational Medicine, Poland
- B291 (Wed-PM) **Surface Vision Mamba: Leveraging Bidirectional State Space Model for Efficient Spherical Manifold Representation**
Authors: Rongzhao He, Weihao Zheng, Leilei Zhao, Ying Wang, Dalin Zhu, Dan Wu, Bin Hu
Presenter: Rongzhao He, Lanzhou University, China

- B296 (Wed-PM) **You Can Detect It: Fetal Biometric Estimation Using Ellipse Detection**
Authors: Hongyuan Zhang, Haoyu Xie, Tingting Ye, Songxiong Wu
Presenter: Hongyuan Zhang, Hong Kong Institute of Science & Innovation, Hong Kong SAR
- B301 (Wed-PM) **Non-Invasive TB Detection using Acoustic and Semantic Features from Cough Sounds**
Authors: Yasmeena Akhter, Rishabh Ranjan, Bikash Dutta, Mayank Vatsa, Richa Singh
Presenter: Yasmeena Akhter, Indian Institute of Technology Jodhpur, India
- B306 (Wed-PM) **MSGFlowNet: Learning Effective Connectivity Network based on Sparse Generative Flow Network from fMRI and EEG Data**
Authors: Zhihao Su, Jihao Zhai, Junzhong Ji, Jinduo Liu
Presenter: Jinduo Liu, Beijing University of Technology, China
- B311 (Wed-PM) **RIFNet: Bridging Modalities for Accurate and Detailed Ocular Disease Analysis**
Authors: Yuqing Li, Qingshan Hou, Peng Cao, Jianguo Ju, Tianqi Wang, Meng Wang, Ke Zou, Yih Chung Tham, Huazhu Fu, Osmar R. Zaiane
Presenter: Osmar Zaiane, Northeastern University, China
- B316 (Wed-PM) **DCKAN: A Dual-Coordinate KAN Framework for Fibrous Cap Segmentation on Carotid OCT**
Authors: Tonghua Wan, Sihan Liu, Yuxin Cai, Shengcai Chen, Yan Wan, Bo Hu, Wu Qiu
Presenter: Wu Qiu, Huazhong University of Science and Technology, China
- B321 (Wed-PM) **A Multimodal Contrastive Learning for Detecting Aortic Dissection on 3D Non-Contrast CT with Anatomy Simplification**
 Paper Highlight *Authors: Duoer Zhang, Wenbo Xiao, Chen Jiang, Yuxuan Qiu, Zhan Feng, Hong Wang, Yefeng Zheng, Wentao Zhu*
Presenter: Duoer Zhang, Zhejiang Lab, China
- B326 (Wed-PM) **MedGround-R1: Advancing Medical Image Grounding via Spatial-Semantic Rewarded Group Relative Policy Optimization**
 Paper Highlight *Authors: Huihui Xu, Yuanpeng Nie, Hualiang Wang, Ying Chen, Wei Li, Junzhi Ning, Lihao Liu, Hongqiu Wang, Lei Zhu, Jiyao Liu, Xiaomeng Li, Junjun He*
Presenter: Huihui Xu, Shanghai AI Lab, China
- B331 (Wed-PM) **Adaptive Embedding for Long-Range High-Order Dependencies via Time-Varying Transformer on fMRI**
Authors: Rundong Xue, Xiangmin Han, Hao Hu, Zeyu Zhang, Shaoyi Du, Yue Gao
Presenter: Rundong Xue, Xi'an Jiaotong University, China
- B336 (Wed-PM) **MM-DINOv2: Adapting Foundation Models for Multi-Modal Medical Image Analysis**
Authors: Daniel Scholz, Ayhan Can Erdur, Viktoria Ehm, Anke Meyer-Baese, Jan C. Peeken, Daniel Rueckert, Benedikt Wiestler
Presenter: Daniel Scholz, Technical University of Munich, Germany

C1 (Wed-PM)	WSI-Agents: A Collaborative Multi-Agent System for Multi-Modal Whole Slide Image Analysis
Paper Highlight	<i>Authors: Xinheng Lyu, Yuci Liang, Wenting Chen, Meidan Ding, Jiaqi Yang, Guolin Huang, Daokun Zhang, Xiangjian He, Linlin Shen</i> <i>Presenter: Xinheng Lyu, University of Nottingham Ningbo China, China</i>
C6 (Wed-PM)	Location-Guided Automated Lesion Captioning in Whole-body PET/CT Images
	<i>Authors: Mingyang Yu, Yaozong Gao, Yiran Shu, Yanbo Chen, Jingyu Liu, Caiwen Jiang, Kaicong Sun, Zhiming Cui, Weifang Zhang, Yiqiang Zhan, Xiang Sean Zhou, Shaonan Zhong, Xinlu Wang, Meixin Zhao, Dinggang Shen</i> <i>Presenter: Mingyang Yu, ShanghaiTech University, China</i>
C11 (Wed-PM)	LesionDiffusion: Towards Text-controlled General Lesion Synthesis
	<i>Authors: Wenhui Lei, Hengrui Tian, Linrui Dai, Hanyu Chen, Xiaofan Zhang</i> <i>Presenter: Linrui Dai, National Institute of Informatics, Japan</i>
C16 (Wed-PM)	DentEval: Fine-tuning-Free Expert-Aligned Assessment in Dental Education via LLM Agents
	<i>Authors: Xinyu Deng, Vesna Miletic, Elvis Trinh, Jinlong Gao, Chang Xu, Daochang Liu</i> <i>Presenter: Xinyu Deng, The University of Sydney, Australia</i>
C21 (Wed-PM)	Explain Any Pathological Concept: Discovering Hierarchical Explanations for Pathology Foundation Models
	<i>Authors: Shuting Xu, Junlin Hou, Hao Chen</i> <i>Presenter: Shuting Xu, Nankai University, China</i>
C26 (Wed-PM)	Knowledge Tree Driven Contextualized Instruction Tuning of Foundation Models for Epilepsy Drug Recommendation
	<i>Authors: Duy Khoa Pham, Deval Mehta, Yiwen Jiang, Daniel Thom, Richard Shek-kwan Chang, Mohammad Nazem-Zadeh, Emma Foster, Timothy Fazio, Sarah Holper, Karin Verspoor, Jiahe Liu, Duong Nhu, Sarah Barnard, Terence O'Brien, Zhibin Chen, Jacqueline French, Patrick Kwan, Zongyuan Ge</i> <i>Presenter: Duy Khoa Pham, Monash University, Australia</i>
C31 (Wed-PM)	Restyled, Tuning, and Alignment: Taming VLMs for Federated Non-IID Medical Image Analysis
	<i>Authors: Shengchao Chen, Ting Shu</i> <i>Presenter: Ting Shu, Shenzhen University, China</i>
C36 (Wed-PM)	Learning Segmentation from Radiology Reports
Paper Highlight	<i>Authors: Pedro R. A. S. Bassi, Wenxuan Li, Jieneng Chen, Zheren Zhu, Tianyu Lin, Sergio Decherchi, Andrea Cavalli, Kang Wang, Yang Yang, Alan L. Yuille, Zongwei Zhou</i> <i>Presenter: Pedro R. A. S. Bassi, University of Bologna, Italy and Johns Hopkins University, United States</i>
C41 (Wed-PM)	Vision-Amplified Semantic Entropy for Hallucination Detection in Medical Visual Question Answering
	<i>Authors: Zehui Liao, Shishuai Hu, Ke Zou, Huazhu Fu, Liangli Zhen, Yong Xia</i> <i>Presenter: Zehui Liao, Northwestern Polytechnical University, China</i>

- C46 (Wed-PM) **Cervical-RG: Automated Cervical Cancer Report Generation from 3D Multi-sequence MRI via CoT-guided Hierarchical Experts**
 Paper Highlight *Authors: Hanwen Zhang, Yu Long, Yimeng Fan, Yu Wang, Zhaoyi Zhan, Sen Wang, Yuncheng Jiang, Rui Sun, Zheng Xing, Zhen Li, Xiaohui Duan, Weibing Zhao*
Presenter: Hanwen Zhang, Beijing Institute of Technology, China
- C51 (Wed-PM) **LEAVS: An LLM-based Labeler for Abdominal CT Supervision**
 Paper Highlight *Authors: Ricardo Bigolin Lanfredi, Yan Zhuang, Mark Finkelstein, Praveen Thoppey Srinivasan Balamuralikrishna, Luke Krembs, Brandon Khoury, Arthi Reddy, Pritam Mukherjee, Neil M. Rofsky, Ronald M. Summers*
Presenter: Ricardo Bigolin Lanfredi, National Institutes of Health, United States
- C56 (Wed-PM) **MCA-RG: Enhancing LLMs with Medical Concept Alignment for Radiology Report Generation**
Authors: Qilong Xing, Zikai Song, Youjia Zhang, Na Feng, Junqing Yu, Wei Yang
Presenter: Qilong Xing, Huazhong University of Science and Technology, China
- C61 (Wed-PM) **μ 2 Tokenizer: Differentiable Multi-Scale Multi-Modal Tokenizer for Radiology Report Generation**
Authors: Siyou Li, Pengyao Qin, Huanan Wu, Dong Nie, Arun J. Thirunavukarasu, Juntao Yu, Le Zhang
Presenter: Siyou Li, Queen Mary University of London, United Kingdom
- C66 (Wed-PM) **Text-driven Multiplanar Visual Interaction for Semi-supervised Medical Image Segmentation**
Authors: Kaiwen Huang, Yi Zhou, Huazhu Fu, Yizhe Zhang, Chen Gong, Tao Zhou
Presenter: Kaiwen Huang, Nanjing University of Science and Technology, China
- C71 (Wed-PM) **CARE-VL: A Domain-Specialized Vision-Language Model for Early ASD Screening**
Authors: Cheol-Hwan Yoo, Jang-Hee Yoo, Jaeyoon Jang
Presenter: Cheol-Hwan Yoo, ETRI, Republic of Korea
- C76 (Wed-PM) **Your other Left! Vision-Language Models Fail to Identify Relative Positions in Medical Images**
Authors: Daniel Wolf, Heiko Hillenhausen, Billurvan Taskin, Alex Bäuerle, Meinrad Beer, Michael Götz, Timo Ropinski
Presenter: Daniel Wolf, Ulm University, Germany
- C81 (Wed-PM) **SimCroP: Radiograph Representation Learning with Similarity-driven Cross-granularity Pre-training**
Authors: Rongsheng Wang, Fenghe Tang, Qingsong Yao, Rui Yan, Xu Zhang, Zhen Huang, Haoran Lai, Zhiyang He, Xiaodong Tao, Zihang Jiang, S. Kevin Zhou
Presenter: Rongsheng Wang, University of Science and Technology of China, China
- C86 (Wed-PM) **Configurable Platform for Biomedical Literature Mining via Multimodal-Driven Extraction**
Authors: Xinpan Yuan, Bozhao Li, Guihu Zhao, Yueming Wang, Liujie Hua, Junhua Kuang, Jianguo Chen, Shaomin Xie, Gan Li
Presenter: Bozhao Li, Hunan University of Technology, China

- C91 (Wed-PM) **RetFiner: A Vision-Language Refinement Scheme for Retinal Foundation Models**
Authors: Ronald Fecso, José Morano, Ursula Schmidt-Erfurth, Hrvoje Bogunović
Presenter: Ronald Fecso, Medical University of Vienna, Austria
- C96 (Wed-PM) **Unleashing Vision Foundation Models for Coronary Artery Segmentation: Parallel ViT-CNN Encoding and Variational Fusion**
Authors: Caixia Dong, Duwei Dai, Xinyi Han, Fan Liu, Xu Yang, Zongfang Li, Songhua Xu
Presenter: Caixia Dong, The Second Affiliated Hospital of Xi'an Jiaotong University, China
- C101 (Wed-PM) **Historical Report Guided Bi-modal Concurrent Learning for Pathology Report Generation**
 Paper Highlight *Authors: Ling Zhang, Boxiang Yun, Qingli Li, Yan Wang*
Presenter: Ling Zhang, East China Normal University, China
- C106 (Wed-PM) **Medical Large Vision Language Models with Multi-Image Visual Ability**
Authors: Xikai Yang, Juzheng Miao, Yuchen Yuan, Jiaze Wang, Qi Dou, Jinpeng Li, Pheng-Ann Heng
Presenter: Xikai Yang, The Chinese University of Hong Kong, Hong Kong SAR
- C111 (Wed-PM) **Delving into Out-of-Distribution Detection with Medical Vision-Language Models**
Authors: Lie Ju, Sijin Zhou, Yukun Zhou, Huimin Lu, Zhuoting Zhu, Pearse A. Keane, Zongyuan Ge
Presenter: Lie Ju, Monash University, Australia
- C116 (Wed-PM) **MVP-LLMs: Optimizing Intervention Timing and Subsequent Decision Support for Mechanical Ventilation Parameter Control Using Large Language Models**
Authors: Teqi Hao, Xiaoyu Tan, Bin Li, Xuemin Wang, Chao Qu, Yinghui Xu, Xihe Qiu
Presenter: Teqi Hao, Shanghai University of Engineering Science, China
- C121 (Wed-PM) **Continual Retinal Vision-Language Pre-training upon Incremental Imaging Modalities**
Authors: Yang Yao, Ruiqi Wu, Yi Zhou, Tao Zhou
Presenter: Yang Yao, Southeast University, China
- C126 (Wed-PM) **MAKE: Multi-Aspect Knowledge-Enhanced Vision-Language Pretraining for Zero-shot Dermatological Assessment**
Authors: Siyuan Yan, Xieji Li, Ming Hu, Yiwen Jiang, Zhen Yu, Zongyuan Ge
Presenter: Siyuan Yan, Monash University, Australia
- C131 (Wed-PM) **Hierarchical Vision-Language Learning for Medical Out-of-Distribution Detection**
Authors: Runhe Lai, Xinhua Lu, Kanghao Chen, Qichao Chen, Wei-Shi Zheng, Ruixuan Wang
Presenter: Runhe Lai, Sun Yat-sen University, China
- C136 (Wed-PM) **Fair-MoE: Medical Fairness-Oriented Mixture of Experts in Vision-Language Models**
Authors: Peiran Wang, Linjie Tong, Jian Wu, Jiayang Liu, Zuozhu Liu
Presenter: Linjie Tong, University of Illinois Urbana-Champaign, United States
- C141 (Wed-PM) **HiLa: Hierarchical Vision-Language Collaboration for Cancer Survival Prediction**
Authors: Jiaqi Cui, Lu Wen, Yuchen Fei, Bo Liu, Luping Zhou, Dinggang Shen, Yan Wang
Presenter: Jiaqi Cui, Sichuan University, China

- C146 (Wed-PM) **RadIR: A Scalable Framework for Multi-Grained Medical Image Retrieval via Radiology Report Mining**
Authors: Tengfei Zhang, Ziheng Zhao, Chaoyi Wu, Xiao Zhou, Ya Zhang, Yanfeng Wang, Weidi Xie
Presenter: Ziheng Zhao, Shanghai Jiao Tong University, China
- C151 (Wed-PM) **V2T-CoT: From Vision to Text Chain-of-Thought for Medical Reasoning and Diagnosis**
Authors: Yuan Wang, Jiaxiang Liu, Shujian Gao, Bin Feng, Zhihang Tang, Xiaotang Gai, Jian Wu, Zuozhu Liu
Presenter: Yuan Wang, Zhejiang University, China
- C156 (Wed-PM) **PromptReg: Universal Medical Image Registration via Task Prompt Learning and Domain Knowledge Transfer**
Authors: Housheng Xie, Xiaoru Gao, Guoyan Zheng
Presenter: Housheng Xie, Shanghai Jiao Tong University, China
- C161 (Wed-PM) **RAPTOR: Generative AI for Parsing Colorectal Cancer Referrals to Streamline Faster Diagnostic Standard Pathways**
 Paper Highlight *Authors: Sofiat Abioye, Shazad Ashraf, Junaid Qadir, Adam Byfield, Anusha Jose, William Poulett, Ben Wallace, Adil Butt, Colm Forde, Marcus Mottershead, Simon Fallis, Andrew Beggs, Aneel Bhangu, Lukman Akanbi, Muhammad Bilal*
Presenter: Sofiat Abioye, Birmingham City University, United Kingdom
- C166 (Wed-PM) **RRG-DPO: Direct Preference Optimization for Clinically Accurate Radiology Report Generation**
 Paper Highlight *Authors: Hong Liu, Dong Wei, Zhe Xu, Xian Wu, Yefeng Zheng, Liansheng Wang*
Presenters: Hong Liu, Xiamen University, China and Zhe Liu, The Chinese University of Hong Kong, Hong Kong SAR
- C171 (Wed-PM) **Interactive Segmentation and Report Generation for CT Images**
Authors: Yannian Gu, Wenhui Lei, Hanyu Chen, Shaoting Zhang, Xiaofan Zhang
Presenter: Xiaofan Zhang, Shanghai Jiao Tong University, China
- C176 (Wed-PM) **PedCLIP: A Vision-Language model for Pediatric X-rays with Mixture of Body part Experts**
Authors: Ta Duc Huy, Abin Shoby, Sen Tran, Yutong Xie, Qi Chen, Phi Le Nguyen, Akshay Gole, Lingqiao Liu, Antonios Perperidis, Mark Friswell, Rebecca Linke, Andrea Glynn, Minh-Son To, Anton van den Hengel, Johan Verjans, Zhibin Liao, Minh Hieu Phan
Presenter: Ta Duc Huy, The University of Adelaide, Australia
- C181 (Wed-PM) **MAARTA: Multi-Agent Adaptive Radiology Teaching Assistant**
Authors: Akash Awasthi, Brandon V. Chung, Anh M. Vu, Ngan Le, Rishi Agrawal, Zhigang Deng, Carol Wu, Hien V. Nguyen
Presenter: Akash Awasthi, University of Houston, United States
- C186 (Wed-PM) **Adapting Vision Foundation Models for Real-time Ultrasound Image Segmentation**
 Paper Highlight *Authors: Xiaoran Zhang, Eric Z. Chen, Lin Zhao, Xiao Chen, Yikang Liu, Boris Maihe, James S. Duncan, Terrence Chen, Shanhui Sun*
Presenter: Shanhui Sun, United Imaging Intelligence, United States

- C191 (Wed-PM) **OpenPath: Open-Set Active Learning for Pathology Image Classification via Pre-trained Vision-Language Models**
Authors: Lanfeng Zhong, Xin Liao, Shichuan Zhang, Shaoting Zhang, Guotai Wang
Presenter: Lanfeng Zhong, University of Electronic Science and Technology of China, China
- C196 (Wed-PM) **ITAdaptor: Image-Tag Adapter Framework with Knowledge Enhancement for Radiology Report Generation**
Authors: Shuaipeng Ding, Mengnan Fan, Mingyong Li, Chao Wang
Presenter: Mengnan Fan, Chongqing Normal University, China
- C201 (Wed-PM) **TRRG: Towards Truthful Radiology Report Generation With Cross-modal Disease Clue Enhanced Large Language Models**
 Paper Highlight *Authors: Yuhao Wang, Yue Sun, Tao Tan, Chao Hao, Yawen Cui, Xinqi Su, Weichen Xie, Linlin Shen, Zitong Yu*
Presenter: Yuhao Wang, University of Science and Technology of China, China
- C206 (Wed-PM) **Contrastive Knowledge-Guided Large Language Models for Medical Report Generation**
Authors: Yuyang Sha, Hongxin Pan, Weiyu Meng, Kefeng Li
Presenter: Yuyang Sha, Macao Polytechnic University, Macao SAR
- C211 (Wed-PM) **Confidence Calibration for Multimodal LLMs: An Empirical Study through Medical VQA**
Authors: Yuetian Du, Yucheng Wang, Ming Kong, Tian Liang, Qiang Long, Bingdi Chen, Qiang Zhu
Presenter: Yuetian Du, Zhejiang University, China
- C216 (Wed-PM) **Exploring Text-enhanced Mixture-of-Experts for Semi-supervised Medical Image Segmentation with Composite Data**
Authors: Qingjie Zeng, Huan Luo, Xinke Ma, Zilin Lu, Yang Hu, Yong Xia
Presenter: Qingjie Zeng, Northwestern Polytechnical University, China
- C221 (Wed-PM) **Robust Sleep Stage Prediction from Electroencephalogram with Label Noise Using Multimodal Large Language Models**
Authors: Xihe Qiu, Chen Zhan, Gengchen Ma, Jingjing Huang, Xiaoyu Tan
Presenter: Chen Zhan, Shanghai University of Engineering Science, China
- C226 (Wed-PM) **Revisiting Automatic Data Curation for Vision Foundation Models in Digital Pathology**
Authors: Boqi Chen, Cédric Vincent-Cuaz, Lydia A. Schoenpflug, Manuel Madeira, Lisa Fournier, Vaishnavi Subramanian, Sonali Andani, Samuel Ruiperez-Campillo, Julia E. Vogt, Raphaëlle Luisier, Dorina Thanou, Viktor H. Koelzer, Pascal Frossard, Gabriele Campanella, Gunnar Rätsch
Presenter: Boqi Chen, ETH Zurich, Switzerland
- C231 (Wed-PM) **ViTAL-CT: Vision Transformers for High-Risk Plaque Classification in Coronary CTA**
Authors: Anjie Le, Jin Zheng, Tan Gong, Quanlin Sun, Jonathan Weir-McCall, Declan P. O'Regan, Michelle C. Williams, David E. Newby, James H. F. Rudd, Yuan Huang
Presenter: Jin Zheng, Imperial College London, United Kingdom

- C236 (Wed-PM) **AdFair-CLIP: Adversarial Fair Contrastive Language-Image Pre-training for Chest X-rays**
Authors: Chenlang Yi, Zizhan Xiong, Qi Qi, Xiyuan Wei, Girish Bathla, Ching-Long Lin, Bobak J. Mortazavi, Tianbao Yang
Presenter: Tianbao Yang, Associate Professor, United States
- C241 (Wed-PM) **CLIP-DSA: Textual Knowledge-Guided Cerebrovascular Diseases Recognition in Multi-View Digital Subtraction Angiography**
Authors: Qihang Xie, Dan Zhang, Mengting Liu, Jianwei Zhang, Ruisheng Su, Caifeng Shan, Jiong Zhang
Presenter: Jiong Zhang, Ningbo Institute of Materials Technology & Engineering, Chinese Academy of Sciences, China
- C246 (Wed-PM) **FunBench: Benchmarking Fundus Reading Skills of MLLMs**
Authors: Qijie Wei, Kaiheng Qian, Xirong Li
Presenter: Qijie Wei, Renmin University of China, China
- C251 (Wed-PM) **TextBraTS: Text-Guided Volumetric Brain Tumor Segmentation with Innovative Dataset Development and Fusion Module Exploration**
Authors: Xiaoyu Shi, Rahul Kumar Jain, Yinhao Li, Ruibo Hou, Jingliang Cheng, Jie Bai, Guohua Zhao, Lanfen Lin, Rui Xu, Yen-wei Chen
Presenter: Xiaoyu Shi, Ritsumeikan University, Japan
- C256 (Wed-PM) **CoCa-CXR: Contrastive Captioners Learn Strong Temporal Structures for Chest X-Ray Vision-Language Understanding**
Authors: Yixiong Chen, Shawn Xu, Andrew Sellergren, Yossi Matias, Avinatan Hassidim, Shravya Shetty, Daniel Golden, Alan L. Yuille, Lin Yang
Presenter: Yixiong Chen, Johns Hopkins University, United States
- C261 (Wed-PM) **UniMRG: Refining Medical Semantic Understanding Across Modalities via LLM-Orchestrated Synergistic Evolution**
Authors: Hongyan Xu, Arcot Sowmya, Ian Katz, Dadong Wang
Presenter: Hongyan Xu, The University of New South Wales, Australia
- C266 (Wed-PM) **Exploring the Design Space of 3D MLLMs for CT Report Generation**
Authors: Mohammed Baharoon, Jun Ma, Congyu Fang, Augustin Toma, Bo Wang
Presenter: Mohammed Baharoon, Harvard University, United States
- C271 (Wed-PM) **LTSE: Language-guided Tissue Referring Segmentation in Pathology Images with Adaptive Expert Mixture**
Authors: Jiao Tang, Bo Qian, Peng Wan, Wei Shao, Daoqiang Zhang
Presenter: Jiao Tang, Nanjing University of Aeronautics and Astronautics, China
- C276 (Wed-PM) **DGHFA: Dynamic Gradient and Hierarchical Feature Alignment for Robust Distillation of Medical VLMs**
Authors: Boyi Xiao, Jianghao Wu, Lanfeng Zhong, Xiaoguang Zou, Yuanquan Wu, Guotai Wang, Shaoting Zhang
Presenter: Boyi Xiao, University of Science and Technology of China and Shanghai Artificial Intelligence Laboratory, China

- C281 (Wed-PM) **Geometry-Guided Local Alignment for Multi-View Visual Language Pre-Training in Mammography**
Authors: Yuexi Du, Lihui Chen, Nicha C. Dvornek
Presenter: Yuexi Du, Yale University, United States
- C286 (Wed-PM) **PATE: Enhancing Few-Shot Pathological Image Classification via Prompt-Based Text-Image Embedding Adaptation**
 Paper Highlight *Authors: Shenghao Chen, Zhen Huang, Xiaoqian Zhou, Han Li, Chunjiang Wang, S. Kevin Zhou*
Presenter: Zhen Huang, University of Science and Technology of China, China
- C291 (Wed-PM) **Pathology Report Generation and Multimodal Representation Learning for Cutaneous Melanocytic Lesions**
Authors: Ruben T. Lucassen, Sander P. J. Moonemans, Tijn van de Luijngaarden, Gerben E. Breimer, Willeke A. M. Blokx, Mitko Veta
Presenter: Ruben Lucassen, University Medical Center Utrecht, The Netherlands
- C296 (Wed-PM) **From Slices to Volumes: Multi-Scale Fusion of 2D and 3D Features for CT Scan Report Generation**
Authors: Abdullah Hosseini, Ahmed Ibrahim, Ahmed Serag
Presenter: Abdullah Hosseini, Weill Cornell Medicine - Qatar, Qatar
- C301 (Wed-PM) **Tumor Microenvironment-Guided Fine-Tuning of Pathology Foundation Models for Esophageal Squamous Cell Carcinoma Immunotherapy Response Prediction**
Authors: Yixuan Lin, Weiping Lin, Chenxu Guo, Xinxin Yang, Hongxue Meng, Liansheng Wang
Presenter: Yixuan Lin, Xiamen University, China
- C306 (Wed-PM) **MOTOR: Multimodal Optimal Transport via Grounded Retrieval in Medical Visual Question Answering**
Authors: Mai A. Shaaban, Tausifa Jan Saleem, Vijay Ram Kumar Papineni, Mohammad Yaqub
Presenter: Mai A. Shaaban, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates
- C311 (Wed-PM) **Med-LEGO: Editing and Adapting toward Generalist Medical Image Diagnosis**
Authors: Yitao Zhu, Yuan Yin, Jiaming Li, Mengjie Xu, Zihao Zhao, Honglin Xiong, Sheng Wang, Qian Wang
Presenter: Yitao Zhu, ShanghaiTech University, China
- C316 (Wed-PM) **RetSTA: An LLM-Based Approach for Standardizing Clinical Fundus Image Reports**
Authors: Jiushen Cai, Weihang Zhang, Hanruo Liu, Ningli Wang, Huiqi Li
Presenter: Jiushen Cai, Beijing Institute of Technology, China
- C321 (Wed-PM) **Eliminating Language Bias for Medical Visual Question Answering with Counterfactual Contrastive Training**
Authors: Xingyu Wan, Qiaoying Teng, Jun Chen, Yonghan Lu, Deqi Yuan, Zhe Liu
Presenter: Qiaoying Teng, Jiangsu University, China

- C326 (Wed-PM) **Bridging Radiological Images and Factors with Vision-Language Model for Accurate Diagnosis of Proliferative Hepatocellular Carcinoma**
Authors: Yanyan Huang, Wanli Zhang, Peixiang Huang, Yu Fu, Ruimeng Yang, Lequan Yu
Presenter: Yanyan Huang, The University of Hong Kong, Hong Kong SAR
- C331 (Wed-PM) **Radar-Based Imaging for Sign Language Recognition in Medical Communication**
Authors: Raffaele Mineo, Gaia Caligiore, Federica Proietto Salanitri, Isaak Kavasidis, Senya Polikovsky, Sabina Fontana, Egidio Ragonese, Concetto Spampinato, Simone Palazzo
Presenter: Raffaele Mineo, University of Catania, Italy
- C336 (Wed-PM) **Semantic-Aware Chest X-ray Report Generation with Domain-Specific Lexicon and Diversity-Controlled Retrieval**
Authors: Baochang Zhang, Chen Jia, Shuting Liu, Heribert Schunkert, Nassir Navab
Presenter: Baochang Zhang, Technical University of Munich, Germany

Poster Session 2: Detection, Segmentation, and Registration / Explainability and Interpretability / Data Quality and Image Restoration

Thursday, September 25, 2025, 11:00 - 12:30

Poster Hall (DCC 2)

- | | |
|--------------------------------|--|
| A2 (Thu-AM)
Paper Highlight | <p>X-SiT: Inherently Interpretable Surface Vision Transformers for Dementia Diagnosis
 <i>Authors: Fabian Bongratz, Tom Nuno Wolf, Jaume Gual Ramon, Christian Wachinger</i>
 <i>Presenter: Fabian Bongratz, Technical University of Munich, Germany</i></p> |
| A7 (Thu-AM) | <p>Explainable ADHD Diagnostic Framework Using Weakly-Supervised Action Recognition
 <i>Authors: Ninghan Fan, Ming Kong, Jing Huang, Bingdi Chen, Qiang Zhu</i>
 <i>Presenter: Ninghan Fan, Zhejiang University, China</i></p> |
| A12 (Thu-AM) | <p>CytoSAE: Interpretable Cell Embeddings for Hematology
 <i>Authors: Muhammed Furkan Dasdelen, Hyesu Lim, Michele Buck, Katharina S. Götze, Carsten Marr, Steffen Schneider</i>
 <i>Presenter: Muhammed Furkan Dasdelen, Helmholtz Munich, Germany</i></p> |
| A17 (Thu-AM) | <p>Fusing Radiomic Features with Deep Representations for Gestational Age Estimation in Fetal Ultrasound Images
 <i>Authors: Fangyijie Wang, Yuan Liang, Sourav Bhattacharjee, Abey Campbell, Kathleen M. Curran, Guénolé Silvestre</i>
 <i>Presenter: Fangyijie Wang, University College Dublin, Ireland</i></p> |
| A22 (Thu-AM) | <p>NeuroXVocal: Detection and Explanation of Alzheimer's Disease through Non-invasive Analysis of Picture-prompted Speech
 <i>Authors: Nikolaos Ntampakis, Konstantinos Diamantaras, Ioanna Chouvarda, Magda Tsolaki, Panagiotis Sarigiannidis, Vasileios Argyriou</i>
 <i>Presenter: Nikolaos Ntampakis, International Hellenic University, Greece</i></p> |
| A27 (Thu-AM) | <p>IP-CRR: Information Pursuit for Interpretable Classification of Chest Radiology Reports
 <i>Authors: Yuyan Ge, Kwan Ho Ryan Chan, Pablo Messina, René Vidal</i>
 <i>Presenter: Pablo Messina, Pontifical Catholic University of Chile, Chile</i></p> |
| A32 (Thu-AM) | <p>Spatial regularisation for improved accuracy and interpretability in keypoint-based registration
 <i>Authors: Benjamin Billot, Ramya Muthukrishnan, Esra Abaci Turk, P. Ellen Grant, Nicholas Ayache, Hervé Delingette, Polina Golland</i>
 <i>Presenter: Benjamin Billot, Inria, Epione team, France</i></p> |
| A37 (Thu-AM) | <p>MAGNET-AD: Multitask Spatiotemporal GNN for Interpretable Prediction of PACC and Conversion Time in Preclinical Alzheimer
 <i>Authors: Salma Hassan, Mostafa Salem, Vijay Ram Kumar Papineni, Ayman Elsayed, Mohammad Yaqub</i>
 <i>Presenter: Salma Hassan, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates</i></p> |

- A42 (Thu-AM) **Prototype-Based Multiple Instance Learning for Gigapixel Whole Slide Image Classification**
Authors: Susu Sun, Dominique van Midden, Geert Litjens, Christian F. Baumgartner
Presenter: Susu Sun, University of Tübingen, Germany
- A47 (Thu-AM) **Training-free Test-time Improvement for Explainable Medical Image Classification**
Authors: Hangzhou He, Jiachen Tang, Lei Zhu, Kaiwen Li, Yanye Lu
Presenter: Hangzhou He, Peking University, China
- A52 (Thu-AM) **GeneMorphFormer: Transformer-Driven Cross-Scale Mapping from Gene Expression to Cortical Morphology**
Authors: Xiao Li, Han Zhang, Qitai Sun, Chenjie Jia, Xiaowei He, Yudan Ren
Presenter: Xiao Li, Northwest University, China
- A57 (Thu-AM) **CoPA: Hierarchical Concept Prompting and Aggregating Network for Explainable Diagnosis**
Authors: Yiheng Dong, Yi Lin, Xin Yang
Presenter: Yiheng Dong, Huazhong University of Science and Technology, China
- A62 (Thu-AM) **Interpretable fMRI Captioning via Contrastive Learning**
Authors: Vyacheslav Shen, Kassymzhomart Kunanbayev, Donggon Jang, Daeshik Kim
Presenter: Kassymzhomart Kunanbayev, Korea Advanced Institute of Science & Technology, Republic of Korea
- A67 (Thu-AM) **E-BayesSAM: Efficient Bayesian Adaptation of SAM with Self-Optimizing KAN-Based Interpretation for Uncertainty-Aware Ultrasonic Segmentation**
Authors: Bin Huang, Zhong Liu, Huiying Wen, Bingsheng Huang, Xin Chen, Shuo Li
Presenter: Bin Huang, Shenzhen University, China
- A72 (Thu-AM) **Latent Motion Profiling for Annotation-free Cardiac Phase Detection in Adult and Fetal Echocardiography Videos**
Authors: Yingyu Yang, Qianye Yang, Kangning Cui, Can Peng, Elena D'Alberty, Netzahualcoyotl Hernandez-Cruz, Olga Patey, Aris T. Papageorghiou, J. Alison Noble
Presenter: Yingyu Yang, University of Oxford, United Kingdom
- A77 (Thu-AM) **PolarDETR: Enhancing Interpretability in Multi-modal Methods for Jawbone Lesion Detection in CBCT**
Authors: Yuxuan Yang, Chen Zhong, Xinyue Zhang, Ruohan Ma, Gang Li, Yong Guo, Jupeng Li
Presenter: Yuxuan Yang, Beijing Jiaotong University, China
- A82 (Thu-AM) **Separable tissue representations for attributable risk prediction**
Authors: Victor Wählstrand, Jennifer Alvé, Lisa Johansson, Kristian Axelsson, Mattias Lorentzon, Ida Häggström
Presenter: Victor Wählstrand, Chalmers University of Technology, Sweden

- A87 (Thu-AM) **Unpaired Multi-Site Brain MRI Harmonization with Image Style-Guided Latent Diffusion**
Authors: Mengqi Wu, Minhui Yu, Weili Lin, Pew-Thian Yap, Mingxia Liu
Presenter: Qianqian Wang, University of North Carolina at Chapel Hill, United States
- A92 (Thu-AM) **Patient-specific radiomic feature selection with reconstructed healthy persona of knee MR images**
Authors: Yaxi Chen, Simin Ni, Shaheer U. Saeed, Aleksandra Ivanova, Rikin Hargunani, Jie Huang, Chaozong Liu, Yipeng Hu
Presenter: Yaxi Chen, University College London, United Kingdom
- A97 (Thu-AM) **Fine-tuning Vision Language Models with Graph-based Knowledge for Explainable Medical Image Analysis**
Authors: Chenjun Li, Laurin Lux, Alexander H. Berger, Martin J. Menten, Mert R. Sabuncu, Johannes C. Paetzold
Presenter: Johannes Paetzold, Weill Cornell Medicine, United States
- A107 (Thu-AM) **Disentangled and Interpretable Multimodal Attention Fusion for Cancer Survival Prediction**
Authors: Aniek Eijpe, Soufyan Lakbir, Melis Erdal Cesur, Sara P. Oliveira, Sanne Abeln, Wilson Silva
Presenter: Aniek Eijpe, Utrecht University, The Netherlands
- A112 (Thu-AM) **LLM-Powered Cross-Modal Alignment for Explainable Seizure Detection from EEG**
Authors: Maryam Riazi, Deeksha M. Shama, Archana Venkataraman
Presenter: Deeksha M. Shama, Johns Hopkins University, United States
- A117 (Thu-AM) **One For All: A Unified Approach to Classification and Self-Explanation**
Authors: Mehdi Naouar, Yannick Vogt, Joschka Boedecker, Gabriel Kalweit, Maria Kalweit
Presenter: Mehdi Naouar, University of Freiburg, Germany
- A122 (Thu-AM) **ProgreSpine: Inherently Explainable Prototypical Regression for Spine Age Estimation**
Authors: Roozbeh Bazargani, Saqib Basar, Sam Hashemi, Siavash Khallaghi
Presenter: Sam Hashemi, Prenuvo Inc., Canada
- A127 (Thu-AM) **An Anatomical Significance-Aware Architecture for Explainable Myocardial Infarction Prediction via Multi-Task Learning**
Authors: Jiachuan Peng, Marcel Beetz, Abhirup Banerjee, Min Chen, Vicente Grau
Presenter: Jiachuan Peng, University of Oxford, United Kingdom
- A132 (Thu-AM) **Uncertainty-Supervised Interpretable and Robust Evidential Segmentation**
Authors: Yuzhu Li, An Sui, Fuping Wu, Xiahai Zhuang
Presenter: An Sui, Fudan University, China
- A137 (Thu-AM) **Flip Distribution Alignment VAE for Multi-Phase MRI Synthesis**
Authors: Xiaoyan Kui, Qianmu Xiao, Qinsong Li, Zexin Ji, Jielin Zhang, Beiji Zou
Presenter: Qianmu Xiao, Central South University, China

- A142 (Thu-AM) **Paper Highlight**
NIMOSEF: Neural implicit motion and segmentation functions
Authors: Jaume Banus, Antoine Delaloye, Pedro M. Gordaliza, Costa Georgantas, Ruud B. van Heeswijk, Jonas Richiardi
Presenter: Jaume Banus, Lausanne University Hospital, CHUV, Switzerland
- A197 (Thu-AM)
LVPNet: A Latent-variable-based Prediction-driven End-to-end Framework for Lossless Compression of Medical Images
Authors: Chenyue Song, Chen Hui, Qing Lin, Wei Zhang, Siqiao Li, Haiqi Zhu, Shengping Zhang, Zhixuan Li, Shaohui Liu, Feng Jiang, Xiang Li
Presenter: Chenyue Song, Harbin Institute of Technology, China
- A202 (Thu-AM)
End-to-End 3D Tooth Landmark Detection with Fuzzy Tooth Localization
Authors: Kaibo Shi, Hairong Jin, Youyi Zheng
Presenter: Kaibo Shi, Zhejiang University, China
- A207 (Thu-AM)
Controllable Image Synthesis Workflow for Enhancing Cervical Cell Detection
Authors: Yihuang Hu, Qi Chen, Linbo Liao, Weiping Lin, Huisi Wu, Liansheng Wang
Presenter: Yihuang Hu, Xiamen University, China
- A212 (Thu-AM)
Register Anything: Estimating “Corresponding Prompts” for Segment Anything Model
Authors: Shiqi Huang, Tingfa Xu, Wen Yan, Dean Barratt, Yipeng Hu
Presenter: Shiqi Huang, University College London, United Kingdom
- A217 (Thu-AM)
RadSAM: Segmenting 3D radiological images with a 2D promptable model
Authors: Julien Khlaout, Elodie Ferreres, Daniel Tordjman, Helene Philippe, Tom Boeken, Pierre Manceron, Corentin Dancette
Presenter: Julien Khlaout, Raidium, France
- A222 (Thu-AM)
SafeClick: Error-Tolerant Interactive Segmentation of Any Medical Volumes via Hierarchical Expert Consensus
Authors: Yifan Gao, Jiayi Sheng, Wenbin Wu, Haoyue Li, Yaoxian Dong, Chaoyang Ge, Feng Yuan, Xin Gao
Presenter: Yifan Gao, University of Science and Technology of China, China
- A227 (Thu-AM)
Spatial Prior-Guided Boundary and Region-Aware 2D Lesion Segmentation in Neonatal Hypoxic Ischemic Encephalopathy
Authors: Amog Rao, Ananya Shukla, Jia Bhargava, Yangming Ou, Rina Bao
Presenters: Amog Rao and Ananya Shukla, Plaksha University, India
- A232 (Thu-AM)
Deep Learning-based Alignment Measurement in Knee Radiographs
Authors: Zhisen Hu, Dominic Cullen, Peter Thompson, David Johnson, Chang Bian, Aleksei Tiulpin, Timothy Cootes, Claudia Lindner
Presenter: Zhisen Hu, The University of Manchester, United Kingdom
- A237 (Thu-AM)
Ambiguous Medical Image Segmentation Using Diffusion Schrödinger Bridge
Authors: Lalith Bharadwaj Baru, Kamalaker Dadi, Tapabrata Chakraborti, Raju S. Bapi
Presenter: Lalith Bharadwaj Baru, International Institute of Information Technology - Hyderabad, India

A242 (Thu-AM)	EfficientMedNeXt: Multi-Receptive Dilated Convolutions for Medical Image Segmentation
Paper Highlight	Authors: Md Mostafijur Rahman, Mustafa Munir, Radu Marculescu Presenter: Md Mostafijur Rahman, The University of Texas at Austin, United States
A247 (Thu-AM)	Probabilistic Inverse Consistent Image Registration Using Sparse Bayesian Network
	Authors: Shenglong Yang, Kangrong Xu, Zefeng He, Tianchao Feng, Xuan Yang Presenter: Shenglong Yang, Shenzhen University, China
A252 (Thu-AM)	Multimodal Prompt Sequence Learning for Interactive Segmentation of Vascular Structures
	Authors: Jongsoo Lim, Soochahn Lee Presenter: Jongsoo Lim, Kookmin University, Republic of Korea
A257 (Thu-AM)	PDC-Net: Pattern Divide-and-Conquer Network for Pelvic Radiation Injury Segmentation
Paper Highlight	Authors: Xinyu Xiong, Wuteng Cao, Zihuang Wu, Lei Zhang, Chong Gao, Guanbin Li, Qiyuan Qin Presenter: Chong Gao, Sun Yat-sen University, China
A262 (Thu-AM)	Region-Based Text-Consistent Augmentation for Multimodal Medical Segmentation
	Authors: Kunyan Cai, Chenggang Yan, Min He, Liangqiong Qu, Shuai Wang, Tao Tan Presenter: Kunyan Cai, Macao Polytechnic University, Macao SAR
A267 (Thu-AM)	PRAD: Periapical Radiograph Analysis Dataset and Benchmark Model Development
	Authors: Zhenhuan Zhou, Yuchen Zhang, Ruihong Xu, Xuansen Zhao, Tao Li Presenter: Zhenhuan Zhou, Nankai University, China
A272 (Thu-AM)	ITMatch: Arch-Guided Semi-Supervised Tooth Arrangement via Iterative Confidence Evaluation
Paper Highlight	Authors: Chengyuan Wang, Zhihui He, Li Chen, Shidong Yang, Guiyu Sun, Fan Duan, Shuo Wang, Yanheng Zhou Presenter: Chengyuan Wang, Tsinghua University, China
A277 (Thu-AM)	Bowsher prior Enhanced Unsupervised PET image Denoising
	Authors: Zhongxue Wu, Jiankai Wu, Jianan Cui, Yuanjing Feng, Zan Chen Presenter: Zhongxue Wu, Zhejiang University of Technology, China
A282 (Thu-AM)	STEAM: Self-supervised TEeth Analysis and Modeling for Point Cloud Segmentation
	Authors: Yifan Liu, Chen Yang, Weihao Yu, Xinyu Liu, Hui Chen, Max Q.-H. Meng, Yixuan Yuan Presenter: Yifan Liu, The Chinese University of Hong Kong, China
A287 (Thu-AM)	CT-Based Hippocampus Segmentation with Dual-Decoder Network (HDD-Net)
	Authors: Wonjun Son, Ji Young Lee, Sung Jun Ahn, Hyunyeol Lee Presenter: Wonjun Son, Kyungpook National University, Republic of Korea

- A292 (Thu-AM) **Is Hyperbolic Space All You Need for Medical Anomaly Detection?**
Authors: Alvaro Gonzalez-Jimenez, Simone Lionetti, Ludovic Amruthalingam, Philippe Gottfrois, Fabian Gröger, Marc Pouly, Alexander A. Navarini
Presenter: Alvaro Gonzalez-Jimenez, University Hospital of Basel, Switzerland
- A297 (Thu-AM) **Hierarchical Spatio-temporal Segmentation Network for Ejection Fraction Estimation in Echocardiography Videos**
Authors: Dongfang Wang, Jian Yang, Yizhe Zhang, Tao Zhou
Presenter: Dongfang Wang, Nanjing University of Science and Technology, China
- A302 (Thu-AM) **Generative Unsupervised Anomaly Detection with Coarse-Fine Ensemble for Workload Reduction in 3D Non-contrast Brain CT of Emergency Room**
Authors: Jongjun Won, Jihwan Kim, Joonseo Oh, Yereen Yoo, Jieun Yum, Joonsang Lee, Joon Hyung Park, Wooyoung Jo, Yoojin Nam, Hyunki Lee, Gil-sun Hong, Namkug Kim
Presenter: Jongjun Won, Asan Medican Center, Republic of Korea
- A307 (Thu-AM) **MoDiff: A Morphology-Emphasized Diffusion Model for Ambiguous Medical Image Segmentation**
Authors: Jung Su Ahn, Ki Hoon Kwak, Jung Woo Seo, Young-Rae Cho
Presenter: Ki Hoon Kwak, Yonsei University, Republic of Korea
- A312 (Thu-AM) **Harnessing EHRs for Diffusion-based Anomaly Detection on Chest X-rays**
Authors: Harim Kim, Yuhan Wang, Minkyu Ahn, Heeyoul Choi, Yuyin Zhou, Charmgil Hong
Presenter: Harim Kim, Handong Global University, Republic of Korea
- A317 (Thu-AM) **Aorta Multi-class Segmentation via Anatomically Constrained Plane Detection**
Authors: Jonghoon An, Dong Hyun Lee, So Hyun Kim, Taejin Moon, Minyoung Chung
Presenter: Jonghoon An, Soongsil University, Republic of Korea
- A322 (Thu-AM) **MTCNet: Motion and Topology Consistency Guided Learning for Mitral Valve Segmentation in 4D Ultrasound**
Authors: Rusi Chen, Yuanting Yang, Jiezhi Yao, Hongning Song, Ji Zhang, Yongsong Zhou, Yuhao Huang, Ronghao Yang, Dan Jia, Yuhan Zhang, Xing Tao, Haoran Dou, Qing Zhou, Xin Yang, Dong Ni
Presenter: Rusi Chen, Shenzhen University, China
- A327 (Thu-AM) **PFESA: FFT-based Parameter-Free Edge and Structure Attention for Medical Image Segmentation**
Authors: Mingqian Li, Zhiqian Yan, Miaoning Yan, Yaodong Liang, Qingmao Zhang, Qiongxiang Ma
Presenter: Mingqian Li, South China Normal University, China
- A332 (Thu-AM) **Gaussian Primitive Optimized Deformable Retinal Image Registration**
Authors: Xin Tian, Jiazheng Wang, Yuxi Zhang, Xiang Chen, Renjiu Hu, Gaolei Li, Min Liu, Hang Zhang
Presenter: Xin Tian, University of Oxford, United Kingdom
- A364 (Thu-AM) **Conformal Prediction for Image Segmentation Using Morphological Prediction Sets**
Authors: Luca Mossina, Corentin Friedrich
Presenter: Luca Mossina, IRT Saint Exupéry, France
- Paper Highlight

- A371 (Thu-AM) **Edge-Aware Token Halting for Efficient and Accurate Medical Image Segmentation**
Authors: Yuhao Guo, Bo Song, Heng Fan, Erkan Cheng
Presenter: Yuhao Guo, Hefei Institutes of Physical Science, Chinese Academy of Sciences, China
- A377 (Thu-AM) **Structure-Preserve Expansion for Medical Image Registration with Minimal Overlap**
Authors: Zaiyuan Liu, Yongsheng Pan, Yong Xia
Presenter: Zaiyuan Liu, Northwestern Polytechnical University, China
- B2 (Thu-AM) **Directional Adaptive Shuffle-Based Visual State-Space Models for Medical Image Restoration**
 Paper Highlight *Authors: Simon C. K. Chan, Lulin Shi, Bingxin Huang, Terence T. W. Wong*
Presenter: Simon C. K. Chan, The Hong Kong University of Science and Technology, Hong Kong SAR
- B7 (Thu-AM) **BME2: A Plug-and-Play Bridge-Based Module for Misalignment Estimation and Elimination in Multi-Scan Image Restoration**
Authors: Wenxuan Chen, Caiwen Jiang, Xiaolei Song, Dinggang Shen
Presenter: Wenxuan Chen, Tsinghua University, China
- B12 (Thu-AM) **HyperSORT: Self-Organising Robust Training with hyper-networks**
Authors: Samuel Joutard, Marijn Stollenga, Marc Balle Sanchez, Mohammad Farid Azampour, Raphael Prevost
Presenter: Samuel Joutard, ImFusion GmbH, Germany
- B17 (Thu-AM) **A Hybrid Contrastive Ordinal Regression Method for Advancing Disease Severity Assessment in Imbalanced Medical Datasets**
Authors: Afsah Saleem, Joshua R. Lewis, Syed Zulqarnain Gilani
Presenter: Afsah Saleem, Edith Cowan University, Australia
- B22 (Thu-AM) **DiffOSeg: Omni Medical Image Segmentation via Multi-Expert Collaboration Diffusion Model**
 Paper Highlight *Authors: Han Zhang, Xiangde Luo, Yong Chen, Kang Li*
Presenter: Han Zhang, Sichuan University, China
- B27 (Thu-AM) **Towards Automated Pediatric Dental Development Staging: A Dataset and Model**
 Paper Highlight *Authors: Peng Wang, Along He, Anli Wang, Zhenhuan Zhou, Xiaohang Guan, Tao Li*
Presenter: Peng Wang, Nankai University, China
- B32 (Thu-AM) **MAGO-SP: Detection and Correction of Water-Fat Swaps in Magnitude-Only VIBE MRI**
Authors: Robert Graf, Hendrik Möller, Sophie Starck, Matan Atad, Philipp Braun, Jonathan Stelter, Annette Peters, Lilian Krist, Stefan N. Willich, Henry Völzke, Robin Bülow, Tobias Pischon, Thoralf Niendorf, Johannes C. Paetzold, Dimitrios Karampinos, Daniel Rueckert, Jan Kirschke
Presenter: Robert Graf, TUM University Hospital, Germany
- B37 (Thu-AM) **Self is the Best Learner: CT-free Ultra-Low-Dose PET Organ Segmentation via Collaborating Denoising and Segmentation Learning**
Authors: Zanting Ye, Xiaolong Niu, Xu Han, Xuanbin Wu, Wantong Lu, Yijun Lu, Hao Sun, Yanchao Huang, Hubing Wu, Lijun Lu
Presenter: Zanting Ye, Southern Medical University, China

- B42 (Thu-AM) **VisNet: A Human Visual System Inspired Lightweight Dual-Path Network for Medical Images Denoising**
Authors: Hailin Yue, Hulin Kuang, Lei Ma, Jin Liu, Junjian Li, Jianhong Cheng, Jianxin Wang
Presenter: Hailin Yue, Central South University, China
- B47 (Thu-AM) **D2MAE: Diffusional Deblurring MAE for Ultrasound Image Pre-training**
Authors: Qingbo Kang, Jun Gao, Hongkai Zhao, Zhu He, Kang Li, Qicheng Lao
Presenter: Qingbo Kang, West China Hospital of Sichuan University, China
- B52 (Thu-AM) **Finer Disentanglement of Aleatoric Uncertainty Can Accelerate Chemical Histopathology Imaging**
Authors: Ji-Hun Oh, Kianoush Falahkheirkhah, Rohit Bhargava
Presenter: Ji-Hun Oh, University of Illinois Urbana-Champaign, United States
- B57 (Thu-AM) **Metastatic Lymph Node Station Classification in Esophageal Cancer via Prior-guided Supervision and Station-Aware Mixture-of-Experts**
 Paper Highlight *Authors: Haoshen Li, Yirui Wang, Qinji Yu, Jie Zhu, Ke Yan, Dazhou Guo, Le Lu, Bin Dong, Li Zhang, Xianghua Ye, Qifeng Wang, Dakai Jin*
Presenter: Haoshen Li, Peking University, China
- B62 (Thu-AM) **NQNN: Noise-aware Quantum Neural Networks for Medical Image Classification**
Authors: Maqsudur Rahman, Jun Zhuang
Presenter: Maqsudur Rahman, Boise State University, United States
- B67 (Thu-AM) **MRI Motion Artifact Correction via Frequency-Assisted Artifact Disentanglement and Confidence-Guided Knowledge Distillation**
Authors: Jiazhen Wang, Heran Yang, Yizhe Yang, Jian Sun
Presenter: Jiazhen Wang, Xi'an Jiaotong University, China
- B72 (Thu-AM) **BayeSMM: Robust Deep Combined Computing Tackling Heavy-tailed Distribution in Medical Images**
 Paper Highlight *Authors: Yuanye Liu, Ruoxuan Zhen, Shangqi Gao, Xinzhe Luo, Xin Gao, Qingchao Chen, Xiahai Zhuang*
Presenter: Yuanye Liu, Fudan University, China
- B77 (Thu-AM) **Path Signature Features Revealed SSRI-Induced White Matter Morphological Reorganization in Depressions**
Authors: Jiaolong Qin, Weihong Dong, Huangjing Ni, Zhijian Yao, Qing Lu, Ye Wu
Presenter: Ye Wu, Nanjing University of Science and Technology, China
- B82 (Thu-AM) **MorphoBoost: Morphology-Driven Boundary Enhancement Model for Accurate Segmentation of Langerhans Cells in Corneal Confocal Microscopy Images**
 Paper Highlight *Authors: Hongshuo Li, Ankai Dong, Tiande Zhang, Shijia Zhou, Yalin Zheng, Lei Mou, Yitian Zhao*
Presenter: Hongshuo Li, Ningbo Institute of Materials Technology & Engineering, Chinese Academy of Sciences, China
- B87 (Thu-AM) **Structure and Smoothness Constrained Dual Networks for MR Bias Field Correction**
Authors: Dong Liang, Xingyu Qiu, Yuzhen Li, Wei Wang, Kuanquan Wang, Suyu Dong, Gongning Luo
Presenter: Gongning Luo, Harbin Institute of Technology, China

- B92 (Thu-AM) **MoMIL: Mixture of Multi-Instance Learners for Modeling Multiple Compound Activities in High Content Imaging**
Authors: Pushpak Pati, Hsiu-Chi Cheng, Steffen Jaensch, Walid M. Abdelmoula, Krishna Chaitanya, Michiel Van Dyck, Tomé Albuquerque, Samantha Allen, Litao Zhang, Tommaso Mansi, Rui Liao, Zhoubing Xu
Presenter: Pushpak Pati, Johnson & Johnson, Switzerland
- B97 (Thu-AM) **Weighted Stratification in Multi-Label Contrastive Learning for Long-Tailed Medical Image Classification**
Authors: Ying-Chih Lin, Yong-Sheng Chen
Presenter: Ying-Chih Lin, National Yang Ming Chiao Tung University, Taiwan
- B102 (Thu-AM) **FIND-Net - Fourier-Integrated Network with Dictionary Kernels for Metal Artifact Reduction**
Authors: Farid Tasharofi, Fuxin Fan, Melika Qahqaie, Mareike Thies, Andreas Maier
Presenter: Farid Tasharofi, Friedrich-Alexander-Universität Erlangen, Germany
- B107 (Thu-AM) **SAMed-2: Selective Memory Enhanced Medical Segment Anything Model**
Authors: Zhiling Yan, Sifan Song, Dingjie Song, Yiwei Li, Rong Zhou, Weixiang Sun, Zhenhong Chen, Sekeun Kim, Hui Ren, Tianming Liu, Quanzheng Li, Xiang Li, Lifang He, Lichao Sun
Presenter: Quanzheng Li, Massachusetts General Hospital and Harvard Medical School, United States
- B112 (Thu-AM) **SIMPLE: Simultaneous Multi-plane Self-supervised Learning for Isotropic MRI Restoration from Anisotropic Data**
Authors: Rotem Benisty, Yevgenia Shteynman, Moshe Porat, Anat Ilivitzki, Moti Freiman
Presenter: Rotem Benisty, Technion - Israel Institute of Technology, Israel
- B117 (Thu-AM) **Meta-Learning-Driven CT Morphology Disentangled Diffusion Model for Multi-Region SPECT Attenuation Correction**
Authors: Haoran Yang, Jiansong Fan, Lihua Li, Xiang Pan
Presenter: Haoran Yang, Jiangnan University, China
- B122 (Thu-AM) **Inferring Super-Resolved Gene Expression by Integrating Histology Images and Spatial Transcriptomics with HISTEX**
Authors: Shuailin Xue, Changmiao Wang, Xiaomao Fan, Wenwen Min
Presenter: Changmiao Wang, Yunnan University, China
- Paper Highlight
- B127 (Thu-AM) **A Frequency-Aware Self-Supervised Learning for Ultra-Wide-Field Image Enhancement**
Authors: Weicheng Liao, Zan Chen, Jianyang Xie, Yalin Zheng, Yuhui Ma, Yitian Zhao
Presenter: Weicheng Liao, Ningbo Institute of Materials Technology & Engineering, Chinese Academy of Sciences, China
- B132 (Thu-AM) **DiffStain: Conditioned Diffusion-Based Semantic Virtual Staining with Mask Guidance**
Authors: Yikai Han, Jimao Jiang, Yuru Pei
Presenter: Yikai Han, Beihang University, China

- B137 (Thu-AM) **Multi-Tracer Uptake Correction for PET-MR via Aligned-Feature Guidance and Multi-scale Pixel-adaptive Routing**
 Paper Highlight *Authors: Aocheng Zhong, Haolin Huang, Jing Wang, Zhenrong Shen, Haiyu Song, Junlei Wu, Yuhua Zhu, Yang Liu, Chuantao Zuo, Qian Wang*
Presenter: Aocheng Zhong, ShanghaiTech University, China
- B142 (Thu-AM) **MedIQA: A Scalable Foundation Model for Prompt-Driven Medical Image Quality Assessment**
Authors: Siyi Xun, Yue Sun, Jingkun Chen, Zitong Yu, Tong Tong, Xiaohong Liu, Mingxiang Wu, Tao Tan
Presenter: Siyi Xun, Macao Polytechnic University, China
- B147 (Thu-AM) **MS-IQA: A Multi-Scale Feature Fusion Network for PET/CT Image Quality Assessment**
Authors: Siqiao Li, Chen Hui, Wei Zhang, Rui Liang, Chenyue Song, Feng Jiang, Haiqi Zhu, Zhixuan Li, Hong Huang, Xiang Li
Presenter: Siqiao Li, Harbin Institute of Technology, China
- B152 (Thu-AM) **Background-Invariant Independence-Guided Multi-head Attention Network for Skin Lesion Classification**
Authors: Debasmit Roy, Srinjoy Dutta, Soham Bose, Friedhelm Schwenker, Ram Sarkar
Presenter: Debasmit Roy, Jadavpur University, India
- B157 (Thu-AM) **High-Res Brain Source Imaging of MEG using a Vector Bayesian Beamformer with Noise learning**
 Paper Highlight *Authors: Tianyu Gao, Kunye Liu, Weikai Ma, Yang Gao, Xiaolin Ning*
Presenter: Tianyu Gao, Beihang University, China
- B162 (Thu-AM) **Noisy Label Refinement Based on Discrete Diffusion Process in 3D Ossicle Segmentation**
Authors: Linqian Fan, Mengshi Zhang, Yonghao Wang, Wenkai Lu, Hongxia Yin
Presenter: Linqian Fan, Tsinghua university, China
- B167 (Thu-AM) **Cost-effective Active Learning for Nucleus Detection Using Crowdsourced Annotations with Dynamic Weighting Adjustment**
Authors: Jiao Tang, Yuankun Zu, Qi Zhu, Peng Wan, Daoqiang Zhang, Wei Shao
Presenter: Jiao Tang, Nanjing University of Aeronautics and Astronautics, China
- B172 (Thu-AM) **Advancing Medical Representation Learning Through High-Quality Data**
 Paper Highlight *Authors: Negin Baghbanzadeh, Adibvafa Fallahpour, Yasaman Parhizkar, Franklin Ogidi, Shuvendu Roy, Sajad Ashkezari, Vahid Reza Khazaie, Michael Colacci, Ali Etemad, Arash Afkanpour, Elham Dolatabadi*
Presenter: Negin Baghbanzadeh, York University, Canada
- B177 (Thu-AM) **Improving Motor Imagery EEG Signal Quality with Dynamic Visual Cues: An Innovative Paradigm and Dataset**
Authors: Chenxi Yue, Huawen Hu, Qilong Yuan, Enze Shi, Jiaqi Wang, Kui Zhao, Xuhui Wang, Shu Zhang
Presenter: Shu Zhang, Northwestern Polytechnical University, China

- B182 (Thu-AM) **Diffusing Boundaries: CBCT-to-CT Translation with Extended Field of View**
Authors: Quentin Spinat, Audrey Duran, Olivier Teboul, Nikos Paragios, Nikos Komodakis
Presenter: Nikos Paragios, Therapanacea, France
- B187 (Thu-AM) **Lightweight Data-Free Denoising for Detail-Preserving Biomedical Image Restoration**
Authors: Tomáš Chobola, Julia A. Schnabel, Tingying Peng
Presenter: Tomáš Chobola, Helmholtz Munich, Germany
- B192 (Thu-AM) **Difficulty Estimation for Image-Specific Medical Image Segmentation Quality Control**
Authors: Joris Fournel, Axel Bartoli, Baptiste Marchi, Arnaud Maurin, Siavash Arjomand Bigdeli, Alexis Jacquier, Aasa Feragen
Presenter: Joris Fournel, Technical University of Denmark, Denmark
- B197 (Thu-AM) **Beyond Shadows: Learning Physics-inspired Ultrasound Confidence Maps from Sparse Annotations**
Authors: Matteo Ronchetti, Rüdiger Göbl, Bugra Yesilkaynak, Oliver Zettinig, Nassir Navab
Presenter: Matteo Ronchetti, ImFusion GmbH, Germany
- B202 (Thu-AM) **EchoViewCLIP: Advancing Video Quality Control through High-performance View Recognition of Echocardiography**
Authors: Shanshan Song, Yi Qin, Honglong Yang, Taoran Huang, Hongwen Fei, Xiaomeng Li
Presenter: Shanshan Song, The Hong Kong University of Science and Technology, Hong Kong SAR
- B207 (Thu-AM) **Pretraining on Chronic Lung Inflammatory Disease Datasets to Enhance Indeterminant Lung Cancer Classification using Masked Autoencoders**
Authors: Axel H.P. Masquelin, Raúl San José Estépar
Presenter: Axel Masquelin, Brigham and Women's Hospital, United States
- B212 (Thu-AM) **Fetuses Made Simple: Modeling and Tracking of Fetal Shape and Pose**
Authors: Yingcheng Liu, Peiqi Wang, Sebastian Diaz, Esra Abaci Turk, Benjamin Billot, P. Ellen Grant, Polina Golland
Presenter: Yingcheng Liu, Massachusetts Institute of Technology, United States
- B217 (Thu-AM) **Unsupervised Learning-Based Susceptibility Artifact Correction for Diffusion-Weighted MRI in Multiple Organs**
Authors: Shihan Qiu, Radu Miron, Yahang Li, Cornelius Eichner, Thorsten Feiweier, Nirmal Janardhanan, Bryan Clifford, Omar Darwish, Mahmoud Mostapha, Mariappan S. Nadar
Presenter: Radu Miron, Siemens Industry Software România, Romania
- B222 (Thu-AM) **Robust Deep Learning for Myocardial Scar Segmentation in Cardiac MRI with Noisy Labels**
Authors: Aida Moafi, Danial Moafi, Evgeny M. Mirkes, Gerry P. McCann, Abbas S. Alatrany, Jayanth Ranjit Arnold, Mostafa Mehdipour Ghazi
Presenter: Aida Moafi, University of Leicester, United Kingdom
- Paper Highlight **Paper Highlight**
Authors: Aida Moafi, Danial Moafi, Evgeny M. Mirkes, Gerry P. McCann, Abbas S. Alatrany, Jayanth Ranjit Arnold, Mostafa Mehdipour Ghazi
Presenter: Aida Moafi, University of Leicester, United Kingdom

- B227 (Thu-AM) **From Variability To Accuracy: Conditional Bernoulli Diffusion Models with Consensus-Driven Correction for Thin Structure Segmentation**
 Paper Highlight *Authors: Jinseo An, Min Jin Lee, Kyu Won Shim, Helen Hong*
Presenter: Jinseo An, Seoul Women's University, Republic of Korea
- B232 (Thu-AM) **Harnessing Side Information for Highly Accelerated MRI**
Authors: Arda Atalik, Sumit Chopra, Daniel K. Sodickson
Presenter: Arda Atalik, New York University, United States
- B237 (Thu-AM) **Uncertainty-Aware Multi-Expert Knowledge Distillation for Imbalanced Disease Grading**
Authors: Shuo Tong, Shangde Gao, Ke Liu, Zihang Huang, Hongxia Xu, Haochao Ying, Jian Wu
Presenter: Shuo Tong, Zhejiang University, China
- B242 (Thu-AM) **GRASP-PsONet: Gradient-based Removal of Spurious Patterns for Psoriasis Severity Classification**
Authors: Basudha Pal, Sharif Amit Kamran, Brendon Lutnick, Molly Lucas, Chaitanya Parmar, Asha Patel Shah, David Apfel, Steven Fakharzadeh, Lloyd Miller, Gabriela Cula, Kristopher Standish
Presenter: Basudha Pal, Johns Hopkins University, United States
- B247 (Thu-AM) **GL-LCM: Global-Local Latent Consistency Models for Fast High-Resolution Bone Suppression in Chest X-Ray Images**
Authors: Yifei Sun, Zhanghao Chen, Hao Zheng, Yuqing Lu, Lixin Duan, Fenglei Fan, Ahmed Elazab, Xiang Wan, Changmiao Wang, Ruiquan Ge
Presenter: Yifei Sun, Hangzhou Dianzi University, China
- B252 (Thu-AM) **CardioInterp: Generative Modeling for Cardiovascular OCT Interpolation with Anatomical Continuity and Fidelity**
Authors: Linyuan Li, Bing Yang, Mingqing Zhang, Mengxian He, Wu Yuan
Presenter: Linyuan Li, The Chinese University of Hong Kong, China
- B257 (Thu-AM) **Non-Salient Object Segmentation in Medical Images via Pre-trained Multi-Granularity Masked Autoencoders**
Authors: Bin Zhang, Dongsheng Ruan, Ronghui Qi, Chenchu Xu, Yanping Zhang, Chengjin Yu, Lei Xu, Rui Wang
Presenter: Bin Zhang, Anhui University, China
- B262 (Thu-AM) **EchoCardMAE: Video Masked Auto-Encoders Customized for Echocardiography**
Authors: Xuan Yang, Rui Xu, Xinchun Ye, Zhihui Wang, Miao Zhang, Yi Wang, Xin Fan, Hongkai Wang, Qingxiong Yue, Xiangjian He, Yen-Wei Chen
Presenter: Rui Xu, Dalian University of Technology, China
- B267 (Thu-AM) **Mono-Modalizing Extremely Heterogeneous Multi-Modal Medical Image Registration**
Authors: Kyobin Choo, Hyunkyung Han, Jinyeong Kim, Chanyong Yoon, Seong Jae Hwang
Presenter: Kyobin Choo, Yonsei University, Republic of Korea

B272 (Thu-AM)	TESLA: Test-time Reference-free Through-plane Super-resolution for Multi-contrast Brain MRI
Paper Highlight	<i>Authors: Yoonseok Choi, Sunyoung Jung, Mohammed A. Al-masni, Ming-Hsuan Yang, Dong-Hyun Kim</i> <i>Presenter: Yoonseok Choi, Yonsei University, Republic of Korea</i>
B277 (Thu-AM)	Query-Level Alignment for End-to-End Lesion Detection with Human Gaze
Paper Highlight	<i>Authors: Yan Kong, Zhixiang Peng, Yuan Yin, Yonghao Li, Jiangdong Cai, Sheng Wang, Qian Wang, Yuqi Fang, Caifeng Shan</i> <i>Presenter: Yan Kong, Nanjing University, China</i>
B282 (Thu-AM)	VesselVerse: A Dataset and Collaborative Framework for Vessel Annotation
Paper Highlight	<i>Authors: Daniele Falcetta, Vincenzo Marciano, Kaiyuan Yang, Jon Cleary, Loïc Legris, Massimiliano Domenico Rizzaro, Ioannis Pitsiorlas, Hava Chaptoukaev, Benjamin Lemasson, Bjoern Menze, Maria A. Zuluaga</i> <i>Presenter: Daniele Falcetta, EURECOM, France</i>
B287 (Thu-AM)	UDPET: Ultra-low Dose PET Imaging Challenge Dataset
	<i>Authors: Song Xue, Hanzhong Wang, Yizhou Chen, Fanxuan Liu, Hong Zhu, Marco Viscione, Rui Guo, Axel Rominger, Biao Li, Kuangyu Shi</i> <i>Presenter: Yizhou Chen, University of Bern, Switzerland</i>
B292 (Thu-AM)	Pose as Clinical Prior: Learning Dual Representations for Scoliosis Screening
	<i>Authors: Zirui Zhou, Zizhao Peng, Dongyang Jin, Chao Fan, Fengwei An, Shiqi Yu</i> <i>Presenter: Zirui Zhou, Southern University of Science and Technology, China</i>
B297 (Thu-AM)	T2WI-BCMIC: Non-Fat Saturated T2-Weighted Imaging Dataset for Bladder Cancer Muscle Invasion Classification
	<i>Authors: Han Huang, Weiye Chen, Qiuxia Wu, Huanjun Wang, Qian Cai, Yan Guo</i> <i>Presenter: Qiuxia Wu, South China University of Technology, China</i>
B302 (Thu-AM)	Training state-of-the-art pathology foundation models with orders of magnitude less data
	<i>Authors: Mikhail Karasikov, Joost van Doorn, Nicolas Känzig, Melis Erdal Cesur, Hugo Mark Horlings, Robert Berke, Fei Tang, Sebastian Otálora</i> <i>Presenter: Juan Sebastian Otálora Montenegro, kaiko.ai, Switzerland</i>
B307 (Thu-AM)	The Missing Piece: A Case for Pre-Training in 3D Medical Object Detection
	<i>Authors: Katharina Eckstein, Constantin Ulrich, Michael Baumgartner, Jessica Kächele, Dimitrios Bounias, Tassilo Wald, Ralf Floca, Klaus H. Maier-Hein</i> <i>Presenter: Katharina Eckstein, German Cancer Research Center (DKFZ), Germany</i>
B312 (Thu-AM)	Treexplorer Super: Topologically Correct Centerline Tree Tracking of Tubular Objects in CT Volumes
	<i>Authors: Roman Naeem, David Hagerman, Jennifer Alvéen, Lennart Svensson, Fredrik Kahl</i> <i>Presenter: Roman Naeem, Chalmers University of Technology, Sweden</i>

- B317 (Thu-AM) **Neural Proteomics Fields for Super-resolved Spatial Proteomics Prediction**
Authors: Bokai Zhao, Weiyang Shi, Hanqing Chao, Zijiang Yang, Yiyang Zhang, Ming Song, Tianzi Jiang
Presenter: Bokai Zhao, Institute of Automation, Chinese Academy of Sciences, China
- B322 (Thu-AM) **VBCD: A Voxel-Based Framework for Personalized Dental Crown Design**
Authors: Linda Wei, Chang Liu, Wenran Zhang, Zengji Zhang, Shaoting Zhang, Hongsheng Li
Presenter: Linda Wei, The Chinese University of Hong Kong, Hong Kong, SAR
- B327 (Thu-AM) **A Uniform Multi-mode Fused Framework for Velocity Field Estimation in Ultrasound Imaging**
Authors: Hailong Li, Liansheng Wang, Yinran Chen
Presenter: Hailong Li, Xiamen University, China
- B332 (Thu-AM) **VoxelOpt: Voxel-Adaptive Message Passing for Discrete Optimization in Deformable Abdominal CT Registration**
Authors: Hang Zhang, Yuxi Zhang, Jiazheng Wang, Xiang Chen, Renjiu Hu, Xin Tian, Gaolei Li, Min Liu
Presenter: Hang Zhang, Cornell University, United States
- B335 (Thu-AM) **Coronary Artery Calcification segmentation by using cross-frequency conditioner and geometric priors Learning**
Authors: Weili Jiang, Yiming Li, Gadeng Luosang, Gang Peng, Yong Peng, Yijun Yao, Zhang Yi, Jianyong Wang, Mao Chen
Presenter: Weili Jiang, Southwest Jiaotong University, China
- C2 (Thu-AM) **Sequence-Independent Continual Test-Time Adaptation with Mixture of Incremental Experts for Cross-Domain Segmentation**
 Paper Highlight *Authors: Dunyuan Xu, Yuchen Yuan, Donghao Zhou, Xikai Yang, Jingyang Zhang, Jinpeng Li, Pheng-Ann Heng*
Presenter: Dunyuan Xu, The Chinese University of Hong Kong, Hong Kong SAR
- C7 (Thu-AM) **MixStyleFlow: Domain Generalization in Medical Image Segmentation using Normalizing Flows**
 Paper Highlight *Authors: Reza Safdari, Mohammad-Ali Nikouei Mahani, Mohamad Koochi-Moghadam, Kyongtae Tyler Bae*
Presenter: Mohamad Koochi-Moghadam, The University of Hong Kong, Hong Kong SAR
- C12 (Thu-AM) **SUGFW: A SAM-based Uncertainty-guided Feature Weighting Framework for Cold Start Active Learning**
Authors: Xiaochuan Ma, Jia Fu, Lanfeng Zhong, Ning Zhu, Guotai Wang
Presenter: Xiaochuan Ma, University of Electronic Science and Technology of China, China
- C17 (Thu-AM) **From Generalist to Specialist: Distilling a Mixture of Foundation Models for Domain-specific Medical Image Segmentation**
Authors: Qing Li, Yizhe Zhang, Shengxiao Yang, Qirong Li, Zian Wang, Junhong Liu, Haoyang Zhang, Shuo Wang, Chengyan Wang
Presenter: Qing Li, Fudan University, China

C22 (Thu-AM)	Minuscule Cell Detection in AS-OCT Images with Progressive Field-of-View Focusing <i>Authors: Boyu Chen, Ameenat Solebo, Daqian Shi, Jinge Wu, Paul Taylor</i> <i>Presenter: Boyu Chen, University College London, United Kingdom</i>
C27 (Thu-AM)	Towards Accurate Tumor Budding Detection: A Benchmark Dataset and A Detection Approach Based on Implicit Annotation Standardization and Positive-Negative Feature Coupling
Paper Highlight	<i>Authors: Rui-Qing Sun, Zeng Fan, Boyang Dai, Yiyan Su, Qun Hao, Chuyang Ye, Shaohui Zhang</i> <i>Presenter: Shaohui Zhang, Beijing Institute of Technology, China</i>
C32 (Thu-AM)	MammoTracker: Mask-Guided Lesion Tracking in Temporal Mammograms <i>Authors: Xuan Liu, Yinhao Ren, Marc D. Ryser, Lars J. Grimm, Joseph Y. Lo</i> <i>Presenter: Joseph Lo, Duke University, United States</i>
C37 (Thu-AM)	Segmenting Vessels Encapsulating Tumor Clusters via Fine-Grained Visual Prompt <i>Authors: Jiahui Yu, Tianyu Ma, Shenjian Gu, Yuping Guo, Feng Chen, Xiaoxiao Li, Yingke Xu</i> <i>Presenter: Jiahui Yu, Zhejiang University, Hangzhou</i>
C42 (Thu-AM)	Automated Characterization of Myocardial Scar Topological Patterns for Ventricular Tachycardia Screening
Paper Highlight	<i>Authors: Xicheng Sheng, Yang Zhang, Lei Li, Bailiang Chen, Freddy Odille, Xiahai Zhuang</i> <i>Presenter: Lei Li, National University of Singapore, Singapore</i>
C47 (Thu-AM)	HybridMamba: A Dual-domain Mamba for 3D Medical Image Segmentation
Paper Highlight	<i>Authors: Weitong Wu, Zhaohu Xing, Jing Gong, Qin Peng, Lei Zhu</i> <i>Presenter: Weitong Wu, The Hong Kong University of Science and Technology (Guangzhou), China</i>
C52 (Thu-AM)	Fit Pixels, Get Labels: Meta-Learned Implicit Networks for Image Segmentation
Paper Highlight	<i>Authors: Kushal Vyas, Ashok Veeraraghavan, Guha Balakrishnan</i> <i>Presenter: Kushal Vyas, Rice University, United States</i>
C57 (Thu-AM)	Abnormality-Driven Representation Learning for Radiology Imaging
Paper Highlight	<i>Authors: Marta Ligeró, Tim Lenz, Georg Wölflein, Omar S. M. El Nahhas, Daniel Truhn, Jakob Nikolas Kather</i> <i>Presenter: Tim Lenz, EKFZ for Digital Health, TU Dresden, Germany</i>
C62 (Thu-AM)	MARSeg: Enhancing Medical Image Segmentation with MAR and Adaptive Feature Fusion
Paper Highlight	<i>Authors: Jeonghyun Hwang, Seungyeon Rhee, Minjeong Kim, Thanaporn Viriyasaranon, Jang-Hwan Choi</i> <i>Presenters: Seungyeon Rhee and Minjeong Kim, Ewha Womans University, Republic of Korea</i>
C67 (Thu-AM)	Periodet: Large-Scale Panoramic Radiograph Benchmark for Clinical-Oriented Apical Periodontitis Detection
Paper Highlight	<i>Authors: Xiaocheng Fang, Jieyi Cai, Huanyu Liu, Chengju Zhou, Minhua Lu, Bingzhi Chen</i> <i>Presenter: Bingzhi Chen, Beijing Institute of Technology, China</i>

- C72 (Thu-AM)
Paper Highlight
Guiding Registration with Emergent Similarity from Pre-Trained Diffusion Models
Authors: Nurislam Tursynbek, Hastings Greer, Başar Demir, Marc Niethammer
Presenter: Marc Niethammer, University of California San Diego, United States
- C77 (Thu-AM)
Paper Highlight
DiffAtlas: GenAI-fying Atlas Segmentation via Image-Mask Diffusion
Authors: Hantao Zhang, Yuhe Liu, Jiancheng Yang, Weidong Guo, Xinyuan Wang, Pascal Fua
Presenter: Hantao Zhang, The École Polytechnique Fédérale de Lausanne, Switzerland
- C82 (Thu-AM)
Spatiotemporal-Sensitive Network for Microvascular Obstruction Segmentation from Cine Cardiac Magnetic Resonance
Authors: Yang Yu, Christopher Kok, Jiahao Wang, Jun Cheng, Shuang Leng, Ru San Tan, Liang Zhong, Xulei Yang
*Presenter: Jun Cheng, Institute for Infocomm Research (I2R), Agency for Science, Technology and Research (A*STAR), Singapore*
- C87 (Thu-AM)
Pairwise-Constrained Implicit Functions for 3D Human Heart Modeling
Authors: Hieu Le, Jingyi Xu, Nicolas Talabot, Jiancheng Yang, Pascal Fua
Presenter: Nicolas Talabot, The École Polytechnique Fédérale de Lausanne, Switzerland
- C92 (Thu-AM)
Learning with Explicit Topological Priors for Chest X-ray Rib Segmentation
Authors: Xiaowei Zhao, Chenglong Li, Jin Tang, Chuanfu Li
Presenter: Xiaowei Zhao, Anhui University, China
- C97 (Thu-AM)
EFFDNet: A Scribble-Supervised Medical Image Segmentation Method with Enhanced Foreground Feature Discrimination
Authors: Jinhua Liu, Shu Yun Tan, Xulei Yang, Yanwu Xu, Si Yong Yeo
Presenter: Jinhua Liu, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore
- C102 (Thu-AM)
MAST-Pro: Dynamic Mixture-of-Experts for Adaptive Segmentation of Pan-Tumors with Knowledge-Driven Prompts
Authors: Runqi Meng, Sifan Song, Pengfei Jin, Lin Teng, Yulin Wang, Yiqun Sun, Ling Chen, Yujin Oh, Xiang Li, Quanzheng Li, Ning Guo, Dinggang Shen
Presenter: Runqi Meng, ShanghaiTech University, China
- C107 (Thu-AM)
TransSino: Prior Sinogram Pattern-Based Transformer for Limited-Angle CT Image Segmentation
Authors: Jae Hyun Yoon, Yeong Jong Lee, Seok Bong Yoo
Presenter: Yeong Jong Lee, Chonnam National University, Republic of Korea
- C112 (Thu-AM)
MatchGen: Detecting Medical Abnormal Region by Generating Matched Normal Regions
Authors: Xinyu Ma, Jinhui Ma, Shiqi He, Xin Che, Hon Yiu So, Lingyang Chu
Presenter: Xinyu Ma, McMaster University, Canada
- C117 (Thu-AM)
SpurBreast: A Curated Dataset for Investigating Spurious Correlations in Real-world Breast MRI Classification
Authors: Jong Bum Won, Wesley De Neve, Joris Vankerschaver, Utku Ozbulak
Presenter: Utku Ozbulak, Ghent University Global Campus, Republic of Korea

- C122 (Thu-AM) **No More Sliding Window: Efficient 3D Medical Image Segmentation with Differentiable Top-K Patch Sampling**
Authors: Young Seok Jeon, Hongfei Yang, Huazhu Fu, Yeshe Kway, Mengling Feng
Presenter: Young Seok Jeon, Emory University, United States
- C127 (Thu-AM) **Vascular Photoacoustic Volume Registration via 2D Feature Matching with Reverse Mapping Based on Maximum Intensity Projection**
Authors: Junda Liao, Chu Zhou, Yuta Asano, Yushi Suzuki, Ryoma Bise, Nobuaki Imanishi, Kazuo Kishi, Sadakazu Aiso, Imari Sato
Presenter: Junda Liao, The University of Tokyo; National Institute of Informatics, Japan
- C132 (Thu-AM) **BraTS-UMamba: Adaptive Mamba UNet with Dual-Band Frequency based Feature Enhancement for Brain Tumor Segmentation**
Authors: Haoran Yao, Hao Xiong, Dong Liu, Hualei Shen, Shlomo Berkovsky
Presenter: Haoran Yao, Henan Normal University, China
- C137 (Thu-AM) **RefineSeg: Dual Coarse-to-Fine Learning for Medical Image Segmentation**
Authors: Anghong Du, Nay Aung, Theodoros N. Arvanitis, Stefan K. Piechnik, Joao A. C. Lima, Steffen E. Petersen, Le Zhang
Presenter: Anghong Du, University of Birmingham, United Kingdom
- C142 (Thu-AM) **AdvMIM: Adversarial Masked Image Modeling for Semi-Supervised Medical Image Segmentation**
Authors: Lei Zhu, Jun Zhou, Rick Siow Mong Goh, Yong Liu
*Presenter: Huazhu Fu, Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A*STAR), Singapore*
- C147 (Thu-AM) **Improving Medical Image Segmentation with Implicit Representation and Noisy Label Robustness**
Authors: Suruchi Kumari, Harshdeep Singh, Pravendra Singh
Presenter: Suruchi Kumari, Indian Institute of Technology Roorkee, India
- C152 (Thu-AM) **New Multiple Sclerosis Lesion Segmentation via Calibrated Inter-patch Blending**
Authors: Jin Ye, Son Duy Dao, Yicheng Wu, Yasmeeen George, Thanh Nguyen-Duc, Daniel F. Schmidt, Hengcan Shi, Winston Chong, Jianfei Cai
Presenter: Jin Ye, Monash University, Australia
- C157 (Thu-AM) **U-Net Transplant: The Role of Pre-training for Model Merging in 3D Medical Segmentation**
Authors: Luca Lumetti, Giacomo Capitani, Elisa Ficarra, Simone Calderara, Costantino Grana, Angelo Porrello, Federico Bolelli
Presenter: Luca Lumetti, University of Modena and Reggio Emilia, Italy
- C162 (Thu-AM) **A Boundary-aware Cold-Diffusion Model for Electron Microscopy Segmentation**
Authors: Muge Qi, Ruohua Shi, Yu Cai, Liuyuan He, Wenyao Wang, Lei Ma
Presenter: Muge Qi, Peking University, China

- C167 (Thu-AM) **RSAD: Region-Specific Anomaly Detection in fMRI for Disease Diagnosis**
 Paper Highlight
Authors: Yusong Sun, Dongdong Chen, Mengjun Liu, Zhenrong Shen, Zhiyun Song, Yuqi Hu, Manman Fei, Xu Han, Zelin Liu, Xingkai Fang, Lu Bai, Lichi Zhang
Presenter: Yusong Sun, Shanghai Jiao Tong University, China
- C172 (Thu-AM) **A Virtual Domain Collaborative Learning Framework for Semi-supervised Microscopic Hyperspectral Image Segmentation**
Authors: Geng Qin, Huan Liu, Wei Li, Haihao Zhang, Yuxing Guo
Presenter: Geng Qin, Beijing Institute of Technology, China
- C177 (Thu-AM) **Compact Training-free NAS with Alternating Evolution Game for Medical Image Segmentation**
Authors: Xiaoxue Sun, Hongpeng Wang, Pei-Cheng Song
Presenter: Xiaoxue Sun, Nankai University, China
- C182 (Thu-AM) **UniOCTSeg: Towards Universal OCT Retinal Layer Segmentation via Hierarchical Prompting and Progressive Consistency Learning**
Authors: Jian Zhong, Li Lin, Chaoran Miao, Kenneth K. Y. Wong, Xiaoying Tang
Presenter: Jian Zhong, Southern University of Science and Technology, China
- C187 (Thu-AM) **Spherical Diffusion Process for Score-Guided Cortical Correspondence via Spectral Attention**
Authors: Seungeun Lee, Sergey Pyatkovskiy, Jaejun Yoo, Ilwoo Lyu
Presenter: Seungeun Lee, Klleon, Republic of Korea
- C192 (Thu-AM) **EUReg: End-to-end Framework for Efficient 2D-3D Ultrasound Registration**
Authors: Haiqiao Wang, Yi Wang
Presenter: Haiqiao Wang, Shenzhen University, China
- C197 (Thu-AM) **MoE-SAM: Enhancing SAM for Medical Image Segmentation with Mixture-of-Experts**
Authors: Ruocheng Li, Lei Wu, Jingjun Gu, Qi Xu, Wanyi Chen, Xiaoxu Cai, Jiajun Bu
Presenter: Ruocheng Li, Zhejiang University, China
- C202 (Thu-AM) **M3HL: Mutual Mask Mix with High-Low Level Feature Consistency for Semi-Supervised Medical Image Segmentation**
Authors: Yajun Liu, Zenghui Zhang, Jiang Yue, Weiwei Guo, Dongying Li
Presenter: Yajun Liu, Shanghai Jiao Tong University, China
- C207 (Thu-AM) **Leveraging Semantic Asymmetry for Accurate Gross Tumor Volume Segmentation of Nasopharyngeal Carcinoma in Planning CT**
Authors: Zi Li, Ying Chen, Zeli Chen, Yanzhou Su, Tai Ma, Tony C. W. Mok, Yan-Jie Zhou, Yunhao Bai, Zhilin Zheng, Le Lu, Yirui Wang, Jia Ge, Senxiang Yan, Xianghua Ye, Dakai Jin
Presenter: Zeli Chen, DAMO Academy, Alibaba Group, China
- C212 (Thu-AM) **SlimFormer-3D: A Layer-Adaptive Lightweight Transformer for Efficient 3D Medical Image Segmentation**
Authors: Yang Hong, Lei Zhang, Xujiang Ye, Jianqing Mo
Presenter: Yang Hong, Guangdong University of Technology, China

- C217 (Thu-AM) **BenchReAD: A systematic benchmark for retinal anomaly detection**
Authors: Chenyu Lian, Hong-Yu Zhou, Zhanli Hu, Jing Qin
Presenter: Chenyu Lian, The Hong Kong Polytechnic University, China
- C222 (Thu-AM) **Improved Baselines with Synchronized Encoding for Universal Medical Image Segmentation**
Authors: Sihan Yang, Jiadong Feng, Xuande Mi, Haixia Bi, Hai Zhang, Jian Sun
Presenter: Sihan Yang, Xi'an Jiaotong University, China
- C227 (Thu-AM) **New Multimodal Similarity Measure for Image Registration via Modeling Local Functional Dependence with Linear Combination of Learned Basis Functions**
Authors: Joel Honkamaa, Pekka Marttinen
Presenter: Joel Honkamaa, Aalto University, Finland
- C232 (Thu-AM) **Towards Robust Retinal Vessel Segmentation via Reducing Open-set Label Noises from SAM-generated Masks**
Authors: Minqing Zhang, Mengxian He, Wu Yuan
Presenter: Minqing Zhang, The Chinese University of Hong Kong, China
- C237 (Thu-AM) **Spline refinement with differentiable rendering**
Authors: Frans Zdyb, Albert Alonso, Julius B. Kirkegaard
Presenter: Frans Zdyb, University of Copenhagen, Denmark
- C242 (Thu-AM) **GEPAR3D: Geometry Prior-Assisted Learning for 3D Tooth Segmentation**
Authors: Tomasz Szczepański, Szymon Płotka, Michal K. Grzeszczyk, Arleta Adamowicz, Piotr Fudalej, Przemysław Korzeniowski, Tomasz Trzciński, Arkadiusz Sitek
Presenter: Michal K. Grzeszczyk, Sano Centre for Computational Personalized Medicine, Poland
- C247 (Thu-AM) **Autoregressive Medical Image Segmentation via Next-Scale Mask Prediction**
Authors: Tao Chen, Chenhui Wang, Zhihao Chen, Hongming Shan
Presenter: Tao Chen, Fudan University, China
- C252 (Thu-AM) **UniSegDiff: Boosting Unified Lesion Segmentation via a Staged Diffusion Model**
Authors: Yilong Hu, Shijie Chang, Lihe Zhang, Feng Tian, Weibing Sun, Huchuan Lu
Presenter: Yilong Hu, Dalian University of Technology, China
- C257 (Thu-AM) **Spatial-Temporal Memory Filtering SAM for Lesion Segmentation in Breast Ultrasound Videos**
Authors: Zhengzheng Tu, Liang Zong, Bo Jiang, Haowen Wang, Kunpeng Wang, Chaoxue Zhang
Presenter: Liang Zong, Anhui University, China
- C262 (Thu-AM) **Tumor Segmentation with Heterogeneity Clustering in Non-contrast Breast MRI**
Authors: Xinyu Xie, Luyi Han, Yonghao Li, Yao-fei Duan, Yue Sun, Muzhen He, Tao Tan, Dinggang Shen
Presenter: Xinyu Xie, Macao Polytechnic University, China

- C267 (Thu-AM) **Hybrid Local-Window-Attention-Assisted U-Net Model for Multimodal Medical-Image Segmentation**
Authors: Jiwon Kim, Seyong Jin, Yeonwoo Noh, Hyeonjoon Moon, Minwoo Lee, Wonjong Noh
Presenter: Jiwon Kim, Sejong University, Republic of Korea
- C272 (Thu-AM) **VesselSDF: Distance Field Priors for Vascular Network Reconstruction**
Authors: Salvatore Esposito, Daniel Rebain, Arno Onken, Changjian Li, Oisin Mac Aodha
Presenter: Salvatore Esposito, University of Edinburgh, United Kingdom
- C277 (Thu-AM) **MSWAL: 3D Multi-class Segmentation of Whole Abdominal Lesions Dataset**
Authors: Zhaodong Wu, Qiaochu Zhao, Ming Hu, Yulong Li, Haochen Xue, Zhengyong Jiang, Angelos Stefanidis, Qiufeng Wang, Imran Razzak, Zongyuan Ge, Junjun He, Yu Qiao, Zhong Zheng, Feilong Tang, Kang Dang, Jionglong Su
Presenter: Zhaodong Wu, Xi'an Jiaotong-Liverpool University, China
- C282 (Thu-AM) **Phenotype Representation and Analysis via Discriminative Atypicality (PRADA) to capture the structural heterogeneity of Autism Spectrum Disorder**
Authors: Emre Onemli, Ahsan Mahmood, Omar Azrak, Dea Garic, Meghan R. Swanson, Rebecca Grzadzinski, Kattia Mata, Mark D. Shen, Jessica B. Girault, Tanya St. John, Juhi Pandey, Lonnie Zwaigenbaum, Annette M. Estes, Audrey M. Shen, Stephen R. Dager, Robert T. Schultz, Kelly N. Botteron, Alan C. Evans, Jed T. Elison, Essa Yacoub, Sun Hyung Kim, Robert C. McKinstry, Guido Gerig, Heather C. Hazlett, Natasha Marrus, Joseph Piven, John R. Pruett Jr., Martin Styner
Presenter: Martin Styner, University of North Carolina, United States
- C287 (Thu-AM) **StyleGAN-based Brain MRI Anomaly Detection via Latent Code Retrieval and Partial Swap**
Authors: Jie Wei, Xiaofei Hu, Shaoting Zhang, Guotai Wang
Presenter: Guotai Wang, University of Electronic Science and Technology of China, China
- C292 (Thu-AM) **MultiTransAD: Cross-Sequence Translation-Driven Anomaly Detection in Multi-Sequence Brain MRI**
Authors: Qi Zhang, Yibo Hu, Jianqi Sun
Presenter: Qi Zhang, Shanghai Jiaotong University, China
- C297 (Thu-AM) **CSAL-3D: Cold-start Active Learning for 3D Medical Image Segmentation via SSL-driven Uncertainty-Reinforced Diversity Sampling**
Authors: Ning Zhu, Ping Ye, Lanfeng Zhong, Qiang Yue, Shaoting Zhang, Guotai Wang
Presenter: Ning Zhu, University of Electronic Science and Technology of China, China
- C302 (Thu-AM) **Medical-Knowledge Driven Multiple Instance Learning for Classifying Severe Abdominal Anomalies on Prenatal Ultrasound**
Authors: Huanwen Liang, Jingxian Xu, Yuanji Zhang, Yuhao Huang, Yuhao Zhang, Xin Yang, Ran Li, Xuedong Deng, Yanjun Liu, Guowei Tao, Yun Wu, Sheng Zhao, Xinru Gao, Dong Ni
Presenter: Huanwen Liang, Shenzhen University, China
- C307 (Thu-AM) **AffinityUMamba: Uncertainty-Aware Medical Image Segmentation via Probabilistic Weak Supervision Beyond Gold-Standard Annotations**
Authors: Yukun Zhang, Guisheng Wang, William Henry Nailon, Kun Cheng
Presenter: Yukun Zhang, Beijing University of Posts and Telecommunications, China

- C312 (Thu-AM) **Anomaly Detection by Clustering DINO Embeddings using a Dirichlet Process Mixture**
Authors: Nico Schulthess, Ender Konukoglu
Presenter: Nico Schulthess, ETH Zürich, Switzerland
- C317 (Thu-AM) **CS²C: Collaborative Spatial and Spectral Neural Clustering for Organelle Segmentation from Volumetric Electron Microscopy**
Authors: Jimao Jiang, Yuru Pei
Presenter: Jimao Jiang, Peking University, China
- C322 (Thu-AM) **SMF-Net: Unlocking Multimodal Insights for Enhanced Stroke Lesion Segmentation**
Authors: Meklit Atlaw, Geng Chen, Haotian Jiang, Xuyun Wen, Hengfei Cui, Yong Xia
Presenter: Meklit Atlaw, Northwestern Polytechnical University, China
- C327 (Thu-AM) **Bridging Classical and Learning-based Iterative Registration through Deep Equilibrium Models**
Authors: Yi Zhang, Yidong Zhao, Qian Tao
Presenter: Yi Zhang, Delft University of Technology, The Netherlands
- C332 (Thu-AM) **GLM-SFNet: Global-Local Vision-Mamba with Semantic Fusion for Medical Image Segmentation**
- Paper Highlight *Authors: Jiahui Chen, Fei Qi, Chengyuan Chang, Qinjie Hu, Kaiwen Fu, Xiaotian Wang, Kun Liu*
Presenter: Jiahui Chen, Xidian University, China

Poster Session 3: Prediction / Generalizability and Adaptation / Reconstruction and Synthesis in Ultrasound, Microscopy, and Photography

Thursday, September 25, 2025, 15:30 - 17:00

Poster Hall (DCC 2)

- | | |
|---------------------------------|---|
| A3 (Thu-PM) | <p>DPGS-Net: Dual Prior-Guided Cross-Domain Adaptive Framework for Ultrasound Image Segmentation</p> <p><i>Authors: Weijie Zhang, Lingfeng Xie, Kun Zeng, Xiaonan Luo, Yongyi Gong</i>
 <i>Presenter: Weijie Zhang, Guangdong University of Foreign Studies, China</i></p> |
| A8 (Thu-PM) | <p>Distilling foundation models for robust and efficient models in digital pathology</p> <p><i>Authors: Alexandre Filiot, Nicolas Dop, Oussama Tchita, Auriane Riou, Rémy Dubois, Thomas Peeters, Daria Valter, Marin Scalbert, Charlie Saillard, Geneviève Robin, Antoine Olivier</i>
 <i>Presenter: Alexandre Filiot, Owkin, France</i></p> |
| A13 (Thu-PM) | <p>PSAT: Pediatric Segmentation Approaches via Adult Augmentations and Transfer Learning</p> <p><i>Authors: Tristan Kirscher, Sylvain Faisan, Xavier Coubez, Loris Barrier, Philippe Meyer</i>
 <i>Presenter: Tristan Kirscher, ICUBE IMaGeS - ICANS, France</i></p> |
| A18 (Thu-PM) | <p>PathoCellBench: A Comprehensive Benchmark for Cell Phenotyping</p> <p><i>Authors: Jérôme Lüscher, Nora Koreuber, Jannik Franzen, Fabian H. Reith, Claudia Winklmayr, Elias Baumann, Christian M. Schürch, Dagmar Kainmüller, Josef Lorenz Rumberger</i>
 <i>Presenter: Claudia Winklmayr, Max Delbrück Center, Germany</i></p> |
| A23 (Thu-PM) | <p>General Methods Make Great Domain-specific Foundation Models: A Case-study on Fetal Ultrasound</p> <p><i>Authors: Jakob Ambsdorf, Asbjørn Munk, Sebastian Llambias, Anders N. Christensen, Kamil Mikolaj, Randall Balestrieri, Martin G. Tolsgaard, Aasa Feragen, Mads Nielsen</i>
 <i>Presenter: Jakob Ambsdorf, University of Copenhagen, Denmark</i></p> |
| A28 (Thu-PM) | <p>OralsAM: One-shot Segmentation for Intraoral Ultrasound Videos with Adaptive Feature Correlation and Self-prompting Strategy</p> <p><i>Authors: Logiraj Kumaralingam, Anparasy Sivaanpu, Manh-Hai Hoang, Javaneh Alavi, Kim-Cuong T. Nguyen, Kumaradevan Punithakumar, Edmond H. M. Lou, Paul Major, Lawrence H. Le</i>
 <i>Presenter: Anparasy Sivaanpu, University of Alberta, Canada</i></p> |
| A33 (Thu-PM) | <p>Automatic dataset shift identification to support safe deployment of medical imaging AI</p> <p><i>Authors: Mélanie Roschewitz, Raghav Mehta, Charles Jones, Ben Glocker</i>
 <i>Presenter: Ben Glocker, Imperial College London, United Kingdom</i></p> |
| A38 (Thu-PM)
Paper Highlight | <p>Adaptive Stain Normalization for Cross-Domain Medical Histology</p> <p><i>Authors: Tianyue Xu, Yanlin Wu, Abhai K. Tripathi, Matthew M. Ippolito, Benjamin D. Haeffele</i>
 <i>Presenter: Yanlin Wu, Johns Hopkins University, United States</i></p> |

- A43 (Thu-PM)
Paper Highlight
Physics-guided deep image prior network for general zero-shot stain deconvolution
Authors: Jianan Chen, Lydia Y. Liu, Wenchao Han, Alison Cheung, Hubert Tsui, Anne L. Martel
Presenter: Jianan Chen, University College London, United Kingdom
- A48 (Thu-PM)
Regularized Low-Rank Adaptation for Few-Shot Organ Segmentation
Authors: Ghassen Baklouti, Julio Silva-Rodríguez, Jose Dolz, Houda Bahig, Ismail Ben Ayed
Presenter: Ghassen Baklouti, ÉTS Montréal & Centre de Recherche du Centre Hospitalier de l'Université de Montréal, Canada
- A53 (Thu-PM)
Self-supervised Normality Learning and Divergence Vector-guided Model Merging for Zero-shot Congenital Heart Disease Detection in Fetal Ultrasound Videos
Authors: Pramit Saha, Divyanshu Mishra, Netzahualcoyotl Hernandez-Cruz, Olga Patey, Aris T. Papageorgiou, Yuki M. Asano, J. Alison Noble
Presenter: Divyanshu Mishra, University of Oxford, United Kingdom
- A58 (Thu-PM)
Solving Medical Multi-Label Domain Adaptation via Wasserstein Adversarial Learning with Class-Level Alignment
Authors: Wenjie Liu, Fuyou Miao, Xu Wang
Presenter: Wenjie Liu, University of Science and Technology of China, China
- A63 (Thu-PM)
Domain-Adaptive Diagnosis of Lewy Body Disease with Transferability Aware Transformer
Authors: Xiaowei Yu, Jing Zhang, Tong Chen, Yan Zhuang, Minheng Chen, Chao Cao, Yanjun Lyu, Lu Zhang, Li Su, Tianming Liu, Dajiang Zhu
Presenter: Tong Chen, University of Texas at Arlington, United States
- A68 (Thu-PM)
AEM: Attention Entropy Maximization for Multiple Instance Learning based Whole Slide Image Classification
Authors: Yunlong Zhang, Honglin Li, Yuxuan Sun, Zhongyi Shui, Jingxiong Li, Chenglu Zhu, Lin Yang
Presenter: Yunlong Zhang, Westlake University, China
- A73 (Thu-PM)
Contour Makes It Stronger: Cross-Domain Cephalometric Landmark Detection Based on Contour Priors
Authors: Xinyue Liang, Runnan Chen, Guangshun Wei, Shaojie Zhuang, Yuanfeng Zhou
Presenter: Yuanfeng Zhou, Shandong University, China
- A78 (Thu-PM)
Paper Highlight
Deep Association Multimodal Learning for Zero-shot Spatial Transcriptomics Prediction
Authors: Yijing Zhou, Yadong Lu, Qingli Li, Xinxing Li, Yan Wang
Presenter: Yijing Zhou, East China Normal University, China
- A83 (Thu-PM)
Pathology Image Compression with Pre-trained Autoencoders
Authors: Srikar Yellapragada, Alexandros Graikos, Kostas Triaridis, Zilinghan Li, Tarak Nath Nandi, Ravi K Madduri, Prateek Prasanna, Joel Saltz, Dimitris Samaras
Presenter: Srikar Yellapragada, Stony Brook University, United States

- A88 (Thu-PM) **CLIMD: A Curriculum Learning Framework for Imbalanced Multimodal Diagnosis**
Authors: Kai Han, Chongwen Lyu, Lele Ma, Chengxuan Qian, Siqi Ma, Zheng Pang, Jun Chen, Zhe Liu
Presenter: Kai Han, Jiangsu University, China
- A93 (Thu-PM) **Regression-assisted Classification for CT-based Portal Hypertension Diagnosis**
Authors: Wuque Cai, Jiayi He, Xu Guo, Hongze Sun, Huan Tong, Bo Wei, Hao Wu, Dezhong Yao, Daqing Guo
Presenter: Jiayi He, University of Electronic Science and Technology of China, China
- A98 (Thu-PM) **MIBF-Net: Multi-modal Information Balanced Fusion Network for Clinical Diagnosis via Patient Narratives and Lesion Image**
Authors: Zixuan Tang, Bai Sun, Shidan He, Yuan Hong, Dongdong Yu, Zhenzhong Liu, Mengtang Li, Bin Chen, Shen Zhao
Presenter: Zixuan Tang, Sun Yat-Sen University, China
- A103 (Thu-PM) **Risk Estimation of Knee Osteoarthritis Progression via Predictive Multi-task Modelling from Efficient Diffusion Model using X-ray Images**
Authors: David Butler, Adrian Hilton, Gustavo Carneiro
Presenter: David Butler, University of Surrey, United Kingdom
- A108 (Thu-PM) **Unraveling Brainstem Deformations in Joubert Syndrome: A Statistical Shape Analysis of MRI-Derived Structures**
Authors: Francesca Maccarone, Giorgio Longari, Filippo Arrigoni, Denis Peruzzo, Simone Melzi
Presenter: Francesca Maccarone, University of Milano-Bicocca, Italy
- A113 (Thu-PM) **Time-Lapse Video-Based Embryo Grading via Complementary Spatial-Temporal Pattern Mining**
Authors: Yong Sun, Yipeng Wang, Junyu Shi, Zhiyuan Zhang, Yanmei Xiao, Lei Zhu, Manxi Jiang, Qiang Nie
Presenter: Yong Sun, The Hong Kong University of Science and Technology (Guangzhou), China
- A118 (Thu-PM) **FoundBioNet: A Foundation-Based Model for IDH Genotyping of Glioma from Multi-Parametric MRI**
Authors: Somayeh Farahani, Marjaneh Hejazi, Antonio Di Ieva, Sidong Liu
Presenter: Somayeh Farahani, Macquarie University, Australia
- Paper Highlight **P2INR-FWI: an Implicit Neural Representation Method for Speed of Sound Image Reconstruction in Ultrasound Computed Tomography**
Authors: Zesong Wang, Weicheng Yan, Zhaohui Liu, Ming Yuchi, Wu Qiu
Presenter: Zesong Wang, Huazhong University of Science and Technology, China
- A123 (Thu-PM) **P2INR-FWI: an Implicit Neural Representation Method for Speed of Sound Image Reconstruction in Ultrasound Computed Tomography**
Authors: Zesong Wang, Weicheng Yan, Zhaohui Liu, Ming Yuchi, Wu Qiu
Presenter: Zesong Wang, Huazhong University of Science and Technology, China
- A128 (Thu-PM) **All-in-One Medical Image Restoration with Latent Diffusion-Enhanced Vector-Quantized Codebook Prior**
Authors: Haowei Chen, Zhiwen Yang, Haotian Hou, Hui Zhang, Bingzheng Wei, Gang Zhou, Yan Xu
Presenter: Haowei Chen, Beihang University, China

- A133 (Thu-PM) **SABPI-Net: A Novel Structure-Aware Network for Accurate and Domain-Invariant Retinopathy of Prematurity Diagnosis**
 Paper Highlight *Authors: Shaobin Chen, Xinyu Zhao, Huazhu Fu, Tao Tan, Jiaju Huang, Xiangyu Xiong, Zhenquan Wu, Behdad Dashtbozorg, Baiying Lei, Guoming Zhang, Yue Sun*
Presenter: Jiaju Huang, Macao Polytechnic University, China
- A138 (Thu-PM) **A β -PET Pattern Prediction via Graph Reconstruction-Aware Fusion (GRAF) of Functional and Structural Networks**
 Paper Highlight *Authors: Haoyue Yuan, Yuxiao Liu, Feihong Liu, Dinggang Shen*
Presenter: Haoyue Yuan, ShanghaiTech University, China
- A143 (Thu-PM) **Focus on Texture: Rethinking Pre-training in Masked Autoencoders for Medical Image Classification**
Authors: Chetan Madan, Aarjav Satia, Soumen Basu, Pankaj Gupta, Usha Dutta, Chetan Arora
Presenter: Chetan Madan, Indian Institute of Technology Delhi, India
- A148 (Thu-PM) **BrainAlign: EEG-Vision Alignment via Frequency-Aware Temporal Encoder and Differentiable Cluster Assigner**
Authors: Enze Shi, Huawen Hu, Qilong Yuan, Kui Zhao, Sigang Yu, Shu Zhang
Presenter: Enze Shi, Northwestern Polytechnical University, China
- A153 (Thu-PM) **Physiological neural representation for personalised tracer kinetic parameter estimation from dynamic PET**
Authors: Kartikay Tehlan, Thomas Wendler
Presenter: Kartikay Tehlan, Technical University of Munich, Germany
- A158 (Thu-PM) **A Non-contrast Head CT Foundation Model for Comprehensive Neuro-Trauma Triage**
Authors: Youngjin Yoo, Bogdan Georgescu, Yanbo Zhang, Sasa Grbic, Han Liu, Gabriela D. Aldea, Thomas J. Re, Jyotipriya Das, Poikavila Ullaskrishnan, Eva Eibenberger, Andrei Chekkoury, Uttam K. Bodanapally, Savvas Nicolaou, Pina C. Sanelli, Thomas J. Schroepel, Yvonne W. Lui, Eli Gibson
Presenter: Youngjin Yoo, Siemens Healthineers, United States
- A163 (Thu-PM) **R2B-WFC Ultrasound Reconstruction: Wavelet Fourier Convolution-based Reconstruction from Radio Frequency to Image**
Authors: Hyunsu Jeong, Chiho Yoon, Minsik Sung, Kiduk Kim, Dougho Park, Chulhong Kim
Presenter: Hyunsu Jeong, Pohang University of Science and Technology, Republic of Korea
- A168 (Thu-PM) **Revisiting Masked Image Modeling with Standardized Color Space for Domain Generalized Fundus Photography Classification**
Authors: Eojin Jang, Myeongkyun Kang, Soopil Kim, Min Sagong, Sang Hyun Park
Presenter: Soopil Kim, Daegu Gyeongbuk Institute of Science and Technology, Republic of Korea
- A173 (Thu-PM) **Out-of-Distribution Nuclei Segmentation in Histology Imaging via Liquid Neural Networks with Modern Hopfield Layer**
Authors: Bishal Ranjan Swain, Kyung Joo Cheoi, Jaepil Ko
Presenter: Bishal Ranjan Swain, Kumoh National Institute of Technology, Republic of Korea

- A178 (Thu-PM) **Prototype-Guided and Lightweight Adapters for Inherent Interpretation and Generalisation in Federated Learning**
Authors: Samuel Ofosu Mensah, Kerol Djoumessi, Philipp Berens
Presenter: Samuel Ofosu Mensah, Hertie Institute for AI in Brain Health, Germany
- A183 (Thu-PM) **Deep Learning Framework for Managing Inter-Reader Variability in Background Parenchymal Enhancement Classification for Contrast-Enhanced Mammography**
 Paper Highlight *Authors: Elodie Ripaud, Clément Jailin, Pablo Milioni de Carvalho, Laurence Vancamberg, Isabelle Bloch*
Presenter: Elodie Ripaud, GE HealthCare, France
- A188 (Thu-PM) **Influence of Classification Task and Distribution Shift Type on OOD Detection in Fetal Ultrasound**
Authors: Chun Kit Wong, Anders N. Christensen, Cosmin I. Bercea, Julia A. Schnabel, Martin G. Tolsgaard, Aasa Feragen
Presenter: Chun Kit Wong, Technical University of Denmark, Denmark
- A193 (Thu-PM) **PathoPainter: Augmenting Histopathology Segmentation via Tumor-aware Inpainting**
Authors: Hong Liu, Haosen Yang, Evi M. C. Huijben, Mark Schuiveling, Ruisheng Su, Josien P. W. Pluim, Mitko Veta
Presenter: Hong Liu, Eindhoven University of Technology, The Netherlands
- A198 (Thu-PM) **Exploring the feasibility of zero-shot super-resolution in preclinical imaging**
Authors: Omar A. M. Gharib, Samuel W. Remedios, Blake E. Dewey, Jerry L. Prince, Aaron Carass
Presenter: Samuel Remedios, Johns Hopkins University, United States
- A203 (Thu-PM) **Synthesis of Pathological Dual-Channel Color Doppler Echocardiograms for Equitable Diagnosis of Heart Diseases**
Authors: Pooneh Roshanitabrizi, Pengfei Guo, Artur Arturi Aharonyan, Kelsey Brown, Taylor Gloria Broudy, Abhijeet Parida, Austin Tapp, Zhifan Jiang, Alison Tompsett, Joselyn Rwebembera, Emmy Okello, Andrea Beaton, Holger R. Roth, Daguang Xu, Syed Muhammad Anwar, Craig A. Sable, Marius George Linguraru
Presenter: Pooneh Roshanitabrizi, Children's National Hospital, United States
- A208 (Thu-PM) **PD-UniST: Prompt-Driven Universal Model for Unpaired H&E-to-IHC Stain Translation**
Authors: Chujie Zhang, Yangyang Xie, Yinhao Li, Xiao Liang, Lanfen Lin, Yen-Wei Chen
Presenter: Chujie Zhang, Ritsumeikan University, China
- A213 (Thu-PM) **Parameter-Efficient 12-Lead ECG Reconstruction from a Single Lead**
Authors: Junseok Lee, Yeonho Yoo, Jinkyu Kim, Dosun Lim, Gyeongsik Yang, Chuck Yoo
Presenter: Junseok Lee, Korea University, Republic of Korea
- A218 (Thu-PM) **UltraRay: Introducing Full-Path Ray Tracing in Physics-Based Ultrasound Simulation**
Authors: Felix Duelmer, Mohammad Farid Azampour, Magdalena Wysocki, Nassir Navab
Presenter: Felix Duelmer, Technical University of Munich, Germany

- A223 (Thu-PM) **Lymphoma Prognosis with Lesion-Anatomy Context Fusion and Attention-Based Multi-Lesion Aggregation**
 Paper Highlight *Authors: Song Zhang, Jiajin Zhang, Liheng Qiu, Wei Liu, Dakai Jin, Le Lu, Shenmiao Yang, Ke Yan*
Presenter: Ke Yan, DAMO Academy, Alibaba Group, China
- A228 (Thu-PM) **Pathology-Informed Latent Diffusion Model for Anomaly Detection in Lymph Node Metastasis**
Authors: Jiamu Wang, Keunho Byeon, Jinsol Song, Anh Nguyen, Sangjeong Ahn, Sung Hak Lee, Jin Tae Kwak
Presenter: Jiamu Wang, Korea University, Republic of Korea
- A233 (Thu-PM) **IMREPET: Implicit Neural Representation for Unsupervised Dynamic PET Reconstruction**
 Paper Highlight *Authors: Kailong Fan, Yubo Ye, Huafeng Liu, Linwei Wang*
Presenter: Kailong Fan, Zhejiang University, China
- A238 (Thu-PM) **MDAA-Diff: CT-Guided Multi-Dose Adaptive Attention Diffusion Model for PET Denoising**
Authors: Xiaolong Niu, Zanting Ye, Xu Han, Yanchao Huang, Hao Sun, Hubing Wu, Lijun Lu
Presenter: Xiaolong Niu, Southern Medical University, China
- A243 (Thu-PM) **ODES: Online Domain Adaptation with Expert Guidance for Medical Image Segmentation**
Authors: Md Shazid Islam, Sayak Nag, Arindam Dutta, Sk Miraj Ahmed, Fahim Faisal Niloy, Shreyangshu Bera, Amit K. Roy-Chowdhury
Presenter: Md Shazid Islam, University of California Riverside, United States
- A248 (Thu-PM) **Contrastive Disentanglement Learning Framework for Multi-lead Wearable ECG Denoising**
Authors: Yue Zhang, Chenyu Zhao, Wen Zhang, Jinliang Wang, Jun Guo, Wei Yang, Qianjin Feng
Presenter: Yue Zhang, Southern Medical University, China
- A253 (Thu-PM) **Blind Restoration of High-Resolution Ultrasound Video**
Authors: Chu Chen, Kangning Cui, Pasquale Cascarano, Wei Tang, Elena Loli Piccolomini, Raymond H. Chan
Presenter: Chu Chen, City University of Hong Kong, Hong Kong SAR
- A258 (Thu-PM) **Multi-Level Gated U-Net for Denoising TMR Sensor-Based MCG Signals**
 Paper Highlight *Authors: Zeyu Xing, Hao Li, Hao Dou, Zhong Zheng, Jingguo Dai, Chen Wang, Jian Cui, Xin Zhang, Tianzi Jiang*
Presenter: Zeyu Xing, Zhejiang University, China
- A263 (Thu-PM) **PD-INR: Prior-Driven Implicit Neural Representations for TOF-PET Reconstruction**
Authors: Yuxuan Long, Yulin Zhang, Hong Wang, Xiaodong Kuang, Hailiang Huang, Fan Rao, Huafeng Liu, Yefeng Zheng, Wentao Zhu
Presenter: Yulin Zhang, Zhejiang University, China

- A268 (Thu-PM) **RedDino: A foundation model for red blood cell analysis**
Authors: Luca Zedda, Andrea Loddo, Cecilia Di Ruberto, Carsten Marr
Presenter: Andrea Loddo, University of Cagliari, Italy
- A273 (Thu-PM) **Global and Local Vision-Language Alignment for Few-Shot Learning and Few-Shot OOD Detection**
 Paper Highlight *Authors: Jie Yan, Xiaoyuan Guan, Wei-Shi Zheng, Hao Chen, Ruixuan Wang*
Presenter: Jie Yan, Sun Yat-sen University, China
- A278 (Thu-PM) **RL4Med-DDPO: Reinforcement Learning for Controlled Guidance Towards Diverse Medical Image Generation using Vision-Language Foundation Models**
Authors: Parham Saremi, Amar Kumar, Mohamed Mohamed, Zahra TehraniNasab, Tal Arbel
Presenter: Parham Saremi, McGill University, Canada
- A283 (Thu-PM) **Language of Stains: Tokenization Enhances Multiplex Immunofluorescence and Histology Image Synthesis**
Authors: Zachary Sims, Sandhya Govindarajan, Gordon B. Mills, Ece Eksi, Young Hwan Chang
Presenter: Zachary Sims, Oregon Health & Science University, United States
- A288 (Thu-PM) **Sparse3Diff: A Diffusion Framework for 3D Reconstruction from Sparse 2D Slices in Volumetric Optical Imaging**
Authors: Hyun Jung Lee, Eunjung Jo, Minjoo Lim, Young-Han Son, Bogyong Kang, Hyeonyeong Nam, Ji-Hoon Jeong, Dong-Hee Shin, Tae-Eui Kam
Presenter: Hyun Jung Lee, Korea University, Republic of Korea
- A293 (Thu-PM) **Uncertainty-aware Diffusion and Reinforcement Learning for Joint Plane Localization and Anomaly Diagnosis in 3D Ultrasound**
Authors: Yuhao Huang, Yueyue Xu, Haoran Dou, Jiaxiao Deng, Xin Yang, Hongyu Zheng, Dong Ni
Presenter: Yuhao Huang, Shenzhen University, China
- A298 (Thu-PM) **SSPNet: Towards Feasible Spatio-Spectral Portraits-Based Deep Learning Framework for Neurodegenerative Disease Multi-Classification**
Authors: Ho-Jung Kim, Dogeun Park, Jeong-Woo Jang, Young-Gi Ju, Dong-Ok Won
Presenter: Dogeun Park, Cerebrovascular Disease Research Center, Hallym University, Republic of Korea
- A303 (Thu-PM) **Conservative-Radical Complementary Learning for Class-incremental Medical Image Analysis with Pre-trained Foundation Models**
Authors: Xinyao Wu, Zhe Xu, Donghuan Lu, Jinghan Sun, Hong Liu, Sadia Shakil, Jiawei Ma, Yefeng Zheng, Raymond Kai-yu Tong
Presenters: Xinyao Wu and Zhe Xu, The Chinese University of Hong Kong, Hong Kong SAR
- A308 (Thu-PM) **Predicting Longitudinal Brain Development via Implicit Neural Representations**
 Paper Highlight *Authors: Maik Dannecker, Daniel Rueckert*
Presenter: Maik Dannecker, Technical University of Munich, Germany

- A313 (Thu-PM) **CXR-CML: Improved zero-shot classification of long-tailed multi-label diseases in Chest X-Rays**
Authors: Rajesh Madhipati, Sheethal Bhat, Lukas Buess, Andreas Maier
Presenter: Rajesh Madhipati, Friedrich-Alexander University Erlangen-Nuremberg, Germany
- A318 (Thu-PM) **CXR-TFT: Multi-Modal Temporal Fusion Transformer for Predicting Chest X-ray Trajectories**
Authors: Mehak Arora, Ayman Ali, Kaiyuan Wu, Carolyn Davis, Takashi Shimazui, Mahmoud Alwakeel, Victor Moas, Philip Yang, Annette Esper, Rishikesan Kamaleswaran
Presenter: Mehak Arora, Duke University, United States
- A323 (Thu-PM) **RetinaLogos: Fine-Grained Synthesis of High-Resolution Retinal Images Through Captions**
Authors: Junzhi Ning, Cheng Tang, Kaijing Zhou, Diping Song, Lihao Liu, Ming Hu, Wei Li, Huihui Xu, Yanzhou Su, Tianbin Li, Jiyao Liu, Jin Ye, Sheng Zhang, Yuanfeng Ji, Junjun He
Presenter: Junzhi Ning, Shanghai Artificial Intelligence Laboratory, China
- A328 (Thu-PM) **ADaptation: Reconstruction-based Unsupervised Active Learning for Breast Ultrasound Diagnosis**
Authors: Yaofei Duan, Yuhao Huang, Xin Yang, Luyi Han, Xinyu Xie, Zhiyuan Zhu, Ping He, Ka-Hou Chan, Ligang Cui, Sio-Kei Im, Dong Ni, Tao Tan
Presenter: Yaofei Duan, Macao Polytechnic University, China
- A333 (Thu-PM) **Bias and Generalizability of Foundation Models across Datasets in Breast Mammography**
 Paper Highlight *Authors: Elodie Germani, Ilayda Selin-Türk, Fatima Zeineddine, Charbel Mourad, Shadi Albarqouni*
Presenter: Shadi Albarqouni, University of Bonn, Germany
- A338 (Thu-PM) **TAT: Task-Adaptive Transformer for All-in-One Medical Image Restoration**
Authors: Zhiwen Yang, Jiaju Zhang, Yang Yi, Jian Liang, Bingzheng Wei, Yan Xu
Presenter: Zhiwen Yang, Beihang University, China
- A343 (Thu-PM) **Controllable Skin Synthesis via Lesion-Focused Vector Autoregression Model**
Authors: Jiajun Sun, Zhen Yu, Siyuan Yan, Jason J. Ong, Zongyuan Ge, Lei Zhang
Presenter: Jiajun Sun, Monash University, Australia
- A348 (Thu-PM) **Reconsidering Explicit Longitudinal Mammography Alignment for Enhanced Breast Cancer Risk Prediction**
Authors: Solveig Thrun, Stine Hansen, Zijun Sun, Nele Blum, Suaiba A. Salahuddin, Kristoffer Wickstrøm, Elisabeth Wetzter, Robert Jenssen, Maik Stille, Michael Kampffmeyer
Presenter: Solveig Thrun, UiT The Arctic University of Norway, Norway
- A353 (Thu-PM) **Confidence in Angle Predictions for Clinical Decision Support**
Authors: Allison Clement, James Willoughby, Irina Voiculescu
Presenter: Allison Clement, Oxford University, United Kingdom

- A358 (Thu-PM) **Calibration in Multiple Instance Learning: Evaluating Aggregation Methods for Ultrasound-Based Diagnosis**
Authors: Axel Geysels, Ben Van Calster, Bart De Moor, Wouter Froyman, Dirk Timmerman
Presenter: Axel Geysels, KU Leuven, Belgium
- A363 (Thu-PM) **Multi-Modal Progressive Fusion for ASD Screening Using Smartphone Video**
Authors: Wenqi Zhong, Bohan Li, Chen Xia, Kuan Li, Dingwen Zhang
Presenter: Chen Xia, Northwestern Polytechnical University, China
- A368 (Thu-PM) **Neuro-AMS: Neuro-informed Age-aware and Medical Knowledge-integrated Strategy for Diagnosis of Multiple Brain Disorders**
Authors: Zhenguo Zhang, Lin Teng, Nan Zhao, Yuxiao Liu, Zhaoyu Qiu, Zehao Weng, Jinwei Kong, Feng Shi, Dinggang Shen
Presenter: Zhenguo Zhang, ShanghaiTech University, China
- A375 (Thu-PM) **Towards Multi-Scenario Generalization: Text-Guided Unified Framework for Low-Dose CT and Total-Body PET Reconstruction**
Authors: Weitao Wang, Yanyan Huang, Shunjie Dong, Le Xue, Kuangyu Shi, Yu Fu
Presenter: Weitao Wang, Lanzhou University, China
- B3 (Thu-PM) **tCURLoRA: Tensor CUR Decomposition Based Low-Rank Parameter Adaptation and Its Application in Medical Image Segmentation**
Authors: Guanhua He, Wangang Cheng, Hancan Zhu, Xiaohao Cai, Gaohang Yu
Presenter: Guanhua He, Shaoxing University, China
- B8 (Thu-PM) **Source-Free Domain Adaptation for Cross-Modality Cardiac Image Segmentation with Contrastive Class Relationship Consistency**
Authors: Ao Ma, Qingpeng Zhu, Jingjing Li, Mads Nielsen, Xu Chen
Presenter: Ao Ma, Southwestern University of Finance and Economics, China
- B13 (Thu-PM) **MedPro-DG: Domain-Aware Masked Contrastive Prompt Learning of Institution Generalization for Outcome Prediction**
Authors: Rongfang Wang, JiaSheng Chen, Xinlong Zhang, Jing Wang, Hui Liu, Zhiguo Zhou, Kai Wang
Presenter: Rongfang Wang, Xidian University, China
- B18 (Thu-PM) **Bio2Vol: Adapting 2D Biomedical Foundation Models for Volumetric Medical Image Segmentation**
Authors: Jiaxin Zhuang, Linshan Wu, Xuefeng Ni, Xi Wang, Liansheng Wang, Hao Chen
Presenter: Jiaxin Zhuang, The Hong Kong University of Science and Technology, Hong Kong SAR
- B23 (Thu-PM) **One-shot active learning for vessel segmentation**
Authors: Daniele Falcetta, Hava Chaptoukaev, Francesco Galati, Maria A. Zuluaga
Presenter: Daniele Falcetta, EURECOM, France
- B28 (Thu-PM) **MedGCD: Generalized Category Discovery in Medical Imaging**
Authors: Ankit Das, Chandan Gautam, Pritee Agrawal, Feng Yang, Yong Liu, Ramasamy Savitha
*Presenter: Ramasamy Savitha, Institute for Infocomm Research (I2R), Agency for Science, Technology and Research (A*STAR), Singapore*

- B33 (Thu-PM) **Improving OCTA Imaging through Cross-Domain Adaptation: A Noise-Guided Framework Using Intralipid-Enhanced Rat Data**
Authors: Bingyu Yang, Bingyao Tan, Zaiwang Gu, Leopold Schmetterer, Huiqi Li, Jun Cheng
*Presenter: Jun Cheng, Institute for Infocomm Research (I2R), Agency for Science, Technology and Research (A*STAR), Singapore*
- B38 (Thu-PM) **CardiacCLIP: Video-based CLIP Adaptation for LVEF Prediction in a Few-shot Manner**
Authors: Yao Du, Jiarong Guo, Xiaomeng Li
Presenter: Yao Du, The Hong Kong University of Science and Technology, Hong Kong SAR
- B43 (Thu-PM) **Geometric-Guided Few-Shot Dental Landmark Detection with Human-Centric Foundation Model**
Authors: Anbang Wang, Marawan Elbatel, Keyuan Liu, Lizhuo Lin, Meng Lan, Yanqi Yang, Xiaomeng Li
Presenter: Anbang Wang, The Hong Kong University of Science and Technology, Hong Kong SAR
- B48 (Thu-PM) **MOC: Meta-Optimized Classifier for Few-Shot Whole Slide Image Classification**
Authors: Tianqi Xiang, Yi Li, Qixiang Zhang, Xiaomeng Li
Presenter: Tianqi Xiang, The Hong Kong University of Science and Technology, Hong Kong SAR
- B53 (Thu-PM) **SPENet: Self-guided Prototype Enhancement Network for Few-shot Medical Image Segmentation**
Authors: Chao Fan, Xibin Jia, Anqi Xiao, Hongyuan Yu, Zhenghan Yang, Dawei Yang, Hui Xu, Yan Huang, Liang Wang
Presenter: Chao Fan, Beijing University of Technology, China
- B58 (Thu-PM) **Treat: A Unified Text-guided Conditioned Deep Learning Model for Generalized Radiotherapy Treatment Planning**
Authors: Sangwook Kim, Yuan Gao, Thomas G. Purdie, Chris McIntosh
Presenter: Sangwook Kim, University of Toronto, Canada
- B63 (Thu-PM) **EchoingECG: An Electrocardiogram Cross-Modal Model for Echocardiogram Tasks**
Authors: Yuan Gao, Sangwook Kim, Chris McIntosh
Presenter: Yuan Gao, University Health Network, Canada
- B68 (Thu-PM) **ConStyX: Content Style Augmentation for Generalizable Medical Image Segmentation**
Authors: Xi Chen, Zhiqiang Shen, Peng Cao, Jinzhu Yang, Osmar R. Zaiane
Presenter: Osmar Zaiane, Northeastern University, China
- B73 (Thu-PM) **Anatomical Structure Few-Shot Detection Utilizing Enhanced Human Anatomy Knowledge in Ultrasound Images**
Authors: Ying Zhu, Bocheng Liang, Ningshu Li, Lei Zhao, Xi Li, Hao Li, Fengwei Yang, Bin Pu
Presenter: Ying Zhu, Yunnan University, China
- Paper Highlight
- B78 (Thu-PM) **HyDA: Hypernetworks for Test Time Domain Adaptation in Medical Imaging Analysis**
Authors: Doron Serebro, Tammy Riklin-Raviv
Presenter: Doron Serebro, Ben Gurion University, Israel

- B83 (Thu-PM)
Paper Highlight
Reverse Imaging for Wide-spectrum Generalization of Cardiac MRI Segmentation
Authors: Yidong Zhao, Peter Kellman, Hui Xue, Tongyun Yang, Yi Zhang, Yuchi Han, Orlando Simonetti, Qian Tao
Presenter: Yidong Zhao, Delft University of Technology, The Netherlands
- B88 (Thu-PM)
Dynamic Gradient Sparsification Training for Few-Shot Fine-tuning of CT Lymph Node Segmentation Foundation Model
Authors: Zihao Luo, Zijun Gao, Wenjun Liao, Shichuan Zhang, Guotai Wang, Xiangde Luo
Presenter: Zihao Luo, University of Electronic Science and Technology of China, China
- B93 (Thu-PM)
Neighborhood-Consistent Binary Transformation for Domain-Invariant Chest X-ray Diagnosis
Authors: Zelong Liu, Huachao Zhu, Zhichao Sun, Yuda Zou, Yuliang Gu, Bo Du, Yongchao Xu
Presenter: Zelong Liu, Wuhan University, China
- B98 (Thu-PM)
A Multi-Branch Framework for Cross-Domain Vessel Segmentation via the Few-Shot Paradigm
Authors: Zihang Huang, Tianyu Zhao, Liang Zhang, Xin Yang
Presenter: Zihang Huang, Huazhong University of Science and Technology, China
- B103 (Thu-PM)
Learning Foundation Models from Multi-Organ Medical Images by Capturing Consistency and Diversity of Anatomical Structures
Authors: Mohammad Reza Hosseinzadeh Taher, Junpyo Hong, Ravi Soni, Gopal Avinash
Presenter: Junpyo Hong, GE HealthCare, United States
- B108 (Thu-PM)
D-CAM: Learning Generalizable Weakly-Supervised Medical Image Segmentation from Domain-invariant CAM
Authors: Jingjun Yi, Qi Bi, Hao Zheng, Haolan Zhan, Wei Ji, Huimin Huang, Yuexiang Li, Shaoxin Li, Xian Wu, Yefeng Zheng, Feiyue Huang
Presenter: Yefeng Zheng, Westlake University, China
- B113 (Thu-PM)
CellStyle: Improved Zero-Shot Cell Segmentation via Style Transfer
Authors: Rüveyda Yilmaz, Zhu Chen, Yuli Wu, Johannes Stegmaier
Presenter: Rüveyda Yilmaz, RWTH Aachen University, Germany
- B118 (Thu-PM)
Noise-Robust Tuning of SAM for Domain Generalized Ultrasound Image Segmentation
Authors: Zhikai Wei, Chao Wu, Hanyu Du, Rui Yu, Bo Du, Yongchao Xu
Presenter: Zhikai Wei, Wuhan University, China
- B123 (Thu-PM)
Multi-Tube-Voltage vBMD Measurement via Dual-Branch Frequency Balancing and Asymmetric Channel Attention
Authors: Mengze Zhang, Yali Li, HuiShu Yuan, Zhen Qian
Presenter: Mengze Zhang, United Imaging Healthcare, Co., Ltd, China
- B128 (Thu-PM)
Paper Highlight
Tied Prototype Model for Few-Shot Medical Image Segmentation
Authors: Hyeongji Kim, Stine Hansen, Michael Kampffmeyer
Presenter: Hyeongji Kim, UiT - The Arctic University of Norway, Norway

- B133 (Thu-PM) **UltraAD: Fine-Grained Ultrasound Anomaly Classification via Few-Shot CLIP Adaptation**
Authors: Yue Zhou, Yuan Bi, Wenjuan Tong, Wei Wang, Nassir Navab, Zhongliang Jiang
Presenter: Yue Zhou, Technical University of Munich, Germany
- B138 (Thu-PM) **Learning Disease State from Noisy Ordinal Disease Progression Labels**
Authors: Gustav Schmidt, Holger Heidrich, Philipp Berens, Sarah Müller
Presenter: Gustav Schmidt, University of Tübingen, Germany
- B143 (Thu-PM) **Leveraging Diffusion Models for Continual Test-Time Adaptation in Fundus Image Classification**
Authors: Mingsi Liu, Xiang Li, Mengxiang Guo, Lixin Duan, Huihui Fang, Yanwu Xu
Presenter: Mingsi Liu, University of Electronic Science and Technology of China, China
- B148 (Thu-PM) **SynPo: Boosting Training-Free Few-Shot Medical Segmentation via High-Quality Negative Prompts**
Authors: Yufei Liu, Haoke Xiao, Jiaxing Chai, Yongcun Zhang, Rong Wang, Zijie Meng, Zhiming Luo
Presenter: Yufei Liu, Xiamen University, China
- B153 (Thu-PM) **Prompt-DAS: Annotation-Efficient Prompt Learning for Domain Adaptive Semantic Segmentation of Electron Microscopy Images**
Authors: Jiabao Chen, Shan Xiong, Jialin Peng
Presenter: Jiabao Chen, Huaqiao University, China
- B158 (Thu-PM) **DSFC: Deformation-Aware Learning Strategy via Self-sustaining Feedback Cycle for Medical Vision Foundation Model Domain Adaptation**
Authors: Jie Lin, Hengyi Jiang, Hong Liu, Liansheng Wang
Presenter: Jie Lin, Xiamen University, China
- B163 (Thu-PM) **Domain Generalization for Pulmonary Nodule Detection via Distributionally-Regularized Mamba**
Authors: Tianzhong Lan, Nan Chen, Zhang Yi, Xiuyuan Xu, Min Zhu
Presenter: Tianzhong Lan, Sichuan University, China
- B168 (Thu-PM) **MadCLIP: Few-shot Medical Anomaly Detection with CLIP**
Authors: Mahshid Shiri, Cigdem Beyan, Vittorio Murino
Presenter: Cigdem Beyan, University of Verona, Italy
- B173 (Thu-PM) **Dual Knowledge-Aware Guidance for Source-Free Domain Adaptive Fundus Image Segmentation**
Authors: Yu Chen, Hailing Wang, Chunwei Wu, Guitao Cao
Presenter: Yu Chen, East China Normal University, China
- Paper Highlight
- B178 (Thu-PM) **Frequency Strikes Back: Boosting Parameter-Efficient Foundation Model Adaptation for Medical Imaging**
Authors: Son T. Ly, Hien V. Nguyen
Presenter: Son Ly, University of Houston, United States
- Paper Highlight

- B183 (Thu-PM) **CAUDA-MI: Cross Attention-Guided Unsupervised Domain Adaptation with Mutual Information for Cardiac MRI Segmentation**
Authors: Dianrong Du, Hengfei Cui, Jiatong Li, Fan Zheng, Yong Xia
Presenter: Dianrong Du, Northwestern Polytechnical University, China
- B188 (Thu-PM) **Contrastive Anatomy-Contrast Disentanglement: A Domain-General MRI Harmonization Method**
Authors: Daniel Scholz, Ayhan Can Erdur, Robbie Holland, Viktoria Ehm, Jan C. Peeken, Benedikt Wiestler, Daniel Rueckert
Presenter: Daniel Scholz, Technical University of Munich, Germany
- B193 (Thu-PM) **Clinical Prior-Guided Tumor Generation for Breast Ultrasound with Cross Domain Adaptation**
Authors: Haoyu Pan, Junyang Mo, Hongxin Lin, Chu Zhang, Zijian Wu, Yi Wang, Qingqing Zheng
Presenter: Haoyu Pan, Shenzhen University, China
- B198 (Thu-PM) **HARP: Harmonization and Adaptive Refinement of Pseudo-Labels for Cross-Domain Medical Image Segmentation**
Authors: Yulong Liu, Wenqing Ye, Hui Liu, Ziyi Chen, Peilin Li, Ronald X. Xu, Mingzhai Sun
Presenter: Yulong Liu, University of Science and Technology of China, China
- B203 (Thu-PM) **HASD: Hierarchical Adaption for Pathology Slide-Level Domain-Shift**
Authors: Jingsong Liu, Han Li, Chen Yang, Michael Deutges, Ario Sadaqi, Xin You, Katharina Breininger, Nassir Navab, Peter J. Schüffler
Presenter: Jingsong Liu, Technical University of Munich, Germany
- B208 (Thu-PM) **Exemplar Med-DETR: Toward Generalized and Robust Lesion Detection in Mammogram Images and Beyond**
Authors: Sheethal Bhat, Bogdan Georgescu, Adarsh Bhandary Panambur, Mathias Zinnen, Tri-Thien Nguyen, Awais Mansoor, Karim Khalifa Elbarbary, Siming Bayer, Florin-Cristian Ghesu, Sasa Grbic, Andreas Maier
Presenter: Sheethal Bhat, Friedrich Alexander Universität, Germany
- B213 (Thu-PM) **Selective Alignment Transfer for Domain Adaptation in Skin Lesion Analysis**
Authors: Nurjahan Sultana, Wenqi Lu, Xinqi Fan, Moi Hoon Yap
Presenter: Nurjahan Sultana, Manchester Metropolitan University, United Kingdom
- B218 (Thu-PM) **Fusing Dual Encoders: Single-source Domain Generalization with Extremely Few Annotations**
Authors: Ruofan Wang, Jintao Guo, Jian Zhang, Lei Qi, Yinghuan Shi
Presenter: Jian Zhang, Nanjing University, China
- B223 (Thu-PM) **TEGDA: Test-time Evaluation-Guided Dynamic Adaptation for Medical Image Segmentation**
Authors: Yubo Zhou, Jianghao Wu, Wenjun Liao, Shichuan Zhang, Shaoting Zhang, Guotai Wang
Presenter: Yubo Zhou, University of Electronic Science and Technology of China, China

- B228 (Thu-PM) **Sparsely Labeled fMRI Data Denoising with Meta-Learning-Based Semi-Supervised Domain Adaptation**
 Paper Highlight *Authors: Keun-Soo Heo, Ji-Wung Han, Soyeon Bak, Minjoo Lim, Bogyong Kang, Sang-Jun Park, Weili Lin, Han Zhang, Dinggang Shen, Tae-Eui Kam*
Presenter: Keun-Soo Heo, Korea University, Republic of Korea
- B233 (Thu-PM) **Iterative Deployment Exposure for Unsupervised Out-of-Distribution Detection**
Authors: Lars Doorenbos, Raphael Sznitman, Pablo Márquez-Neila
Presenter: Lars Doorenbos, University of Bonn, Germany
- B238 (Thu-PM) **Cross-Modality Supervised Prostate Segmentation on CBCT for Adaptive Radiotherapy**
Authors: Balint Kovacs, Goran Stanic, Fabian Weykamp, Florian Ebert, Dimitrios Bounias, Bouchra Tawk, Martin Niklas, Jakob Liermann, Oliver Jäkel, Klaus H. Maier-Hein, Ralf Floca, Kristina Giske
Presenter: Balint Kovacs, German Cancer Research Center (DKFZ) Heidelberg, Germany
- B243 (Thu-PM) **DpDNet: An Dual-Prompt-Driven Network for Universal PET-CT Segmentation**
Authors: Xinglong Liang, Jiaju Huang, Luyi Han, Tianyu Zhang, Xin Wang, Yuan Gao, Chunyao Lu, Lishan Cai, Tao Tan, Ritse Mann
Presenter: Xinglong Liang, The Netherlands Cancer Institute, The Netherlands
- B248 (Thu-PM) **MedNNS: Supernet-based Medical Task-Adaptive Neural Network Search**
Authors: Lotfi Abdelkrim Mecharbat, Ibrahim Almakky, Martin Takac, Mohammad Yaqub
Presenter: Lotfi Abdelkrim Mecharbat, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates
- B253 (Thu-PM) **SAM2-ProMem: Enhancing Zero-Shot 3D Segmentation with Stochastic Propagation and Memory Search**
Authors: Yujie Wang, Juntao Huang, Dazhu Liang, Fangzhou Liao, Jie Chen, Boan Chen
Presenter: Yujie Wang, Shukun Technology & Shanghai Jiaotong University, China
- B258 (Thu-PM) **LKA: Large Kernel Adapter for Enhanced Medical Image Classification**
Authors: Ziquan Zhu, Si-Yuan Lu, Tianjin Huang, Lu Liu, Zhe Liu
Presenter: Ziquan Zhu, University of Leicester, United Kingdom
- B263 (Thu-PM) **Single Image Test-Time Adaptation via Multi-View Co-Training**
Authors: Smriti Joshi, Richard Osuala, Lidia Garrucho, Kaisar Kushibar, Dimitri Kessler, Oliver Diaz, Karim Lekadir
Presenter: Smriti Joshi, Universitat de Barcelona, Spain
- B268 (Thu-PM) **LEAF: Latent Diffusion with Efficient Encoder Distillation for Aligned Features in Medical Image Segmentation**
Authors: Qilin Huang, Tianyu Lin, Zhiguang Chen, Fudan Zheng
Presenter: Qilin Huang, Sun Yat-sen University, China
- B273 (Thu-PM) **Robust sensitivity control in digital pathology via tile score distribution matching**
Authors: Arthur Pignet, John Klein, Geneviève Robin, Antoine Olivier
Presenter: Antoine Olivier, Owkin, France

- B278 (Thu-PM) **FedCLAM: Client Adaptive Momentum with Foreground Intensity Matching for Federated Medical Image Segmentation**
 Paper Highlight *Authors: Vasilis Siomos, Jonathan Passerat-Palmbach, Giacomo Tarroni*
Presenter: Vasilis Siomos, City St. George's, University of London, United Kingdom
- B283 (Thu-PM) **HA-SAM: Hierarchically Adapting SAM for Nerve Segmentation in Ultrasound Images**
Authors: Zihao Peng, Susu Kang, Xuping Huang, Xucheng Xiang, Gengyu He, Tianzhu Liu, Wei Mei, Shan Tan
Presenter: Shan Tan, Huazhong University of Science and Technology, China
- B288 (Thu-PM) **Active Source-Free Cross-Domain and Cross-Modality Adaptation for Volumetric Medical Image Segmentation by Image Sensitivity and Organ Heterogeneity Sampling**
Authors: Jin Yang, Xiaobing Yu, Peijie Qiu, Daniel Marcus, Aristeidis Sotiras
Presenter: Aristeidis Sotiras, Washington University School of Medicine in St. Louis, United States
- B293 (Thu-PM) **Unleashing SAM for Few-Shot Medical Image Segmentation with Dual-Encoder and Automated Prompting**
Authors: Cuong M. Pham, Phi Le Nguyen, Thanh Trung Nguyen, Minh Hieu Phan, Binh P. Nguyen
Presenter: Binh Nguyen, Victoria University of Wellington, New Zealand
- B298 (Thu-PM) **Bayesian Transformers and Higher-Order Graph Matching for Cell Tracking in Serial Tissue Sections**
Authors: Mostafa Karami, Sahand Hamzehei, David Arce, Gianna Raimondi, Linnaea Ostroff, Sheida Nabavi
Presenter: Sheida Nabavi, University of Connecticut, United States
- B303 (Thu-PM) **Test-Time Training with Local Contrast- Preserving Copy-Pasted Image for Domain Generalization in Retinal Vessel Segmentation**
Authors: Yuliang Gu, Zhichao Sun, Zelong Liu, Yongchao Xu
Presenter: Yuliang Gu, Wuhan University, China
- B308 (Thu-PM) **Robust Fetal Pose Estimation across Gestational Ages via Cross-Population Augmentation**
Authors: Sebastian Diaz, Benjamin Billot, Neel Dey, Molin Zhang, Esra Abaci Turk, P. Ellen Grant, Polina Golland, Elfar Adalsteinsson
Presenter: Sebastian Diaz, Massachusetts Institute of Technology, United States
- B313 (Thu-PM) **Domain Generalization for Mammogram Classification by Suppressing Domain-Specific Features**
Authors: Jiqun Chen, Luhao Sun, Wenzong Jiang, Weifeng Liu, Chao Li, Zhiyong Yu, Baodi Liu
Presenter: Jiqun Chen, China University of Petroleum (East China), China
- B318 (Thu-PM) **ISAC: Redefining the Vascular Segmentation Paradigm through Mask Completion for Cross-Domain Generalization**
Authors: Tianyu Zhao, Zihang Huang, Xixi Jiang, Liang Zhang, Xiaohuan Ding, Xin Yang
Presenter: Tianyu Zhao, Huazhong University of Science and Technology, China

- B323 (Thu-PM) **MAUP: Training-free Multi-center Adaptive Uncertainty-aware Prompting for Cross-domain Few-shot Medical Image Segmentation**
Authors: Yazhou Zhu, Haofeng Zhang
Presenter: Yazhou Zhu, Nanjing University of Science and Technology, China
- B328 (Thu-PM) **Addressing Label Scarcity and Domain Shift in Medical Image Segmentation**
Authors: Suruchi Kumari, Pravendra Singh
Presenter: Suruchi Kumari, Indian Institute of Technology Roorkee, India
- B333 (Thu-PM) **DetectDiffuse: Aggregation- and Attention-driven Universal Lesion Detection with Multi-scale Diffusion Model**
Authors: Xinyu Li, Danni Ai, Jingfan Fan, Tianyu Fu, Hong Song, Deqiang Xiao, Jian Yang
Presenter: Xinyu Li, Beijing Institute of Technology, China
- C3 (Thu-PM) **Parameterized Diffusion Optimization enabled Autoregressive Ordinal Regression for Diabetic Retinopathy Grading**
 Paper Highlight *Authors: Qinkai Yu, Wei Zhou, Hantao Liu, Yanyu Xu, Meng Wang, Yitian Zhao, Huazhu Fu, Xujiong Ye, Yalin Zheng, Yanda Meng*
Presenter: Qinkai Yu, University of Exeter, United Kingdom
- C8 (Thu-PM) **Few-Shot, Now for Real: Medical VLMs Adaptation without Balanced Sets or Validation**
Authors: Julio Silva-Rodríguez, Fereshteh Shakeri, Houda Bahig, Jose Dolz, Ismail Ben Ayed
Presenter: Julio Silva-Rodríguez, ÉTS Montréal, Canada
- C13 (Thu-PM) **Enhancing WSI-Based Survival Analysis with Report-Auxiliary Self-Distillation**
Authors: Zheng Wang, Hong Liu, Zheng Wang, Danyi Li, Min Cen, Baptiste Magnier, Li Liang, Liansheng Wang
Presenter: Liansheng Wang, Xiamen University, China
- C18 (Thu-PM) **Learning Contrastive Multimodal Fusion with Improved Modality Dropout for Disease Detection and Prediction**
Authors: Yi Gu, Kuniaki Saito, Jiaxin Ma
Presenter: Yi Gu, Nara Institute of Science and Technology, Japan
- C23 (Thu-PM) **Longitudinal MRI-Clinical Multimodal Fusion for pCR Prediction in Breast Cancer**
Authors: Dingrui Ma, Jiawei Cao, Hao Cheng, Dan Zhou, Jianping Liu, Xiaofeng Zhang, Kaijie Wu, Chaochen Gu, Xinping Guan
Presenter: Dingrui Ma, Shanghai Jiao Tong University, China
- C28 (Thu-PM) **Predicting Alzheimer's Disease Progression Using a Regression-based Survival Model with Longitudinal Data**
Authors: Ling Dai, Yiqun Sun, Jincheng Gu, Qinsen Bao, Feihong Liu, Dinggang Shen
Presenter: Ling Dai, ShanghaiTech University, China

- C33 (Thu-PM) **Contrastive Masked Video Modeling for Coronary Angiography Diagnosis**
Authors: Zhiming Shao, Yingqian Zhang, Zechen Wei, Yong Ge, Chen Wang, Guodong Ding, Lei Gao, Liwei Zhang, Yundai Chen, Jie Tian, Hui Hui
Presenter: Zhiming Shao, Key Laboratory of Molecular Imaging, Institute of Automation, Chinese Academy of Sciences, China
- C38 (Thu-PM) **Dynamic Function-Structure Connectivity Coupling for Predicting Progression Trajectories in Neurocognitive Decline**
Authors: Qianqian Wang, Wei Wang, Hong-Jun Li, Weili Lin, Mingxia Liu
Presenter: Qianqian Wang, The University of North Carolina at Chapel Hill, United States
- C43 (Thu-PM) **MurreNet: Modeling Holistic Multimodal Interactions Between Histopathology and Genomic Profiles for Survival Prediction**
Authors: Mingxin Liu, Chengfei Cai, Jun Li, Pengbo Xu, Jinze Li, Jiquan Ma, Jun Xu
Presenter: Mingxin Liu, Nanjing University of Information Science and Technology, China
- C48 (Thu-PM) **Opportunistic Osteoporosis Diagnosis via Texture-Preserving Self-Supervision, Mixture of Experts and Multi-Task Integration**
Authors: Jiaying Huang, Heng Guo, Le Lu, Fan Yang, Minfeng Xu, Ge Yang, Wei Luo
Presenter: Jiaying Huang, Institute of Automation, Chinese Academy of Sciences, China
- C53 (Thu-PM) **Multi-modal Knowledge Decomposition based Online Distillation for Biomarker Prediction in Breast Cancer Histopathology**
Authors: Qibin Zhang, Xinyu Hao, Qiao Chen, Rui Xu, Fengyu Cong, Cheng Lu, Hongming Xu
Presenter: Hongming Xu, Dalian University of Technology, China
- C58 (Thu-PM) **Cross-Modality Masked Learning for Survival Prediction in ICI Treated NSCLC Patients**
Authors: Qilong Xing, Zikai Song, Bingxin Gong, Lian Yang, Junqing Yu, Wei Yang
Presenter: Qilong Xing, Huazhong University of Science and Technology, China
- C63 (Thu-PM) **MedSoft-Diffusion: Medical Semantic-Guided Diffusion Model with Soft Mask Conditioning for Vertebral Disease Diagnosis**
 Paper Highlight *Authors: Shidan He, Enyuan Hu, Zixuan Tang, Bin Chen, Dongdong Yu, Yuan Hong, Zhenzhong Liu, Mengtang Li, Lei Liu, Shen Zhao*
Presenter: Shidan He, Sun Yat-sen University, China
- C68 (Thu-PM) **Dual Selective Gleason Pattern-Aware Multiple Instance Learning for Grade Group Prediction in Histopathology Images**
Authors: Xinyu Hao, Hongming Xu, Qibin Zhang, Qi Xu, Ilkka Polonen, Fengyu Cong
Presenter: Xinyu Hao, Dalian University of Technology, China
- C73 (Thu-PM) **MvHo-IB: Multi-View Higher-Order Information Bottleneck for Brain Disorder Diagnosis**
Authors: Kunyu Zhang, Qiang Li, Shujian Yu
Presenter: Kunyu Zhang, Zhengzhou University, China

- C78 (Thu-PM) **CoC: Chain-of-Cancer based on Cross-Modal Autoregressive Traction for Survival Prediction**
Authors: Haipeng Zhou, Sicheng Yang, Sihan Yang, Jing Qin, Lei Chen, Lei Zhu
Presenter: Haipeng Zhou, The Hong Kong University of Science and Technology (Guangzhou), China
- C83 (Thu-PM) **Clinical Prior Guided Cross-Modal Hierarchical Fusion for Histological Subtyping of Lung Cancer in CT Scans**
Authors: Chenchen Fan, Ahmed Elazab, Songqi Zhang, Yuxuan Wang, Qinghua Liang, Danna Li, Yongquan Zhang, Ying Xiang, Bo Liu, Changmiao Wang
Presenter: Chenchen Fan, Zhejiang University of Finance and Economics, China
- C88 (Thu-PM) **DISCLOSE the Neurodegeneration Dynamics: Individualized ODE Discovery for Alzheimer's Disease Precision Medicine**
 Paper Highlight *Authors: Wooseok Jung, Joonhyuk Park, Won Hwa Kim*
Presenter: Joonhyuk Park, Pohang University of Science and Technology, Republic of Korea
- C93 (Thu-PM) **GrInAdapt: Source-free Multi-Target Domain Adaptation for Retinal Vessel Segmentation**
Authors: Zixuan Liu, Aaron Honjaya, Yuekai Xu, Yi Zhang, Hefu Pan, Xin Wang, Linda G. Shapiro, Sheng Wang, Ruikang K. Wang
Presenters: Aaron Honjaya and Yuekai Xu, University of Washington, United States
- C98 (Thu-PM) **LNODE: Uncovering the Latent Dynamics of A β in Alzheimer's Disease**
Authors: Zheyu Wen, George Biros
Presenter: George Biros, The University of Texas at Austin, United States
- C103 (Thu-PM) **Clinical Data-Driven Retrieval-Augmented Model for Lung Nodule Malignancy Prediction**
Authors: Ruibo Hou, Shurong Chai, Rahul Kumar Jain, Yinhao Li, Jiaqing Liu, Shiyu Teng, Xiaoyu Shi, Lanfen Lin, Yen-Wei Chen
Presenter: Ruibo Hou, Ritsumeikan University, Japan
- C108 (Thu-PM) **Prior-guided Prototype Aggregation Learning for Alzheimer's Disease Diagnosis**
Authors: Yueqin Diao, Huihui Fang, Hanyi Yu, Yuning Wang, Yaling Tao, Ziyang Huang, Si Yong Yeo, Yanwu Xu
Presenter: Yueqin Diao, South China University of Technology, China
- C113 (Thu-PM) **Collateral Circulation guided Multi-modality Fusion Network for Postoperative Infarct Prediction**
Authors: Yichen Guo, Xinyi Zhao, Lisong Dai, Heming Dong, Lai Jiang, Mai Xu, Shengxi Li
Presenter: Lai Jiang, Beihang University, China
- C118 (Thu-PM) **Temporal Atlas-Guided Generation of Longitudinal Data via Geometric Latent Embeddings**
Authors: Shaoju Wu, Jian Wang, Sila Kurugol, Andy Tsai
Presenter: Sila Kurugol, Boston Children's Hospital and Harvard Medical School, United States

- C123 (Thu-PM) **Reliable and Interpretable Visual Field Progression Prediction with Diffusion Models and Conformal Risk Control**
Authors: Wenwen Si, Vivian Lin, Bo Sun, Kuk Jin Jang, Rubo Xing, Almiqdad Saeed, Rina Nagatani, Oleg Sokolsky, Insup Lee, Lama Al-Aswad
Presenter: Vivian Lin, University of Pennsylvania, United States
- C128 (Thu-PM) **Fine-Grained Rib Fracture Diagnosis with Hyperbolic Embeddings: A Detailed Annotation Framework and Multi-Label Classification Model**
Authors: Shripad Pate, Aiman Farooq, Suvrankar Datta, Musadiq Aadil Sheikh, Atin Kumar, Deepak Mishra
Presenter: Aiman Farooq, Indian Institute of Technology Jodhpur, India
- C133 (Thu-PM) **From Pixels to Prognosis: A Multi-Modal Attention-based Framework for Visceral Adipose Tissue Estimation**
 Paper Highlight *Authors: Arooba Maqsood, Afsah Saleem, Marc Sim, David Suter, Simone Radavelli-Bagatini, Jonathan M. Hodgson, Richard L. Prince, Kun Zhu, William D. Leslie, John T. Schousboe, Joshua R. Lewis, Syed Zulqarnain Gilani*
Presenter: Arooba Maqsood, Edith Cowan University, Australia
- C138 (Thu-PM) **VMRA-MaR: An Asymmetry-Aware Temporal Framework for Longitudinal Breast Cancer Risk Prediction**
Authors: Zijun Sun, Solveig Thrun, Michael Kampffmeyer
Presenter: Zijun Sun, University of Bologna, Italy
- C143 (Thu-PM) **OTSurv: A Novel Multiple Instance Learning Framework for Survival Prediction with Heterogeneity-aware Optimal Transport**
Authors: Qin Ren, Yifan Wang, Ruogu Fang, Haibin Ling, Chenyu You
Presenter: Chenyu You, Stony Brook University, United States
- C148 (Thu-PM) **Flexibly Distilled 3D Rectified Flow with Anatomical Constraints for Developmental Infant Brain MRI Prediction**
Authors: Haifeng Wang, Zehua Ren, Heng Chang, Xinmei Qiu, Fan Wang, Chunfeng Lian, Jianhua Ma
Presenter: Chunfeng Lian, Xi'an Jiaotong University, China
- C153 (Thu-PM) **Foundation-Model-Boosted Multimodal Learning for fMRI-based Neuropathic Pain Drug Response Prediction**
Authors: Wenrui Fan, L. M. Riza Rizky, Jiayang Zhang, Chen Chen, Haiping Lu, Kevin Teh, Dinesh Selvarajah, Shuo Zhou
Presenter: Wenrui Fan, The University of Sheffield, United Kingdom
- C158 (Thu-PM) **RANDose: A Region-aware Attention Network for Accurate Radiation Dose Prediction**
Authors: G. Jignesh Chowdary, Tiezhi Zhang, Xin Qian, Zhaozheng Yin
Presenter: G. Jignesh Chowdary, Stony Brook University, United States
- C163 (Thu-PM) **PLUS: Plug-and-Play Enhanced Liver Lesion Diagnosis Model on Non-Contrast CT Scans**
Authors: Jiacheng Hao, Xiaoming Zhang, Wei Liu, Xiaoli Yin, Yuan Gao, Chunli Li, Ling Zhang, Le Lu, Yu Shi, Xu Han, Ke Yan
Presenter: Jiacheng Hao, Tsinghua University, China

- C168 (Thu-PM) **Asynchronous Multi-Modal Learning for Dynamic Risk Monitoring of Acute Respiratory Distress Syndrome in Intensive Care Units**
Authors: Yidan Feng, Bohan Zhang, Sen Deng, Zhanli Hu, Jing Qin
Presenter: Yidan Feng, The Hong Kong Polytechnic University, China
- C173 (Thu-PM) **VT-SNN: Variable Time-step Spiking Neural Network Based on Uncertainty Measure and Its Application in Brain Disease Diagnosis**
 Paper Highlight *Authors: Haonan Rao, Shaolong Wei, Shu Jiang, Mingliang Wang, Weiping Ding, Jiashuang Huang*
Presenter: Haonan Rao, Nantong University, China
- C178 (Thu-PM) **ThyroidXL: Advancing Thyroid Nodule Diagnosis with an Expert-Labeled, Pathology-Validated Dataset**
Authors: Hung Duong Viet, Huan Vu, Duong Phan Huong, Quyen Nguyen Duc, Hao Pham Duc, Toan Le Quang, Sy Nguyen Ba, Dung Do Tien, Sang Dinh Viet, Cuong Nguyen Tien, Hoang Pham Huy, Hy Ngo Dien
Presenter: Cuong Nguyen, VNPT, Vietnam
- C183 (Thu-PM) **Multi-scale Attention-based Multiple Instance Learning for Breast Cancer Diagnosis**
 Paper Highlight *Authors: Mariana Mourão, Jacinto C. Nascimento, Carlos Santiago, Margarida Silveira*
Presenter: Mariana Mourão, Instituto Superior Técnico, Portugal
- C188 (Thu-PM) **Multistage Alignment and Fusion for Multimodal Multiclass Alzheimer's Disease Diagnosis**
 Paper Highlight *Authors: Shuo Huang, Lujia Zhong, Yonggang Shi*
Presenter: Yonggang Shi, University of Southern California, United States
- C193 (Thu-PM) **Lesion-centered vision transformer for stroke outcome prediction from image and clinical data**
Authors: Mingtian Liu, Nima Hatami, Laura Mechtouff, Tae-Hee Cho, Carole Lartizien, Carole Frindel
Presenter: Mingtian Liu, CREATIS, France
- C198 (Thu-PM) **Hard Sample Mining-based Tongue Diagnosis for Fatty Liver Disease Severity Classification**
Authors: Tao Chen, Jie Gao, Yong Xu, Weihong Qiu, Yijie Wu, Weimin Ye, Kunhong Liu
Presenter: Tao Chen, Zhejiang University, China
- C203 (Thu-PM) **Leveraging Visual Prompt with Diffusion Adversarial Network for Radiotherapy Dose Prediction**
Authors: Zhenghao Feng, Lu Wen, Jiaqi Cui, Xi Wu, Jianghong Xiao, Xingchen Peng, Dinggang Shen, Yan Wang
Presenter: Yan Wang, Sichuan University, China
- C208 (Thu-PM) **RadKAM: Attention-Driven Kolmogorov-Arnold Model for Automatic Radiation-Induced Lymphopenia Prediction by Multimodal Learning**
Authors: Rongchang Zhao, Zhangyue Wu, Jian Zhang, Zijian Zhang, Shuo Li
Presenter: Rongchang Zhao, Central South University, China

- C213 (Thu-PM) **UniCross: Balanced Multimodal Learning for Alzheimer’s Disease Diagnosis by Uni-modal Separation and Metadata-guided Cross-modal Interaction**
Authors: Lisong Yin, Chuyang Ye, Tiantian Liu, Jinglong Wu, Tianyi Yan
Presenter: Lisong Yin, Beijing Institute of Technology, China
- C218 (Thu-PM) **Integrate Semantic Radiomics as Prior Evidence into Evidential Deep Learning for Pelvic Lipomatosis Diagnosis**
Authors: Zheran Zhang, Xiaodong Yue, Maoyu Wang, Zhikang Xu, Yufei Chen, Zhipeng Wei
Presenter: Zheran Zhang, Shanghai University, China
- C223 (Thu-PM) **MT-WilmsNet: A Multi-Level Transformer Fusion Network for Wilms’ Tumor Segmentation and Metastasis Prediction**
Authors: Zhu Zhu, Wenjing Yu, Xiaohui Ma, Shuai Liu, Jie Dong, Yuxin Du, Changmiao Wang, Gang Yu
Presenter: Zhu Zhu, Zhejiang University, China
- C228 (Thu-PM) **Prototype-Guided Cross-Modal Knowledge Enhancement for Adaptive Survival Prediction**
Authors: Fengchun Liu, Linghan Cai, Zhikang Wang, Zhiyuan Fan, Jin-gang Yu, Hao Chen, Yongbing Zhang
Presenter: Fengchun Liu, Harbin Institute of Technology (Shenzhen), China
- C233 (Thu-PM) **Attention-Based Multimodal Deep Learning Model for Post-Stroke Motor Impairment Prediction**
 Paper Highlight *Authors: Rukiye Karakis, Kali Gurkahraman, Georgios D. Mitsis, Marie-Hélène Boudrias*
Presenter: Rukiye Karakis, Sivas Cumhuriyet University, Turkey
- C238 (Thu-PM) **Uncertainty-Aware Multimodal MRI Fusion for HIV-Associated Asymptomatic Neurocognitive Impairment Prediction**
Authors: Zige Chen, Haonan Qin, Wei Wang, Zhongkai Zhou, Chen Zhao, Yuqi Fang, Caifeng Shan
Presenter: Zige Chen, Nanjing University, China
- C243 (Thu-PM) **CTSL: Codebook-based Temporal-Spatial Learning for Accurate Non-Contrast Cardiac Risk Prediction Using Cine MRIs**
Authors: Haoyang Su, Shaohao Rui, Jinyi Xiang, Lianming Wu, Xiaosong Wang
Presenter: Haoyang Su, Fudan University, China
- C248 (Thu-PM) **Boosting Generalizability in NPC ART Prediction via Multi-Omics Feature Mapping**
 Paper Highlight *Authors: Jiabao Sheng, Zhe Li, Jiang Zhang, Saikit Lam, Zhi Chen, Lei Xing, Jing Cai*
Presenter: Jiabao Sheng, The Hong Kong Polytechnic University, Hong Kong SAR
- C253 (Thu-PM) **Brain-Heart-Gut Guided Multi-Constraint Knowledge Distillation for Early Alzheimer’s Disease Diagnosis**
Authors: Fan Li, Shilun Zhao, Shuwei Bai, Yuxiao Liu, Kai Zhang, Yin Xu, Ya Zhang, Kaicong Sun, Dinggang Shen
Presenter: Fan Li, ShanghaiTech University, China

- C258 (Thu-PM) **Feature Copy-Paste Network for Lung Cancer EGFR Mutation Status Prediction in CT images**
Authors: Xingyu Huang, Shuo Wang, Chengcai Liu, Haolin Sang, Yi Wu, Jie Tian
Presenter: Xingyu Huang, Beihang University, China
- C263 (Thu-PM) **Conditional Latent Diffusion Models for Irregularly Spaced Longitudinal Radiological Data**
Authors: Nabil Mouadden, Othmane Laousy, Rafael Marini, Valentin Ong, Marie-Pierre Revel, Guillaume Chassagnon, Stergios Christodoulidis, Maria Vakalopoulou
Presenter: Maria Vakalopoulou, Centrale Supélec, University Paris Saclay, France
- C268 (Thu-PM) **Self-Propagative Multi-Task Learning for Predicting Cardiometabolic Risk Factors**
Authors: Seonghyeon Ko, Huigyu Yang, Junghyun Bum, Duc-Tai Le, Hyunseung Choo
Presenter: Seonghyeon Ko, Sungkyunkwan University, Republic of Korea
- C273 (Thu-PM) **Spatially Gene Expression Prediction using Dual-Scale Contrastive Learning**
Authors: Mingcheng Qu, Yuncong Wu, Donglin Di, Yue Gao, Tonghua Su, Yang Song, Lei Fan
Presenter: Mingcheng Qu, Harbin Institute of Technology, China
- C278 (Thu-PM) **Multiview Feature Fusion and Contrastive Learning for Drug-Target Interaction Prediction**
Authors: Xiaoting Zeng, Li Li, Yu Liang, Weilin Chen, Baiying Lei
Presenter: Xiaoting Zeng, Shenzhen University, China
- C283 (Thu-PM) **A flexible deep learning framework for survival analysis with medical data**
Authors: Gabriele Campanella, Ida Häggström, Lucas Kook, Torsten Hothorn, Thomas J. Fuchs
Presenter: Ida Häggström, Chalmers University of Technology, Sweden
- C288 (Thu-PM) **Progression-Aware Generative Model Enhancing Baseline Visit Prediction of Early Alzheimer's Disease**
Authors: Xingyu Gao, Runyi Guo, Zhe Zhao
Presenter: Xingyu Gao, Donghua University, China
- C293 (Thu-PM) **Adaptive Adversarial Data Augmentation with Trajectory Constraint for Alzheimer's Disease Conversion Prediction**
Authors: Hyuna Cho, Hayoung Ahn, Guorong Wu, Won Hwa Kim
Presenter: Hyuna Cho, Pohang University of Science and Technology, Republic of Korea
- C298 (Thu-PM) **MReg: A Novel Regression Model with MoE-based Video Feature Mining for Mitral Regurgitation Diagnosis**
Authors: Zhe Liu, Yuhao Huang, Lian Liu, Chengrui Zhang, Haotian Lin, Tong Han, Zhiyuan Zhu, Yanlin Chen, Ruiyue Chen, Dong Ni, Zhongshan Gou, Xin Yang
Presenter: Zhe Liu, Shenzhen University, China
- C303 (Thu-PM) **PTCMIL: Multiple Instance Learning via Prompt Token Clustering for Whole Slide Image Analysis**
Authors: Beidi Zhao, SangMook Kim, Hao Chen, Chen Zhou, Zu-hua Gao, Gang Wang, Xiaoxiao Li
Presenter: Beidi Zhao, The University of British Columbia, Canada

- C308 (Thu-PM) **Cross-Modal CXR-CTPA Knowledge Distillation using latent diffusion priors towards CXR Pulmonary Embolism Diagnosis**
Authors: Noa Cahan, Meshi Sizikov, Hayit Greenspan
Presenter: Noa Cahan, Tel Aviv University, Israel
- C313 (Thu-PM) **Temporal Representation Learning of Phenotype Trajectories for pCR Prediction in Breast Cancer**
Authors: Ivana Janíčková, Yen Y. Tan, Thomas H. Helbich, Konstantin Miloserdov, Zsuzsanna Bago-Horvath, Ulrike Heber, Georg Langs
Presenter: Ivana Janíčková, Medical University of Vienna, Austria
- C318 (Thu-PM) **Investigating Voxel-level Brain Age Prediction as a Pretext Task for Brain MRI Segmentation**
Authors: Tasneem Nasser, Roberto Souza, Naser El-Sheimy
Presenter: Tasneem Nasser, University of Calgary, Canada
- C323 (Thu-PM) **VAMPIRE: Uncovering Vessel Directional and Morphological Information from OCTA Images for Cardiovascular Disease Risk Factor Prediction**
Authors: Lehan Wang, Hualiang Wang, Chubin Ou, Lushi Chen, Yunyi Liang, Xiaomeng Li
Presenter: Lehan Wang, The Hong Kong University of Science and Technology, Hong Kong SAR
- C328 (Thu-PM) **Deep Knowledge-Infused Transformer for NSCLC Lymph Node Station Metastasis Prediction: Development of an AI-Powered Intraoperative Decision System**
Authors: Jie Zhao, Zifan Chen, Guangzhengao Yang, Yijiang He, Li Zhang, Bin Dong
Presenter: Jie Zhao, Peking University, China
- C333 (Thu-PM) **MELON: Multimodal Mixture-of-Experts with Spectral-Temporal Fusion for Long-Term Mobility Estimation in Critical Care**
- Paper Highlight *Authors: Jiaqing Zhang, Miguel Contreras, Jessica Sena, Andrea Davidson, Yuanfang Ren, Ziyuan Guan, Tezcan Ozrazgat-Baslanti, Tyler J. Loftus, Subhash Nerella, Azra Bihorac, Parisa Rashidi*
Presenter: Subhash Nerella, University of Florida, United States

Poster Session 4: Deployment, Trustworthiness, and Privacy / Surgical Navigation / Reconstruction and Synthesis in MRI and CT/X-Ray

Friday, September 26, 2025, 11:00 - 12:30

Poster Hall (DCC 2)

- A4 (Fri-AM) **Maverick: Collaboration-free Federated Unlearning for Medical Privacy**
 Paper Highlight *Authors: Win Kent Ong, Chee Seng Chan*
Presenter: Win Kent Ong, Universiti Malaya, Malaysia
- A9 (Fri-AM) **MeDi: Metadata-Guided Diffusion Models for Mitigating Biases in Tumor Classification**
Authors: David Jacob Drexlin, Jonas Dippel, Julius Hense, Niklas Prenil, Grgoire Montavon, Frederick Klauschen, Klaus-Robert Mller
Presenter: Jonas Dippel, TU Berlin, Germany
- A14 (Fri-AM) **FOCUS: Feature Replay with Optimized Channel-Consistent Dropout for U-Net Skip-Connections**
Authors: Simon Johannes Joham, Franz Thaler, Arnela Hadzic, Martin Urschler
Presenter: Simon Joham, Medical University of Graz, Austria
- A19 (Fri-AM) **Temporal Model-Based Federated Active Medical Image Classification**
Authors: Yunlu Yan, Chun-Mei Feng, Yuexiang Li, Jinheng Xie, Jun Chen, Mohamed Elhoseiny, Ming Hu, Kaishun Wu, Lei Zhu
Presenter: Yunlu Yan, The Hong Kong University of Science and Technology (Guangzhou), China
- A24 (Fri-AM) **PRECISE-AS: Personalized Reinforcement Learning for Efficient Point-of-Care Echocardiography in Aortic Stenosis Diagnosis**
Authors: Armin Saadat, Nima Hashemi, Hooman Vaseli, Michael Y. Tsang, Christina Luong, Michiel Van de Panne, Teresa S. M. Tsang, Purang Abolmaesumi
Presenter: Armin Saadat, University of British Columbia, Canada
- A29 (Fri-AM) **Shuffle-Diversity Collaborative Federated Learning for Imbalanced Medical Image Analysis**
Authors: Wenpeng Gao, Liantao Lan, Yumeng Liu, Ruxin Wang, Xiaomao Fan
Presenter: Xiaomao Fan, Shenzhen Technology University, China
- A34 (Fri-AM) **GoCa: Trustworthy Multi-Modal RAG with Explicit Thinking Distillation for Reliable Decision-Making in Med-LVLMs**
Authors: Pengyu Dai, Yafei Ou, Yuqiao Yang, Ze Jin, Kenji Suzuki
Presenter: Pengyu Dai, Institute of Science Tokyo, Japan
- A39 (Fri-AM) **Subgroup Performance Analysis in Hidden Stratifications**
Authors: Alceu Bissoto, Trung-Dung Hoang, Tim Flhmann, Susu Sun, Christian F. Baumgartner, Lisa M. Koch
Presenter: Alceu Bissoto, University of Bern, Switzerland

- A44 (Fri-AM) **On the Interplay of Human-AI Alignment, Fairness, and Performance Trade-offs in Medical Imaging**
 Paper Highlight *Authors: Haozhe Luo, Ziyu Zhou, Shelley Zixin Shu, Aurélie Pahud de Mortanges, Robert Berke, Mauricio Reyes*
Presenter: Haozhe Luo, University of Bern, Switzerland
- A49 (Fri-AM) **DeepAf: One-Shot Spatiospectral Auto-Focus Model for Digital Pathology**
Authors: Yousef Yeganeh, Maximilian Frantzen, Michael Lee, Kun Hsing-Yu, Nassir Navab, Azade Farshad
Presenter: Yousef Yeganeh, Technical University of Munich, Germany
- A54 (Fri-AM) **Personalized Federated Side-Tuning for Medical Image Classification**
Authors: Jiayi Chen, Benteng Ma, Yongsheng Pan, Bin Pu, Hengfei Cui, Yong Xia
Presenter: Yong Xia, Northwestern Polytechnical University, China
- A59 (Fri-AM) **Privacy Preserving Chest X-ray Classification in Latent Space with Homomorphically Encrypted Neural Inference**
Authors: Jonghun Kim, Gyeongdeok Jo, Sinyoung Ra, Hyunjin Park
Presenter: Jonghun Kim, Sungkyunkwan University, Republic of Korea
- A64 (Fri-AM) **Embedding-Based Federated Data Sharing via Differentially Private Conditional VAEs**
Authors: Francesco Di Salvo, Hanh Huyen My Nguyen, Christian Ledig
Presenter: Francesco Di Salvo, University of Bamberg, Germany
- A69 (Fri-AM) **Incorporating Rather Than Eliminating: Achieving Fairness for Skin Disease Diagnosis Through Group-Specific Experts**
Authors: Gelei Xu, Yuying Duan, Zheyuan Liu, Xueyang Li, Meng Jiang, Michael Lemmon, Wei Jin, Yiyu Shi
Presenter: Gelei Xu, University of Notre Dame, United States
- A74 (Fri-AM) **Seeing Beyond the Surface: Retinal Thickness Prediction from Color Fundus Photography for DME Management**
Authors: Wenquan Cheng, Yihua Sun, Jinyuan Wang, Jia Guo, Zihan Li, Zhuhao Wang, Guochen Ning, Yingfeng Zheng, Hongen Liao, Tien Yin Wong, Su Jeong Song
Presenter: Wenquan Cheng, Tsinghua University, China
- A79 (Fri-AM) **GradInvDiff: Stealing Medical Privacy in Federated Learning via Diffusion-Based Gradient Inversion**
Authors: Zhiyuan Wang, Daisong Gan, Wenzhuo Fang, Yuliang Zhu, Kun Liu
Presenter: Daisong Gan, University of Chinese Academy of Sciences, China
- A84 (Fri-AM) **RadioFormer: Integrating Radiologist Inductive Bias for Tumor Classification on Multi-Sequence MR Images**
Authors: Xiaoyu Bai, Yong Xia
Presenter: Xiaoyu Bai, Northwestern Polytechnical University, China

- A89 (Fri-AM) **Mutual Information Regularization for Fairness-aware Deep Imaging Representations**
 Paper Highlight Authors: Amir Reza Sadri, Thomas DeSilvio, Satish E. Viswanath
 Presenter: Amir Reza Sadri, Case Western Reserve University, United States
- A94 (Fri-AM) **Multi-task Screening for Cervical Diseases via Feature Routing and Asymmetric Distillation**
 Authors: Haotian Jiang, Haolin Huang, Jiangdong Cai, Mengjie Xu, Zhenrong Shen, Manman Fei, Xinyu Wang, Lichi Zhang, Qian Wang
 Presenter: Haotian Jiang, ShanghaiTech University, China
- A99 (Fri-AM) **FedWSIDD: Federated Whole Slide Image Classification via Dataset Distillation**
 Authors: Haolong Jin, Shenglin Liu, Cong Cong, Qingmin Feng, Yongzhi Liu, Lina Huang, Yingzi Hu
 Presenter: Haolong Jin, Huazhong University of Science and Technology, China
- A104 (Fri-AM) **Decentralized Noise Handling in Medical Imaging: Encoder-Decoder Based Federated Imputation for Robust Training**
 Authors: Yunyoung Chang, Yeonwoo Noh, Sang-Woong Lee, Minwoo Lee, Wonjong Noh
 Presenter: Yunyoung Chang, Gachon University, Republic of Korea
- A109 (Fri-AM) **Variational Visible Layers: A Practical Framework for Uncertainty Estimation**
 Paper Highlight Authors: Zeinab Abboud, Herve Lombaert, Samuel Kadoury
 Presenter: Zeinab Abboud, Polytechnique Montreal, Canada
- A114 (Fri-AM) **Conformal Risk Control for Semantic Uncertainty Quantification in Computed Tomography**
 Authors: Jacopo Teneggi, J. Webster Stayman, Jeremias Sulam
 Presenter: Jacopo Teneggi, Johns Hopkins University, United States
- A119 (Fri-AM) **Enhancing AI-assisted Stroke Emergency Triage with Adaptive Uncertainty Estimation**
 Authors: Shuhua Yang, Tongan Cai, Haomiao Ni, Wenchao Ma, Yuan Xue, Kelvin Wong, John Volpi, James Z. Wang, Sharon X. Huang, Stephen T. C. Wong
 Presenter: Sharon Huang, The Pennsylvania State University, United States
- A124 (Fri-AM) **PRADA: Protecting and Detecting Dataset Abuse for Open-source Medical Dataset**
 Authors: Jinhyeok Jang, Hong Joo Lee, Nassir Navab, Seong Tae Kim
 Presenter: Hong Joo Lee, Technical University of Munich, Germany
- A129 (Fri-AM) **Equitable Federated Learning with NCA**
 Authors: Nick Lemke, Mirko Konstantin, Henry John Krumb, John Kalkhof, Jonathan Stieber, Anirban Mukhopadhyay
 Presenter: Nick Lemke, Technische Universität Darmstadt, Germany
- A134 (Fri-AM) **Bridging Knowledge Discrepancy in Retinal Image Analysis through Federated Multi-Task Learning**
 Authors: Jing Yang, Yuxi Ma, Jin-Gang Yu, Feng Gao, Shuting Yang, Du Cai, Jiacheng Wang, Liansheng Wang
 Presenter: Jing Yang, National Institute for Data Science in Health and Medicine & Xiamen University, China

- A139 (Fri-AM) **Enhancing Soft Tissue Sarcoma Classification by Mitigating Patient-Specific Bias in Whole Slide Images**
Authors: Weiping Lin, Runchen Zhu, Wentai Hou, Jiacheng Wang, Yixuan Lin, Rui Chen, Na Ta, Liansheng Wang
Presenter: Weiping Lin, Xiamen University, China
- A144 (Fri-AM) **High-Order Progressive Trajectory Matching for Medical Image Dataset Distillation**
Authors: Le Dong, Jinghao Bian, Jingyang Hou, Jingliang Hu, Yilei Shi, Weisheng Dong, Xiao Xiang Zhu, Lichao Mou
Presenter: Le Dong, Xidian University, China
- A149 (Fri-AM) **Revisit the Stability of Vanilla Federated Learning Under Diverse Conditions**
Authors: Youngjoon Lee, Jinu Gong, Sun Choi, Joonhyuk Kang
Presenter: Youngjoon Lee, Korea Advanced Institute of Science & Technology, Republic of Korea
- A154 (Fri-AM) **Adaptive Frame Selection for Gestational Age Estimation from Blind Sweep Fetal Ultrasound Videos**
 Paper Highlight *Authors: Tanya Akumu, Marawan Elbatel, Victor M. Campello, Richard Osuala, Carlos Martin-Isla, Ignacio Valenzuela, Xiaomeng Li, Bishesh Khanal, Karim Lekadir*
Presenter: Tanya Akumu, University of Barcelona, Spain
- A159 (Fri-AM) **LHU-Net: a Lean Hybrid U-Net for Cost-efficient, High-performance Volumetric Segmentation**
Authors: Yousef Sadegheih, Afshin Bozorgpour, Pratibha Kumari, Reza Azad, Dorit Merhof
Presenter: Yousef Sadegheih, University of Regensburg, Germany
- A164 (Fri-AM) **Feeling the Stakes: Realism and Ecological Validity in User Research for Computer-Assisted Interventions**
Authors: Sue Min Cho, Winnie Wu, Ethan Kilmer, Russell H. Taylor, Mathias Unberath
Presenter: Sue Min Cho, Johns Hopkins University, United States
- A169 (Fri-AM) **WaveFormer: A 3D Transformer with Wavelet-Driven Feature Representation for Efficient Medical Image Segmentation**
Authors: Md Mahfuz Al Hasan, Mahdi Zaman, Abdul Jawad, Alberto Santamaria-Pang, Ho Hin Lee, Ivan Tarapov, Kyle B. See, Md Shah Imran, Antika Roy, Yaser Pourmohammadi Fallah, Navid Asadizanjani, Reza Forghani
Presenter: Kyle See, University of Florida, United States
- A174 (Fri-AM) **Toward Medical Deepfake Detection: A Comprehensive Dataset and Novel Method**
 Paper Highlight *Authors: Shuaibo Li, Zhaohu Xing, Hongqiu Wang, Pengfei Hao, Xingyu Li, Zekai Liu, Lei Zhu*
Presenter: Shuaibo Li, The Hong Kong University of Science and Technology (Guangzhou), China
- A179 (Fri-AM) **SV-DRR: High-Fidelity Novel View X-Ray Synthesis Using Diffusion Model**
Authors: Chun Xie, Yuichi Yoshii, Itaru Kitahara
Presenter: Chun Xie, University of Tsukuba, Japan

- A184 (Fri-AM) **Direct Inversion Formula of the Multi-coil MR Operator under Arbitrary Trajectories**
Authors: Junzhou Chen, Anthony G. Christodoulou, Zhaoyang Fan
Presenter: Junzhou Chen, Cedars-Sinai Medical Center, United States
- A189 (Fri-AM) **Reflect: Rectified Flows for Efficient Brain Anomaly Correction Transport.**
Authors: Farzad Beizadeh, Sina Hajimiri, Ismail Ben Ayed, Gregory Lodygensky, Christian Desrosiers, Jose Dolz
Presenter: Farzad Beizadeh, École de technologie supérieure, Canada
- A194 (Fri-AM) **Hierarchical Anatomy-Aware Guidance for Brain Tissue Microstructure Reconstruction from T1-weighted MRI**
Authors: Yuxing Li, Chuyang Ye
Presenter: Chuyang Ye, Beijing Institute of Technology, China
- A199 (Fri-AM) **T2I-Diff: fMRI Signal Generation via Time-Frequency Image Transform and Classifier-Free Denoising Diffusion Models**
Authors: Hwa Hui Tew, Junn Yong Loo, Yee-Fan Tan, Xinyu Tang, Hernando Ombao, Fuad Noman, Raphaël C.-W. Phan, Chee-Ming Ting
Presenter: Hwa Hui Tew, Monash University Malaysia, Malaysia
- A204 (Fri-AM) **Instrument-Splatting: Controllable Photorealistic Reconstruction of Surgical Instruments Using Gaussian Splatting**
Authors: Shuojue Yang, Zijian Wu, Mingxuan Hong, Qian Li, Daiyun Shen, Septimiu E. Salcudean, Yueming Jin
Presenter: Shuojue Yang, National University of Singapore, Singapore
- A209 (Fri-AM) **Cascaded 3D Diffusion Models for Whole-body 3D 18-F FDG PET/CT synthesis from Demographics**
Authors: Siyeop Yoon, Sifan Song, Pengfei Jin, Matthew Tivnan, Yujin Oh, Sekeun Kim, Dufan Wu, Xiang Li, Quanzheng Li
Presenter: Siyeop Yoon, Harvard Medical School, United States
- A214 (Fri-AM) **Physics-Informed Implicit Neural Representations for Joint B0 Estimation and Echo Planar Imaging**
Authors: Wenqi Huang, Nan Wang, Congyu Liao, Yimeng Lin, Mengze Gao, Daniel Rueckert, Kavin Setsompop
Presenter: Wenqi Huang, Technical University of Munich, Germany
- A219 (Fri-AM) **Real Super-Resolution for Proximal Femur: Enhanced Computation of Structural Bone Metrics from Clinical CTs**
Authors: Niklas C. Koser, Marten J. Finck, Felix N. von Brackel, Benjamin Ondruschka, Sören Pirk, Claus-C. Glüer
Presenter: Niklas C. Koser, Kiel University and University Hospital Schleswig-Holstein, Germany
- A224 (Fri-AM) **Multifrequency Neural Network-based Wave Inversion in MR Elastography**
Authors: Héloïse Bustin, Tom Meyer, Jakob Jordan, Lars Walczak, Heiko Tzschätzsch, Ingolf Sack, Anja Hennemuth
Presenter: Héloïse Bustin, Charité - Universitätsmedizin Berlin, Germany
- Paper Highlight

- A229 (Fri-AM) **LDDMem: Large Deformation Diffeomorphic Metric Embedding Decoupling Shape Analysis from Image Registration**
Authors: Greg M. Fleishman, P. Thomas Fletcher
Presenter: Greg M. Fleishman, Howard Hughes Medical Institute, Janelia Research Campus, United States
- A234 (Fri-AM) **OsteoOpt: A Bayesian Optimization Framework for Enhancing Bone Union Likelihood in Mandibular Reconstruction Surgery**
Authors: Hamidreza Aftabi, John E. Lloyd, Amanda Ding, Benedikt Sagl, Eitan Prisman, Antony Hodgson, Sidney Fels
Presenter: Hamidreza Aftabi, University of British Columbia, Canada
- Paper Highlight
Authors: Hamidreza Aftabi, John E. Lloyd, Amanda Ding, Benedikt Sagl, Eitan Prisman, Antony Hodgson, Sidney Fels
Presenter: Hamidreza Aftabi, University of British Columbia, Canada
- A239 (Fri-AM) **EFMS-Net: Efficient Frequency-Enhanced Multi-Scale Network for Ischemic Stroke Segmentation**
Authors: Jie Yang, Shaowei Shen, Xuwei Fan, Ning Chen, Zhibin Gao, Lianfen Huang, Yihong Zhan
Presenter: Jie Yang, Xiamen University, China
- A244 (Fri-AM) **Q-space Guided Collaborative Attention Translation Network for Flexible Diffusion-Weighted Images Synthesis**
Authors: Pengli Zhu, Yingji Fu, Nanguang Chen, Anqi Qiu
Presenter: Pengli Zhu, Hong Kong Polytechnic University, Hong Kong SAR
- Paper Highlight
Authors: Pengli Zhu, Yingji Fu, Nanguang Chen, Anqi Qiu
Presenter: Pengli Zhu, Hong Kong Polytechnic University, Hong Kong SAR
- A249 (Fri-AM) **A Unified Continuous Staging Framework for Alzheimer's Disease and Lewy Body Dementia via Hierarchical Anatomical Features**
Authors: Tong Chen, Minheng Chen, Jing Zhang, Yan Zhuang, Chao Cao, Xiaowei Yu, Yanjun Lyu, Lu Zhang, Li Su, Tianming Liu, Dajiang Zhu
Presenter: Tong Chen, University of Texas at Arlington, United States
- A254 (Fri-AM) **ReSeg-UNet: A Reconstruction-Guided Optimization Framework for Enhanced Medical Image Segmentation**
Authors: Lin Li, Dong Tang, Xiaowen Chu, Xiaofei Yang, Fei Yu
Presenter: Lin Li, Guangzhou University, China
- A259 (Fri-AM) **MGG-Net: A Multi-Modal Feature Extraction and Global-Aware Feature Graph-Based Deep Learning Network for MGMT Status Classification in Glioma**
Authors: Haoyang Liu, Yuwen Zeng, Xiaoyong Zhang, Wentong Zhou, Arata Nagai, Masayuki Kanamori, Hidenori Endo, Noriyasu Homma
Presenter: Haoyang Liu, Tohoku University, Japan
- A264 (Fri-AM) **Forget-MI: Machine Unlearning for Forgetting Multimodal Information in Healthcare Settings**
Authors: Shahad Hardan, Darya Taratynova, Abdelmajid Essofi, Karthik Nandakumar, Mohammad Yaqub
Presenter: Shahad Hardan, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates
- A269 (Fri-AM) **TRACE: Temporally Reliable Anatomically-Conditioned 3D CT Generation with Enhanced Efficiency**
Authors: Minye Shao, Xingyu Miao, Haoran Duan, Zeyu Wang, Jingkun Chen, Yawen Huang, Xian Wu, Jingjing Deng, Yang Long, Yefeng Zheng
Presenter: Minye Shao, Durham University, United Kingdom

- A274 (Fri-AM) **Physics-driven Signal Regularization in Diffusion Models for Multi-contrast MR Image Synthesis**
Authors: Yejee Shin, Yunsu Byeon, Geonhui Son, Hanbyol Jang, Dosik Hwang, Sewon Kim
Presenter: Yejee Shin, Yonsei University, Republic of Korea
- A279 (Fri-AM) **Parameter-Efficient Fine-Tuning of 3D DDPM for MRI Image Generation Using Tensor Networks**
Authors: Binghua Li, Ziqing Chang, Tong Liang, Chao Li, Toshihisa Tanaka, Shigeki Aoki, Qibin Zhao, Zhe Sun
Presenter: Binghua Li, Tokyo University of Agriculture and Technology, Japan
- A284 (Fri-AM) **SOFA: Deep Learning Framework for Simulating and Optimizing Atrial Fibrillation Ablation**
Authors: Yunsung Chung, Chanho Lim, Ghassan Bidaoui, Christian Massad, Nassir Marrouche, Jihun Hamm
Presenter: Yunsung Chung, Tulane University, United States
- A289 (Fri-AM) **DIGS: Dynamic CBCT Reconstruction using Deformation-Informed 4D Gaussian Splatting and a Low-Rank Free-Form Deformation Model**
Authors: Yuliang Huang, Imraj Singh, Thomas Joyce, Kris Thielemans, Jamie R. McClelland
Presenter: Yuliang Huang, University College London, United Kingdom
- A294 (Fri-AM) **MSDG-StyleNet: Multi-source Unsupervised Domain-Generalized CBCT-to-CT Translation with Style-Consistent Disentangled Representations**
Authors: Xin Long, Xinrui Liu, Fan Gan
Presenter: Xin Long, Nanchang University, China
- A299 (Fri-AM) **Temporal Neural Cellular Automata: Application to modeling of contrast enhancement in breast MRI**
Authors: Daniel M. Lang, Richard Osuala, Veronika Spieker, Karim Lekadir, Rickmer Braren, Julia A. Schnabel
Presenter: Daniel Lang, Helmholtz Munich, Germany
- A304 (Fri-AM) **Faster, Self-Supervised Super-Resolution for Anisotropic Multi-View MRI Using a Sparse Coordinate Loss**
Authors: Maja Schlereth, Moritz Schillinger, Katharina Breininger
Presenter: Maja Schlereth, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
- A309 (Fri-AM) **FDF-VQVAE: A Frequency Disentanglement and Fusion Learning Framework for Multi-Sequence MRI Enhancement**
Authors: Xinghe Xie, Luyi Han, Yue Sun, Chi Kin Lam, Jian Zheng, Tong Tong, Wei Ke, Chan-Tong Lam, Tao Tan
Presenter: Xinghe Xie, Macao Polytechnic University, China
- A314 (Fri-AM) **Causality-driven Spatio-temporal Generator for Multi-phase Contrast-enhanced CT Synthesis**
Authors: Qikui Zhu, Hao Wu, Yanyan Zhang, Shuo Li
Presenter: Qikui Zhu, Case Western Reserve University, United States

- A319 (Fri-AM) **Anatomy-Conserving Unpaired CBCT-to-CT Translation via Schrödinger Bridge**
Authors: Ke Shi, Song Ouyang, Gang Liu, Yong Luo, Kehua Su, Zhiwen Liang, Bo Du
Presenter: Ke Shi, Wuhan University, China
- A324 (Fri-AM) **MedDiff-FT: Data-Efficient Diffusion Model Fine-tuning with Structural Guidance for Controllable Medical Image Synthesis**
Authors: Jianhao Xie, Ziang Zhang, Zhenyu Weng, Yuesheng Zhu, Guibo Luo
Presenter: Jianhao Xie, Peking University, China
- A329 (Fri-AM) **Dynamic-Aware Spatio-temporal Representation Learning for Dynamic MRI Reconstruction**
Authors: Dayoung Baik, Jaejun Yoo
Presenter: Dayoung Baik, Ulsan National Institute of Science and Technology, Republic of Korea
- A334 (Fri-AM) **Oblique Genomics Mixture of Experts: Prediction of Brain Disorder With Aging-Related Changes of Brain's Structural Connectivity Under Genomic Influences**
Authors: Yanjun Lyu, Jing Zhang, Lu Zhang, Wei Ruan, Tianming Liu, Dajiang Zhu
Presenter: Dajiang Zhu, University of Texas at Arlington, United States
- A339 (Fri-AM) **Accelerated Free-Breathing 5D Multi-Echo Respiratory Motion-Resolved R2*, PDFF, and QSM Using Novel Composite Total Variation**
Authors: MungSoo Kang, Or Alus, Youngwook Kee
Presenter: Youngwook Kee, Stony Brook University, United States
- A344 (Fri-AM) **DisDiff: Disentanglement Diffusion Network for MR Imaging Translation**
Authors: Yipin Zhang, Ziqi Yu, Xiang Zhang, Shengjie Zhang, Xiang Chen, Haibo Yang, Xiao-Yong Zhang
Presenter: Yipin Zhang, Fudan University, China
- A349 (Fri-AM) **MOST: MR reconstruction Optimization for multiple downStream Tasks via continual learning**
Authors: Hwihun Jeong, Se Young Chun, Jongho Lee
Presenter: Hwihun Jeong, Seoul National University, Republic of Korea
- A354 (Fri-AM) **4D CardioSynth: Synthesising Dynamic Virtual Heart Populations through Spatiotemporal Disentanglement**
Authors: Haoran Dou, Jinghan Huang, Arezoo Zakeri, Zherui Zhou, Tingting Mu, Jinming Duan, Alejandro F. Frangi
Presenter: Haoran Dou, University of Manchester, United Kingdom
- A359 (Fri-AM) **Cross-view Generalized Diffusion Model for Sparse-view CT Reconstruction**
 Paper Highlight *Authors: Jixiang Chen, Yiqun Lin, Yi Qin, Hualiang Wang, Xiaomeng Li*
Presenter: Jixiang Chen, The Hong Kong University of Science and Technology, Hong Kong SAR
- A361 (Fri-AM) **Sim-to-Real Transformer-Based Shape Reconstruction for Automated Orthopedic Fracture Reduction Planning**
Authors: Sutuke Yibulayimu, Yanzhen Liu, Yudi Sang, Gang Zhu, Hui Li, Hao Lu, Chunpeng Zhao, Xinbao Wu, Yu Wang
Presenter: Yanzhen Liu, Beihang University, China

- A366 (Fri-AM) **Steerable Anatomical Shape Synthesis with Implicit Neural Representations**
Authors: Bram de Wilde, Max T. Rietberg, Guillaume Lajoine, Jelmer M. Wolterink
Presenter: Jelmer Wolterink, University of Twente, The Netherlands
- A373 (Fri-AM) **Coarse-to-Fine Medical Image Translation by Incorporating Deterministic Guidance and Probabilistic Refinement**
Authors: Hongnian Tian, Tianxu Lv, Jiansong Fan, Delin Pan, Lihua Li, Xiang Pan
Presenter: Hongnian Tian, Jiangnan University, China
- A378 (Fri-AM) **PathVG: A New Benchmark and Dataset for Pathology Visual Grounding**
 Paper Highlight *Authors: Chunlin Zhong, Shuang Hao, Junhua Wu, Xiaona Chang, Jiwei Jiang, Xiu Nie, He Tang, Xiang Bai*
Presenters: Chunlin Zhong and Shuang Hao, Huazhong University of Science and Technology, China
- B4 (Fri-AM) **Towards Markerless Intraoperative Tracking of Deformable Spine Tissue**
 Paper Highlight *Authors: Connor Daly, Elettra Marconi, Marco Riva, Jinendra Ekanayake, Daniel S. Elson, Ferdinando Rodriguez y Baena*
Presenter: Connor Daly, Imperial College London, United Kingdom
- B9 (Fri-AM) **Automatic Deep Deformable Registration using Domain Adaptation and Run-Time Optimisation**
Authors: Emilien Gadoux, Adrien Bartoli
Presenter: Emilien Gadoux, Institut Pascal, France
- B14 (Fri-AM) **ClipGS: Clippable Gaussian Splatting for Interactive Cinematic Visualization of Volumetric Medical Data**
 Paper Highlight *Authors: Chengkun Li, Yuqi Tong, Kai Chen, Zhenya Yang, Ruiyang Li, Shi Qiu, Jason Ying-Kuen Chan, Pheng-Ann Heng, Qi Dou*
Presenter: Chengkun Li, The Chinese University of Hong Kong, Hong Kong SAR
- B19 (Fri-AM) **Conformal forecasting for surgical instrument trajectory**
Authors: Sara Sangalli, Gary Sarwin, Ertunc Erdil, Carlo Serra, Alessandro Carretta, Victor Staartjes, Ender Konukoglu
Presenter: Sara Sangalli, ETH Zürich, Switzerland
- B24 (Fri-AM) **Surgical Action Planning with Large Language Models**
Authors: Mengya Xu, Zhongzhen Huang, Jie Zhang, Xiaofan Zhang, Qi Dou
Presenter: Mengya Xu, The Chinese University of Hong Kong, Hong Kong SAR
- B29 (Fri-AM) **Endo-FASt3r: Endoscopic Foundation model Adaptation for Structure from motion**
 Paper Highlight *Authors: Mona Sheikh Zeinoddin, Mobarak I. Hoque, Zafer Tandogdu, Greg L. Shaw, Matthew J. Clarkson, Evangelos B. Mazomenos, Danail Stoyanov*
Presenter: Mona Sheikh Zeinoddin, University College London, United Kingdom

- B34 (Fri-AM) **CurConMix: A Curriculum Contrastive Learning Framework for Enhancing Surgical Action Triplet Recognition**
Authors: Yongjun Jeon, Jongmin Shin, Seonmin Park, Bogeun Kim, Kanggil Park, Namkee Oh, Kyu-Hwan Jung
Presenter: Yongjun Jeon, Sungkyunkwan University, Republic of Korea
- B39 (Fri-AM) **Motion-Boundary-Driven Unsupervised Surgical Instrument Segmentation in Low-Quality Optical Flow**
Authors: Yang Liu, Peiran Wu, Jiayu Huo, Gongyu Zhang, Zhen Yuan, Christos Bergeles, Rachel Sparks, Prokar Dasgupta, Alejandro Granados, Sebastien Ourselin
Presenter: Yang Liu, King's College London, United Kingdom
- B44 (Fri-AM) **Enforcing Geometric Constraints of Surface Normal and Pose for Self-supervised Monocular Depth Estimation on Laparoscopic Images**
Authors: Wenda Li, Yuichiro Hayashi, Masahiro Oda, Takayuki Kitasaka, Kazunari Misawa, Kensaku Mori
Presenter: Wenda Li, Naogya University, Japan
- B49 (Fri-AM) **RadGS-Reg: Registering Spine CT with Biplanar X-rays via Joint 3D Radiative Gaussians Reconstruction and 3D/3D Registration**
 Paper Highlight *Authors: Ao Shen, Xueming Fu, Junfeng Jiang, Qiang Zeng, Ye Tang, Zhengming Chen, Luming Nong, Feng Wang, S. Kevin Zhou*
Presenter: Ao Shen, Hohai University, China
- B54 (Fri-AM) **Smarter Self-Distillation: Optimizing the Teacher for Surgical Video Applications**
Authors: Amine Yamlahi, Piotr Kalinowski, Patrick Godau, Rayan Younis, Martin Wagner, Beat Müller, Lena Maier-Hein
Presenter: Amine Yamlahi, German Cancer Research Center (DKFZ), Germany
- B59 (Fri-AM) **SurgTPGS: Semantic 3D Surgical Scene Understanding with Text Promptable Gaussian Splatting**
 Paper Highlight *Authors: Yiming Huang, Long Bai, Beilei Cui, Kun Yuan, Guankun Wang, Mobarak I. Hoque, Nicolas Padoy, Nassir Navab, Hongliang Ren*
Presenter: Yiming Huang, The Chinese University of Hong Kong, Hong Kong SAR
- B64 (Fri-AM) **EndoDAV: Depth Any Video in Endoscopy with Spatiotemporal Accuracy**
Authors: Zanwei Zhou, Chen Yang, Piao Yang, Xiaokang Yang, Wei Shen
Presenter: Zanwei Zhou, Shanghai Jiao Tong University, China
- B69 (Fri-AM) **Pattern-Anchored Adaptive Prototype Learning for Gastroscopic Lesion Detection and Beyond**
 Paper Highlight *Authors: Xuanye Zhang, Xiaoqing Hu, Guanbin Li, Si-Qi Liu, Xiang Wan, Yuanhuan Xiong*
Presenter: Xuanye Zhang, Shenzhen Research Institute of Big Data, CUHK-Shenzhen, China
- B74 (Fri-AM) **Recognizing Surgical Phases Anywhere: Few-Shot Test-time Adaptation and Task-graph Guided Refinement**
Authors: Kun Yuan, Tingxuan Chen, Shi Li, Joël L. Lavanchy, Christian Heiliger, Ege Özsoy, Yiming Huang, Long Bai, Nassir Navab, Vinkle Srivastav, Hongliang Ren, Nicolas Padoy
Presenter: Kun Yuan, University of Strasbourg, France & Technical University of Munich, Germany

- B79 (Fri-AM) **MedAgentSim: Self-Evolving Multi-Agent Simulations for Realistic Clinical Interactions**
 Paper Highlight Authors: Mohammad Almansoori, Komal Kumar, Hisham Cholakkal
 Presenter: Mohammad Almansoori, Mohamed bin Zayed University of Artificial Intelligence, United Arab Emirates
- B84 (Fri-AM) **D4Recon: Dual-stage Deformation and Dual-scale Depth Guidance for Endoscopic Reconstruction**
 Authors: Hritam Basak, Zhaozheng Yin
 Presenter: Hritam Basak, Stony Brook University, United States
- B89 (Fri-AM) **Endo-GSMT: Endoscopic Monocular Scene Reconstruction with Dynamic Gaussian Splatting and Motion Tracking**
 Authors: Hao Gou, Changmiao Wang, Jiahao Yang, Yaoqun Liu, Fucang Jia, Deqiang Xiao, Feiwei Qin, Huoling Luo
 Presenter: Hao Gou, Hangzhou Dianzi University, China
- B94 (Fri-AM) **CAT-SG: A Large Dynamic Scene Graph Dataset for Fine-Grained Understanding of Cataract Surgery**
 Authors: Felix Holm, Gözde Ünver, Ghazal Ghazaei, Nassir Navab
 Presenter: Felix Holm, Technical University of Munich, Germany
- B99 (Fri-AM) **Marker-less Head Pose Tracking for Image-guided Cerebral Artery Navigation**
 Authors: Qiuying Wang, Pandeng Zhang, Dewei Chen, Hao Tang, Chang Liu, Jia Liu
 Presenter: Qiuying Wang, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China
- B104 (Fri-AM) **Phase-Informed Tool Segmentation for Manual Small-Incision Cataract Surgery**
 Authors: Bhuvan Sachdeva, Naren Akash, Tajamul Ashraf, Simon Müller, Thomas Schultz, Maximilian W. M. Wintergerst, Niharika Singri, Kaushik Murali, Mohit Jain
 Presenter: Thomas Schultz, University of Bonn, Germany
- B109 (Fri-AM) **SG2VID: Scene Graphs Enable Fine-Grained Control for Video Synthesis**
 Paper Highlight Authors: Ssharvien Kumar Sivakumar, Yannik Frisch, Ghazal Ghazaei, Anirban Mukhopadhyay
 Presenter: Ssharvien Kumar Sivakumar, Technische Universität Darmstadt, Germany
- B114 (Fri-AM) **Weakly-Supervised 2D/3D Image Registration via Differentiable X-ray Rendering and ROI Segmentation**
 Authors: Yuxin Cui, Max Q.-H. Meng, Zhe Min
 Presenter: Zhe Min, Shandong University, China
- B119 (Fri-AM) **Operating Room Workflow Analysis via Reasoning Segmentation over Digital Twins**
 Authors: Yiqing Shen, Chenjia Li, Bohan Liu, Cheng-Yi Li, Tito Porras, Mathias Unberath
 Presenter: Mathias Unberath, Johns Hopkins University, United States
- B124 (Fri-AM) **Self-adaptive Vision-Language Model for 3D Segmentation of Pulmonary Artery and Vein**
 Authors: Xiaotong Guo, Deqian Yang, Dan Wang, Ying Zhu, Haochen Zhao, Yuan Li, Zhilin Sui, Tao Zhou, Lijun Zhang, Hui Meng, Yanda Meng
 Presenter: Yanda Meng, University of Exeter, United Kingdom

- B129 (Fri-AM) **FSA-Net: Fractal-driven Synergistic Anatomy-aware Network for Segmenting White Line of Toldt in Laparoscopic Images**
Authors: Kecheng Wu, Zhaohu Xing, Zerong Cai, Feng Gao, Wenxue Li, Lei Zhu
Presenter: Kecheng Wu, The Hong Kong University of Science and Technology (Guangzhou), China
- B134 (Fri-AM) **Frequency-domain Multi-modal Fusion for Language-guided Medical Image Segmentation**
Authors: Bo Yu, Jianhua Yang, Zetao Du, Yan Huang, Chenglong Li, Liang Wang
Presenter: Bo Yu, Anhui University, China
- B139 (Fri-AM) **BREA-Depth: Bronchoscopy Realistic Airway-geometric Depth Estimation**
Authors: Francis Xiatian Zhang, Emile Mackute, Mohammadreza Kasaei, Kevin Dhaliwal, Robert Thomson, Mohsen Khadem
Presenter: Francis Xiatian Zhang, The University of Edinburgh, United Kingdom
- B144 (Fri-AM) **Towards Holistic Surgical Scene Graph**
Authors: Jongmin Shin, Enki Cho, Ka Young Kim, Jung Yong Kim, Seong Tae Kim, Namkee Oh
Presenter: Jongmin Shin, Samsung Medical Center, Republic of Korea
- B149 (Fri-AM) **Localization Lens for Improving Medical Vision-Language Models**
Authors: Hasan Farooq, Murtaza Taj, Mehwish Nasim, Arif Mahmood
Presenter: Hasan Farooq, Lahore University of Management Sciences, Pakistan
- B154 (Fri-AM) **World Model for AI Autonomous Navigation in Mechanical Thrombectomy**
Authors: Harry Robertshaw, Han-Ru Wu, Alejandro Granados, Thomas C. Booth
Presenter: Harry Robertshaw, King's College London, United Kingdom
- B159 (Fri-AM) **Semantic Scene Graph for Ultrasound Image Explanation and Scanning Guidance**
Authors: Xuesong Li, Dianye Huang, Yameng Zhang, Nassir Navab, Zhongliang Jiang
Presenter: Xuesong Li, Technical University of Munich, Germany
- B164 (Fri-AM) **Towards Globally Predictable k-Space Interpolation: A White-box Transformer Approach**
 Paper Highlight *Authors: Chen Luo, Qiyu Jin, Taofeng Xie, Xuemei Wang, Huayu Wang, Congcong Liu, Liming Tang, Guoqing Chen, Zhuo-Xu Cui, Dong Liang*
Presenter: Chen Luo, Inner Mongolia University, China
- B169 (Fri-AM) **EndoFlow-SLAM: Real-Time Endoscopic SLAM with Flow-Constrained Gaussian Splatting**
Authors: Taoyu Wu, Yiyi Miao, Zhuoxiao Li, Haocheng Zhao, Kang Dang, Jionglong Su, Limin Yu, Haoang Li
Presenter: Taoyu Wu, Xi'an Jiaotong-Liverpool University, China
- B174 (Fri-AM) **EndoMamba: An Efficient Foundation Model for Endoscopic Videos via Hierarchical Pre-training**
 Paper Highlight *Authors: Qingyao Tian, Huai Liao, Xinyan Huang, Bingyu Yang, Dongdong Lei, Sebastien Ourselin, Hongbin Liu*
Presenter: Qingyao Tian, Institute of Automation, Chinese Academy of Sciences, China

- B179 (Fri-AM) **Asymmetric Matching in Abdominal Lymph Nodes of Follow-up CT Scans**
Authors: Yiji Mao, Yi Zhang, Xinyu Zou, Yuling Zheng, Hao Huang, Haixian Zhang
Presenter: Haixian Zhang, Sichuan University, China
- B184 (Fri-AM) **Navigational Bronchoscopy in Critical Care via End-to-End Pose Regression**
Authors: Emile Mackute, Francis Xiatian Zhang, Kevin Dhaliwal, Mohsen Khadem
Presenter: Emile Mackute, The University of Edinburgh, United Kingdom
- B189 (Fri-AM) **6D Object Pose Tracking for Orthopedic Surgical Training using Visual-Inertial Sensor Fusion**
Authors: Maarten Hogenkamp, Tobias Stauffer, Quentin Lohmeyer, Mirko Meboldt
Presenter: Maarten Hogenkamp, ETH Zürich, Switzerland
- B194 (Fri-AM) **Automated Integration of Surgical Implants into Digital Twins for Trauma Surgery**
Authors: Tobias Stauffer, Manuel Reber, Léon Fellmann, Reto Babst, Mirko Meboldt, Quentin Lohmeyer
Presenter: Tobias Stauffer, ETH Zürich, Switzerland
- B199 (Fri-AM) **Multi-modal Representations for Fine-grained Multi-label Critical View of Safety Recognition**
 Paper Highlight *Authors: Britty Baby, Vinkle Srivastav, Pooja P. Jain, Kun Yuan, Pietro Mascagni, Nicolas Padoy*
Presenter: Britty Baby, University of Strasbourg, France
- B204 (Fri-AM) **ICE-PoGO: Improving Dynamic Panoramic Reconstruction of 4D ICE Imaging through Pose Graph Optimization**
Authors: Sebastian Herz, Magdalena Wysocki, Felix Tristram, Julia Hickler, Lydia Neary-Zajiczek, Christoph Hennesperger, Nassir Navab, Stefan Wörz
Presenter: Sebastian Herz, LUMA Vision, Germany
- B209 (Fri-AM) **CholecMamba: A Mamba-based Multimodal Reasoning Model for Cholecystectomy Surgery**
Authors: Zipei Wang, Sitian Pan, Mengjie Fang, Ruofan Zhang, Jie Tian, Di Dong
Presenter: Zipei Wang, Key Laboratory of Molecular Imaging, Institute of Automation, Chinese Academy of Sciences, China
- B214 (Fri-AM) **A Novel Framework for Integrating 3D Ultrasound into Percutaneous Liver Tumour Ablation**
 Paper Highlight *Authors: Shuwei Xing, Derek W. Cool, David Tessier, Elvis C.S. Chen, Terry M. Peters, Aaron Fenster*
Presenter: Shuwei Xing, Robarts Research Institute & Western University, Canada
- B219 (Fri-AM) **Sparse-XM: Spine Pose Adjustment with RGB-D Bone Segmentation via Cross-Modality Label Transfer**
Authors: William R. Warner, Indrani Bhattacharya, Linton T. Evans, Sohail K. Mirza, Keith D. Paulsen, Xiaoyao Fan
Presenter: William Warner, Dartmouth College, United States
- B224 (Fri-AM) **Unsupervised Structure-Geometric Consistency for Monocular Endoscopic Depth Overestimation**
Authors: Wenkang Fan, Enqi Qiu, Hongzhi Xu, Xiongbiao Luo
Presenter: Wenkang Fan, Xiamen University, China

- B229 (Fri-AM) **T2GS: Comprehensive Reconstruction of Dynamic Surgical Scenes with Gaussian Splatting**
Authors: Jinjing Xu, Chenyang Li, Peng Liu, Micha Pfeiffer, Liwen Liu, Reuben Docea, Martin Wagner, Stefanie Speidel
Presenter: Jinjing Xu, NCT, Dresden, Germany
- B234 (Fri-AM) **Surgical-MambaLLM: Mamba2-enhanced Multimodal Large Language Model for VQLA in Robotic Surgery**
Authors: Pengfei Hao, Hongqiu Wang, Shuaibo Li, Zhaohu Xing, Guang Yang, Kaishun Wu, Lei Zhu
Presenter: Pengfei Hao, The Hong Kong University of Science and Technology (Guangzhou), China
- B239 (Fri-AM) **StepAL: Step-aware Active Learning for Cataract Surgical Videos**
Authors: Nisarg A. Shah, Bardia Safaei, Shameema Sikder, S. Swaroop Vedula, Vishal M. Patel
Presenter: Patel Vishal, Johns Hopkins University, United States
- B244 (Fri-AM) **Untangling Vascular Trees for Surgery and Interventional Radiology**
Authors: Guillaume Houry, Tom Boeken, Stéphanie Allasonnière, Jean Feydy
Presenter: Guillaume Houry, Inria Paris, France
- B249 (Fri-AM) **Endoscopic Artifact Inpainting for Improved Endoscopic Image Segmentation**
 Paper Highlight *Authors: Zhangyuan Yu, Chenlin Du, Hongrui Liang, Xiuqi Zheng, Zeyao Ma, Mingjun Wu, Mingwu Ao, Qicheng Lao*
Presenter: Qicheng Lao, Beijing University of Posts and Telecommunications, China
- B254 (Fri-AM) **Synthesizing Delayed-Phase Contrast-Enhanced Breast MR Images from Early-Phase Images Using an Iterative Deep Network**
Authors: Woojin Chung, Junghwa Kang, Ga Eun Park, Sung Hun Kim, Yoonho Nam
Presenter: Woojin Chung, Hankuk University of Foreign Studies, Republic of Korea
- B259 (Fri-AM) **Indepth Integration of Multi-granularity Features from Dual-modal for Disease Classification**
Authors: Yeli Wu, Xiaocai Zhang, Weiwen Wu, Haiteng Jiang, Chao An, Jianjia Zhang
Presenter: Yeli Wu, Shenzhen Campus of Sun Yat-sen University, China
- B264 (Fri-AM) **C-NCA : Chained Neural Cellular Automata for Fast and Accurate Thermal Ablation Estimation**
Authors: Jonas Mehtali, Juan Manuel Verde, Caroline Essert
Presenter: Jonas Mehtali, University of Strasbourg, France
- B269 (Fri-AM) **Veriserum: A dual-plane fluoroscopic dataset with knee implant phantoms for deep learning in medical imaging**
 Paper Highlight *Authors: Jinhao Wang, Florian Vogl, Pascal Schütz, Saša Ćuković, William R. Taylor*
Presenter: Jinhao Wang, ETH Zürich, Switzerland
- B274 (Fri-AM) **Paired Image Generation with Diffusion-Guided Diffusion Models**
Authors: Haoxuan Zhang, Wenju Cui, Yuzhu Cao, Tao Tan, Jie Liu, Yunsong Peng, Jian Zheng
Presenter: Wenju Cui, University of Science and Technology of China, China

- B279 (Fri-AM) **Class-Conditioned Image Synthesis with Diffusion for Imbalanced Diabetic Retinopathy Grading**
Authors: Haochen Zhang, Anna Heinke, Ines D. Nagel, Dirk-Uwe G. Bartsch, William R. Freeman, Truong Q. Nguyen, Cheolhong An
Presenter: Truong Nguyen, University of California San Diego, United States
- B284 (Fri-AM) **Supervised Diffusion-Model-Based PET Image Reconstruction**
Authors: George Webber, Alexander Hammers, Andrew P. King, Andrew J. Reader
Presenter: George Webber, King's College London, United Kingdom
- B289 (Fri-AM) **Domain-Agnostic Stroke Lesion Segmentation Using Physics-Constrained Synthetic Data**
 Paper Highlight *Authors: Liam Chalcraft, Jenny Crinion, Cathy J. Price, John Ashburner*
Presenter: Liam Chalcraft, University College London, United Kingdom
- B294 (Fri-AM) **Distribution-Guided Multi-Tracer Brain PET Synthesis from Structural MRI with Class-Conditioned Weighted Diffusion**
Authors: Minhui Yu, David S. Lalush, Derek C. Monroe, Kelly S. Giovanello, Weili Lin, Pew-Thian Yap, Jason P. Mihalik, Mingxia Liu
Presenter: Qianqian Wang, The University of North Carolina at Chapel Hill, United States
- B299 (Fri-AM) **Super-resolution and segmentation of 4D Flow MRI using Deep learning and Weighted Mean Frequencies**
Authors: Simon Perrin, Sébastien Levilly, Harold Mouchère, Jean-Michel Serfaty
Presenter: Simon Perrin, Nantes Université / LS2N, France
- B304 (Fri-AM) **Tackling Hallucination from Conditional Models for Medical Image Reconstruction with DynamicDPS**
Authors: Seunghoi Kim, Henry F. J. Tregidgo, Matteo Figini, Chen Jin, Sarang Joshi, Daniel C. Alexander
Presenter: Seunghoi Kim, University College London, United Kingdom
- B309 (Fri-AM) **GLCP: Global-to-Local Connectivity Preservation for Tubular Structure Segmentation**
 Paper Highlight *Authors: Feixiang Zhou, Zhuangzhi Gao, He Zhao, Jianyang Xie, Yanda Meng, Yitian Zhao, Gregory Y.H. Lip, Yalin Zheng*
Presenter: Feixiang Zhou, University of Liverpool, United Kingdom
- B314 (Fri-AM) **Analysis of Image-and-Text Uncertainty Propagation in Multimodal Large Language Models with Cardiac MR-Based Applications**
Authors: Yucheng Tang, Yunguan Fu, Weixi Yi, Yipei Wang, Daniel C. Alexander, Rhodri Davies, Yipeng Hu
Presenter: Yucheng Tang, University College London, United Kingdom
- B319 (Fri-AM) **Improving Autism Detection with Multimodal Behavioral Analysis**
Authors: William Saakyan, Matthias Norden, Lola Eversmann, Simon Kirsch, Muyu Lin, Simon Guendelman, Isabel Dziobek, Hanna Drimalla
Presenter: William Saakyan, Bielefeld University, Germany

- B324 (Fri-AM) **Contrast Flow Pattern and Cross-Phase Specificity-Aware Diffusion Model for NCCT-to-Multiphase CECT Synthesis**
Authors: Kaiyi Zheng, Mu Huang, Xinming Li, Jianhua Ma, Qianjin Feng, Wei Yang, Liming Zhong
Presenter: Kaiyi Zheng, Southern Medical University, China
- B329 (Fri-AM) **Unsupervised OCT image interpolation using deformable registration and generative models**
Authors: Shuwen Wei, Samuel W. Remedios, Zhangxing Bian, Shimeng Wang, Junyu Chen, Yihao Liu, Bruno Jedynak, Tin Y. A. Liu, Shiv Saidha, Peter A. Calabresi, Jerry L. Prince, Aaron Carass
Presenter: Samuel Remedios, Johns Hopkins University, United States
- B334 (Fri-AM) **Probabilistic Prior-Guided Anatomical Alignment for MRI Super-Resolution**
Authors: Yiwen Luo, Xiaoying Tang, Yixuan Yuan
Presenter: Yiwen Luo, City University of Hong Kong, China
- C4 (Fri-AM) **Blaze3DM: Integrating Triplane Representation with Diffusion for Solving 3D Inverse Problems in Medical Imaging**
Authors: Jia He, Bonan Li, Ge Yang, Ziwen Liu
Presenter: Jia He, Institute of Automation, Chinese Academy of Sciences, China
- C9 (Fri-AM) **Diffusion-based Multi-modal MR Fusion for TOF-MRA Image Synthesis**
Authors: Tianen Yu, Xinyu Song, Lei Xiang, Tao Zhou
Presenter: Tianen Yu, Nanjing University of Science and Technology, China
- C14 (Fri-AM) **High-Fidelity Unified One-to-Many Medical Image Synthesis via Text-Conditioned Latent Diffusion**
Authors: Youjian Zhang, Jian Huang, Jie Wang, Zezhou Li, Zhongya Wang, Guanqun Zhou, Zhicheng Zhang, Gang Yu
Presenter: Youjian Zhang, JancsiLab, JancsiTech, Hong Kong SAR
- C19 (Fri-AM) **RetiDiff: Diffusion-based Synthesis of Retinal OCT Images for Enhanced Segmentation**
Authors: Sicheng Li, Mai Dan, Yuhui Chu, Jiahui Yu, Yunpeng Zhao, Pengpeng Zhao
Presenter: Sicheng Li, Binjiang Institute of Zhejiang University, China
- C24 (Fri-AM) **Segmentor-guided Counterfactual Fine-Tuning for Locally Coherent and Targeted Image Synthesis**
Authors: Tian Xia, Matthew Sinclair, Andreas Schuh, Fabio De Sousa Ribeiro, Raghav Mehta, Rajat Rasal, Esther Puyol-Antón, Samuel Gerber, Kersten Petersen, Michiel Schaap, Ben Glocker
Presenter: Tian Xia, Imperial College London, United Kingdom
- C29 (Fri-AM) **MDPG: Multi-domain Diffusion Prior Guidance for MRI Reconstruction**
Authors: Lingtong Zhang, Mengdie Song, Xiaohan Hao, Huayu Mai, Bensheng Qiu
Presenter: Lingtong Zhang, University of Science and Technology of China, China

- C34 (Fri-AM) **Semi-Supervised Deformation-Free Image-to-Image Translation for Realistic CT Synthesis from CBCT**
Authors: Ji Yong Han, Su Yang, Sujeong Kim, Sunjung Kim, Sang-Heon Lim, Heejin Yun, Dahee Kim, Won-Jin Yi
Presenter: Ji Yong Han, Seoul National University, Republic of Korea
- C39 (Fri-AM) **Adapting Foundation Model for Dental Caries Detection with Dual-View Co-Training**
Authors: Tao Luo, Han Wu, Tong Yang, Dinggang Shen, Zhiming Cui
Presenter: Tao Luo, ShanghaiTech University, China
- C44 (Fri-AM) **Physics informed guided diffusion for accelerated multi-parametric MRI reconstruction**
Authors: Perla Mayo, Carolin M. Pirkel, Alin Achim, Bjoern Menze, Mohammad Golbabaee
Presenter: Perla Mayo, University of Bristol, United Kingdom
- C49 (Fri-AM) **Mesh4D: A Motion-Aware Multi-View Variational Autoencoder for 3D+t Mesh Reconstruction**
Authors: Mengyun Qiao, Jin Zheng, Weitong Zhang, Qiang Ma, Liu Li, Bernhard Kainz, Declan P. O'Regan, Paul M. Matthews, Steven Niederer, Wenjia Bai
Presenter: Mengyun Qiao, University College London, United Kingdom
- C54 (Fri-AM) **UNSURF: Uncertainty Quantification for Cortical Surface Reconstruction of Clinical Brain MRIs**
Authors: Karthik Gopinath, Raghav Mehta, Ben Glocker, Juan Eugenio Iglesias
Presenter: Raghav Mehta, Imperial College London, United Kingdom
- C59 (Fri-AM) **Sparse Reconstruction of Optical Doppler Tomography with Alternative State Space Model and Attention**
Authors: Zhenghong Li, Jiaxiang Ren, Wensheng Cheng, Yanzuo Liu, Congwu Du, Yingtian Pan, Haibin Ling
Presenter: Haibin Ling, Stony Brook University, United States
- C64 (Fri-AM) **Single-spoke Motion-compensated Dynamic 3D MRI Reconstruction via Neural Representation**
Authors: Lixuan Chen, James M. Balter, Liye Shen, Jeong Joon Park
Presenter: Lixuan Chen, University of Michigan, United States
- C69 (Fri-AM) **Pathology-Aware Adaptive Watermarking for Text-Driven Medical Image Synthesis**
Authors: Chanyoung Kim, Dayun Ju, Jinyeong Kim, Woojung Han, Roberto Alcover-Couso, Seong Jae Hwang
Presenter: Chanyoung Kim, Yonsei University, Republic of Korea
- C74 (Fri-AM) **Predicting Radiation Therapy Response based on Dynamic Temporal Feature Difference Fusion from Longitudinal MRI**
Authors: Xinyu Hao, Hongming Xu, Qibin Zhang, Qi Xu, Xiaofeng Wang, Ilkka Polonen, Fengyu Cong
Presenter: Xinyu Hao, Dalian University of Technology, China

- C79 (Fri-AM) **WiD-PET: PET Image Reconstruction from Low-Dose Data Using a Wavelet-Informed Diffusion Model with Fast Inference**
Authors: Qingcheng Lyu, Tong Chen, Yiran Wang, Erjian Guo, Luping Zhou
Presenter: Luping Zhou, The University of Sydney, Australia
- C84 (Fri-AM) **VQ-SCD: Vector Quantization Meets Unknown Scan Condition Self-supervised Low-Dose CT Denoising**
Authors: Bo Su, Jiabo Xu, Xiangyun Hu, Kai Deng, Jiancheng Li, Zhouxian Lu
Presenter: Bo Su, Wuhan University, China
- C89 (Fri-AM) **VesselGPT: Autoregressive Modeling of Vascular Geometry**
 Paper Highlight *Authors: Paula Feldman, Martin Sinnona, Claudio Delrieux, Viviana Siless, Emmanuel Iarussi*
Presenter: Paula Feldman, Universidad Torcuato Di Tella, Argentina
- C94 (Fri-AM) **AVDM: Controllable Adversarial Diffusion Model for Vessel-to-Volume Synthesis**
Authors: Jian Dai, Wanchen Liu, Honghao Cui, Xiao Liu, Jiajun Wang, Zhiji Zheng, Daoying Geng
Presenter: Jian Dai, Fudan University, China
- C99 (Fri-AM) **Guiding Quantitative MRI Reconstruction with Phase-wise Uncertainty**
Authors: Haozhong Sun, Zhongsen Li, Chenlin Du, Haokun Li, Yajie Wang, Huijun Chen
Presenter: Haozhong Sun, Tsinghua University, China
- C104 (Fri-AM) **UltraTwin: Towards Cardiac Anatomical Twin Generation from Multi-view 2D Ultrasound**
Authors: Junxuan Yu, Yaofei Duan, Yuhao Huang, Yu Wang, Rongbo Ling, Weihao Luo, Ang Zhang, Jingxian Xu, Qiongying Ni, Yongsong Zhou, Binghan Li, Haoran Dou, Liping Liu, Yanfen Chu, Feng Geng, Zhe Sheng, Zhifeng Ding, Dingxin Zhang, Rui Huang, Yuhang Zhang, Xiaowei Xu, Tao Tan, Dong Ni, Zhongshan Gou, Xin Yang
Presenter: Junxuan Yu, Shenzhen University, China
- C109 (Fri-AM) **Ultra-Low-Field MRI Enhancement via INR-Based Style Transfer**
 Paper Highlight *Authors: Kh Tohidul Islam, Mevan Ekanayake, Zhaolin Chen*
Presenter: Zhaolin Chen, Monash University, Australia
- C114 (Fri-AM) **Flow Matching for Medical Image Synthesis: Bridging the Gap Between Speed and Quality**
Authors: Milad Yazdani, Yasamin Medghalchi, Pooria Ashrafian, Ilker Hacihaliloglu, Dena Shahriari
Presenter: Milad Yazdani, The University of British Columbia, Canada
- C119 (Fri-AM) **NeRF-based CBCT Reconstruction needs Normalization and Initialization**
Authors: Zhuowei Xu, Han Li, Dai Sun, Zhicheng Li, Yujia Li, Qingpeng Kong, Zhiwei Cheng, Nassir Navab, S. Kevin Zhou
Presenter: Zhuowei Xu, University of Science and Technology of China, China
- C124 (Fri-AM) **Controllable Flow Matching for 3D Contrast-Enhanced Brain MRI Synthesis from Non-Contrast Scans**
Authors: Heng Chang, Yu Shang, Haifeng Wang, Yuxia Liang, Haoyu Wang, Fan Wang, Chen Niu, Chunfeng Lian
Presenter: Chunfeng Lian, Xi'an Jiaotong University, China

C129 (Fri-AM) **DC-Seg: Disentangled Contrastive Learning for Brain Tumor Segmentation with Missing Modalities**

Paper Highlight *Authors: Haitao Li, Ziyu Li, Yiheng Mao, Zhengyao Ding, Zhengxing Huang*
Presenter: Haitao Li, Zhejiang University, China

C134 (Fri-AM) **DuoDent: Tooth Generation using Dual-Stream Diffusion with Normal Consistency**

Authors: Doeyoung Kwon, Seongjun Kim, In-Seok Song, Seung Jun Baek
Presenter: Doeyoung Kwon, Korea University, Republic of Korea

C139 (Fri-AM) **InstructX2X: An Interpretable Local Editing Model for Counterfactual Medical Image Generation**

Paper Highlight *Authors: Hyungi Min, Taeseung You, Hangyeul Lee, Yeongjae Cho, Sungzoon Cho*
Presenter: Hyungi Min, Seoul National University, Republic of Korea

C144 (Fri-AM) **Unisyn: A Generative Foundation Model for Universal Medical Image Synthesis across MRI, CT and PET**

Paper Highlight *Authors: Yulin Wang, Honglin Xiong, Kaicong Sun, Jiameng Liu, Xin Lin, Ziyi Chen, Yuanzhe He, Qian Wang, Dinggang Shen*
Presenter: Yulin Wang, ShanghaiTech University, China

C149 (Fri-AM) **FilterDiff: Noise-free Frequency-domain Diffusion Models for Accelerated MRI Reconstruction**

Authors: Tao Song, Fang Nie, Yi Guo, Feng Xu, Shaoting Zhang
Presenter: Tao Song, Fudan University, China

C154 (Fri-AM) **Structure-aware MRI Translation: Multi-Modal Latent Diffusion Model with Arbitrary Missing Modalities**

Authors: Xinzhe Zhang, Junjie Liang, Peng Cao, Jinzhu Yang, Osmar R. Zaiane
Presenter: Osmar Zaiane, Northeastern University, China

C159 (Fri-AM) **FMM-Diff: A Feature Mapping and Merging Diffusion Model for MRI Generation with Missing Modality**

Authors: Wenjin Zhong, Cong Cong, Zihan Wang, Zeya Yan, Antonio Di Ieva, Sidong Liu
Presenter: Wenjin Zhong, Macquarie University, Australia

C164 (Fri-AM) **D3M: Deformation-Driven Diffusion Model for Synthesis of Contrast-Enhanced MRI with Brain Tumors**

Authors: Haowen Pang, Peng Zhang, Xiaoming Hong, Shannan Chen, Chuyang Ye
Presenter: Haowen Pang, Beijing Institute of Technology, China

C169 (Fri-AM) **CardiacFlow: 3D+t Four-Chamber Cardiac Shape Completion and Generation via Flow Matching**

Paper Highlight *Authors: Qiang Ma, Qingjie Meng, Mengyun Qiao, Paul M. Matthews, Declan P. O'Regan, Wenjia Bai*
Presenter: Qiang Ma, Imperial College London, United Kingdom

- C174 (Fri-AM) **CortexGen: A Geometric Generative Framework for Realistic Cortical Surface Generation Using Latent Flow Matching**
Authors: Yuanzhuo Zhu, Kehan Li, Jianhua Ma, Chunfeng Lian, Fan Wang
Presenter: Yuanzhuo Zhu, Xi'an Jiaotong University, China
- C179 (Fri-AM) **Lifespan Cortical Surface Reconstruction from Thick-Slice Clinical MRI**
Authors: Xiuyu Dong, Kaibo Tang, Dan Hu, Zhengwang Wu, Li Wang, Weili Lin, Gang Li
Presenter: Xiuyu Dong, The University of North Carolina at Chapel Hill, United States
- C184 (Fri-AM) **DGM: Disentangled Generative Model for Detecting AD Individualized Pathological Changes via Pseudo-Healthy Synthesis**
Authors: Zhuangzhuang Li, Kun Zhao, Dong Wang, Yong Liu
Presenter: Zhuangzhuang Li, Beijing University of Posts and Telecommunications, China
- C189 (Fri-AM) **3D Acetabular Surface Reconstruction from 2D Pre-operative X-ray Images using SRVF Elastic Registration and Deformation Graph**
 Paper Highlight *Authors: Shuai Zhang, Jinliang Wang, Xu Wang, Sujith Konan, Danail Stoyanov, Evangelos B. Mazomenos*
Presenter: Shuai Zhang, University College London, United Kingdom
- C194 (Fri-AM) **Mask2Surface: Motion Correction and Super-Resolution for Cardiac Surface Reconstruction Using Latent Diffusion**
Authors: Zichen Zhang, Zhentao Liu, Zeng Zhang, Zhiming Cui
Presenter: Zichen Zhang, ShanghaiTech University, China
- C199 (Fri-AM) **Hybrid State-Space Models and Denoising Training for Unpaired Medical Image Synthesis**
Authors: Junming Zhang, Shancheng Jiang
Presenter: Junming Zhang, Sun Yat-sen University, China
- C204 (Fri-AM) **Mind the Detail: Uncovering Clinically Relevant Image Details in Accelerated MRI with Semantically Diverse Reconstructions**
Authors: Jan Nikolas Morshuis, Christian Schlarmann, Thomas Küstner, Christian F. Baumgartner, Matthias Hein
Presenter: Jan Nikolas Morshuis, University of Tübingen, Germany
- C209 (Fri-AM) **Phenotype-Guided Generative Model for High-Fidelity Cardiac MRI Synthesis: Advancing Pretraining and Clinical Applications**
Authors: Ziyu Li, Yujian Hu, Zhengyao Ding, Yiheng Mao, Haitao Li, Fan Yi, Hongkun Zhang, Zhengxing Huang
Presenter: Ziyu Li, Zhejiang University, China
- C214 (Fri-AM) **Implicit Deformable Medical Image Registration with Learnable Kernels**
Authors: Stefano Fogarollo, Gregor Laimer, Reto Bale, Matthias Harders
Presenter: Stefano Fogarollo, University of Innsbruck, Austria
- C219 (Fri-AM) **BiMSRec: A Progressive Image Reconstruction Framework for Medical Image Fusion Guided by Multi-Scale Deformation Fields**
Authors: Nuoer Long, Kaiwen Yang, Xinyu Xie, Zitong Yu, Tao Tan, Yue Sun
Presenter: Kaiwen Yang, Macao Polytechnic University, Macao SAR

- C224 (Fri-AM) **MAK-GAN: Multi-level Adaptive Convolutional Kernels for Asymmetric Multi-modal PET Reconstruction**
Authors: Xinyi Zeng, Pinxian Zeng, Yan Wang, Jiaqi Cui, Luping Zhou, Caiwen Jiang, Han Zhang, Dinggang Shen
Presenter: Xinyi Zeng, Sichuan University, China
- C229 (Fri-AM) **Towards Interpretable Counterfactual Generation via Multimodal Autoregression**
Authors: Chenglong Ma, Yuanfeng Ji, Jin Ye, Lu Zhang, Ying Chen, Tianbin Li, Mingjie Li, Junjun He, Hongming Shan
Presenter: Chenglong Ma, Fudan University, China
- C234 (Fri-AM) **ResMAP: Restoring MRIs of Mixed Artifacts by Prompt Cascading Retrieval**
Authors: Yuxian Tang, Feng Li, Feng Shi, Qian Wang
Presenter: Yuxian Tang, ShanghaiTech University, China
- C239 (Fri-AM) **Speech Audio Generation from Dynamic MRI via a Knowledge Enhanced Conditional Variational Autoencoder**
 Paper Highlight *Authors: Yaxuan Li, Han Jiang, Yifei Ma, Shihua Qin, Jonghye Woo, Fangxu Xing*
Presenter: Yaxuan Li, The University of Hong Kong, Hong Kong SAR
- C244 (Fri-AM) **Controllable latent diffusion model to evaluate the performance of cardiac segmentation methods**
Authors: Romain Deleat-besson, Celia Goujat, Olivier Bernard, Pierre Croisille, Magalie Viallon, Nicolas Duchateau
Presenter: Romain Deleat-besson, Universite Claude Bernard Lyon 1, France
- C249 (Fri-AM) **WASABI: A Metric for Evaluating Morphometric Plausibility of Synthetic Brain MRIs**
Authors: Bahram Jafrasteh, Wei Peng, Cheng Wan, Yimin Luo, Ehsan Adeli, Qingyu Zhao
Presenter: Qingyu Zhao, Weill Cornell Medicine, United States
- C254 (Fri-AM) **A Large-scale Neural Model Inversion Framework for Effective Connectivity Estimation**
Authors: Guoshi Li, Pew-Thian Yap
Presenter: Guoshi Li, University of North Carolina at Chapel Hill, United States
- C259 (Fri-AM) **Intra- and Cross-View Enhancement for OCTA Imaging**
Authors: Jingbo Zeng, Bingyao Tan, Zaiwang Gu, Shenghua Gao, Leopold Schmetterer, Jun Cheng
*Presenter: Jun Cheng, Agency for Science, Technology and Research (A*STAR), Singapore*
- C264 (Fri-AM) **Generating Novel Brain Morphology by Deforming Learned Templates**
 Paper Highlight *Authors: Alan Q. Wang, Fangrui Huang, Bailey Trang, Wei Peng, Mohammad Abbasi, Kilian Pohl, Mert R. Sabuncu, Ehsan Adeli*
Presenter: Alan Wang, Stanford University, United States
- C269 (Fri-AM) **D2Diff: A Dual-Domain Diffusion Model for Accurate Multi-Contrast MRI Synthesis**
Authors: Sanuwani Dayarathna, Himashi Peiris, Kh Tohidul Islam, Tien-Tsin Wong, Zhaolin Chen
Presenter: Sanuwani Dayarathna, Monash University, Australia

- C274 (Fri-AM) **Boosting 3D Liver Shape Datasets with Diffusion Models and Implicit Neural Representations**
Authors: Khoa Tuan Nguyen, Francesca Tozzi, Wouter Willaert, Joris Vankerschaver, Niki Rashidian, Wesley De Neve
Presenter: Khoa Tuan Nguyen, Ghent University Global Campus; Ghent University, Republic of Korea
- C279 (Fri-AM) **Boosting Medical Image Synthesis via Registration-guided Consistency and Disentanglement Learning**
Authors: Chuanpu Li, Zeli Chen, Yiwon Zhang, Liming Zhong, Wei Yang
Presenter: Chuanpu Li, Southern Medical University, China
- C284 (Fri-AM) **Target Prior-enriched Implicit 3D CT Reconstruction with Adaptive Ray Sampling**
Authors: Qinglei Cao, Ziyao Tang, Xiaoqin Tang
Presenter: Xiaoqin Tang, Southwest University, China
- C289 (Fri-AM) **UFO-3: Unsupervised Three-Compartment Learning for Fiber Orientation Distribution Function Estimation**
 Paper Highlight *Authors: Xueqing Gao, Rizhong Lin, Jianhui Feng, Yonggang Shi, Yuchuan Qiao*
Presenter: Xueqing Gao, Tongji University, China
- C294 (Fri-AM) **Anatomy-Aware Low-Dose CT Denoising via Pretrained Vision Models and Semantic-Guided Contrastive Learning**
Authors: Runze Wang, Zeli Chen, Zhiyun Song, Wei Fang, Jiajin Zhang, Danyang Tu, Yuxing Tang, Minfeng Xu, Xianghua Ye, Le Lu, Dakai Jin
Presenter: Runze Wang, DAMO Academy, Alibaba Group, China
- C299 (Fri-AM) **Dyna3DGR: 4D Cardiac Motion Tracking with Dynamic 3D Gaussian Representation**
Authors: Xueming Fu, Pei Wu, Yingtai Li, Xin Luo, Zihang Jiang, Junhao Mei, Jian Lu, Gao-Jun Teng, S. Kevin Zhou
Presenter: Xueming Fu, University of Science and Technology of China, China
- C304 (Fri-AM) **Lesion-Aware Post-Training of Latent Diffusion Models for Synthesizing Diffusion MRI from CT Perfusion**
Authors: Junhyeok Lee, Hyunwoong Kim, Hyungjin Chung, Heeseong Eom, Joon Jang, Chul-Ho Sohn, Kyu Sung Choi
Presenter: Junhyeok Lee, Seoul National University, Republic of Korea
- C309 (Fri-AM) **RDMR: Recursive Inference and Representation Disentanglement for Multimodal Large Deformation Registration**
 Paper Highlight *Authors: Yibo Hu, Ziqi Zhao, Qi Zhang, Lisa X. Xu, Jianqi Sun*
Presenter: Yibo Hu, Shanghai JiaoTong University, China
- C314 (Fri-AM) **IFRFNet: Iterative Frequency Restoration-Fusion Network for Fast System Matrix Calibration on Magnetic Particle Image**
Authors: Weixin Xu, Penghua Zhai, Jie Tian, Wei Mu
Presenter: Weixin Xu, Beihang University, China

- C319 (Fri-AM) **Hierarchical Part-based Generative Model for Realistic 3D Blood Vessel**
Authors: Siqi Chen, Guoqing Zhang, Jiahao Lai, Bingzhi Shen, Sihong Zhang, Caixia Dong, Xuejin Chen, Yang Li
Presenter: Siqi Chen, Tsinghua University, China
- C324 (Fri-AM) **Spatio-temporal Pre-trained Foundation Model for Neural Decoding with Fine-grained Optimization**
Authors: Ziyu Li, Zhiyuan Zhu, Yang Bai, Qing Li, Xia Wu
Presenter: Ziyu Li, Beijing Institute of Technology, China
- C329 (Fri-AM) **DCT-Net: Dual-branch CT Reconstruction from Orthogonal X-rays with Diffusion Model and Contrastive Learning**
Authors: Zhiyu Zhang, Cong Shen, Jijun Tang, Zhijun Liao
Presenter: Zhiyu Zhang, Tianjin University of Technology, China
- C334 (Fri-PM) **WDNet: A Novel Wavelet-guided Hierarchical Diffusion Network for Multi-Target Segmentation in Colonoscopy Images**
Authors: Dongdong He, Fang Ma, Ziteng Liu, Xunhai Yin, Hao Liu, Wenpeng Gao, Chenghong Zhang, Yili Fu
Presenter: Dongdong He, Harbin Institute of Technology, China

Poster Session 5: Surgical Data Science / Graphs / Missing Data and Weak Supervision

Friday, September 26, 2025, 15:30 - 17:00

Poster Hall (DCC 2)

- A5 (Fri-PM) **Automated Detection of BK Virus in H&E Whole-Slide Images Using Weakly-Supervised Deep Learning and Interpretable Morphological Biomarkers**
 Paper Highlight *Authors: Sharifa Sahai, Ana D. Ramos-Guerra, Cristina Almagro-Pérez, Guillaume Jaume, Andrew Zhang, Helmut Rennke, Astrid Weins, Juan E. Ortuño, Maria J. Ledesma-Carbayo, Faisal Mahmood*
Presenters: Sharifa Sahai, Harvard Medical School, United States and Ana D. Ramos-Guerra, Universidad Politécnica de Madrid, Spain
- A10 (Fri-PM) **SAGCNet: Spatial-Aware Graph Completion Network for Missing Slice Imputation in Population CMR Imaging**
Authors: Junkai Liu, Nay Aung, Theodoros N. Arvanitis, Stefan K. Piechnik, Joao A. C. Lima, Steffen E. Petersen, Le Zhang
Presenter: Junkai Liu, University of Birmingham, United Kingdom
- A15 (Fri-PM) **FDAS: Foundation Model Distillation and Anatomic Structure-aware Multi-task Learning for Self-Supervised Medical Image Segmentation**
Authors: Xiaoran Qi, Guoning Zhang, Jianghao Wu, Shaoting Zhang, Xiaorong Hou, Guotai Wang
Presenter: Xiaoran Qi, University of Electronic Science and Technology of China, China
- A20 (Fri-PM) **Synergy-Guided Regional Supervision of Pseudo Labels for Semi-Supervised Medical Image Segmentation**
Authors: Tao Wang, Xinlin Zhang, Yuanbin Chen, Yuanbo Zhou, Longxuan Zhao, Tao Tan, Tong Tong
Presenter: Tao Wang, Fuzhou University, China
- A25 (Fri-PM) **Multi-Masked Querying Network for Robust Emotion Recognition from Incomplete Multi-Modal Physiological Signals**
Authors: Geng-Xin Xu, Xiang Zuo, Ye Li
Presenter: Geng-Xin Xu, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China
- A30 (Fri-PM) **Iterative Foundation-Dedicated Learning: Optimized Key Frames, Prompts and Memories for Semi-Supervised Segmentation**
Authors: Ziman Yin, Dong Nie, Shuo Li, Junjun Pan, Zhenyu Tang
Presenter: Ziman Yin, Beihang University, China
- A35 (Fri-PM) **Tree-based Semantic Losses: Application to Sparsely-supervised Large Multi-class Hyperspectral Segmentation**
 Paper Highlight *Authors: Junwen Wang, Oscar Maccormac, William Rochford, Aaron Kujawa, Jonathan Shapey, Tom Vercauteren*
Presenter: Junwen Wang, King's College London, United Kingdom
- A40 (Fri-PM) **MAMBA-Based Weakly Supervised Medical Image Segmentation with Cross-Modal Textual Information**
Authors: Zhen Pan, Wenhui Huang, Yuanjie Zheng
Presenter: Wenhui Huang, Shandong Normal University, China

- A45 (Fri-PM) **Robust Multimodal Learning for Ophthalmic Disease Grading via Disentangled Representation**
Authors: Xinkun Wang, Yifang Wang, Senwei Liang, Feilong Tang, Chengzhi Liu, Ming Hu, Chao Hu, Junjun He, Zongyuan Ge, Imran Razzak
Presenter: Feilong Tang, Monash University, Australia
- A50 (Fri-PM) **Multi-modal MRI Translation via Evidential Regression and Distribution Calibration**
Authors: Jiyao Liu, Shangqi Gao, Yuxin Li, Lihao Liu, Xin Gao, Zhaohu Xing, Junzhi Ning, Yanzhou Su, Xiao-Yong Zhang, Junjun He, Ningsheng Xu, Xiahai Zhuang
Presenter: Jiyao Liu, Fudan University, China
- A55 (Fri-PM) **A Semi-Supervised Knowledge Distillation Framework for Left Ventricle Segmentation and Landmark Detection in Echocardiograms**
Authors: Haoyuan Chen, Yonghao Li, Long Yang, Han Wu, Lin Zhou, Kaicong Sun, Dinggang Shen
Presenter: Haoyuan Chen, ShanghaiTech University, China
- A60 (Fri-PM) **Weakly Semi-Supervised Cervical Lesion Cell Detection via Twin-Memory Augmented Multiple Instance Learning**
Authors: Manman Fei, Zhiyun Song, Zhenrong Shen, Mengjun Liu, Qian Wang, Lichi Zhang
Presenter: Manman Fei, Shanghai Jiao Tong University, China
- A65 (Fri-PM) **Spatial Aggregation for Semi-supervised Active Learning in 3D Medical Image Segmentation**
Authors: Siteng Ma, Honghui Du, Dairui Liu, Kathleen M. Curran, Aonghus Lawlor, Ruihai Dong
Presenter: Siteng Ma, University College Dublin, Ireland
- A70 (Fri-PM) **Self-Supervised Distillation of Legacy Rule-Based Methods for Enhanced EEG-Based Decision-Making**
Authors: Yipeng Zhang, Yuanyi Ding, Chenda Duan, Atsuro Daida, Hiroki Nariai, Vwani Roychowdhury
Presenter: Yipeng Zhang, University of California, Los Angeles, United States
- A75 (Fri-PM) **Inter-class separability loss for weakly supervised mutually exclusive multiclass segmentation of brain tumor lesions**
 Paper Highlight *Authors: Vivek Dhamale, Vaanathi Sundaresan*
Presenter: Vivek Dhamale, Indian Institute of Science, Bangalore, India
- A80 (Fri-PM) **Temporal Modulated Multi-Scale Deformation Fusion via Knowledge Distillation for 4D Medical Image Interpolation**
Authors: Jiaju Zhang, Danni Ai, Zhikun Gan, Tianyu Fu, Jingfan Fan, Hong Song, Deqiang Xiao, Jian Yang
Presenter: Jiaju Zhang, Beijing Institute of Technology, China
- A85 (Fri-PM) **A Unified Missing Modality Imputation Model with Inter-Modality Contrastive and Consistent Learning**
Authors: Liangce Qi, Yusi Liu, Yuqin Li, Weili Shi, Guanyuan Feng, Zhengang Jiang
Presenter: Liangce Qi, Changchun University of Science and Technology, China

- A90 (Fri-PM) **Last Layer Laplacian Pseudocoresets for Robust Medical Image Analysis**
Authors: Franciskus Xavier Erick, Johanna Paula Müller, Zhe Li, Bernhard Kainz
Presenter: Franciskus Xavier Erick, Friedrich-Alexander University Erlangen-Nürnberg, Germany
- A95 (Fri-PM) **Multimodal Imputation of Imaging-derived Phenotypes from Genomic and Blood-based Biomarkers Enhances Common Disease Discovery**
Authors: Haoyang Zhang, Yan Li, Junhong Liu, Lizhen Lan, Zian Wang, Longyu Sun, Yuntong Lv, Shengxiao Yang, Qing Li, Mengting Sun, Yajing Zhang, Binghua Chen, Xionghui Zhou, Lianming Wu, Chengyan Wang
Presenter: Haoyang Zhang, Fudan University, China
- A100 (Fri-PM) **UM-SAM: Unsupervised Medical Image Segmentation using Knowledge Distillation from Segment Anything Model**
Authors: Jia Fu, He Li, Tao Lu, Shaoting Zhang, Guotai Wang
Presenter: Jia Fu, University of Electronic Science and Technology of China, China
- A105 (Fri-PM) **Edge-semantic Synergy Fusion and Adaptive Noise-aware for Weakly Supervised Pathological Tissue Segmentation**
Authors: Hualong Zhang, Siyang Feng, Zihan Huan, Huadeng Wang, Zhenbing Liu, Rushi Lan, Xipeng Pan
Presenter: Hualong Zhang, Guilin university of Electronic Technology, China
- A110 (Fri-PM) **Bridging the Gap in Missing Modalities: Leveraging Knowledge Distillation and Style Matching for Brain Tumor Segmentation**
Authors: Shenghao Zhu, Yifei Chen, Weihong Chen, Yuanhan Wang, Chang Liu, Shuo Jiang, Feiwei Qin, Changmiao Wang
Presenter: Shenghao Zhu, Hangzhou Dianzi University, China
- A115 (Fri-PM) **Anatomical Graph-based Multilevel Distillation for Robust Alzheimer's Disease Diagnosis with Missing Modalities**
 Paper Highlight *Authors: Fei Liu, Huabin Wang, Mohamed Hisham Jaward, Shiuan-Ni Liang, Huey Fang Ong, Jiayuan Cheng*
Presenter: Fei Liu, Monash University Malaysia, Malaysia
- A120 (Fri-PM) **UltrON: Ultrasound Occupancy Networks**
Authors: Magdalena Wysocki, Felix Duelmer, Ananya Bal, Nassir Navab, Mohammad Farid Azampour
Presenter: Magdalena Wysocki, Technical University of Munich, Germany
- A125 (Fri-PM) **Semi-Supervised Multi-Modal Medical Image Segmentation for Complex Situations**
Authors: Dongdong Meng, Sheng Li, Hao Wu, Guoping Wang, Xueqing Yan
Presenter: Dongdong Meng, Peking University, China
- A130 (Fri-PM) **Diffusion-Based User-Guided Data Augmentation for Coronary Stenosis Detection**
Authors: Sumin Seo, In Kyu Lee, Hyun-Woo Kim, Jaesik Min, Chung-Hwan Jung
Presenter: Sumin Seo, Medipixel, Inc., Republic of Korea

- A135 (Fri-PM) **PCR-MIL: Phenotype Clustering Reinforced Multiple Instance Learning for Whole Slide Image Classification**
Authors: Jingjiao Lou, Qingtao Pan, Qing Yang, Bing Ji
Presenter: Jingjiao Lou, Shandong University, China
- A140 (Fri-PM) **A Learning Framework for Predicting CT-based PRM Biomarker from MRI Sequences in COPD**
Authors: Yiling Xu, Simon M. F. Triphan, Julian Grolig, Hanyi Zhang, Jürgen Biederer, Craig J. Galbán, Hans-Ulrich Kauczor, Mark O. Wielpütz, Oliver Weinheimer
Presenter: Yiling Xu, Heidelberg University Hospital, Germany
- A145 (Fri-PM) **Revisiting 3D Medical Scribble Supervision: Benchmarking Beyond Cardiac Segmentation**
Authors: Karol Gotkowski, Klaus H. Maier-Hein, Fabian Isensee
Presenter: Karol Gotkowski, German Cancer Research Center, Germany
- A150 (Fri-PM) **FedAMM: Federated Learning for Brain Tumor Segmentation with Arbitrary Missing Modalities**
Authors: Yukun Shi, Meiting Xue, Yan Zeng, Jilin Zhang, Jian Wan, Ye Zhou
Presenter: Yukun Shi, Hangzhou Dianzi University, China
- A155 (Fri-PM) **Scalp Diagnostic System With Label-Free Segmentation and Training-Free Image Translation**
Authors: Youngmin Kim, Saejin Kim, Hoyeon Moon, Youngjae Yu, Junhyug Noh
Presenter: Youngmin Kim, Yonsei University, Republic of Korea
- A160 (Fri-PM) **GA-SAM: Geometry-Aware SAM Adaptation with Sparse Annotation-Driven Point Cloud Completion**
Authors: Shumeng Li, Jian Zhang, Lei Qi, Yinghuan Shi
Presenter: Shumeng Li, Nanjing University, China
- A165 (Fri-PM) **ProTeUS: A Spatio-Temporal Enhanced Ultrasound-Based Framework for Prostate Cancer Detection**
Authors: Tarek Elghareb, Mohamed Harmanani, Minh Nguyen Nhat To, Paul Wilson, Amoon Jamzad, Fahimeh Fooladgar, Baraa Abdelsamad, Obed Dzikunu, Samira Sojoudi, Gabrielle Reznik, Michael Leveridge, Robert Siemens, Silvia Chang, Peter Black, Parvin Mousavi, Purang Abolmaesumi
Presenter: Tarek Elghareb, University of British Columbia, Canada
- A170 (Fri-PM) **ReCo-I2P: An Incomplete Supervised Lymph Node Segmentation Framework Based on Orthogonal Partial-instance Annotation**
Authors: Litingyu Wang, Ping Ye, Wenjun Liao, Shichuan Zhang, Shaoting Zhang, Guotai Wang
Presenter: Litingyu Wang, University of Electronic Science and Technology of China, China
- Paper Highlight
- A175 (Fri-PM) **Hierarchical Corpus-View-Category Refinement for Carotid Plaque Risk Grading in Ultrasound**
Authors: Zhiyuan Zhu, Jian Wang, Yong Jiang, Tong Han, Yuhao Huang, Ang Zhang, Kaiwen Yang, Mingyuan Luo, Zhe Liu, Yao-fei Duan, Dong Ni, Tianhong Tang, Xin Yang
Presenter: Zhiyuan Zhu, Shenzhen University, China

- A180 (Fri-PM) **Masked Contrastive Language-Image Modeling For Brain Segmentation**
Authors: Jianwen Liang, Junyan Lyu, Yixuan Yuan, Xiaoying Tang
Presenter: Jianwen Liang, Southern University of Science and Technology, China
- A185 (Fri-PM) **Subtyping Breast Lesions via Generative Augmentation based Long-tailed Recognition in Ultrasound**
Authors: Shijing Chen, Xinrui Zhou, Yuhao Wang, Yuhao Huang, Ao Chang, Dong Ni, Ruobing Huang
Presenter: Shijing Chen, Shenzhen University, China
- A190 (Fri-PM) **IM-Fuse: A Mamba-based Fusion Block for Brain Tumor Segmentation with Incomplete Modalities**
Authors: Vittorio Pipoli, Alessia Saporita, Kevin Marchesini, Costantino Grana, Elisa Ficarra, Federico Bolelli
Presenter: Kevin Marchesini, University of Modena and Reggio Emilia, Italy
- A195 (Fri-PM) **Hallucination-Aware Multimodal Benchmark for Gastrointestinal Image Analysis with Large Vision-Language Models**
 Paper Highlight *Authors: Bidur Khanal, Sandesh Pokhrel, Sanjay Bhandari, Ramesh Rana, Nikesh Shrestha, Ram B. Gurung, Cristian Linte, Angus Watson, Yash R. Shrestha, Binod Bhattarai*
Presenter: Binod Bhattarai, University of Aberdeen, United Kingdom
- A200 (Fri-PM) **Endo-CLIP: Progressive Self-Supervised Pre-training on Raw Colonoscopy Records**
Authors: Yili He, Yan Zhu, Peiyao Fu, Ruijie Yang, Tianyi Chen, Zhihua Wang, Quanlin Li, Pinghong Zhou, Xian Yang, Shuo Wang
Presenter: Yili He, University College London, United Kingdom
- A205 (Fri-PM) **ESPNet: Edge-Aware Feature Shrinkage Pyramid for Polyp Segmentation**
Authors: Raneem Toman, Venkataraman Subramanian, Sharib Ali
Presenter: Raneem Toman, University of Leeds, United Kingdom
- A210 (Fri-PM) **SurgicalGS: Dynamic 3D Gaussian Splatting for Accurate Robotic-Assisted Surgical Scene Reconstruction**
Authors: Jialei Chen, Xin Zhang, Mobarak I. Hoque, Francisco Vasconcelos, Danail Stoyanov, Daniel S. Elson, Baoru Huang
Presenter: Jialei Chen, Imperial College London, United Kingdom
- A215 (Fri-PM) **Clinically-guided Data Synthesis for Laryngeal Lesion Detection**
Authors: Chiara Baldini, Kaisar Kushibar, Richard Osuala, Simone Balocco, Oliver Diaz, Karim Lekadir, Leonardo S. Mattos
Presenter: Chiara Baldini, Istituto Italiano di Tecnologia, Italy
- A220 (Fri-PM) **Future Slot Prediction for Unsupervised Object Discovery in Surgical Video**
Authors: Guiqiu Liao, Matjaz Jogan, Marcel Hussing, Edward Zhang, Eric Eaton, Daniel A. Hashimoto
Presenter: Matjaz Jogan, University of Pennsylvania, United States

- A225 (Fri-PM) **VAP-Diffusion: Enriching Descriptions with MLLMs for Enhanced Medical Image Generation**
Authors: Peng Huang, Junhu Fu, Bowen Guo, Zeju Li, Yuanyuan Wang, Yi Guo
Presenter: Junhu Fu, Fudan University, China
- A230 (Fri-PM) **FPN-in-FPN: A Nested Multi-Scale Aggregation Network for Polyp Segmentation**
Authors: Jin Ye, Yanzhou Su, Yicheng Wu, Junjun He, Bohan Zhuang, Zhaolin Chen, Jianfei Cai
Presenter: Jin Ye, Monash University, Australia
- A235 (Fri-PM) **Feature Mixing Approach for Detecting Intraoperative Adverse Events in Laparoscopic Roux-en-Y Gastric Bypass Surgery**
Authors: Rupak Bose, Chinedu Innocent Nwoye, Jorge F. Lazo, Joël L. Lavanchy, Nicolas Padoy
Presenter: Chinedu Innocent Nwoye, Intuitive Surgical, United States
- A240 (Fri-PM) **Synchronous Inhibition and Activation for Weakly Supervised Semantic Segmentation of Pathology Images**
Authors: Jiansong Fan, Yicheng Di, Jiayu Bao, Lihua Li, Xiang Pan
Presenter: Jiansong Fan, Jiangnan University, China
- A245 (Fri-PM) **Estimating Bone Mineral Density and Muscle Mass from EOS Low Dose X-ray Imaging System**
Authors: Kazuki Suehara, Yi Gu, Yoshito Otake, Keisuke Uemura, Masashi Okamoto, Kunihiro Tokunaga, Hugues Talbot, Yoshinobu Sato
Presenter: Yoshito Otake, Nara Institute of Science and Technology, Japan
- A250 (Fri-PM) **Improved Tumor Segmentation using Selective Synthetic Augmentation for Enhanced Surgical Planning in Breast MRI**
Authors: Miguel Luna, John Baek, Won Hwa Kim, Wan Gyu Son, Kwang Min Lee, Hye Jung Kim, Jaeh Kim
Presenter: Miguel Luna, BeamWorks, Republic of Korea
- A255 (Fri-PM) **MedICL: In-Context Learning for Semantically Enhanced AKI Prediction in Cardiac Surgery**
Authors: Chenyang Su, Yishun Wang, Boqiang Xu, Rong Feng, Lei Du, Hongbin Liu, Gaofeng Meng
Presenter: Chenyang Su, City University of Hong Kong, China
- A260 (Fri-PM) **A Prior-Driven Lightweight Network for Endoscopic Exposure Correction**
Authors: Zhijian Wu, Hong Wang, Yuxuan Shi, Dingjiang Huang, Yefeng Zheng
Presenter: Zhijian Wu, Westlake University, China
- A265 (Fri-PM) **PolypSegTrack: Unified Foundation Model for Colonoscopy Video Analysis**
Authors: Anwesha Choudhuri, Zhongpai Gao, Meng Zheng, Benjamin Planche, Terrence Chen, Ziyang Wu
Presenter: Anwesha Choudhuri, United Imaging Intelligence, United States
- A270 (Fri-PM) **Endplate3D-QCT: A High-Resolution Dataset and Benchmark for Automated 3D Segmentation of Lumbar Vertebral Endplates in QCT**
Authors: Zixun Yin, Da Zou, Yi Zhao, Chenbin Zhang, Weishi Li, Minghui Wu, Kun Yan, Ping Wang
Presenter: Zixun Yin, Peking University, China
- Paper Highlight *Authors: Zixun Yin, Da Zou, Yi Zhao, Chenbin Zhang, Weishi Li, Minghui Wu, Kun Yan, Ping Wang*
Presenter: Zixun Yin, Peking University, China

- A275 (Fri-PM) **Facial Appearance Prediction with Conditional Multi-scale Autoregressive Modeling for Orthognathic Surgical Planning**
 Paper Highlight *Authors: Jungwook Lee, Xuanang Xu, Daeseung Kim, Tianshu Kuang, Hannah H. Deng, Xinrui Song, Yasmine Soubra, Rohan Dharia, Michael A.K. Liebschner, Jaime Gateno, Pingkun Yan*
Presenter: Jungwook Lee, Rensselaer Polytechnic Institute, United States
- A280 (Fri-PM) **KidneyDepth: A Synthetic Kidney Dataset for Metric Depth Estimation in Ureteroscopy**
Authors: Laura Oliva-Maza, Florian Steidle, Julian Klodmann, Klaus Strobl, Arkadiusz Miernik, Rudolph Triebel
Presenter: Laura Oliva-Maza, German Aerospace Center (DLR), Germany
- A285 (Fri-PM) **Half-SAM: SAM-based Haustral Fold Detection In Colonoscopy with Debris Suppression and Temporal Consistency**
 Paper Highlight *Authors: Mayank Golhar, LuoJie Huang, Nicholas J. Durr*
Presenter: Mayank Golhar, Johns Hopkins University, United States
- A290 (Fri-PM) **Endo3R: Unified Online Reconstruction from Dynamic Monocular Endoscopic Video**
 Paper Highlight *Authors: Jiaxin Guo, Wenzhen Dong, Tianyu Huang, Hao Ding, Ziyi Wang, Haomin Kuang, Qi Dou, Yun-Hui Liu*
Presenter: Jiaxin Guo, The Chinese University of Hong Kong, Hong Kong SAR
- A295 (Fri-PM) **SAMSA: Segment Anything Model enhanced with Spectral Angles for Hyperspectral Interactive Medical Image Segmentation**
 Paper Highlight *Authors: Alfie Roddan, Tobias Czempel, Chi Xu, Daniel S. Elson, Stamatia Giannarou*
Presenter: Alfie Roddan, Imperial College London, United Kingdom
- A300 (Fri-PM) **BrainMT: A Hybrid Mamba-Transformer Architecture for Modeling Long-Range Dependencies in Functional MRI Data**
Authors: Arunkumar Kannan, Martin A. Lindquist, Brian Caffo
Presenter: Arunkumar Kannan, Johns Hopkins University, United States
- A305 (Fri-PM) **Learning 3D Medical Image Models From Brain Functional Connectivity Network Supervision For Mental Disorder Diagnosis**
Authors: Xingcan Hu, Wei Wang, Li Xiao
Presenter: Xingcan Hu, University of Science and Technology of China, China
- A310 (Fri-PM) **Alzheimer's Disease Recognition Based on Adaptive Graph Normalization Flow for Incomplete Multimodal Data Fusion**
Authors: Yaqin Li, Yihong Dong, Yanan Wu, Haihao Yan, Linlin Gao
Presenter: Yaqin Li, Ningbo University, China
- A315 (Fri-PM) **A Causal-holistic Adaptive Intervention Network for Tailoring Automated Coronary Artery Disease Diagnosis to Individual Patients**
Authors: Xinghua Ma, Xingyu Qiu, Yuetan Chu, Kuanquan Wang, Zhaowen Qiu, Gongning Luo, Xin Gao
Presenter: Xinghua Ma, Harbin Institute of Technology, China

- A320 (Fri-PM) **Rethinking Multi-view Mammogram Representation Learning via Counterfactual Reasoning with Kolmogorov-Arnold Theorem**
Authors: Guoli Wang, Benzhen Wei, Shuo Li
Presenter: Shuo Li, Case Western Reserve University, United States
- A325 (Fri-PM) **A Causality-Inspired Model for Intima-Media Thickening Assessment in Ultrasound Videos**
Authors: Shuo Gao, Meng Yang, Jun Xue, Yang Chen, Jingyang Zhang, Guangquan Zhou
Presenter: Shuo Gao, Southeast University, China
- A330 (Fri-PM) **R1Seg-3D: Rethinking Reasoning Segmentation for Medical 3D CTs**
Authors: Qin Hao, Long Yu, Shengwei Tian, Xujiang Ye, Lei Zhang
Presenter: Qin Hao, Xinjiang University, China
- A335 (Fri-PM) **Synthetic Ground Truth Counterfactuals for Comprehensive Evaluation of Causal Generative Models in Medical Imaging**
Authors: Emma A. M. Stanley, Vibujithan Vigneshwaran, Erik Y. Ohara, Finn G. Vamosi, Nils D. Forkert, Matthias Wilms
Presenter: Emma Stanley, University of Calgary, Canada
- A340 (Fri-PM) **MOSCARD - Multimodal Opportunistic Screening for Cardiovascular Adverse events with Causal Reasoning and De-confounding**
Authors: Jialu Pi, Juan Maria Farina, Rimita Lahiri, Jiwoong Jeong, Archana Gurudu, Hyung-Bok Park, Chieh-Ju Chao, Chadi Ayoub, Reza Arsanjani, Imon Banerjee
Presenter: Jialu Pi, Arizona State University, United States
- A345 (Fri-PM) **Multi-Spatial Granger Causality Features Fusion Network for Alzheimer's Disease Classification**
Authors: Zhiwei Song, Jingming Li, Hu Yu, Xiaojuan Guo
Presenter: Zhiwei Song, Beijing Normal University, China
- A350 (Fri-PM) **Information Bottleneck-based Causal Attention for Multi-label Medical Image Recognition**
Authors: Xiaoxiao Cui, Yiran Li, Kai He, Shanzhi Jiang, Mengli Xue, Wentao Li, Junhong Leng, Zhi Liu, Lizhen Cui, Shuo Li
Presenter: Xiaoxiao Cui, Shandong University, China
- A355 (Fri-PM) **CF-Seg: Counterfactuals meet Segmentation**
Authors: Raghav Mehta, Fabio De Sousa Ribeiro, Tian Xia, Mélanie Roschewitz, Ainkaran Santhirasekaram, Dominic C. Marshall, Ben Glocker
Presenter: Raghav Mehta, Imperial College London, United Kingdom
- A360 (Fri-PM) **Mission Balance: Generating Under-represented Class Samples using Video Diffusion Models**
Authors: Danush Kumar Venkatesh, Isabel Funke, Micha Pfeiffer, Fiona Kolbinger, Hanna Maria Schmeiser, Marius Distler, Jürgen Weitz, Stefanie Speidel
Presenter: Danush Kumar Venkatesh, National Centre for Tumor Diseases, Germany

- A365 (Fri-PM) **Learning from Sparse Point Labels for Dense Carcinosis Localization in Advanced Ovarian Cancer Assessment**
Authors: Farahdiba Zarin, Riccardo Oliva, Vinkle Srivastav, Armine Vardazaryan, Andrea Rosati, Alice Zampolini Faustini, Giovanni Scambia, Anna Fagotti, Pietro Mascagni, Nicolas Padoy
Presenter: Farahdiba Zarin, University of Strasbourg, France
- A372 (Fri-PM) **DiDGen: Diffusion-based Dual-task Synthesis for Dermoscopic Data Generation**
Authors: Junjie Shentu, Matthew Watson, Noura Al Moubayed
Presenter: Junjie Shentu, Durham University, United Kingdom
- B5 (Fri-PM) **Cerebrovascular Diseases Screening from Color Fundus Photography via Cross-View Fusion and Graph-Based Discrimination**
 Paper Highlight *Authors: Congyu Tian, Shihao Zou, Xiangyun Liao, Cheng Chen, Chubin Ou, Jianping Lv, Shanshan Wang, Weixin Si*
Presenter: Shihao Zou, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China
- B10 (Fri-PM) **BrainPrompt: Domain Adaptation with Prompt Learning for Multi-site Brain Network Analysis**
Authors: Liuzeng Zhang, Lanting Li, Peng Cao, Jinzhu Yang, Osmar R. Zaiane
Presenter: Osmar Zaiane, Northeastern University, China
- B15 (Fri-PM) **Multi-view Graph Contrastive Learning with Dynamic Self-aware and Cross-sample Topology Augmentation for Brain Disorder Diagnosis**
Authors: Hao Zhang, Xiaoyun Liu, Shuo Huang, Yonggui Yuan, Daoqiang Zhang, Li Zhang
Presenter: Hao Zhang, Nanjing Forestry University, China
- B20 (Fri-PM) **Graph Disentanglement Learning for fMRI Analysis: Decoupling Disease, Covariates, and Individual Variability**
Authors: Shengjie Zhang, Zhuangzhuang Jiang, Xin Shen, Ziqi Yu, Xiang Chen, Xiao-Yong Zhang, Yuan Zhou
Presenter: Shengjie Zhang, Shanghai Jiao Tong University School of Medicine, China
- B25 (Fri-PM) **Conditional Graph Diffusion with Topological Constraints for Brain Network Generation**
Authors: Joonhyuk Park, Donghyun Lee, Guorong Wu, Won Hwa Kim
Presenter: Joonhyuk Park, Pohang University of Science and Technology, Republic of Korea
- B30 (Fri-PM) **ShareLink: Neuro-Inspired EEG-based Cross-Subject Emotion Recognition via Shared Bi-hemisphere**
Authors: Zixuan Huang, Lingyao Kong, Licheng Ao, Shiyi Yao, An Xiang, Fen Miao
Presenter: Zixuan Huang, Shenzhen institutes of Advanced Technology, Chinese Academy of Sciences, China
- B35 (Fri-PM) **Robust Topographical Representation for Longitudinal Propagation of Tau Pathology**
Authors: Jiaxin Yue, Jianwei Zhang, Xinkai Wang, Yonggang Shi
Presenter: Jiaxin Yue, University of Southern California, United States

- B40 (Fri-PM) **Hierarchical Characterization of Brain Dynamics via State Space-based Vector Quantization**
Authors: Yanwu Yang, Thomas Wolfers
Presenter: Yanwu Yang, University of Tübingen, Germany
- B45 (Fri-PM) **A novel Fourier Adjacency Transformer for advanced EEG emotion recognition**
Authors: Jinfeng Wang, Yanhao Huang, Sifan Song, Boqian Wang, Jionglong Su, Jiaman Ding
Presenter: Jinfeng Wang, Kunming University of Science and Technology, China
- B50 (Fri-PM) **Concept-induced Graph Perception Model for Interpretable Diagnosis**
Authors: Lei Zhao, Changjian Chen, Bin Pu, Xiaoming Qi, Fengfeng Peng, Chunlian Wang, Kenli Li, Guanghua Tan
Presenter: Lei Zhao, Hunan University, China
- B55 (Fri-PM) **PRGNN: Pyramidal Region Graph Neural Network for Region-Based Brain PET Classification**
Authors: Daesung Kim, Seungbeom Seo, Boosung Kim, Kyobin Choo, Youngjun Jun, Mijin Yun
Presenter: Seungbeom Seo, Yonsei University, Republic of Korea
- B60 (Fri-PM) **Knowledge-guided Multi-scale Graph Mamba for Whole Slide Image Classification**
Authors: Minghong Duan, Zhiwei Yang, Yingfan Ma, Manning Wang, Zhijian Song
Presenter: Minghong Duan, Fudan University, China
- B65 (Fri-PM) **Endo-4DGX: Robust Endoscopic Scene Reconstruction and Illumination Correction with Gaussian Splatting**
Authors: Yiming Huang, Long Bai, Beilei Cui, Yanheng Li, Tong Chen, Jie Wang, Jinlin Wu, Zhen Lei, Hongbin Liu, Hongliang Ren
Presenter: Yiming Huang, The Chinese University of Hong Kong, Hong Kong SAR
- B70 (Fri-PM) **Core-Periphery Principle Guided State Space Model for Functional Connectome Classification**
Authors: Minheng Chen, Xiaowei Yu, Jing Zhang, Tong Chen, Chao Cao, Yan Zhuang, Yanjun Lyu, Lu Zhang, Tianming Liu, Dajiang Zhu
Presenter: Minheng Chen, University of Texas at Arlington, United States
- B75 (Fri-PM) **Cross-Modal Brain Graph Transformer via Function-Structure Connectivity Network for Brain Disease Diagnosis**
Authors: Jingxi Feng, Heming Xu, Junhao Cai, Yujie Chang, Dong Zhang, Shaoyi Du, Juan Wang
Presenter: Jingxi Feng, Xi'an Jiaotong University, China
- B80 (Fri-PM) **Explainable Classifier for Malignant Lymphoma Subtyping via Cell Graph and Image Fusion**
Authors: Daiki Nishiyama, Hiroaki Miyoshi, Noriaki Hashimoto, Koichi Ohshima, Hidekata Hontani, Ichiro Takeuchi, Jun Sakuma
Presenter: Daiki Nishiyama, Institute of Science Tokyo / RIKEN AIP, Japan

- B85 (Fri-PM) **Multiscale Graph and Multi-Step Cross-Frame Mamba for Myocarditis Lesion Segmentation**
Authors: Chengjin Yu, Hao Zhang, Yuanting Yan, Dong Zhang, Sangyin Lv, Cailing Pu
Presenter: Hao Zhang, Anhui University, China
- B90 (Fri-PM) **Unsupervised Anomaly Detection on Preclinical Liver H&E Whole Slide Images using Graph based Feature Distillation**
Authors: Lin Li, Lillie Shelton, Thomas Forest, Kyathanahalli Janardhan, Tiffany Jenkins, Michael J. Napolitano, Roujia Wang, David Leigh, Tosha Shah, Grady Earl Carlson, Rajath Soans, Antong Chen
Presenter: Lin Li, Merck & Co., Inc., United States
- B95 (Fri-PM) **Heterogeneous Masked Attention-Guided Path Convolution for Functional Brain Network Analysis**
Authors: Jiakun Xu, Xin Zhang, Tong Xiong, Shengxian Chen, Xiaofen Xing, Jindou Hao, Xiangmin Xu
Presenter: Jiakun Xu, South China University of Technology, China
- B100 (Fri-PM) **GPU Accelerated Modeling of Cortical Radial and Tangential Connectivity Changes in Neurodegeneration**
 Paper Highlight *Authors: Hongbo Zhang, Xinyu Nie, Jiaxin Yue, Yuan Li, John Ringman, Yonggang Shi*
Presenter: Hongbo Zhang, University of Southern California, United States
- B105 (Fri-PM) **DHGFormer: Dynamic Hierarchical Graph Transformer for Disorder Brain Disease Diagnosis**
Authors: Rundong Xue, Hao Hu, Zeyu Zhang, Xiangmin Han, Juan Wang, Yue Gao, Shaoyi Du
Presenter: Rundong Xue, Xi'an Jiaotong University, China
- B110 (Fri-PM) **Multimodal Hypergraph Guide Learning for Non-Invasive ccRCC Survival Prediction**
Authors: Jielong Yan, Xiangmin Han, Jieyi Zhao, Yue Gao
Presenter: Jielong Yan, Tsinghua University, China
- B115 (Fri-PM) **Brain activation mapping based on Regional Synchronization of fMRI signals embedded in Graph Eigenmodes**
Authors: Zhenyu Tang, Yu Zhao, Yang Yang, Xiaoyu Liu, Jingyong Su
Presenter: Jingyong Su, Harbin Institute of Technology, China
- B120 (Fri-PM) **Dual-Stream Multi-Band Fusion Network for Dynamic Functional Connectivity Analysis in Brain Disorder Classification**
Authors: Ling Wu, Hexi Li, Zhengyuan Lyu, Zhiwei Song, Hu Yu, Xiaojuan Guo
Presenter: Ling Wu, Beijing Normal University, China
- B125 (Fri-PM) **T&F-DFC FusionNet: Time&Frequency-Dynamic Functional Connectivity Fusion Network for ADHD Diagnosis in Children based on fNIRS**
Authors: Mengxiang Chu, Yunxiang Ma, Xiaowei He, Xiao Li, Jiaojiao Ren, Zhengyu Zhong, Jingjing Yu, Hongbo Guo
Presenter: Mengxiang Chu, Northwest University, China

- B130 (Fri-PM) **Probabilistic Integration of Renal Cancer Radiology and Pathology Using Graph Neural Networks**
Authors: Shangqi Gao, Shangde Gao, Ines Machado, Mireia Crispin-Ortuzar
Presenter: Shangqi Gao, University of Cambridge, United Kingdom
- B135 (Fri-PM) **Cross-Modal Graph Learning for Perivascular Spaces Segmentation**
Authors: Tao Chen, Dan Zhang, Xi Long, Marcel Breeuwer, Sveta Zinger, Peiyu Huang, Jiong Zhang
Presenter: Dan Zhang, Ningbo University of Technology, China
- B140 (Fri-PM) **Ada-FCN: Adaptive Frequency-Coupled Network for fMRI-Based Brain Disorder Classification**
Authors: Yue Xun, Jiaying Xu, Wenbo Gao, Chen Yang, Shujun Wang
Presenter: Yue Xun, Hong Kong Polytechnic University, Hong Kong SAR
- B145 (Fri-PM) **Brain-Environment Cross-Attention (BECA) Meta-Matching: A New Perspective of Brain Connectome Zero-Shot Learning**
Authors: Ziquan Wei, Tingting Dan, Guorong Wu
Presenter: Ziquan Wei, University of North Carolina at Chapel Hill, United States
- B150 (Fri-PM) **pyOpenNFT: an open-source Python framework for ML-based real-time fMRI and EEG-fMRI neurofeedback**
Authors: Ekaterina Antipushina, Nikita Davydov, Riccardo De Feo, Evgeny Prilepin, Artem Nikonov, Yury Koush
Presenter: Ekaterina Antipushina, Skolkovo Institute of Science and Technology, Russia
- Paper Highlight *Authors: Ekaterina Antipushina, Nikita Davydov, Riccardo De Feo, Evgeny Prilepin, Artem Nikonov, Yury Koush*
Presenter: Ekaterina Antipushina, Skolkovo Institute of Science and Technology, Russia
- B155 (Fri-PM) **Explainable Integrative Bipartite Graph Convolutional Neural Network for Predicting Ejection Fraction in Echocardiography**
Authors: Seungeun Lee, Jaeyoung Kim, Kyungtae Kang, Mingon Kang
Presenter: Seungeun Lee, Hanyang University, Republic of Korea
- B160 (Fri-PM) **BrainPrompt: Multi-Level Brain Prompt Enhancement for Neurological Condition Identification**
Authors: Jiaying Xu, Kai He, Yue Tang, Wei Li, Mengcheng Lan, Xia Dong, Yiping Ke, Mengling Feng
Presenter: Kai He, National University of Singapore, Singapore
- B165 (Fri-PM) **Integrating meta-analysis in multi-modal brain studies with graph-based attention transformer**
Authors: Hyounghsin Choi, Sunghun Kim, Jong-eun Lee, Bo-yong Park, Hyunjin Park
Presenter: Hyounghsin Choi, Sungkyunkwan University, Republic of Korea
- B170 (Fri-PM) **MoST-IG: Morphology-Guided Spatial Transcriptomics Integration via Visual-Genomic Graph Optimal Transport**
Authors: Liting Yu, Tao Ma, Weiqin Zhao, Zhuo Liang, Lequan Yu
Presenter: Liting Yu, The University of Hong Kong, China
- B175 (Fri-PM) **Various Attention Mechanism Graph Convolutional Network with Multi-Source Domain Adaptation for Cross-Subject EEG Emotion Recognition**
Authors: Shuo Shi, Xulei Zheng, Taiyi Wu, Xiaoke Hao
Presenter: Xiaoke Hao, Hebei University of Technology, China

- B180 (Fri-PM) **Multi-Sensory Cognitive Computing for Learning Population-level Brain Connectivity**
Authors: Mayssa Soussia, Mohamed Ali Mahjoub, Islem Rekik
Presenter: Mayssa Soussia, ENISO, Tunisia
- B185 (Fri-PM) **LG-DBGL: Lateralization-Guided Dissociative Brain Graph Learning for Alzheimer's Disease Identification**
Authors: Jiazhen Ye, Manman Yuan, Junlin Li, Weiming Jia, Jiacheng Wang, Jiapei Li
Presenter: Jiazhen Ye, Inner Mongolia University, China
- B190 (Fri-PM) **Anatomy-Guided Multimodal Graph Networks for Alzheimer's Disease: Integrative Analysis of Cross-Modal Brain Connectivity Signatures**
Authors: Wenzheng Hu, Zhenghua Guan, Peng Yang, Jiaqiang Li, Yi Liu, Shushen Gan, Tuo Cai, Ao Zhang, Tengda Zhang, Junlong Qu, Shaolong Wang, Gege Cai, Xiang Dong, Tianfu Wang, Baiying Lei
Presenter: Wenzheng Hu, Shenshen University, China
- B195 (Fri-PM) **Multi-Modal Graph-Based Machine Learning for Predicting Surgical Outcome in Epilepsy Patients**
 Paper Highlight *Authors: Artur Arturi Aharonyan, Syeda Abeera Amir, Nunthasiri Wittayanakorn, Marius George Lingurar, Chima Oluigbo, Syed Muhammad Anwar*
Presenter: Abeera Amir, Childrens National Hospital, United States
- B200 (Fri-PM) **Does Connectome Harmonic Analysis pass the Spin Test?**
Authors: Raphaël Vock, Antoine Grigis, Benoît Dufumier, Edouard Duchesnay
Presenter: Raphaël Vock, CEA, NeuroSpin, Université Paris-Saclay, France
- B205 (Fri-PM) **Hyperbolic Kernel GCN with Structure-Function Connectivity Coupling for Neurocognitive Impairment Analysis**
Authors: Meimei Yang, Yongheng Sun, Qianqian Wang, Wei Wang, Hong-Jun Li, Mingxia Liu
Presenter: Qianqian Wang, University of North Carolina at Chapel Hill, United States
- B210 (Fri-PM) **Robust Incomplete-Modality Alignment for Ophthalmic Disease Grading and Diagnosis via Labeled Optimal Transport**
 Paper Highlight *Authors: Qinkai Yu, Jianyang Xie, Yitian Zhao, Cheng Chen, Lijun Zhang, Liming Chen, Jun Cheng, Lu Liu, Yalin Zheng, Yanda Meng*
Presenter: Qinkai Yu, University of Exeter, United Kingdom
- B215 (Fri-PM) **MMBNA: Masked Multiview Brain Network Analysis via Disentangling for Alzheimer's Early Diagnosis with fMRI**
Authors: Dequan Meng, Jie Guo, Junze Wang, Xiaoming Xi, Lishan Qiao, Limei Zhang, Mingxia Liu
Presenter: Dequan Meng, Shandong Jianzhu University, China
- B220 (Fri-PM) **The Refining of Brain Connectivity Features on Residual Posterior Patterns**
Authors: Xinbei Zha, Jiaming Zhang, Jin Gu
Presenter: Xinbei Zha, Southwest Jiaotong University, China

- B225 (Fri-PM) **Graph-based Neighbor-Aware Network for Gaze-Supervised Medical Image Segmentation**
Authors: Shaoxuan Wu, Jingkun Chen, Zhuo Jin, Peilin Zhang, Zhizezhang Gao, Jun Feng, Xiao Zhang, Dinggang Shen
Presenter: Shaoxuan Wu, Northwest University, China
- B230 (Fri-PM) **Graph-PAVNet: A Graph-Based Learning Framework for Pulmonary Artery and Vein Separation Using Multimodal Feature Sampling**
Authors: Qingya Li, Ye Yuan, Lu Liu, Nan Bao, Lisheng Xu, Wenjun Tan
Presenter: Qingya Li, Northeastern University, China
- B235 (Fri-PM) **Knowledge-Enhanced Complementary Information Fusion with Temporal Heterogeneous Graph Learning for Disease Prediction**
Authors: Zongbao Yang, Shihuan He, Zhichen Chen, Hao Zhang, Ruxin Wang
Presenter: Zongbao Yang, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China
- B240 (Fri-PM) **Semantically Consistent Discrete Diffusion for 3D Biological Graph Modeling**
Authors: Chinmay Prabhakar, Suprosanna Shit, Tamaz Amiranashvili, Hongwei Bran Li, Bjoern Menze
Presenter: Chinmay Prabhakar, University of Zurich, Switzerland
- B245 (Fri-PM) **DEFUSE-MS: Deformation Field-Guided Spatiotemporal Graph-Based Framework for Multiple Sclerosis New Lesion Detection**
 Paper Highlight *Authors: Mostafa Salem, Salma Hassan, Vijay Ram Kumar Papineni, Ayman Elsayed, Mohammad Yaqub*
Presenter: Mostafa Salem, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates
- B250 (Fri-PM) **Brain Wiring Knowledge Graph Reasoning: A Region Embedding Approach for Logical Neuronal Relation Inference**
Authors: Zhengyun Zhou, Guojia Wan, Fei Liao, Wenbin Hu, Minghui Liao, Junchao Qiu, Xinyuan Li, Bo Du
Presenter: Zhengyun Zhou, Wuhan University, China
- B255 (Fri-PM) **Task-aligned fMRI Generation Model for Brain Disorder Diagnosis**
Authors: Yifan Li, Xiaotong Wu, Xiaocai Zhang, Haiteng Jiang, Weiwen Wu, Dinggang Shen, Jianjia Zhang
Presenter: Yifan Li, Shenzhen Campus of Sun Yat-sen University, China
- B260 (Fri-PM) **CAPE: Connectivity-Aware Path Enforcement Loss for Curvilinear Structure Delineation**
Authors: Elyar Esmaeilzadeh, Ehsan Garaaghaji, Farzad Hallaji Azad, Doruk Oner
Presenter: Doruk Oner, Bilkent University, Turkey
- B265 (Fri-PM) **TReND: Transformer derived features and Regularized NMF for neonatal functional network Delineation**
Authors: Sovesh Mohapatra, Minhui Ouyang, Shufang Tan, Jianlin Guo, Lianglong Sun, Yong He, Hao Huang
Presenter: Sovesh Mohapatra, University of Pennsylvania, United States

- B270 (Fri-PM) **Adaptive Graph Learning with Multi-Graph Convolutions for Brain Disorder Classification**
Authors: Fuad Noman, Raphaël C.-W. Phan, Hernando Ombao, Chee-Ming Ting
Presenter: Fuad Noman, Monash University Malaysia, Malaysia
- B275 (Fri-PM) **BiSCoT: Behavior-Informed Subgroup-Consistent Connectome Template for Interpretable Brain Network Analysis**
Authors: Zijian Chen, Stefen Beeler-Duden, Sophie Lawson, Zachary Jacokes, John Darrell Van Horn, Kevin A. Pelphrey, Archana Venkataraman
Presenter: Zijian Chen, Boston University, United States
- B280 (Fri-PM) **Edge-Aware Hierarchical Graph Transformer to Decode Brain Arterial Network**
Authors: Kaiyu Zhang, Li Chen, Wenjin Liu, Taewon Kim, Xin Wang, Yin Guo, Zhiwei Tan, Zhensen Chen, Angie Tang, Xihai Zhao, Thomas S. Hatsukami, Mahmud Mossa-Basha, Niranjana Balu, Chun Yuan
Presenter: Zhiwei Tan, University of Washington, United States
- B285 (Fri-PM) **SPromptGL: Semantic Prompt Guided Graph Learning for Multi-modal Brain Disease**
Authors: Xixi Wan, Bo Jiang, Shihao Li, Aihua Zheng
Presenter: Xixi Wan, Anhui University, China
- B290 (Fri-PM) **Bipartite Patient-Modality Graph Learning with Event-Conditional Modelling of Censoring for Cancer Survival Prediction**
 Paper Highlight *Authors: Hailin Yue, Hulin Kuang, Jin Liu, Junjian Li, Lanlan Wang, Mengshen He, Jianxin Wang*
Presenter: Hailin Yue, Central South University, China
- B295 (Fri-PM) **ClinGRAD: Clinically-Guided Genomics and Radiomics Interpretable GNN for Dementia Diagnosis**
Authors: Salma Hassan, Mostafa Salem, Vijay Ram Kumar Papineni, Ayman Elsayed, Mohammad Yaqub
Presenter: Salma Hassan, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates
- B300 (Fri-PM) **Graph Laplacian Transformer with Progressive Sampling for Prostate Cancer Grading**
Authors: Masum Shah Junayed, John Derek Van Vessel, Qian Wan, Gahie Nam, Sheida Nabavi
Presenter: Sheida Nabavi, University of Connecticut, United States
- B305 (Fri-PM) **MindLink: Subject-agnostic Cross-Subject Brain Decoding Framework**
Authors: Sungyoon Jung, Donghyun Lee, Won Hwa Kim
Presenter: Won Hwa Kim, Pohang University of Science and Technology, Republic of Korea
- B310 (Fri-PM) **A Model Order-Free Method for Stable States Extraction in Dynamic Functional Connectivity**
Authors: Songke Fang, Vince D. Calhoun, Godfrey Pearlson, Peter Kochunov, Theo G.M. van Erp, Yuhui Du
Presenter: Songke Fang, Shanxi University, China
- B315 (Fri-PM) **Causality-Inspired Graph Neural Network for Interpretable Strabismus Subtype Classification**
Authors: Jiawen Zheng, Li Luo, Jiafan Zhuang, Peiwei Wei, Lihao Zhong, Xiaoling Xie, Jinming Guo, Meng Xie, Xiaoli Kang, Jie Cen, Lingyan Dong, Ce Zheng, Zhun Fan
Presenter: Jiawen Zheng, Shantou University, China

- B320 (Fri-PM) **A Novel Streamline-based diffusion MRI Tractography Registration Method with Probabilistic Keypoint Detection**
 Paper Highlight *Authors: Junyi Wang, Mubai Du, Ye Wu, Yijie Li, William M. Wells III, Lauren J. O'Donnell, Fan Zhang*
Presenter: Junyi Wang, University of Electronic Science and Technology of China, China
- B325 (Fri-PM) **MedGNN: General Medical Image Recognition Network via GNN Visual Representations**
Authors: Jiayu Ye, An Zeng, Dan Pan, Junhao Chen, Guanwei Cheng
Presenter: An Zeng, Guangdong University of Technology, China
- C5 (Fri-PM) **Mamba Guided Boundary Prior Matters: A New Perspective for Generalized Polyp Segmentation**
 Paper Highlight *Authors: Tapas K. Dutta, Snehashis Majhi, Deepak Ranjan Nayak, Debesh Jha*
Presenter: Deepak Ranjan Nayak, Malaviya National Institute of Technology Jaipur, India
- C10 (Fri-PM) **Guided Augmentation for Monocular Depth Estimation in Cell Microscopy**
Authors: Abhishek Viswanathan, Rajagopalan A.N., Nikhil Yelamathy, Ankit Rai, Pradeep Ramachandran
Presenter: Abhishek Viswanathan, KLA Corporation, India
- C15 (Fri-PM) **Unsupervised Quality Control and Enhancement of Polyp Segmentation in Colonoscopy Videos using Spatiotemporal Consistency**
Authors: Yujia Li, Tao Zhou, Ruixuan Wang, Shuo Wang, Yizhe Zhang
Presenter: Yujia Li, Nanjing University of Science and Technology, China
- C20 (Fri-PM) **Anatomy-based Self-supervised Pre-training for Scale-robust Hierarchical Representations in Chest X-rays**
 Paper Highlight *Authors: Surong Chu, Yan Qiang, Guohua Ji, Xueting Ren, Lijing Zhang, Baoping Jia, Yangyang Wei, Juanjuan Zhao, Shuo Li*
Presenter: Surong Chu, Taiyuan University of Technology, China
- C25 (Fri-PM) **SAMUSA: Segment Anything Model 2 for UltraSound Annotation**
Authors: Baptiste Podvin, Toby Collins, Günther Saibro, Chiara Innocenzi, Yuchuan Yang, Flavio Milana, Yvonne Keeza, Grace Ufitinema, Florian Ujemurwego, Guido Torzilli, Jacques Marescaux, Daniel George, Alexandre Hostettler,
Presenter: Baptiste Podvin, IRCAD France, France
- C30 (Fri-PM) **ADA: An Adaptive Augmentation Framework for Single-Source Domain Generalization in Medical Image Segmentation**
Authors: Runlin Huang, Hongmin Cai, Weipeng Zhuo, Shangyan Cai, Haowei Lin, Wentao Fan, Weifeng Su
Presenter: Runlin Huang, Beijing Normal-Hong Kong Baptist University, China
- C35 (Fri-PM) **DINO Adapted to X-Ray (DAX): Foundation Models for Intraoperative X-Ray Imaging**
Authors: Joshua Scheuplein, Maximilian Rohleder, Andreas Maier, Björn Kreher
Presenter: Joshua Scheuplein, Friedrich-Alexander-Universität Erlangen-Nürnberg & Siemens Healthineers AG, Germany

- C40 (Fri-PM) **A Two-Stage Method for Specular Highlight Detection and Removal in Medical Images**
Authors: Zefeng Li, Mingyue Cui, Daosong Hu, Jin Gong, Jingchong Weng, Zeyu Zhang, Lele Tian, Mengran Li, Kai Huang
Presenter: Zefeng Li, Sun Yat-sen University, China
- C45 (Fri-PM) **HARM3-Fusion: Hierarchical Attentional Representation Learning of Multi-Modal, Multi-Temporal, and Multi-Sequence Fusion for Pathological Complete Response Prediction of Head and Neck Squamous Cell Carcinoma**
Authors: Jianye Wang, Xinyue Liu, Zhiying Gong, Lingjie Yang, Hanwen Zhang, Yu Long, Yimeng Fan, Yuncheng Jiang, Xiaohui Duan, Weibing Zhao
Presenter: Jianye Wang, Shenzhen MSU-BIT University, China
- C50 (Fri-PM) **Pre-Trained LLM is a Semantic-Aware and Generalizable Segmentation Booster**
Authors: Fenghe Tang, Wenxin Ma, Zhiyang He, Xiaodong Tao, Zihang Jiang, S. Kevin Zhou
Presenter: Fenghe Tang, University of Science and Technology of China, China
- C55 (Fri-PM) **A Novel ED Triage Framework Using Conditional Imputation, Multi-Scale Semantic Learning, and Cross-Modal Fusion**
Authors: Yi Xiao, Jun Zhang, Cheng Chi, Chunyu Wang
Presenter: Yi Xiao, Southeast University, China
- C60 (Fri-PM) **Temporally-Aware Supervised Contrastive Learning for Polyp Counting in Colonoscopy**
Authors: Luca Parolari, Andrea Cherubini, Lamberto Ballan, Carlo Biffi
Presenter: Luca Parolari, University of Padova, Italy
- C65 (Fri-PM) **Source-Free Active Domain Adaptation for Efficient Medical Video Polyp Segmentation**
Authors: Jialu Li, Hongqiu Wang, Weiming Wang, Jing Qin, Qiong Wang, Lei Zhu
Presenter: Jialu Li, The Hong Kong University of Science and Technology (Guangzhou), China
- C70 (Fri-PM) **BioD2C: A Dual-level Semantic Consistency Constraint Framework for Biomedical VQA**
Authors: Zhengyang Ji, Shang Gao, Li Liu, Yifan Jia, Yutao Yue
Presenter: Zhengyang Ji, Shandong University, China
- C75 (Fri-PM) **NERO: Explainable Out-of-Distribution Detection with Neuron-level Relevance in Gastrointestinal Imaging**
Authors: Anju Chhetri, Jari Korhonen, Prashanna Gyawali, Binod Bhattarai
Presenter: Anju Chhetri, NepAl Applied Mathematics and Informatics Institute for research, Nepal
- C80 (Fri-PM) **SurgSora: Object-Aware Diffusion Model for Controllable Surgical Video Generation**
Authors: Tong Chen, Shuya Yang, Junyi Wang, Long Bai, Hongliang Ren, Luping Zhou
Presenter: Tong Chen, The University of Sydney, Australia
- C85 (Fri-PM) **TGSAM-2: Text-Guided Medical Image Segmentation using Segment Anything Model 2**
Authors: Runtian Yuan, Ling Zhou, Jilan Xu, Qingqiu Li, Mohan Chen, Yuejie Zhang, Rui Feng, Tao Zhang, Shang Gao
Presenter: Runtian Yuan, Fudan University, China

- C90 (Fri-PM) **HRVVS: A High-resolution Video Vasculature Segmentation Network via Hierarchical Autoregressive Residual Priors**
Authors: Xincheng Yao, Yijun Yang, Kangwei Guo, Ruiqiang Xiao, Haipeng Zhou, Haisu Tao, Jian Yang, Lei Zhu
Presenter: Xincheng Yao, The Hong Kong University of Science and Technology (Guangzhou), China
- C95 (Fri-PM) **EndoGen: Conditional Autoregressive Endoscopic Video Generation**
Authors: Xinyu Liu, Hengyu Liu, Cheng Wang, Tianming Liu, Yixuan Yuan
Presenter: Yixuan Yuan, The Chinese University of Hong Kong, Hong Kong SAR
- C100 (Fri-PM) **Memory-Augmented SAM2 for Training-Free Surgical Video Segmentation**
 Paper Highlight *Authors: Ming Yin, Fu Wang, Xujiang Ye, Yanda Meng, Zeyu Fu*
Presenter: Ming Yin, University of Exeter, United Kingdom
- C105 (Fri-PM) **Enjoying Information Dividend: Gaze Track-based Medical Weakly Supervised Segmentation**
Authors: Zhisong Wang, Yiwen Ye, Ziyang Chen, Yong Xia
Presenter: Zhisong Wang, Northwestern Polytechnical University, China
- C110 (Fri-PM) **Hybrid Graph Mamba: Unlocking Non-Euclidean Potential for Accurate Polyp Segmentation**
Authors: Yueyue Zhu, Haolin Lv, Geng Chen, Zhonghao Zhang, Haotian Jiang, Yong Xia
Presenter: Yueyue Zhu, Northwestern Polytechnical University, China
- C115 (Fri-PM) **UWT-Net: Mining low-frequency feature information for medical image segmentation**
Authors: Pengcheng Zhang, Xiaocao Ouyang, Ran Peng
Presenter: Pengcheng Zhang, Sichuan Agricultural University, China
- C120 (Fri-PM) **BCRNet: Enhancing Landmark Detection in Laparoscopic Liver Surgery via Bezier Curve Refinement**
Authors: Qian Li, Feng Liu, Shuojue Yang, Daiyun Shen, Yueming Jin
Presenter: Qian Li, National University of Singapore, Singapore
- C125 (Fri-PM) **Tetra-orientated Mamba with T2-FLAIR Mismatch Features for Glioma Segmentation, IDH Genotyping, and Grading**
Authors: Xinyu Li, Jin Liu, Hulin Kuang, Yuanzhuo Wang, Jianxin Wang
Presenter: Xinyu Li, Central South University, China
- C130 (Fri-PM) **EndoMetric: Near-Light Monocular Metric Scale Estimation in Endoscopy**
Authors: Raúl Iranzo, Víctor M. Batlle, Juan D. Tardós, José M. M. Montiel
Presenter: Raúl Iranzo, I3A. Universidad de Zaragoza, Spain
- C135 (Fri-PM) **Adaptively Distilled ControlNet: Accelerated Training and Superior Sampling for Medical Image Synthesis**
Authors: Kunpeng Qiu, Zhiying Zhou, Yongxin Guo
Presenter: Kunpeng Qiu, National University of Singapore, Singapore

- C140 (Fri-PM) **SemiVT-Surge: Semi-Supervised Video Transformer for Surgical Phase Recognition**
Authors: Yiping Li, Ronald de Jong, Sahar Nasirihaghighi, Tim Jaspers, Romy van Jaarsveld, Gino Kuiper, Richard van Hillegersberg, Fons van der Sommen, Jelle Ruurda, Marcel Breeuwer, Yasmina Al Khalil
Presenter: Yiping Li, Eindhoven University of Technology, The Netherlands
- C145 (Fri-PM) **KMUNet: A novel medical image segmentation model based on KAN and Mamba**
Authors: Hongsheng Zhang, Yuting Duan, Ting Liu, Weifeng Zhang, Hongzhong Tang
Presenter: Hongzhong Tang, Xiangtan University, China
- C150 (Fri-PM) **Stronger Together: Registering Preoperative Imagery, LUS, and MIS Liver Images**
 Paper Highlight *Authors: Mohammad Mahdi Kalantari, Erol Ozgur, Mohammad Alkhatib, Navid Rabbani, Yamid Espinel, Richard Modrzejewski, Bertrand Le Roy, Emmanuel Buc, Youcef Mezouar, Adrien Bartoli*
Presenter: Mohammad Mahdi Kalantari, Clermont-Auvergne INP, France
- C155 (Fri-PM) **SR-SAM: Subspace Regularization for Domain Generalization of Segment Anything Model**
Authors: Xixi Jiang, Chen Yang, Liang Zhang, Tim Kwang-Ting Cheng, Xin Yang
Presenter: Xixi Jiang, The Hong Kong University of Science and Technology, Hong Kong SAR
- C160 (Fri-PM) **Dual-Branch Dynamic Coupling Weakly Supervised Learning for Class-Incremental Histopathological Region Segmentation**
Authors: Xiaoyan Hong, Jiansong Fan, Zhaohong Deng, Xiang Pan
Presenter: Xiaoyan Hong, Jiangnan University, China
- C165 (Fri-PM) **CD-PolypNet: Cross-Domain Polyp Segmentation Network with Internal Feature Distillation and Dual-Stream Boundary Focus via Large Vision Model**
Authors: Changpeng Yue, Jianxiang Zhao, Chao Wang, Xinglun Zhao, Axiu Mao, Jia Hou, Chenggang Yan, Kai Zhao, Shuai Wang
Presenter: Changpeng Yue, Hangzhou Dianzi University, China
- C170 (Fri-PM) **Accurate Boundary Alignment and Realism Enhancement for Colonoscopic Polyp Image-Mask Pair Generation**
Authors: Riyu Qiu, Kun Xia, Feng Gao, Shuting Yang, Du Cai, Jiacheng Wang, Yinran Chen, Liansheng Wang
Presenter: Riyu Qiu, Xiamen University, China
- C175 (Fri-PM) **Think as Cardiac Sonographers: Marrying SAM with Left Ventricular Indicators Measurements According to Clinical Guidelines**
Authors: Tuo Liu, Qinghan Yang, Yu Zhang, Rongjun Ge, Yang Chen, Guangquan Zhou
Presenter: Tuo Liu, Southeast University, China
- C180 (Fri-PM) **Prolog-Driven Rule-Based Diagnostics with Large Language Models for Precise Clinical Decision Support**
Authors: Xiaoyu Tan, Bin Li, Weidi Xu, Chao Qu, Wei Chu, Yinghui Xu, Yuan Qi, Xihe Qiu
Presenter: Bin Li, Shanghai University of Engineering Science, China

- C185 (Fri-PM) **Clinical Validation of Deep Learning for Real-Time Tissue Oxygenation Estimation Using Spectral Imaging**
Authors: Jens De Winne, Siri Willems, Siri Luthman, Danilo Babin, Hiep Luong, Wim Ceelen
Presenter: Jens De Winne, Ghent University, Belgium
- C190 (Fri-PM) **Self-supervised Axial Super-Resolution for Volume Microscopy via Diffusion-Guided Structure Distillation**
Authors: Bohao Chen, Yanchao Zhang, Yanan Lv, Hua Han, Xi Chen
Presenter: Bohao Chen, School of Advanced Interdisciplinary Sciences, University of Chinese Academy of Sciences, China
- C200 (Fri-PM) **A Diffusion-Driven Temporal Super-Resolution and Spatial Consistency Enhancement Framework for 4D MRI imaging**
 Paper Highlight *Authors: Xuanru Zhou, Jiarun Liu, Shoujun Yu, Hao Yang, Cheng Li, Tao Tan, Shanshan Wang*
Presenter: Xuanru Zhou, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China
- C205 (Fri-PM) **SurgX: Neuron-Concept Association for Explainable Surgical Phase Recognition**
Authors: Ka Young Kim, Hyeon Bae Kim, Seong Tae Kim
Presenter: Ka Young Kim, Kyung Hee University, Republic of Korea
- C210 (Fri-PM) **Physics-Informed Neural Operators for Tissue Elasticity Reconstruction**
Authors: Youjin Kim, Jae Yong Lee, Junseok Kwon
Presenter: Youjin Kim, Chung-Ang University, Republic of Korea
- C215 (Fri-PM) **Memory-Augmented Incomplete Multimodal Survival Prediction via Cross-Slide and Gene-Attentive Hypergraph Learning**
Authors: Mingcheng Qu, Guang Yang, Donglin Di, Yue Gao, Tonghua Su, Yang Song, Lei Fan
Presenter: Guang Yang, Harbin Institute of Technology, China
- C220 (Fri-PM) **Hypergraph-Guided Federated Distillation Learning for Efficient and Robust Multi-Center fMRI Data Analysis**
 Paper Highlight *Authors: Tao Jin, Yidan Xu, Yuhao Gao, Xichun Sheng, Chenggang Yan, Yaoqi Sun, Xiangmin Han, Yue Gao*
Presenter: Yidan Xu, Hangzhou Dianzi University, China
- C225 (Fri-PM) **DIY Challenge Blueprint: From Organization to Technical Realization in Biomedical Image Analysis**
Authors: Leonard Klausmann, Tobias Rueckert, David Rauber, Raphaela Maerkl, Suemeyye R. Yildiran, Max Gutbrod, Christoph Palm
Presenter: Leonard Klausmann, OTH Regensburg, Germany
- C230 (Fri-PM) **U-RWKV: Lightweight medical image segmentation with direction-adaptive RWKV**
Authors: Hongbo Ye, Fenghe Tang, Peiang Zhao, Zhen Huang, Dexin Zhao, Minghao Bian, S. Kevin Zhou
Presenter: Hongbo Ye, University of Science and Technology of China, China

- C235 (Fri-PM) **Implicit U-KAN2.0: Dynamic, Efficient and Interpretable Medical Image Segmentation**
Authors: Chun-Wun Cheng, Yining Zhao, Yanqi Cheng, Javier A. Montoya-Zegarra, Carola-Bibiane Schönlieb, Angelica I. Aviles-Rivero
Presenter: Chun-Wun Cheng, University of Cambridge, United Kingdom
- C240 (Fri-PM) **A New Paradigm for Low-dose PET/CT Reconstruction with Mamba-powered Progressive Network and Physics-informed Consistency**
Authors: Zixin Tang, Caiwen Jiang, Zhiming Cui, Dinggang Shen
Presenter: Zixin Tang, ShanghaiTech University, China
- C245 (Fri-PM) **Holistic White-light Polyp Classification via Alignment-free Dense Distillation of Auxiliary Optical Chromoendoscopy**
Authors: Qiang Hu, Qimei Wang, Jia Chen, Xuanta Ji, Mei Liu, Qiang Li, Zhiwei Wang
Presenter: Qiang Hu, Huazhong University of Science and Technology, China
- C250 (Fri-PM) **Multi-Linear 3D Craniofacial Infant Shape Model**
Authors: Till N. Schnabel, Yoriko Lill, Benito K. Benitez, Gaspard Krief, Sebastián Tapia Corón, Friederike Prüfer, Philipp Metzler, Andreas A. Mueller, Markus Gross, Barbara Solenthaler
Presenter: Till Schnabel, ETH Zurich, Switzerland
- C255 (Fri-PM) **Targeted False Positive Synthesis via Detector-guided Adversarial Diffusion Attacker for Robust Polyp Detection**
Authors: Quan Zhou, Gan Luo, Qiang Hu, Qingyong Zhang, Jinhua Zhang, Yinjiao Tian, Qiang Li, Zhiwei Wang
Presenter: Gan Luo, Wuhan University of Technology, China
- C260 (Fri-PM) **Learning Explainable Imaging-Genetics Associations Related to a Neurological Disorder**
Authors: Jueqi Wang, Zachary Jacokes, John Darrell Van Horn, Michael C. Schatz, Kevin A. Pelphrey, Archana Venkataraman
Presenter: Jueqi Wang, Boston University, United States
- C265 (Fri-PM) **Semantic Interpolative Diffusion Model: Bridging the Interpolation to Masks and Colonoscopy Image Synthesis for Robust Generalization**
Authors: Chanyeong Heo, Jaehee Jung
Presenter: Chanyeong Heo, Myongji University, Republic of Korea
- C270 (Fri-PM) **Automated Auditing of Upper Endoscopy Procedure Times: A Temporal Multiclass Analysis**
Authors: Diego Bravo, Josué Ruano, Martín Gómez, Fabio A. González, Eduardo Romero
Presenter: Diego Bravo, Universidad Nacional de Colombia, Colombia
- C275 (Fri-PM) **FViM: Frequency Vision Mamba for Label-Free Cell Death Pathway Prediction in Lung Cancer Chemotherapy**
Authors: Zhaoyi Ye, Shubin Wei, Liye Mei, Yueyun Weng, Qing Geng, Du Wang, Cheng Lei
Presenter: Zhaoyi Ye, Wuhan University, China

- C280 (Fri-PM) **RefineNet: Elevating Medical Foundation Models through Quality-Centric Data Curation by MLLM-Annotated Proxy Distillation**
Authors: Ningyi Zhang, Yuan Gao, Xin Wang, Ka-Hou Chan, Jian Wu, Chan-Tong Lam, Shanshan Wang, Yue Sun, Sio-Kei Im, Tao Tan
Presenter: Ningyi Zhang, Macao Polytechnic University, Macao SAR
- C285 (Fri-PM) **STMDiff: Spatiotemporal Matching Diffusion Model for Dual-Time-Point Total-body PET/CT Imaging via Contrastive Learning**
Authors: Wenbo Li, Zhenxing Huang, Lianghua Li, Chunyan Yang, Yihan Wang, Wenjian Qin, Na Zhang, Hairong Zheng, Dong Liang, Jianjun Liu, Zhanli Hu
Presenter: Wenjian Qin, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China
- C290 (Fri-PM) **GE2Hist: Generating Histology Images from Single-cell Gene Expression via Cross-modal Generative Network**
Authors: Hongmin Cai, Boan Ji, Shangyan Cai, Yi Liao, Jiazhou Chen, Weitian Huang
Presenter: Hongmin Cai, South China University of Technology, China
- C295 (Fri-PM) **HWA-UNETR: Hierarchical Window Aggregate UNETR for 3D Multimodal Gastric Lesion Segmentation**
Authors: Jiaming Liang, Lihuan Dai, Xiaoqi Sheng, Xiangguang Chen, Chun Yao, Guihua Tao, Qibin Leng, Hongmin Cai, Xi Zhong
Presenter: Jiaming Liang, South China University of Technology, China
- C300 (Fri-PM) **LIP-CAR: a learned inverse problem approach for medical imaging with contrast agent reduction**
Authors: Davide Evangelista, Elena Morotti, Sonia Colombo Serra, Pengpeng Luo, Giovanni Valbusa, Davide Bianchi
Presenter: Elena Morotti, University of Bologna, Italy
- C305 (Fri-PM) **DyMAS-Net: Dynamic Multi-Scale Adaptive Sampling Network for Efficient Medical Image Segmentation**
Authors: Siqi Wang, Qingxue Zhao, Di Wu, Jiakang Gao, Jun Tian
Presenter: Jun Tian, Nankai University, China
- C310 (Fri-PM) **Endoscopic Depth-of-Field Expansion via Cascaded Network with Two-streamed Multi-scale Fusion**
Authors: Xiang Deng, Xing Liu, Tian Xu, Xiaoyue Liu, Tianyuan Gan, Chen Lu, Congcong Zhou, Peng Wang, Yong Lei, Xuesong Ye
Presenter: Xiang Deng, Zhejiang University, China
- C315 (Fri-PM) **PolyMamba: Spatial-prior Guided Mamba for Polyp Segmentation with High-Frequency Enhancement**
Authors: Renyu Fu, Shurui Hu, Xiao Zheng, Chang Tang, Xinwang Liu
Presenter: Renyu Fu, China University of Geosciences, China
- C320 (Fri-PM) **Medical Contrastive Learning of Positive and Negative Mentions**
Authors: WeiLong Wu, Jingzhi Yang, Xun Zhu, Xiao Zhang, ZiYu Liu, Miao Li, Ji Wu
Presenters: Miao Li and WeiLong Wu, Tsinghua University, China

- C325 (Fri-PM) **Knowing or Guessing? Robust Medical Visual Question Answering via Joint Consistency and Contrastive Learning**
Authors: Songtao Jiang, Yuxi Chen, Sibong Song, Yan Zhang, Yeying Jin, Yang Feng, Jian Wu, Zuozhu Liu
Presenter: Songtao Jiang, Zhejiang University, China
- C330 (Fri-PM) **Unsupervised Discovery of Spatiotypes and Context-Aware Graph Neural Networks for Modeling Clinical Endpoints**
Authors: Muhammad Dawood, Emily Thomas, Rosalin Cooper, Carlo Pescia, Anna Sozanska, Hosuk Ryou, Daniel Royston, Jens Rittscher
Presenter: Jens Rittscher, University of Oxford & Oxford Big Data Institute, United Kingdom
- C335 (Fri-PM) **Cross-Modal Contrastive Learning for Emotion Recognition: Aligning ECG with EEG-Derived Features**
Authors: Yi Wu, Yuhang Chen, Jiahao Cui, Jiaji Liu, Lin Liang, Shuai Li
Presenter: Yuhang Chen, Beihang University, China

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Program Schedule

Time	Program
08:00-09:20	Session 1: Diagnostic Imaging & Pathology AI (Moderators: Joe Yeong, Yosep Chong)
	Pre-Clinical Multicenter Evaluation of Lunit INSIGHT CXR 4.0: Advancing Chest X-Ray AI Analysis <i>Authors: Benoit Rizk, Yuri Ha, Natalie Heracleous, Amine Korchi, Olivier Berrebi</i> <i>Presenter: Benoit Rizk</i>
	Bridging Development and Practice: First AI-Assisted Intestinal Ultrasound for Inflammatory Bowel Disease Evaluated on Unprocessed Clinical Images <i>Authors: Bobby Lo, Jakob Karrer, Jonatan Ruiz-Molsgaard, Johan Burisch, Gorm Roager Madsen, Klaus Theede, Johan Fremberg Ilvermark, Bjørn Leth Møller, Bulat Ibragimov, Trine Boysen</i> <i>Presenter: Bobby Lo</i>
	Stochastic AnoGAN: Robust Unsupervised Plaque Detection and Segmentation in Carotid Ultrasound Imaging <i>Authors: Arash Saboori, Fredrik Öhberg, Ulf Näslund, Christer Grönlund</i> <i>Presenter: Arash Saboori</i>
	Automated CT-Based Volumetric Body Composition Analysis Predicts Post-Operative Complications Following Pancreaticoduodenectomy: A Retrospective Study <i>Authors: Victoria M. Gershuni, Rakesh Sharma, Shubha Vasisht, Gracia M. Vargas, Raheema Damani, Jeffrey Duda, James C. Gee, Charles M. Vollmer, Walter Witschey</i> <i>Presenter: Victoria M. Gershuni</i>
	Ex-Vivo Evaluation of an Improved Computer-Aided Detection System for Barrett's Neoplasia on Real-World Imaging Conditions <i>Authors: M.R. Jong, R.A.H. van Eijck van Heslinga, C.H.J. Kusters, T.J.M. Jaspers, T.G.W. Boers, L.C. Duits, R.E. Pouw, B.L.A.M. Weusten, A. Alkhalaf, F. van der Sommen, P.H.N. de With, A.J. de Groof, J.J. Bergman</i> <i>Presenter: Martijn Roderick Jong</i>
	Generative AI-Based Translation of Frozen Sections to FFPE: A Pilot Study on Clinical Application to Skin Cancer Resection Margins <i>Authors: Sang-Hoon Lee, Yusung Chu, Seong Min Hong, Sena Lee, Jin Gyo Jeong, Yosep Chong, Sejung Yang, Minseob Eom</i> <i>Presenter: Sang-Hoon Lee</i>
09:30-10:30	Common Keynote Session: Bioadhesive ultrasound and telerobotic neurointervention Presenter: Xuanhe Zhao
11:00-12:30	Poster Session (Moderators: Jonghye Woo) Location: DCC 2
12:30-13:30	Lunch Break
13:30-15:00	Session 2: Multimodal & Systems-Level / Foundational- Model AI (Moderators: Pietro Mascagni, Chan Kwon Jung)
	Prognostic Data Extraction via a Privacy-Preserving Large Language Model: A Clinician-AI Collaborative Evaluation in Head and Neck Oncology <i>Authors: Sang-Hoon Lee, Yusung Chu, Seong Min Hong, Sena Lee, Jin Gyo Jeong, Yosep Chong, Sejung Yang, Minseob Eom</i> <i>Presenter: Sang-Hoon Lee</i>

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Time	Program
	Retrospective Analysis of Foundation Models for Breast MR Image Analysis: Comparing Contrast-Enhanced vs Non-Contrast Protocol <i>Authors: Tri-Thien Nguyen, Lorenz Kapsner, Sabine Ohlmeyer, Evelyn Wenkel, Shirin Heidarikahkesh, Hannes Schreiter, Luise Brock, Dominika Skwierawska, Frederik Laun, Andrzej Liebert, Julian Hossbach, Andreas Maier, Michael Uder, Sebastian Bickelhaupt</i> <i>Presenter: Tri-Thien Nguyen</i>
	MedARC: A Reinforcement-Learned Multi-Agent Collaboration System for Expert-Level Medical Visual Reasoning <i>Authors: Chang Wook Jeong, Juseong Jin</i> <i>Presenter: Juseong Jin</i>
	AI-Based Spectral Imaging Biomarkers for Recognizing Sepsis and Predicting Mortality in Intensive Care: A Prospective Study of 483 Critically Ill Patients <i>Authors: Maximilian Dietrich, Silvia Seidlitz, Katharina Hölzl, Ayca von Garrel, Jan Sellner, Stephan Katzenschlager, Tobias Hölle, Dania Fischer, Maik von der Forst, Felix C. F. Schmitt, Alexander Studier-Fischer, Markus A. Weigand, Lena Maier-Hein</i> <i>Presenter: Maximilian Dietrich</i>
	Predictive Radiogenomic AI Model for Patient Stratification in Brain Tumor <i>Authors: Prajwal Ghimire, Marc Modat, Thomas C Booth</i> <i>Presenter: Prajwal Ghimire</i>
	GASTRONET-5M: A Multicenter Dataset for Foundation Model Development in Gastrointestinal Endoscopy <i>Authors: M. R. Jong, T. G. W. Boers, K. N. Fockens, J. B. Jukema, C. H. J. Kusters, T. J. M. Jaspers, R. A. H. van Eijck van Heslinga, F. C. Slooter, M. R. Struyvenberg, R. Bisschops, J. A. van der Putten, P. H. N. de With, F. van der Sommen, A. J. de Groof, J.J. Bergman</i> <i>Presenter: Martijn Roderick Jong</i>
	Artificial Clarity, Clinical Confusion: Reassessing AI-Based Fundus Image Enhancement in Biomarker Prediction <i>Authors: Sunjin Hwang, Dongjin Nam, Junseok Park, Hyeonmin Kim</i> <i>Presenter: Sunjin Hwang</i>
15:00-15:30	Break and Poster Viewing (DCC II)
15:30-17:00	Session 3: Surgical, Interventional AI (Moderators: Ozanan Meireles, Chang Wook Jeong)
	Surgical-LLaVA: An Instruction-Tuned Vision-Language Model for Surgical Scenario Understanding <i>Authors: Chang Wook Jeong, Juseong Jin</i> <i>Presenter: Juseong Jin</i>
	Clinical Integration of MR-Derived Contours into Intraoperative TRUS-Guided HDR Prostate Brachytherapy <i>Authors: Joel Beaudry, Aneesh Dhar, David Aramburu Nunez, Tonghe Wang, Lindsey Diamond, Marisa Kollmeier, Shirin A. Enger, Antonio L. Damato</i> <i>Presenter: Joel Beaudry</i>

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Time	Program
	Feasibility of Intraoperative Transcervical Ultrasound Guidance During Transoral Robotic Surgery: A Prospective Clinical Study <i>Authors: Jae Young Kwon, Wanwen Chen, Cornelius Kürten, Jason Chang, Septimiu Salcudean, Eitan Prisman</i> <i>Presenter: Jae Young Kwon</i>
	Integrating Intraoperative 3D Scanned Specimen Maps into Postoperative Radiation Therapy Planning for Head and Neck Cancer: A Feasibility Study <i>Authors: Jae Young Kwon, Wanwen Chen, Cornelius Kürten, Jason Chang, Septimiu Salcudean, Eitan Prisman</i> <i>Presenter: Jae Young Kwon</i>
	Robot-Assisted Automated Intra-Cardiac Echocardiography for EP/SHD Procedures: Preclinical Validation in Animal and Heart Phantom Models <i>Authors: Young-Ho Kim, Jaeyoung Huh, Paul Klein, Yue Zhang, Gareth Funka-Lea, Mark Allen, C Huie Lin, Tobias Bohling, Puneet Sharma, Ankur Kapoor</i> <i>Presenter: Young-Ho Kim</i>
	3D Generative Models for Vertebral Segmentation and Pedicle Screw Path Prediction Models <i>Authors: Byeongkeun Kwon, Dasom Seong, Suhyeon Kim, Sung Hyun Noh</i> <i>Presenter: Byeongkeun Kwon</i>
	Deep Learning-Based Pipeline for Automatic Tissue Differentiation in Surgical Hyperspectral Imaging with Sparse Annotation <i>Authors: Oscar MacCormac, Junwen Wang, Conor C. Horgan, Philip Noonan, Matthew Elliot, Zhonghao Wang, Michael Ebner, Sebastien Ourselin, Jose Lavrador, Ahilan Kailaya-Vasan, Tom Vercauteren, Jonathan Shapey</i> <i>Presenter: Oscar MacCormac</i>
17:00-18:30	CLINICCAI Panel: From Idea to Product (Moderators: Joon Beom Seo, Jonghye Woo)
	1. Clinical Researcher: What is a valuable unmet need? <i>Presenter: Joe Yeong</i>
	2. Engineer in University: How to translate unmet need to product at Lab level? <i>Presenter: Jonghye Woo</i>
	3. Engineers in Industry: How to make commercial product? <i>Presenter: Kyuhwan Jung</i>
	4. Legal Approval: Government Perspective <i>Presenter: Ozanan Meireles</i>
	5. Legal Approval: Industry Perspective <i>Presenter: Jason Suh</i>
	6. Real World Implementation: Practical Issue <i>Presenter: Pietro Mascagni</i>

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Thursday, September 25, 2025, 11:00-12:30

Poster Hall (DCC 2)

Vision-Language Models for Automated Video Analysis and Documentation in Laparoscopic Surgery

Authors: Hannah Sophie Muti, Esther Helene Stueker, Fiona R. Kolbinger, Florian Oehme, Jakob Nikolas Kather

Presenter: Hannah Sophie Muti

Opportunistic Screening Using AI-Based Chest CT Analysis: A Retrospective Evaluation of xAID Chest CT

Authors: Daria Kokina, Vitaly Polushkin, Taikhan Dautov, Kirill Lopatin

Presenter: Kirill Lopatin

AI-Assisted Point-of-Care Ultrasound for Rapid Detection of Upper-Arm Injuries

Authors: Jacob L. Jaremko, Shrimanti Ghosh, Yuyue Zhou, Anisha Sethumadhavan, Jessica Knight, Natasha Akhlaq, Kai Yue (Michael) Xie, Abhilash R. Hareendranathan

Presenter: Jacob L. Jaremko

Validation of Retuve: An Open-Source Multi-Modal AI System for Hip Dysplasia Diagnosis with Ultrasound

Authors: Jacob L. Jaremko, Adam McArthur, Abhilash Hareendranathan, Alexander Scammon, Damian Sol

Presenter: Jacob L. Jaremko

Metabolic Burden Alters Energy Requirements of Brain Networks: Evidence from Network Control Theory in the UK Biobank

Authors: Hyun Soo Park, Bumseok Jeong

Presenter: Hyun Soo Park

Action Triplet Recognition in Minimally Invasive Liver Surgery: Benchmarking and Comparison with Cholecystectomy Data

Authors: Namkee Oh, Gyu-Seong Choi, Yongjun Jeon, Jongmin Shin, Seonmin Park, Kanggil Park, Kyu-Hwan Jung

Presenter: Namkee Oh

Prompting Strategies and Fine-Tuning Using GPT, Claude, Gemini, and LLaMA for Diagnostic Classification of Parkinson's Disease

Authors: Do-Young Kang, Hyun-Ji Shin, Young-Jin Jeong, Sungmin Jun

Presenter: Do-Young Kang

VimHRNet: A Deep Learning Framework for Automatic Landmark Detection and Radiologic Parameter Measurement in Wrist Radiographs

Authors: Sami P. Väänänen, Mohamed Traoré, Mervi Tiitonen, Antti Voss, Rami Kristian Korhonen, Jussi Tohka, Sanna Suoranta

Presenter: Sami P. Väänänen

CLINICCAI PRESENTATIONS LIST

Automated AI-Based Segmentation of Colorectal Liver Metastases: A Discovery Study on Histopathological Whole-Slide Images

Authors: Zhen Qian, Faber Pas, Michael A. de Leeuw, Stefan Klein, Michail Doukas, Peter Vermeulen, Dirk J. Grünhagen, Cornelis Verhoef, Martijn P.A. Starmans

Presenter: Martijn P.A. Starmans

Explainable Coronary Artery Calcium Prediction from Fundus Photographs: SHAP-Based Analysis Using Regression and Feature Contribution Profiling

Authors: Dongjin Nam, Hyeonmin Kim, Jaewon Seo, Tae Hyun Park, Junseok Park, Jungkyung Cho, Miso Jang, Simon Nusinovici, Tyler Hyungtaek Rim, Sunjin Hwang

Presenter: Dongjin Nam

Automated Quantification of Interstitial Lung Abnormalities and Associations with Mortality in Lung Cancer Screening

Authors: Pardeep Vasudev, Mehran Azimbagirad, Brintha Selvarajah, Amyn Bhamani, Shahab Aslani, Daryl Cheng, Daniel Alexander, SUMMIT consortium, Sam Janes, Joseph Jacob

Presenter: Pardeep Vasudev

Impact of CAD4TB on Reader Performance in Detecting Active Pulmonary TB from Chest X-Rays: A Retrospective MRMC Study

Authors: Edwin Klinkenberg, Sasan Asadiabadi, Ir. Laura Mansilla Valle

Presenter: Edwin Klinkenberg

Real-Time Motion Prediction for MRI-Linac-Based Cardiac Radio-Ablation

Authors: Nicolas Mühlischlegel, Elia Lombardo, Tom Blöcker, Yuqing Xiong, Rabea Klaar, Manon Aubert, Marco Riboldi, Claus Belka, Stefanie Corradini, Christopher Kurz, Martin Fast, Guillaume Landry

Presenter: Nicolas Mühlischlegel

Deep Learning-Based Prediction of Immune Checkpoint Inhibitor Efficacy in Brain Metastases Using Brain MRI

Authors: Melisa S. Guelen, Tobias R. Bodenmann, Mason C. Cleveland, Jay B. Patel, Felix J. Dorfner, Nelson Gil, Shreyas Bhat Brahmavar, Dagoberto Pulido-Arias, Jayashree Kalpathy-Cramer, Jean-Philippe Tiran, Bruce R. Rosen, Elizabeth Gerstner, Jawed Nawabi, David Wasilewski, Andrea Dell'Orco, Albert E. Kim, Christopher P. Bridge

Presenter: Melisa S. Guelen

RETI-RATEY: Towards Automated and Reliable Fundus Image Quality Assessment

Authors: Ariel Yuhan Ong, Justin Engelmann, Michael Morley, Pearse A. Keane

Presenter: Ariel Yuhan Ong

Ensuring Clinically Reliable AI: A Scalable Approach for Data Harmonization, Validation, and Performance Monitoring

Authors: Sumir S. Patel, Veysel Kocaman, Enes Hosgor

Presenter: Sumir S. Patel

CLINICCAI PRESENTATIONS LIST

Widefield Quantitative Fluorescence Imaging in Glioma Surgery: Prospective In-Vivo Clinical Feasibility of a Novel Integrated Hyperspectral Imaging System

Authors: Matthew Elliot, Charlie Budd, Silvere Segaud, Aya Elshalakany, Oscar MacCormac, Zita Reisz, Ali ElHag, Yasir A. Chowdhury, Jose Pedro Lavrador, Francesco Vergani, Ranj Bhangoo, Keyoumars Ashkan, Sebastien Ourselin, Graeme Stasiuk, Yijing Xie, Tom Vercauteren, Jonathan Shapey

Presenter: Matthew Elliot

AI-Based Instrument Motion Detection and Visibility Enhancement in Laparoscopic Video for AR-Guided Surgery

Authors: Puspamita Banerjee, Pooja P Jain, Subhamoy Mandal

Presenter: Puspamita Banerjee

Beyond Single-Run Metrics with CP-Fuse: A Rigorous Multi-Cohort Evaluation of Clinico-Pathological Fusion for Improved Survival Prediction in TCGA Cohorts

Authors: Juan Felipe Duran, Yujing Zou, Harry Glickman, Elliot Wadge, Khalil Sultanem, George Shenouda, Martin Vallières, Shirin A. Enger

Presenter: Juan Felipe Duran

Explainable AI for Lymph Node Metastasis Prediction in Gastric Cancer Biopsy Whole-Slide Images Leveraging a Foundation Model with Multiple Instance Learning

Authors: Haeyoun Kang, Sikandar Ali, Ali Hussain, Damin Moon, Won-Ae Lee, Min Cho, Hyeong-Chan Shin, Yujun Park, Baek Hwan Cho, Nam-Hoon Cho, Heejung An, Dongmin Kim, Heung-Kook Choi, Hee Cheol Kim, Hyunki Kim

Presenter: Haeyoun Kang

**DOCTORAL CONSORTIUM
PRESENTATION LIST**

DOCTORAL CONSORTIUM PRESENTATION LIST

Posters - Selected for Long Oral Presentations

Dynamic Learning of Histopathology in the Spatio-Temporal Continuum

Niklas Babendererde, TU Darmstadt, Germany

Annotation-Efficient Selection and Collaborative Datasets for Clinical Translation in Brain Vessel Segmentation

Daniele Falcetta, EURECOM, France

Towards AI-guided Cardiovascular Ultrasonography with Large-scale Implicit Structural Learning

Haojun Jiang, Tsinghua University, China

Building Cancer AI Systems to Accelerate the Cancer Moonshot Using Medical Images

Jieneng Chen, John Hopkins University, USA

Deep Generative Models for Explainability and Fairness in Medical Image Analysis

Amar Kumar, McGill University, Canada

Toward Next-generation Medical Vision Backbones: Modeling Finer-grained Long-range Visual Dependency

Mingyuan Meng, The University of Sydney, Australia

Advancing Healthcare with Multimodal AI: Enhanced Diagnosis, Cognitive Monitoring, and Inclusive Medical Communication

Raffaele Mineo, University of Catania, University Campus Bio-Medico of Rome, Italy

Reeb Graphs for Topological Connectomics

S Shailja, University of California Santa Barbara, USA

Posters - Selected for Short Oral Presentations

Multimodal AI for Equitable Respiratory Disease Diagnosis: From Chest X-rays to Cough Sounds in Resource-Constrained Healthcare

Yasmeena Akhter, Indian Institute of Technology Jodhpur, India

Deep Multi-Modality Fusion for Integrative Healthcare

Omnia Alwazzan, Queen Mary University of London, United Kingdom

From Fusion to Diffusion for early Pulmonary Embolism detection and severity prediction

Noa Cahan, Tel Aviv University, Israel

Deep Learning-Based Prediction of Molecular Markers in Glioma Using Magnetic Resonance Imaging

Somayeh Farahani, Macquarie University, Australia

Deep Learning for Stroke Imaging: Enhancing Focus, Efficiency, and Fairness

Uma-Maria Lal-Trehan Estrada, University of Girona, Spain

Enabling Generalizable Medical Imaging Analysis with Adaptation and Enhancement

Liu Jie, City University of Hong Kong, Hong Kong

Generative Deep Learning for Cancer Image Analysis

Richard Osuala, Universitat de Barcelona, Spain

Additional Posters

SATELLITE EVENTS

WORKSHOPS

23 SEPTEMBER 2025

WORKSHOPS - 23 SEPTEMBER 2025

Augmented Environments for Computer-Assisted Interventions (AE-CAI) IBS Building -2F-200

Time	Session / Event	Details / Paper ID
08:00–08:15	Opening Remarks	-
Session 1: Surgical Planning and Simulation	Chairs: [Chair 1], [Chair 2]	
08:15–08:25	Acquiring aligned endoscopic and depth image pairs	Paper ID 4
08:25–08:35	Planning non-linear trajectories	Paper ID 26
08:35–08:45	Assessing Reconstructed Liver Surfaces	Paper ID 15
08:45–08:55	Soft Tissue Simulation	Paper ID 8
08:55–09:05	Point-Guided Latent Diffusion	Paper ID 25
09:05–09:15	Efficient 3D Scene Reconstruction	Paper ID 1
Session 2: Augmented Reality and Visualization	Chairs: [Chair 3], [Chair 4]	
09:15–09:25	InteractOR: Mixed Reality Segmentation	Paper ID 5
09:25–09:35	Dynamic Anatomy Modeling for Knee Arthroscopy	Paper ID 6
09:35–09:45	Hidden Tumor Visualization	Paper ID 13
09:45–09:55	Automatic Annotations via AR	Paper ID 18
09:55–10:05	MR-Guided Needle Insertion Comparison	Paper ID 27
10:05–10:15	Buffer / Transition	-
10:30–11:30	Coffee Break & Poster Session 1	Posters from Sessions 1 & 2
11:30–12:30	Keynote: Dr. Pascau	-
12:30–13:30	Lunch Break	-
Session 3: Endoscope Tracking, Navigation, and Surgical Vision	Chairs: [Chair 5], [Chair 6]	
13:30–13:40	Tool Detection in Laparoscopy	Paper ID 3
13:40–13:50	SLAM-based Navigation in Ureteroscopy	Paper ID 9
13:50–14:00	Few-shot MM-Former for Panoptic Segmentation	Paper ID 10
14:00–14:10	Vision-based Sinus Navigation	Paper ID 28
14:10–14:20	Landmark-free 3D-2D Liver Registration	Paper ID 20
14:20–14:30	EgoSurgery-HTS Dataset	Paper ID 24
Session 4: Computer-Assisted Intervention and Surgical Data Science	Chairs: [Chair 7], [Chair 8]	
14:30–14:40	PRISM for Polyp Segmentation	Paper ID 12
14:40–14:50	SAMmorph Multimodal Registration	Paper ID 7

Time	Session / Event	Details / Paper ID
14:50–15:00	Ultrasound-Guided IV Techniques in VR	Paper ID 14
15:00–15:10	Discussion / Transition	-
15:30–16:30	Coffee Break & Poster Session 2	Posters from Sessions 3 & 4
16:30–17:30	Keynote: Dr. Pietro Mascagni	-
17:30–17:45	Transition/Buffer	-
17:45–18:00	Awards & Closing Remarks	-

AMAI 2025 – The Fourth Workshop on Applications of Medical Artificial Intelligence (AMAI)

DCC1 – Room 1F-102

13:30	Introductory remarks: AMAI Organizers
13:35-13:55	Keynote talk Ying Ding, PhD Bill & Lewis Suit Professor, School of Information and Dell Medical School, University of Texas at Austin, USA Title: Application of Large Language Models to Empower Medical Communications
13:55-14:45	Oral Presentation Session I: 5 papers (10 mins /paper; including presentation and Q&A)
14:45-15:35	Poster presentation and coffee break
15:35-15:50	Invited talk Behrouz Shabestari, PhD, Director, National Technology Centers Program, National Institute of Biomedical Imaging and Bioengineering (NIBIB) Title: “NIBIB Support for AI in Imaging and Interventional Radiology”
15:50-16:30	Oral Presentation Session II: 4 papers (10 mins /paper; including presentation and Q&A)
16:30-17:15	Student Panel Balance Technical and Translational Components in Medical AI Research
17:15-17:55	Oral Presentation Session III: 4 papers 10 mins /paper; including presentation and Q&A)
17:55-18:00	Award announcement and closing remarks
18:00	Adjourn

Bridging Regulatory Science and Medical Imaging Evaluation (BRIDGE)

DCC1- Room 2F-206-207-208

Session 1 Title: Keynotes

Time	Talk Title
08:00–08:10	Title: Introduction to BRIDGE Speaker: Ghada Zamzmi
08:10–08:45	Title: Accelerating AI Model Development and Evaluation with Regulatory Science Speaker: Dr. Nicholas Petrick, Food and Drug Administration
08:45–09:20	Title: Bridging Innovation and Reality: Toward Next-Generation Imaging AI Validation Speaker: Dr. Lena Maier-Hein, German Cancer Research Center
09:20–09:55	Title: Perspective on the challenges of taking surgical AI research to the patient Speaker: Dr. Danail Stoyanov, University College London
10:00–10:30	Coffee Break

Session 2 Title: Posters

Time	Paper Title
10:30–10:40	Title: Evaluation of Deformable Image Registration under Align-ment- Regularity Trade-off Authors: Vasiliki Sideri-Lampretsa, Daniel Rueckert, and Huaqi Qiu
10:40–10:50	Title: Some hidden traps of confidence intervals in medical image segmentation: coverage i ssues Authors: Pascaline Andre, Charles Heitz, Evangelia Christodoulou, Annika Reinke, Carole H. Sudre, Michela Antonel-li, M. Jorge Cardoso, Antoine Gilson, Sophie Tezenas du Montcel, Gael Varoquaux, Lena Maier-Hein, and Olivier Colliot
10:50–11:00	Title: Three Countries, Three Continents: AI Medical Device Regulation and Certification Comparison in the US, EU, and South Korea Authors: Kanjar De and Alireza Salehi
11:00–11:10	Title: FDA's PCCP: Opportunities and Gaps Authors: Niklas Babendererde, Amin Ranem, Moritz Fuchs, Camila Gonzalez, Henry John Krumb, Anirban Mukhopadhyay
11:10–11:20	Title: Enabling PSO-Secure Synthetic Data Sharing Using Diver-sity- Aware Diffusion Models Authors: Mischa Dombrowski and Bernhard Kainz

11:20-11:30 **Title:** From Data to Value: Gaps in Federated Learning Evaluation for Clinical Deployment in Medical Imaging
Authors: Beatriz Garcia Santa Cruz, Jaleh SHOSHTARIAN MALAK, Hanna CWIEK-KUPCZYNSKA, Venkata Satagopam

Session 3 Title: Panel Discussion

11:30-12:30 From Challenge to Change: Regulatory-Driven Medical AI Innovation
Panelists: Dr. Ben Glocker, Dr. Nicholas Petrick, Dr. Federica Zanca, Dr. Suhyeong Park, and Dr. Oliver Eidel, Industry Panelist (TBA)
Moderator: Dr. Thijs Kooi

Computer-Aided Pelvic Imaging for Female Health DCC1- Room 1F-108

13:30 - 14:00 **Introduction: “Computer-Aided Pelvic Imaging for Female Health”**
 14:00 - 14:45 **Keynote: Prof. Julia Schnabel, TUM, Munich Germany**
 14:45 - 15:30: Oral Session 1

- **Short talk: Publicly Available Female Pelvis MRI Datasets: Current Resources and Limitations for Image-Based Research**
 Maximilian Lindholz, Tillmann Arlt, Richard Ruppel, Robin Schmidt, Yasmin El-Nahry, Sylvia Mechsner, Sophia Elisabeth Ellen Schulze-Weddige, Georg Lukas Baumgärtner, Charlie Alexander Hamm, Lynn Jeanette Savic, Sebastian Arndt, Lisa Siegler, Leonard Stepansky, Matthias May, and Tobias Penzkofer
- **A Prospective Dual-Modality Tool for Monitoring Uterine Peristalsis: Integrating Dynamic MRI and Electrohysterography**
 Maria Camila Bustos Vivas, Smiti Tripathy, and Jana Hutter
- **Visionerves: Automatic and Reproducible Hybrid AI for Peripheral Nervous System Recognition Applied to Endometriosis Cases**
 Giammarco La Barbera, Enzo Bonnot, Thomas Isla, Juan Pablo de la Plata, Joy-Rose Dunoyer de Segonzac, Jennifer Attali, Cécile Lozach, Alexandre Bellucci, Louis Marcellin, Laure Fournier, Sabine Sarnacki, Pietro Gori, and Isabelle Bloch
- **Diffusing the Blind Spot: Uterine MRI Synthesis with Diffusion Models**
 Johanna P. Müller, Anika Knupfer, Pedro Blöss, Edoardo Berardi Vittur, Bernhard Kainz, Jana Hutter

15:30 - 16:00 Coffee Break

16:00 - 16:55 Oral Session 2

- **Multi-Step Segmentation of Pelvic Fractures: Handling Variable Fracture Counts Through Anatomical and Surface Analysis**
 Artur Jurgas, Maciej Stanuch, Marek Wodziński, and Andrzej Skalski
- **Delineation Uncertainty from Clinician Ranges in Cervical Cancer Radiotherapy Planning**
 Omar Todd, Sooha Kim, Katherine Mackay, Raghav Mehta, Fabio De Sousa Ribeiro, David Bernstein, Alexandra Taylor, Ben Glocker

• **UteroVAE: A Shape-Informed Variational Autoencoder for Uterine MRI Encoding in Adenomyosis, Fibroids, and Healthy Uteri**

Richard Ruppel, Maximilian Lindholz, Robin Schmidt, Yasmin El-Nahry, Syliva Mechsner, Sophia Elisabeth Ellen Schulze-Weddige, Georg Lukas Baumgärtner, Tillmann Arlt, Charlie Alexander Hamm, Sebastian Arndt, Lisa Siegler, Leonard Stepansky, Jana Hutter, Matthias May, Tobias Penzkofer

• **Real-Time Automated Analysis and Reporting of Uterine MRI**

Deepak Bhatia, Jordina Aviles Verdera, Michael Kitzberger, Smiti Tripathy, Maria Camila Bustos Vivas, Lieselotte Kratzsch, Anika Knupfer, and Jana Hutter

17:00 - 17:45 **Joint Panel Session with the WOMEN's Workshop on Open Challenges and Next Steps**

17:45 - 18:00 **Workshop Closing**

**14th MICCAI Workshop on Clinical Image-based Procedures (CLIP 2025):
Towards Holistic Patient Models for Personalised Healthcare**
DCC2- Room 3F-301

Session 1 Title: Keynote

Session Chairs: Dr. Marius Erdt

Time Paper Title

08:00–08:45 Keynote: *AI for cardiovascular medicine*
 Prof. Dr. Sandy Engelhardt (Institute for Artificial Intelligence in Cardiovascular Medicine, Heidelberg University, Germany)

Session 2 Title: Paper presentation and discussion

Session Chairs: Dr. Marius Erdt

Time Paper Title

08:45–09:00 *2D/3D Registration of Acetabular Hip Implants Under Perspective Projection and Ellipse Fitting*
 Yehyun Suh, J. Ryan Martin, Daniel Moyer

09:00–09:15 *TileDVP: Decoding the Tissue Proteome from H&E Images*
 Emilie Mathian, Lukas Oldenburg, Eduard Chelebian, Lisa Schweizer, Gijs Zonderland, Kristian Egebjerg, Ishani Ummat, Andreas Mund, Maximillian T. Strauss

09:15–09:30 *Domain-Specialized Interactive Segmentation Framework for Meningioma Radiotherapy Planning: Multi-Prompt 3D Tumor Delineation with Clinical Integration*
 Junhyeok Lee, Jang Han Jang, Kyu Sung Choi

09:30–09:45 *Does Spatial Normalization Improve UNet-based Subcortical Segmentation for Parkinson's Disease DBS Planning?*
 Tomás Lima, Victor Alves, Daniel Novák, Eduard Bakštein

09:45–10:00 *OrificeNet--Automatic Concealed Orifice Detection from Microscope Imagery with CBCT-Guided Refinement*
 Kefan Zhou, Yufei Chen, Wei Liu, Qiyun Shen, Qi Zhang

10:00-10:30 Coffee Break

Session 3 Title: Paper presentation and discussion

Session Chairs: Prof. Klaus Drechsler

Time	Paper Title
10:30–10:45	<i>NEURAL: Attention-Guided Pruning for Unified Multimodal Resource-Constrained Clinical Evaluation</i> Devvrat Joshi, Islem Rekik
10:45-11:00	<i>Interpreting CT-scans with CLIP: An Explorative Study of Attribution Methods for 3D Vision-Language Models</i> David Avedis Injarabian, Joonas Ariva, Hendrik Šuvalov, Dmytro Fishman
11:00-11:15	<i>Automated Constraint-Aware X-ray View Planning for Vascular Interventions Using Preoperative CTA</i> Baochang Zhang, Abdelkader Saad, Heribert Schunkert, Nassir Navab
11:15-11:30	<i>ECG Report Generation with Diagnostic Knowledge Enhanced Prompt Learning</i> Panpan Fan, Xiaodong Yue, Yufei Chen, Zhipeng Wei, Jie Shi, Zhikang Xu
11:30-11:45	<i>AI-Driven Multimodal TMJ Patient Modeling: From Unstructured Notes to Precision Treatment: Structured Notes for Image-Guided TMJ Planning</i> Alban Gaydamour, Enzo Tulissi, Claudia Mattos, Maxwell Shin, Adam Hershey, Anabelle Kwon, Selene Barone, Aron Aliaga, Marilia Yatabe, David Hanauer, Steve Pieper, Jonas Bianchi, Juan Prieto, Martin Styner, Lucia Cevitanes
11:45-12:00	<i>Ablate them all: A trajectory planning for concurrent percutaneous ablation of multiple tumors</i> Adela Lukes, Stefano Fogarollo, Reto Bale, Wolfgang Freysinger

Session 4 Title: Best paper award

Session Chairs: Prof. Klaus Drechsler

Time	Paper Title
12:00-12:30	Best paper award ceremony and closing remarks

COLlaborative Intelligence and Autonomy in Image-guided Surgery (COLAS)

DCC1- Room 2F-204

Time	Section Name:
13:30-13:40	Opening & Welcome
13:40-14:10	Keynote Talk 1 Speaker: Danail Stoyanov
14:10-14:40	Keynote Talk 2 Speaker: Daguang Xu
14:40-15:20	Oral Session (8 min talk, 6 papers in total) 1. Real-Time Surgical Keypoint Detection in Laparoscopic Cholecystectomy - Speaker: Yiyang You (Optosurgical LLC) 2. Nested ResNet: A Vision-Based Method for Detecting the Sensing Area of a Drop-in Gamma Probe - Speaker: Songyu Xu (University College London) 3. Temporally Stable Monocular Depth Estimation in Surgical Vision - Speaker: Jialang Xu (University College London) 4. Towards Robust Surgical Automation via Digital Twin Representations from Foundation Models - Speaker: Hao Ding (Johns Hopkins University) 5. Mitigating Biases in Surgical Operating Rooms with Geometry - Speaker: Tony Wang (Technical University of Munich) 6. X-RAFT: Cross-Modal Non-Rigid Registration of Blue and White Light Neurosurgical Hyperspectral Images - Speaker: Charlie Budd (King's College London)
15:20-16:05	Poster Session & Coffee Break
16:05-16:35	Keynote Talk 3 Speaker: Xiaojun Chen
16:35-17:05	Keynote Talk 4 Speaker: Jie Ying Wu
17:05-17:35	Keynote Talk 5 Speaker: Xiuyuan Chen
17:35-18:05	Panel Discussion
18:05-18:20	Award Section & Closing Remarks

**Deep-Breath2025: 2nd Deep Breast Workshop on AI and Imaging for
Diagnostic and Treatment Challenges in Breast Care**
IBS Building -2F-100

Session 1 (Oral Session 1): Segmentation and Diagnosis

Session Chairs: Tianyu Zhang, Nika Rasoolzadeh

Moderators: Xinglong Liang, Hatem A. Rashwan, Yaofei Duan

Time	Paper Title
08:00–08:10	Introduction to Deep-Breath 2025 Tianyu Zhang, Radboudumc, the Netherlands
08:10–08:30	Opening & Keynote: A deep dive to bring AI for breast imaging to the surface Ritse M. Mann, Radboudumc, the Netherlands
08:30–08:40	Divergence-Aware Training with Automatic Subgroup Mitigation for Breast Tumor Segmentation Eleonora Poeta, Luisa Vargas, Daniele Falcetta, Vincenzo Marciano, Eliana Pastor, Tania Cerquitelli, Elena Baralis, and Maria A. Zuluaga
08:40–08:50	Breast Cancer Detection from Multi-View Screening Mammograms with Visual Prompt Tuning Han Chen, and Anne L. Martel
08:50–09:00	Towards Breast Cancer Recurrence Prediction Using Transformer-Based Learning from Global–Local Radiomics and Clinical Data Adnan Khalid, Muhammad Mursil, Fabrice Meriaudeau, Ibrahima Faye, Alain Lalande, Domenec Puig, and Hatem A. Rashwan
09:00–09:25	Keynote: Translating trustworthy AI models into breast cancer care: From early prevention to treatment evaluation Shandong Wu, University of Pittsburgh, USA
09:25–09:35	MM + CD Fusion: Deep Learning-based 3D Multi-Modal Fusion for Early Pathological Complete Response Prediction in Breast Cancer Tewele W. Tareke, Neree Payan, Alexandre Cochet, Alain Lalande, and Fabrice Meriaudeau
09:35–09:45	Uncertainty-Aware Cross-Modal Attention for Breast Cancer Classification in Ultrasound Imaging Aiman Farooq, Chandisha Das, and Deepak Mishra
09:45–09:55	Longitudinal Mammogram Exam-based Breast Cancer Diagnosis Models: Vulnerability to Adversarial Attacks Zhengbo Zhou, Degan Hao, Dooman Arefan, Margarita Zuley, Jules Sumkin, James Joshi, Shandong Wu

09:55-11:15 **Coffee Break and Poster Session**

Session 2 (Challenge Session1): MAMA-MIA 2025 Challenge

Session Chairs: Lidia Garrucho Moras, Smriti Joshi, Kaisar Kushibar

11:15-12:30 MAMA-MIA Challenge

12:30-13:30 Lunch Break and Poster Session

Session 3 (Oral Session 2): Image Synthesis

Session Chairs: Luyi Han, Jarek van Dijk

Moderators: Gustav Müller-Franzes, Chunyao Lu

Time	Paper Title
13:30–13:40	Comparing Conditional Diffusion Models for Synthesizing Contrast-Enhanced Breast MRI from Pre-Contrast Images Sebastian Ibarra, Javier del Riego, Alessandro Catanese, Julian Cuba, Julian Cardona, Nataly Leon, Jonathan Infante, Karim Lekadir, Oliver Diaz, and Richard Osuala
13:40–13:50	SynBT: High-quality Tumor Synthesis for Breast Tumor Segmentation by 3D Diffusion Model Hongxu Yang, Edina Timko, Levente Lippenszky, Vanda Czipczer, and Lehel Ferenczi
13:50–14:00	Mammographic Image Generation Using Generative Cellular Automata Lea Schwarz, Ricardo Montoya-del-Angel, Marawan Elbatel, and Robert Marti
14:00–14:10	Project: SAFE-MRI (Screening And Future Enhanced MRI) Jarek van Dijk, Radboudumc, the Netherlands
14:10–14:30	Keynote: ODELIA Jakob Nikolas Kather, Dresden University of Technology, Germany Session 4 (Challenge Session 2): ODELIA 2025 Challenge <i>Session Chairs: Nicholas Payne, Oliver Lester Saldanha</i>
14:30–15:30	ODELIA 2025 Challenge
15:30-16:00	Coffee Break

Session 5 (Oral Session 3): Others (federated learning, registration, foundation models, pathology, etc.)

Session Chairs: Tianyu Zhang, Oliver Lester Saldanha

Moderators: Yuan Gao, Xin Wang

Time	Paper Title
16:00–16:10	FedBC: Privacy-preserving breast cancer diagnosis from ultrasound images using federated learning Faisal Ahmed, David Sánchez, Josep Domingo-Ferrer, and Zouhair Haddi

- 16:10–16:20 Are Vision Foundation Models Ready for Out-of-the-Box Medical Image Registration?
Hanxue Gu, Yaqian Chen, Nicholas Konz, Qihang Li, and Maciej A. Mazurowski
- 16:20–16:30 Segmenting Invasive and In Situ Carcinoma in Breast WSIs with a Pretrained Histopathology Transformer
Lauren Jimenez-Martin, Felip Vilardell, Ana Petit, Eduard Dorca, Teresa Soler-Monsó, Irma Ramos-Oliver, Laura Pons, Pedro L. Fernández, Laia Adalid-Llansa, Daniel Mata, Lourdes Salazar-Huayna, Josep R. Casas, and Verónica Vilaplana
- 16:30–16:50 Keynote: General Ultrasound Artificial Intelligence
Tao Tan, Macao Polytechnic University, China

Session 6 (Challenge Session 3): UUSIC 2025 Challenge

Session Chairs: Zehui Lin, Luyi Han, Tao Tan

- 16:50-17:50 UUSIC 2025 Challenge
- 17:50-18:00 Best Paper Award
- 18:00 Closing

Fifth MICCAI workshop on Deep Generative Models for Medical Image Computing and Computer Assisted Intervention (DGM4MICCAI) **DCC1- Room 2F-206-207-208**

- 13:30 - 13:40 Opening
- 13:40 - 15:00 Long Orals 1 (11 papers, 5 mins talk + 2 mins Q&A each)
- 15:00 - 15:30 Short Orals 1 (8 paper, 3 mins talk + 1 min Q&A)
- 15:30 - 16:00 Coffee Break
- 16:00 - 16:30 Keynote Wolleb (25 minutes talk + 5 minutes Q&A)
- 16:30 - 17:35 Long Orals 2 (9 papers, 5 mins talk + 2 mins Q&A each)
- 17:35 - 17:55 Short Orals 2 (5 paper, 3 mins talk + 1 min Q&A)
- 17:55 - 18:00 Awards + Closing

Workshop on Digital Twin for Healthcare

DCC1- Room 2F-205

Session 1 Title: Oral Session 1

Session Chairs: Xiaoyue Liu

Time	Paper Title
13:30-13:40	Opening Remarks
13:40-14:20	Keynote 1: Predictive Hybrid Digital Twins: Theory, Methods, and Applications. Prof. Linwei Wang
14:20-14:30	A Real-Time Digital Twin for Type 1 Diabetes using Simulation-Based Inference Trung-Dung Hoang
14:30-14:40	Acoustic Simulation with Deep Learning for Low-intensity Transcranial Focused Ultrasound Digital Twins Minjee Seo
14:40-14:50	
14:50-15:00	
15:00-15:40	Personalized 3D MI Geometry Reconstruction from Cine MRI with Explicit Cardiac Motion Modeling Yilin Lyu Microvascular Retinal Digital Twins from Non-Invasive Clinical Images Remi Hernandez

Keynote 2: Digital Twins for Surgical Data Science
Prof. Mathias Unberath

15:40-16:10 Poster Session/Coffee Break

Session 2 Title: Oral Session 2

Session Chairs: Yilin Lyu

Time	Paper Title
16:10-16:20	Sponsor Session AWS - Product Introduction
16:20-16:30	Personalized 4D Whole Heart Geometry Reconstruction from Cine MRI for Cardiac Digital Twins Xiaoyue Liu
16:30-16:40	Rules based Key-Point Extraction for MR-Guided Biomechanical Digital Twins of the Spine Robert Graf

16:40–16:50 Towards Robust Algorithms for Surgical Phase Recognition via Digital Twin Representation
Mathias Unberath

16:50–17:00 Retrospective Evaluation of a Patient-Specific Liver Digital Twin to Predict Thermal Ablation
 Outcomes in HCC
Chloé Audigier

17:00–17:40

17:40–17:50

17:50–18:00 Keynote 3: Development of the virtual heart for the study of cardiac arrhythmias
Prof. Henggui Zhang

Discussion/Awards
 Closing

EMA: Efficient Medical AI

DCC1- Room 1F-107

**Session 1 Title: Medical AI Innovation: From Efficient Segmentation to Privacy-Preserving
 Foundations**

Session Chairs: Long Bai (Alibaba), Kun Yuan (TUM/Strasbourg)

Time Content

08:30–08:45 **[Welcome Speech & Workshop Introduction]**

08:45–09:15 **[Keynote] The Future of Medical AI: Robust and Continual
 Adaptation of Foundation Models**
 Prof. Mobarak I. Hoque (The University of Manchester)

09:15–09:45 **[Keynote] Clinically Applicable AIs for Computer-aided –
 Diagnosis Systems**
 Prof. Masahiro Oda (Nagoya University)

09:45–10:45 **[Oral Session 1] | 10 min Presentation & 2 min Q&A**
 1. Thomas Boucher: From $O(n^2)$ to $O(n)$ Parameters:
 Quantum Self-Attention in Vision Transformers for Biomedical Image Classification
 2. Zhe Min: DetSAM: A Joint Detection-and-Segmentation Learning Framework for Multi-
 Class Surgical Instrument Segmentation
 3. Tom Vercauteren: Beyond One-hot Encoding? Journey into Compact Encoding for Large
 Multi-class Segmentation
 4. Boxuan Li: Efficient Foundation Model Pre-training on Mixed Retina Images from Similar
 Modalities
 5. Hongqiu Wang: Towards Efficient and Privacy-Preserving Medical Image Segmentation: A
 Point-Driven Source-Free Active Adaptation Framework

10:45–11:15 [Poster Session & Coffee Break]

11:15-11:45 **[Keynote] Harnessing Multimodal AI for Knowledge
Enhanced Computational Pathology**

Prof. Lequan Yu (The University of Hong Kong)

11:45-12:15 **[Keynote] Endoluminal Robotics & Embodied AI in vivo**

Prof. Hongliang Ren (The Chinese University of Hong Kong)

Session 2 Title: Model Optimization & Multimodal Breakthroughs in Medical AI

Session Chairs: Tong Chen (USYD), Jing Wu (UCL)

Time Content

13:15-13:45 **[Sponsorship Talk] Introduction of MCML**

Prof. Daniel Rückert (Technical University of Munich)

13:45-14:15 **[Keynote] TBC**

Prof. Xiaoxiao Li (The University of British Columbia)

14:15-14:45 **[Keynote] Efficient Computation for Medical Multi-Modal Analysis**

Prof. Jinman Kim (The University of Sydney)

14:45-15:45 **[Oral Session 2] | 10 min Presentation & 2 min Q&A**

1. Michael Deutges: Neural Cellular Automata for Weakly Supervised Segmentation of White Blood Cells

2. Mostafa Mehdipour Ghazi: RARE-UNet: Resolution-Aligned Routing Entry for Adaptive Medical Image Segmentation

3. Yucheng Tang: Impact of Clinical Image Quality on Efficient Foundation Model Finetuning

4. Jiacheng Hou: BrainNetMLP: An Efficient and Effective Baseline for Functional Brain Network Classification

5. Yang Yang: Triple Expert Adaptation Networks with Adaptive Prompt Selection for Multi-Modal Medical Image Fusion

15:45-16:15 [Poster Session & Coffee Break]

16:15-16:45 **[Keynote] Holistic Representation Learning for Efficient
Surgical Video Understanding**

Dr. Ghazal Ghazaei (ZEISS Corporate Research)

16:45-17:15 **[Keynote] Making Medical AI Lighter and Smarter: Pruning
and Self-Supervision in Practice**

Dr. Hanqing Chao (Alibaba DAMO Academy)

17:15-17:30 **[Closing Remarks & Award Session]**

Fairness of AI in Medical Imaging (FAIMI): Addressing Biases for Equitable Healthcare Outcomes

DCC1- Room 1F-111

**Session 1 Title: Oral Session 1 – Methods for mitigating bias in medical imaging and
Case studies**

Session Chairs: Eike Petersen & Ben Glocker

Time	Paper Title
13:30–13:35	Welcome
13:35–14:20	<u>FAIMI Keynote</u> : Prof. Tal Arbel
14:20–14:35	Hartmut Häntze, et al. Sex-based Bias Inherent in the Dice Similarity Coefficient: A Model Independent Analysis for Multiple Anatomical Structures
14:35–14:50	Utku Ozbulak, et al. Revisiting the Evaluation Bias Introduced by Frame Sampling Strategies in Surgical Video Segmentation
14:50–15:05	Artur Paulo, et al. Assessing Annotator and Clinician Biases in an Open-Source Tool Used to Generate Head CT Segmentations for Deep Learning Training
15:05–15:30	Poster session
15:30–16:00	Coffee Break + Poster session

Session 2 Title: Oral Session 2 – Algorithmic fairness in medical imaging

Session Chairs: Veronika Cheplygina & Esther Puyol

Time	Paper Title
16:00–16:15	Emma Stanley, et al. Exploring the interplay of label bias with subgroup size and separability: A case study in mammographic density classification
16:15–16:30	Gelei Xu, et al. Fair Dermatological Disease Diagnosis through Auto-weighted Federated Learning and Performance-aware Personalization
16:30–16:45	Louisa Fay, et al. MIMM-X: Disentangling Spurious Correlations for Medical Image Analysis
16:45–17:30	<u>GISTeR Keynote</u> : Prof. Hyang Woon Lee
17:30–17:55	Round table lead by Hyang Woon Lee, Ben Glocker and Eike Petersen
17:55–18:00	Closing and awards

Tenth International Skin Imaging Collaboration (ISIC) Workshop on Skin Image Analysis

DCC1- Room 2F-204

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|-------|---|
| 13:30 | Opening Remarks (4 mins) |
| 13:34 | Invited Talk I: TBA (Zongyuan Ge) |
| 14:10 | Oral Presentation I LesionGen: A Concept-Guided Diffusion Model for Dermatology Image Synthesis.
Jamil Fayyad* (University of Victoria, Canada), Nourhan Bayasi (University of British Columbia, Canada), Ziyang Yu (University of Toronto, Canada), and Homayoun Najjaran (University of Victoria, Canada) |
| 14:34 | Short Break I |
| 14:42 | Oral Presentation II Fitzpatrick Thresholding for Skin Image Segmentation.
Duncan Stothers* (University of British Columbia, Canada), Lia Gracey (University of Texas at Austin, USA), Carlie Reeves (University of Mississippi Medical Center, USA), and Sophia Xu (Columbia University, USA) |
| 15:06 | Oral Presentation III
What Can We Learn from Inter-Annotator Variability in Skin Lesion Segmentation?
Kumar Abhishek* (Simon Fraser University, Canada), Jeremy Kawahara (AIP Labs, Hungary), and Ghassan Hamarneh (Simon Fraser University, Canada) |
| 15:30 | Coffee Break |
| 16:00 | Invited Talk II
TBA (Nicholas Kurtansky) |
| 16:36 | Oral Presentation IV
Topology-Aware Deep Models for Skin Lesion Classification.
Sayoni Chakraborty (University of Texas at Dallas, USA), Philmore Koung (University of Texas at Dallas, USA), and Baris Coskunuzer* (University of Texas at Dallas, USA) |
| 17:00 | Short Break II |
| 17:08 | Oral Presentation V
Retrieval-Augmented VLMs for Multimodal Melanoma Diagnosis.
Jihyun Moon (Handong Global University, South Korea) and Charmgil Hong* (Handong Global University, South Korea) |

17:32 Oral Presentation VI
Lightweight Dual-Task Framework for Semi-Supervised Lesion Segmentation with Knowledge Distillation from SAM.
Xuan-Loc Huynh (Boston University, USA), Huy-Thach Pham (North Carolina Agricultural and Technical State University, USA), Thanh-Minh Nguyen (AI Vietnam Research Lab, Vietnam), Tran Quang Khai Bui (AI Vietnam Research Lab, Vietnam), Tat-Bach Nguyen (Iowa State University, USA), Quan Nguyen (Posts and Telecommunications Institute of Technology, Vietnam), Minh Huu Nhat Le (Methodist Hospital, USA), Phat K. Huynh (North Carolina Agricultural and Technical State University, USA), and Anh Vu* (University of Houston, USA)

17:56 Closing Remarks

Multimodal Large Language Models in Clinical Practice (MLLM) **DCC1- Room 1F-101**

Session 1 Title: Keynote 1 and 2

Session Chairs: Professor Curtis Langlotz, Stanford University and Dr Sophie Ostmeier, Stanford University

Time Paper Title

08:50–09:00 **Opening**

09:00–09:30 **Keynote: Title To be Confirmed. Tentative Title: AI Agent for Therapeutics.**
Professor Marinka Zitnik, Harvard University

09:30–10:00 **Keynote: Title To be Confirmed. Tentative Title: Towards Generalist Medical Foundation Models.**
Dr Shekoofeh Azizi, Google DeepMind

10:00–10:30 **Coffee Break**

Session 2 Title: Keynote 3 and Oral Presentations

Session Chairs: Professor Curtis Langlotz, Stanford University and Yunsoo Kim, University College London

Time Paper Title

10:30–11:00 **RadFig-VQA: A Multi-Imaging-Modality Radiology Benchmark for Evaluating Vision-Language Models in Clinical Practice**
Yosuke Yamagishi, Shouhei Hanaoka, Yuta Nakamura, Tomohiro Kikuchi, Akinobu Shimizu, Takeharu Yoshikawa, Osamu Abe
Trustworthy clinical thinking in MLLMs: Hierarchical Energy-based Reasoning for interpretable MEDical Scans (HERMES)
Florence Xini Doo, Huiwen Han, Bradley A. Maron, Heng Huang

11:00-11:30 Keynote: Title To be Confirmed. Tentative Title: Multimodal Generative AI for Precision Health.
 Dr Hoifung Poon, Microsoft Health Futures

11:30-12:00 Beyond One Size Fits All: Customization of Radiology Report Generation Methods
 Tom van Sonsbeek, Arnaud Arindra Adiyoso Setio, Jung-Oh Lee, Junwoo Cho, Junha Kim, Hyeonsoo Lee, Gunhee Nam, Laurent Dillard, Tae Soo Kim
MedDual: A Practical Dual-Decoding Framework for Mitigating Hallucinations in Medical Vision-Language Models
 Zhe Zhang, Daisong Gan, Zhaochi Wen, Dong Liang

12:00-12:30 3 Minute Lightning Talks for Poster Boaster
 Poster Presenters

12:30-13:30 Lunch

Session 3 Title: Keynote 4 and Panel Discussion

Session Chairs: Professor Honghan Wu, University of Glasgow and Professor Xiaoqing Guo, Hong Kong Baptist University

Time	Paper Title
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13:30-14:00	Keynote: Harnessing Large AI Models for Transforming Healthcare Professor Hao Chen, Hong Kong University of Science and Technology
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14:00-15:30	Panel Discussion: Human-AI Collaboration in Clinical Workflows Dr Jeya Maria Jose, Microsoft Research Professor Pranav Rajpurkar, Harvard University Professor Yueming Jin, National University of Singapore Professor Luping Zhou, University of Sydney Professor Edward Choi, KAIST Dr Tanveer Syeda-Mahmood, IBM Research
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15:30-16:00 Coffee Break

Session 4 Title: Poster Presentation and Keynote 5

Session Chairs: Professor Weidi Xie, Shanghai Jiao Tong University and Dr Chaoyi Wu, Shanghai Jiao Tong University

Time	Paper Title
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16:00-17:00	Poster Presentations
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17:00-17:30	Keynote: From Raw Data to Real Impact: Training, Evaluating, and Integrating a Multimodal Radiology Assistant at Medical Center Scale Dr Valentina Salvatelli, Microsoft Research
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17:30-17:40 Closing

MLMI 2025 Workshop

DCC1-Room 3F-301

- 08:00 – 08:15 Opening Ceremony
- 08:15 – 09:00 Keynote 1
- 09:00 – 10:00 Oral Session 1 – Image Segmentation and Registration
- 10:00 – 10:30 Coffee Break
- 10:30 – 11:45 Oral Session 2 – Computer Aided Diagnosis and Classification
- 11:45 – 12:30 Poster Session 1 – (P1-P46)
- 12:30 – 13:30 Lunch Break
- 13:30 – 14:15 Keynote 2
- 14:15 – 15:30 Oral Session 3 – Image Reconstruction and Synthesis
- 15:30 – 16:00 Coffee Break
- 16:00 – 16:45 Poster Session 2 – (P47 – P93)
- 16:45 – 17:45 Oral Session 4 – Multimodal Analysis and Brain Networking Modelling
- 17:45 – 18:00 Closing Remarks & Best Paper Award Announcement

MSB EMERGE: Empowering MEDical information computing and Research through earlycareer Guidance and Expertise

DCC1- Room 2F-205

- 08:00 - 08:10 Opening Remarks and Introduction
- 08:10 - 08:50 Keynote Talk (TBA)
- 08:50 - 09:40 Oral Session 1: Foundation Models and Generalization in Medical AI
 NFCMTL: Auto NailFold Capillaroscopy through a Multi-Task Learning Model - Ding et al.
 Foundation Models as Class-Incremental Learners for Dermatological Image Classification -
 Elkhayat et al.
 ZeroSlide: Is Zero-Shot Classification Adequate for Lifelong Learning in WSI Analysis? -
 Bui et al.
- 09:40 - 10:00 Poster Teasers (20 x 1 min)

- 10:00 - 10:30 Coffee + Posters
- 10:30 - 11:15 Oral Session 2: Representation Learning for Detection and Diagnosis
 GroundingDINO for Open-Set Lesion Detection in Medical Imaging - Roughley et al.
 Structured Spectral Graph Learning for Anomaly Classification in 3D Chest CT - Di Piazza et al.
 Automated Method Design for Cancer Image Classification by Differential Evolution - Oviedo Acosta et al.
- 11:15 - 12:00 Oral Session 3: Signals, Bias, and Structure in Medical Data
 A Study in Scatter: Investigating Low-Contrast Contents Outside X-Ray Collimation - Maier et al.
 ESCAViT: EEG Symmetry-Aware Training with Domain-Adaptive Contrastive Learning - Lim et al.
 Priority-Aware Clinical Pathology Hierarchy Training for MIL - Hong et al.
- 12:00 - 12:20 Oral Session 4: Conference (Papers from MICCAI'25)-to-Workshop Track
 An Argument for Applications of Reinforcement in Image Segmentation to Mitigate Adversarial Attacks - Ryan Marinelli
 MM-DINOv2: Adapting Foundation Models for Multi-Modal Medical Image Analysis - Daniel Scholz et al.
 Pathology-Aware Adaptive Watermarking for Text-Driven Medical Image Synthesis - Chanyoung Kim et al.
 RL4Med-DDPO: Reinforcement Learning for Controlled Guidance Towards Diverse Medical Image Generation - Parham Saremi et al.
- 12:20 - 12:30 Closing Remarks and Awards

10th International Workshop on Simulation and Synthesis in Medical Imaging (SASHIMI 2025)

DCC1- Room 1F-106

Session 1 Title: SASHIMI

Session Chair: Samuel W. Remedios

- 13:30-13:35 Introduction to SASHIMI2025
- 13:35-13:50 FastDTI - Residual Dense Network for DTI
Jain, A., Ramanarayanan, S., Ram, K., Sivaprakasam, M.
- 13:50-14:05 3D Super-Resolution for Enhancing Compression Fracture Detection in Thick-Slice CT: Diffusion Models vs GANs
Kudo, A., Kitamura, Y., Suzuki, Y., Tomiyama, N., Hori, M.

- 14:05-14:20 Conditional Iterative α -(de)Blending Model for CBCT-to-sCT Synthesis: Towards a Deterministic and Simple Process
Cao, J., Sargeant, C., McWilliam, A., Osorio, E
- 14:20-14:35 Unsupervised MRI Harmonization via Parameter Prediction and Super-Resolved MPMs
Borges, P., Fernandez, V., Nachev, P., Ourselin, S., Cardoso, J.
- 14:35-15:20 Keynote
 MAISI: A Foundation Model for Accelerated, Anatomy-Aware High-Resolution 3D CT Synthesis
Can Zhao
- 15:20-16:30 Poster session + coffee break

Session 2 Title: SynthRAD2025

Session Chairs: Adrian Thummerer, Viktor Rogowski

- 16:30-16:42 Introduction to SynthRAD2025
 SynthRAD2025 organizer
- 16:47-16:55 2nd place task 1
- 16:55-17:03 2nd place task 2
- 17:03-17:15 Winner task 1: MRI-to-CT
- 17:15-17:27 Winner task 2: CBCT-to-CT
- 17:27-18:00 Closing

TopBrain Segmentation Challenge for Whole Brain Vessel Anatomy and SWITCH2025: Stroke Workshop on Imaging and Treatment Challenges
DCC1- Room 1F-104

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|----------------------|--|
| 13:30 - 13:35 | Opening remarks - SWITCH workshop and TopBrain challenge. |
| 13:35 – 14:15 | Keynote by Dr. Wi-Sun Ryu, Chief Medical Officer, JLK Inc.
Topic: challenges and opportunities of AI in stroke care pathway (tentative) |
| 14:15 – 15:00 | Highlighted oral presentations by authors (10 minutes presentation + 5 min QA) |
| 14:15 – 14:30: | Outcome prediction and individualized treatment effect estimation in patients with large vessel occlusion stroke
<i>Presenter: Lisa Herzog (University of Zurich, Switzerland)</i> |
| 14:30 – 14:45: | Leveraging Last-Known-Well Times for Radiomics-based Stroke Onset Estimation from Non-Contrast CT
<i>Presenter: Linda Vorberg (FAU Erlangen-Nürnberg, Germany)</i> |
| 14:45 – 15:00: | Self-Supervised Pretraining and Multi-Label Decoding for Hemorrhage Segmentation
<i>Presenter: Aloys Portafaix (Polytechnique Montreal, Canada)</i> |
| 15:00 - 15:20 | Flash presentations by authors (2 min presentation) |
| 15:00 – 15:02: | Direct Vascular Territory Segmentation on Cerebral Digital Subtraction Angiography
<i>Presenter: Lotte Strong (Erasmus MC, The Netherlands)</i> |
| 15:03 – 15:05: | Towards Diagnostic Quality Flat-Panel Detector CT Imaging Using Diffusion Models
<i>Presenter: Hélène Corbaz (University of Basel, Switzerland)</i> |
| 15:06 – 15:08: | OccluNet: Spatio-Temporal Deep Learning for Occlusion Detection on DSA
<i>Presenter: Anushka A. Kore (TU Delft, The Netherlands)</i> |
| 15:09 – 15:11: | Discriminating Distal Ischemic Stroke from Seizure-Induced Stroke Mimics Using Dynamic Susceptibility Contrast
<i>Presenter: Marijn Borghouts (TU Eindhoven, The Netherlands)</i> |
| 15:12 – 15:14: | From Thresholds to Teachers: Correcting Unsupervised Learning for Arterial Calcifications in CTA
<i>Presenter: Markus Tiefenthaler (Medical University of Innsbruck, Austria)</i> |
| 15:15 – 15:17: | CLAIRE-DSA: Fluoroscopic Image Classification for Quality Assurance of Computer Vision Pipelines in Acute Ischemic Stroke
<i>Presenter: Cristo J. van den Berg / Frank te Nijenhuis (Erasmus MC, The Netherlands)</i> |
| 15:20 - 16:00 | Poster & Coffee session |

- 16:00 - 16:40 Keynote by Prof. MD. Susanne Wegener Neurologist at the Dept. Of Neurology, USZ, SNSF professor at UZH.
Topic: TBD
- 16:40 – 17:50 [TopBrain](#) challenge results and presentations
- 16:40 – 17:00 Overview of the Challenge
- 17:00 – 17:50 Presentations by participants
- 17:50 – 18:00 Workshop and Challenge awards & closing remarks

Workshop on MICCAI challenges on Women's Health

DCC1- Room 1F-108

08:00 – 08:10 Opening

Session 1 Title: Oral session

Session Chairs: Ines Machado & Arnaud Huaultmé

Time	Paper Title
08:10–08:20	Multimodal Classification of Cervical Lesions in a Multi-Center Colposcopy Imaging Study Antoine Mirri, Garance Martin, Theo Haëm, Isabelle Bloch, Geoffroy Canlorbe
08:20–08:30	Development of the model for predicting the efficacy of bevacizumab and prognosis in ovarian cancer using deep learning-based pathomics signatures Han Yin, Qi Liu, Songwei Feng, Yirui Wang, Xiaoying Wei, Xiaoping Qu, Ke Zhang, Guoqing Wang, Yong Ren, Xiang Zhao, Lihua Zhang, Yang Shen
08:30–08:40	Sound, movement and depth sensors in the obstetric operating room to objectively assess the steps of a new soft caesarean protocol Elise Corbel, Arnaud Huaultmé, Pierre Jannin, Krystel Nyangoh-Timoh, Maela Le Lous
08:40–08:50	AI-based Surgical Workflow Recognition for Laparoscopic Hysterectomy: A Review of Methods and Results on AutoLaparo Dataset Yeuyao Chen, Yonghao Long, Yang Shen, Qi Dou
08:50–09:00	Surgical reports based identification of Robotic hysterectomy processes with Large Language Models Aya Bouchair, Krystel Nyangoh-Timoh, Soline Galuret, Pierre Jannin, Arnaud Huaultmé
09:00–09:10	Automated Cervical Os Segmentation for Camera-Guided, Speculum-Free Screening Aoife McDonald-Bowyer, Anjana Wijekoon, Ryan Laurance Love, Katie Allan, Scott Colvin, Aleksandra Gentry-Maharaj, Adeola Olaitan, Danail Stoyanov, Agostino Stilli1, Sophia Bano



**28th INTERNATIONAL CONFERENCE ON MEDICAL IMAGE
COMPUTING AND COMPUTER ASSISTED INTERVENTION**
23-27 September 2025 • DAEJEON, REPUBLIC OF KOREA
From Concept to Clinical | Pan-Asian Connection

Session 2 Title: Poster Session

Session Chairs: Krystel Nyangoh-Timoh

Time Paper Title

09:15–09:30 Poster Teasers

09:30–10:00 Poster Session

10:00–10:30 Coffee Break

Session 3 Title: Keynote 1

Session Chairs: Pierre Jannin

10:30–11:20 Keynote: Pr. Krystel Nyangoh-Timoh
Surgical Data Science for Women's Health

Session 3 Title: Keynote 2

Session Chairs: Qi Dou

11:25–12:15 Keynote: Pr. Yang Shen
Enhancing Gynecological Care with AI: Insights from Clinical Practice

12:15–12:30 Closing

27 SEPTEMBER 2025

WORKSHOPS - 27 SEPTEMBER 2025

Agentic AI for Medicine **DCC1- Room 3F-301**

Session 1 Title: Agentic AI for Medicine

Session Chairs: Dr Jianing Qiu

Time	Paper Title
08:00–08:05	Opening Remarks Prof Ehsan Adeli
08:05–08:30	
08:30–08:55	Keynote: Finding the Scaling Law of AI Agents Dr Guohao Li Keynote: Agentic AI in General Surgery Dr Kyle Lam
08:55–09:10	ADAgent: LLM Agent for Alzheimer’s Disease Analysis with Collaborative Coordinator Wenlong Hou, Guangqian Yang, Ye Du, Yeung Lau, Lihao Liu, Junjun He, Ling Long, and Shujun Wang
09:10–09:25	M ³ Builder: A Multi-Agent System for Automated Machine Learning in Medical Imaging Jinghao Feng, Qiaoyu Zheng, Chaoyi Wu, Ziheng Zhao, Ya Zhang, Yanfeng Wang, and Weidi Xie
09:25–09:40	An Explainable Multimodal Framework with LLM Agents for Intracranial Hemorrhage Detection Shashwath Punneshtetty, Dhyey Italiya, Vinti Agarwal, Chandresh Maurya, and Amit Agrawal
09:40–09:55	
09:55–10:20	MedXpert-CAD: A Multimodal Multi-Agentic System for Clinical Imaging Analysis via Model Context Protocol LLM-Driven Agentic Workflows Mukhlis Raza, Saied Salem, Afnan Habib, Osamah Abdulmahmod, Hyunwook Kwon, Jamil Hussain, and Mugahed A. Al-antari

Coffee Break & Poster Session

Session 2 Title: Agentic AI for Medicine

Session Chairs: Dr Baoru Huang

Time	Paper Title
10:20–10:45	Keynote: TBD Prof James Zou
10:45–11:10	Keynote: TBD Prof Marinka Zitnik
11:10–11:25	Harmony Trevor Brokowski, John Onofrey, and Annie Hartley
11:25–11:40	Scan-do Attitude: Towards Autonomous CT Protocol Management using a Large Language Model Agent Xingjian Kang, Linda Vorberg, Andreas Maier, Alexander Katzmann, and Oliver Taubmann
11:40–11:55	
11:55–12:10	
12:10–12:25	
12:25–12:30	AURA: A Multi-Modal Medical Agent for Understanding, Reasoning & Annotation Nima Fathi, Amar Kumar, and Tal Arbel MedPAO: A Protocol-Driven Agent for Structuring Medical Reports Shrish Shrinath Vaidya, Gowthamaan Palani, Sidharth Ramesh, Velmurugan Balasubramanian, Minmini Selvam, Gokulraja Srinivasaraja, and Ganapathy Krishnamurthi Award Announcement Prof Ehsan Adeli, Prof Wu Yuan, Prof Daniel Rueckert
	Closing Remarks Prof Wu Yuan

**ASMUS 2025: The 6th International Workshop on Advances in Simplifying
Medical UltraSound**
IBS Building - 2F-100

08:00–08:05 Introduction and Opening

Session 1 Title: Oral Session 1: Segmentation, Imaging and Syhthesis

Session Chairs: Wufeng Xue and Ruobing Huang

- 08:05–08:17 Motion-enhanced Cardiac Anatomy Segmentation via an Insertable Temporal Attention Module
 Md Kamrul Hasan, Guang Yang, Choon Hwai Yap
- 08:17–08:29 DiffUS: Differentiable Ultrasound Rendering from Volumetric Imaging
 Gabriel Duguey, Noe Bertramo, Vivek Gopalakrishnan
- 08:29–08:41 TREAT-Net: Tabular-Referenced Echocardiography Analysis for Acute Coronary Syndrome Treatment Prediction
 Diane Kim, Nguyen Nhat Minh To, Dr. Sherif Abdalla, Teresa Tsang, Purang Abolmaesumi, Christina Luong
- 08:41–08:53 DiFUSAL: Diffusion-Based Fetal Ultrasound Synthesis with Active Learning
 Maryam Arjemandi, Salma Hassan, Hu Wang, Mohammad Yaqub, Saudabi Valappil
- 08:55–09:35 Keynote:** Towards Cardiovascular AI
 David Ouyang, Kaiser Permanente
- 09:35–10:00 **Invited Technical Report**
 Stephen Aylward, NVIDIA
- 10:00–10:40 Coffee Break and Posters**
- Session 2 Title: Oral Session 2: Registration and Reconstruction**
Session Chairs: Wufeng Xue and Ruobing Huang
- 10:40–10:52 Robust rigid MRI-TRUS registration using attention-CNN and ICP
 Manasi Kattel, Benjamin Billot, Federica Facente, Dr Herve Dellinger, Nicholas Ayache
- 10:52–11:04 Det-SAMReg: Few-Shot Medical Image Registration using Vision Foundation Models
 Mengting Yang, Qilin Wang, Shiqi Huang, Wen Yan, Yipeng Hu, Zhe Min
- 11:04–11:16 DualTrack: Sensorless 3D Ultrasound needs Local and Global Context
 Paul Wilson, Matteo Ronchetti, Ruediger Goebel, Viktoria Markova, Sebastian Rosenzweig, Raphael Prevost, Parvin Mousavi, Oliver Zettinig
- 11:16–11:28 Modulated INR with Prior Embeddings for Ultrasound Imaging Reconstruction
 Remi Delaunay, Christoph Hennemersperger, Stefan Wörz
- 11:30–12:10 Keynote:** Transforming Healthcare with AI: Scalable AI-powered Ultrasound Solutions for Resource-Constrained Settings
 Wei Luo, Gates Foundation
- 12:10–12:30 **Summary and Awards**
- 12:30–13:30 Lunch break

Session 3 Title: Challenge Session 1: Landmark Detection Challenge for Intrapartum Ultrasound Measurement Meeting the Actual Clinical Assessment of Labor Progress (IUGC)

Session Chairs: Jieyun Bai

- 13:30-13:45 Introduction to the Challenge
- 13:45-15:15 Winning Teams' Technical Presentations (6 teams)
- 15:15-15:30 Award Ceremony and Group Photo
- 15:30-16:00 **Coffee Break**

Session 4 Title: Challenge Session 2: Trackerless 3D Freehand Ultrasound Reconstruction Challenge (TUS-REC)

Session Chairs: Qi Li

- 16:00-16:10 Introduction to the TUS-REC2025 Challenge
- 16:10-17:00 Presentations by competing teams
- 17:00-17:05 Results summary
- 17:05-17:15 Awards ceremony

MICCAI 2025 Workshop on Computational Diffusion MRI
DCC1- Room 2F-205

Session 1

Session Chairs (S Shailja)

- 08:00 - 08:10 Welcome
- 08:10 - 09:00 Keynote: Connectome 2.0 (TBD)
Susie Huang, MD, PhD
- 09:00 - 09:15 Streamline Signature Net (SSN): Efficient White Matter Pathway Recognition for Bundles
 Parcellation Using Path Signature
Renzhi Zhao
- 09:15 - 09:30 Streamline Density Normalization: A Robust Approach to Mitigate Bundle Variability in
 Multi-Site Diffusion MRI
Yixue Feng
- 09:30 - 9:45 Fully Automated Segmentation of Fiber Bundles in Anatomic Tracing Data
Kyriaki-Margarita Bintsi

09:45 – 10:00 Biophysical modeling of Intra-Voxel Incoherent Motion (IVIM) MRI based on realistic cerebral microvascular anatomy and dynamics in mouse and human brain
Grant Hartung

10:00-10:30 Coffee Break

Session 2
Session Chairs (TBD)

10:30–11:20 Keynote: Clinical translation and scaling (TBD)
Jelle Veraart, ScD

11:20-11:35 From Fiber Tracts to Tumor Spread: Biophysical Modeling of Butterfly Glioma Growth Using Diffusion Tensor Imaging
Jonas Weidner

11:35-11:50 Progressive axonal degeneration in white matter pathways traversing peritumoral penumbra in frontotemporal glioma
Patryk Filipiak

11:50-12:05 Susceptibility Distortion Correction of Diffusion MRI with a single Phase-Encoding Direction
Sedigheh Dargahi

12:05– 12:20 Quantifying Parameter Estimation Difficulty of dMRI Models by Submanifold Geometry in Signal Space
Yoshitaka Masutani

12:20-12:30 Closing

**The 4th Workshop on Computational Mathematics Modeling in Cancer
Analysis**
DCC1- Room 2F-204

Session 1 Title: Keynote Session
Session Chairs: Chao Li, Wenjian Qin, Jia Wu, Nazar Zaki

Time Paper Title

13:30–13:45 Open Remarks

13:45-14:20 **Keynote:** Computational Modeling of Breast Cancer Images: From Heuristics to Biology
 Prof. Shandong Wu, University of Pittsburgh

14:20-14:55 **Keynote:** Towards Generalizable Multi-Omics Modeling for Radiation Therapy
 Prof. Jing Cai, Hong Kong Polytechnic University

14:55-15:30 **Keynote:** Cone-beam CT Intelligent Imaging for Radiation Oncology
 Prof. Tianye Niu, University of Science and Technology of China

15:30-16:00 Coffee Break

Session 2 Title: Oral Session
Session Chairs: Wenjian Qin

Time	Paper Title
16:00-16:20	Oral 1 - Jonas Weidner A Lightweight Optimization Framework for Estimating 3D Brain Tumor Infiltration
16:20-16:40	Oral 2 - Valentin Septiers A data-driven approach to optimise parameters of a computational digital twin model in response to SBRT on MR-Linac
16:40-17:00	Oral 3 - Anran Liu, Xiaofei Wang Score-based Diffusion Model for Unpaired Virtual Histology Staining
17:00-17:20	Oral 4 - Xueren Zhang CT Image Segmentation Using Frequency Domain Feature-Assisted Selective Long Memory State Space Model
17:20-17:40	Oral 5 - Xidong Wu, Hao Chen OG-SAM: Enhancing Multi-Organ Segmentation with Organogenesis-Based Adaptive Modeling
17:40-18:00	Oral 6 - Guantian Huang Region-aware Diagnosis of Clinically Significant Prostate Cancer via Semi-supervised Learning Segmentation

COMputational PAtiology and multimodaL data Workshop

DCC1- Room 3F-301

Session A

Session Chairs: Francesco Ciompi, Linda Studer

Time	Session Part
08:00–08:05	Welcome <i>Organising Committee</i>
08:05–08:45	Academia Keynote by Norman Zerbe Head Digital Pathology Research at Charité Berlin, Group Leader at RWTH Aachen, President of ESDIP (European Society of Digital Pathology), and board member of ASDP (Asian Society of Digital Pathology).
08:45–09:15	Oral presentations: - Centroid-Aware Gaussian Prompt Learning with Erosion-Guided Accumulator for Robust Semantic Cell Segmentation Nur Suriza Syazwany, Su Jung Kim, Ju-Hyeon Nam, Sang-Chul Lee - Effortless Vision-Language Model Specialization in Histopathology without Annotation Jingna Qiu, Nishanth Jain, Jonas Ammeling, Marc Aubreville, Katharina Breininger - KidneyGrader: Fine-Grained Tubulitis Scoring Using Weakly Supervised Transformers Abrar Rashid, Vishal Jain, Sarah Cechnicka, Aamir Chaudry, Candice Roufosse, Bernhard Kainz
09:15–10:00	Poster Session (see list below)
10:00–10:30	Coffee Break + Poster Session

Session B

Session Chairs: Nadieh Khalili, Sara Oliveira

Time	Session Part
10:30–11:10	Industry Keynote by YoungKeun (Paul) Park CEO + Co-founder at TomoCube, and Professor at KAIST
11:10–11:40	Oral presentations: - From Gene Expression to Tissue Morphology: Can Generative Models Uncover the Link? Frederieke Lohmann, Alberto Valdeolivas, Jelica Vasiljević - GenST: A Generative Cross-Modal Model for Predicting Spatial Transcriptomics from Histology Images Ruby Wood, Yang Hu, Jens Rittscher, Bin Li - MV Hybrid: Improving Spatial Transcriptomics Prediction with Hybrid State Space-Vision Transformer Backbone in Pathology Vision Foundation Models Won June Cho, Hongjun Yoon, Daeky Jeong, Hyeongyeol Lim, Yosep Chong

11:40–12:20 **Discussion panel: How AI and digital pathology will improve access to healthcare across Asia**
Panelists: Hicham El Attar, Haeyoun Kang, David Joon Ho, Mai Chan Lau, Norman Zerbe, Spyridon Bakas
 Moderator: Joe Yeong

12:20–12:30 **Awards + Closing**

CREATE: Clinical-driven Robotics and Embodied AI Technology **DCC1- Room 1F-109**

Keynote Session 1: Pioneering Technology for the Future of Surgery

Session Chairs: Prof. Jiebo Luo & Prof. Nassir Navab

13:30–13:50 Keynote: SurgLLM: A Versatile Large Multimodal Model for Surgical Video Understanding
Speaker: Prof. Jiebo Luo

13:50–14:10 Keynote: Sensing, Perception, Intelligence & Action in High Intensity, Dynamic Surgical Environments
Speaker: Prof. Nassir Navab

14:10–14:30 Keynote: AI for Public Health: Exploration and Reflections
Speaker: Prof. S. Kevin Zhou

14:30–14:50 Keynote: Embodied Intelligence -The Inevitable Path to “Smart and Beneficial” Healthcare
Speaker: Prof. Hongbin Liu

14:50–15:10 Keynote: Robotic Endoscopy & Surgical Foundation Models
Speaker: Prof. Hongliang Ren

15:10–15:30 Keynote: Harnessing the Power of Vision and Language to Improve Surgical Safety
Speaker: Prof. Nicolas Padoy

15:30–15:50 Coffee Break & Poster

Keynote Session 2: Neuroscience and Embodied Intelligence

Session Chair: Prof. Hongbin Liu & Prof. Hongliang Ren

15:50–16:10 Keynote: Surgical Embodied Intelligence for the Future of Autonomous Surgery
Speaker: Prof. Qi Dou

16:10–16:30 Keynote: Holistic Surgical Video Understanding using Scene Graphs
Speaker: Dr. Felix Holm

16:30–16:50 Keynote: Decoding the Brain for Embodied AI
Speaker: Prof. Danny CHAN

16:50–17:10 Keynote: Artificial Intelligence for Movement Disorders
Speaker: Prof. Shiro Horisawa

Paper Presentations Session: Advances in Surgical AI

Session Chair: Dr. Jinlin Wu & Dr. Bai Long

Time	Paper Title
17:10–17:20	Keynote: Harnessing Foundation Models for Robust and Generalizable 6-DOF Bronchoscopy Localization <i>Authors: Qingyao Tian, Huai Liao, Xinyan Huang, Bingyu Yang, Hongbin Liu</i>
17:20–17:30	Keynote: Embodied Surgical Intelligence via Digital Twins: Autonomous Trocar Insertion <i>Authors: Duy Hoang Ho, Ahmed Hamdan Alanazi, SAEED ALI ALQARNI, Chi Lee, Gary Sutkin, Yugyung Lee</i>
17:30–17:40	Keynote: ReCAP: Recursive Cros-Attention Network for Pseudo-Label Generation in Robotic Surgical Skill Assessment <i>Authors: Julien Quarez, Marc Modat, Sebastien Ourselin, Jonathan Shapey, Alejandro Granados</i>
17:40–17:50	Keynote: Can DeepSeek Reason Like a Surgeon? An Empirical Evaluation for Vision-Language Understanding in Robotic-Assisted Surgery <i>Authors: Boyi Ma, Yanguang Zhao, Jie Wang, Guankun Wang, Kun yuan, Tong Chen, Long Bai, Hongliang Ren</i>
17:50–18:00	Keynote: MoViS: Motion-guided Video Generation for Laparoscopic Surgery <i>Authors: Yousef Yeganeh, Azade Farshad, Nassir Navab</i>

18:00-18:10 Award & Closing

6th MICCAI Workshop on “Distributed, Collaborative and Federated Learning” (DeCaF)

DCC1- Room 2F-206-207-208

13:30-15:30	DeCaF Session 1
13:30-13:40	<u>Introduction to the DeCaF workshop</u>
13:40-14:15	<u>KEYNOTE 1 Yu Han</u> (Q-&-A)
14:15-14:50	<u>KEYNOTE 2 Alex Karargyris</u> (Q-&-A)
14:50-15:30	<u>DeCaF Presentations</u> (4 x 10 mins)
14:50-15:00	<i>Oral1: Federated Fine-tuning of SAM-Med3D for MRI-based Dementia Classification Kaouther Mouheb, Marawan Elbatel, Janne Papma, Geert Jan Biessels, Jurgen Claassen, Huub Mid delkoop, Barbara van Munster, Wiesje van der Flier, Inez Ramakers, Stefan Klein, and Esther E. Bron1ne</i>
15:00-15:10	<i>Oral2: Mitigating Data Exfiltration Attacks through Layer-Wise Learning Rate Decay Fine-Tuning Elie Thellier, Huiyu Li, Nicholas Ayache, and Hervé Delingette</i>

- 15:10-15:20 *Oral3: Dynamic Hyperparameter Adjustment via Reinforcement Learning in Asynchronous Federated Learning for Medical Image Analysis*
 Shuang Gu, Zhenyu Tang, Song Qiu, Xiaosong Wang
- 15:20-15:30 *Oral4: MONet-FL: Extending nnU-Net with MONAI for Clinical Federated Learning*
 Simone Bendazzoli, Mehdi Astaraki, Antonios Tzortzakakis, Andréas Abrahamsson, Björn Engelbrekt Wahlin, Sofia Brunori, Maria Holstensson, and Rodrigo Moreno
- 15:30 – 16:10 Poster Session and Coffee Break
- 16:10-16:30 **DeCaF Presentations** (5 x 10 mins)
- 16:10-16:20 PST: *Oral5: FedGIN: Federated Learning with Dynamic Global Intensity Non-linear Augmentation for Organ Segmentation using Multi-modal Images*
 Sachin Dudda Nagaraju, Ashkan Moradi, Bendik Skarre Abrahamsen, and Mattijs Elschot
- 16:20-16:30 *Oral6: Validation of Various Normalization Methods for Brain Tumor Segmentation: Can Federated Learning Overcome This Heterogeneity?*
 Jan Fiszer, Dominika Ciupek, and Maciej Malawski
- 16:30-16:40 *Oral7: The Interplay Between Explainability and Differential Privacy in Federated Healthcare*
 Marc Molina Van De Bosch, Andrea Protani, Riccardo Taiello, Lorenzo Giusti, Matilde Carvalho Costa, Ioannis Stathopoulos, Efstathios Efstathopoulos, Diogo Reis Santos, Miguel Angel Gonzalez Ballester, and Luigi Serio
- 16:40-16:50 *Oral8: Federated Reprogramming Knowledge Distillation for Medical Image Classification*
 Afsaneh Mahanipour, Abdullah-Al-Zubaer Imran, and Hana Khamfroush
- 16:50-17:00 *Oral9: FedSlowdown: Efficiency Attacks Against Federated Learning of Adaptive Neural Networks*
 Ayomide Akinsanya and Tegan Brennan
- 17:00-17:05 **Concluding remarks**

Third Edition of Data Engineering in Medical Imaging (DEMI)

DCC1- Room 1F-110

8:00 - 8:15	Poster setup + welcome
8:15 - 8:30	Welcome Address by Workshop Chair
8:30 - 9:30	Keynote 1: Dr. Mohammad Yaqub
9:30 - 10:00	Session 1: Segmentation
-	2 Long Presentations
-	Paper ID: 7, 33
10:00 -10:30	Coffee Break & Poster Session
10:30 - 12:30	Session 2: Federated, Benchmarking, Datasets & VLMs
-	2 Long Presentations
-	Paper IDs 19, 25
-	14 Spotlights:
-	Paper ID: 5, 6, 10, 14, 15, 16, 18, 20, 21, 23, 27, 29, 30, 32
12:30 - 1:30	Lunch Break & Poster Viewing
1:30 - 2:30	Session 3: Data Augmentation
-	1 Long Presentation
-	Paper ID: 26
-	5 Spotlights:
-	Paper ID: 9, 12, 13, 31, 11
2:30 - 3:30	Keynote 2: Prof. KC Santosh
3:30 - 4:00	Coffee Break & Poster Session
4:00 - 5:00	Keynote 3 : Prof. Stefanie Speidel
5:00 - 5:30	Sponsor Presentation, Awards & Closing Remarks

Emerging LLM/LMM Applications in Medical Imaging (ELAMI)

DCC1- Room 1F-112

8:00 – 8:05	Welcome and Introduction
8:05 – 8:45	Paper Session I (8 min each)

8:05 – 8:13	GMAT: Grounded Multi-Agent Clinical Description Generation for Text Encoder in Vision-Language MIL for Whole Slide Image Classification
8:13 – 8:21	SCOPE: Label Extraction of Stroke Diagnosis from Unstructured Medical Reports Using Retrieval-Augmented Generation
8:21 – 8:29	Mind the Evaluation Gap: Large Language Models for Structured Data Extraction from Radiology Reports
8:29 – 8:37	NeuroReport-MS: Multi-Scale Agentic AI for Automated Clinical Report Generation in Multiple Sclerosis
8:37 – 8:45	REMIX: Refinement-Enhanced Visual-Textual Mixing for Lesion Segmentation
8:45 – 9:20	Keynote I – Dr. Daniel Rückert (35 min)
9:20 – 9:56	Paper Session II (8 min each)
9:20 – 9:28	An LLM-based Active Assistant and Smart Manual for CT Imaging Workflows
9:28 – 9:36	Enhancing 3D Medical Vision-Language Models with Slice-wise Visual Prompt
9:36 – 9:44	SIGMA: Auto-regressive VLM for Automated Radiology Report Generation from Longitudinal 3D CT Volumes
9:44 – 9:52	Specialised or Generic? Tokenization Choices for Radiology Language Models
9:52 – 10:00	SCOPE: Speech-guided COLlaborative PERception Framework for Surgical Scene Segmentation
10:00 – 10:10	Coffee Break
10:10 – 10:45	Dr. Vishal Patel(35 min)
10:45 – 11:13	Paper Session III (8 min each)
10:45 – 10:53	Imagining Alternatives: Towards High-Resolution 3D Counterfactual Medical Image Generation via Language Guidance
10:53 – 11:01	Pixels Under Pressure: Exploring Fine-Tuning Paradigms for Foundation Models in High-Resolution Medical Imaging
11:00 - 11:09	DeepGPT-DILI: Integrating Graph Convolutional Networks and Large Language Model Embeddings for Accurate Drug-Induced Liver Injury Prediction
11:09 – 11:17	From Reports to Relations: Large Language Models for Knowledge Graph Extraction from Pathology Reports

11:17 – 11:52	Dr. Kevin Zhou(35 min)
11:52 – 12:10	Paper Session IV (8 min each)
11:52 – 12:00	3D Vision–Language Models with Segmentation-Guided Multimodal Data for Spinal MRI Report Generation
12:00 – 12:08	[Late-breaking paper or backup]
12:08 – 12:30	Dr. Yuyin Zhou (35 min)
12:30	Award Announcement & Closing

7th Workshop on “GRaphs in biomedical Image anaLysis (GRAIL)”

IBS Building - 2F-200

08:00-08:15	Opening
08:15-09:00	Keynote 1: Multi-resolution Learning on Graphs for Connectomic Features in Neuroimaging Prof. Won Hwa Kim (Postech)
09:00-09:15	Oral: Skip priors and add graph-based anatomical information, for point-based Couinaud segmentation Xiaotong Zhang
09:15-09:30	Oral: Prompt-Driven Multi-View Representation Learning for Clinical Progression Prediction of Significant Memory Concern Cui Wang
09:30-09:45	Oral: Improving Late-Life Depression Analysis with Collaborative Domain Adaptation: Learning from Heterogeneous Structural MRI Yuzhen Gao
09:45-10:00	Oral: Decoder-Free Supervoxel GNN for Accurate Brain-Tumor Localization in Multi-Modal MRI Andrea Protani
10:00-10:30	Coffee Break
10:30-11:15	Keynote 2: Graph Neural Networks in Medicine - Prospects, Pitfalls, and Privacy Dr. Tamara Muller
11:15-11:45	Oral: Graph Conditioned Diffusion for Controllable Histopathology Image Generation Sarah Cechnicka

11:45-12:30 Oral: X-Node: Self-Explanation is All We Need
Prajit Sengupta

12:30-13:30 Lunch

Session 2 Title: Track 2: TGI

Session Chairs: Prof. Johannes C. Paetzold

13:30-14:15 Keynote 3
Dr. Jong Chul Ye (KAIST)

14:15-14:30 Oral: Spectral Graph Autoregressive Modeling for Conditional Brain Network Augmentation
Hayoung Ahn

14:30-14:45 Oral: HFR: Hemodynamic Feature Regression for Physically Constrained Pressure Drop Estimation
Jakub Chojnacki

14:45-15:00 Oral: WANCARD: Wasserstein Adversarial Network for Cancer Drug Response
Mansu Kim

15:00-15:15 Oral: Population-graph post-hoc corrections of survival predictions for improved risk stratification
Oriane Thiery

15:15-15:30 Open Q&A/discussion

15:30-16:00 Coffee Break

Session 3 Title: Track 3: Hypergraph

Session Chairs: Dr. Seyed Ahmad Ahmadi

16:00-16:45 Keynote 4 / Tutorial
Prof. Mustafa Hajij (Hybrid)

16:45-17:15 Invited orals from the main conferences

17:15-17:45 Posters presentation

17:45-18:00 Closing (GRAIL, TGI, Hypergraph)

MICCAI Workshop on Human-AI Collaboration (HAIC)

DCC1- Room 2F-206-207-208

Session 1: Opening Remarks, Keynote 1, and Oral Presentations

Session Chair: Cheng Ouyang

Time	Paper Title
08:00–08:15	Opening Remarks
08:15–08:45	Keynote Talk 1 Prof. Helen Higham, Director of the Oxford Simulation, Teaching and Research Centre (OxSTaR), University of Oxford
08:45–09:45	Oral Session 1
08:45–09:00	User Perception of Attention Visualizations: Effects on Interpretability Across Evidence-Based Medical Documents Andres Carvallo, Denis Parra, Peter Brusilovsky, Hernan Valdivieso, Gabriel Rada, Ivania Donoso, Vladimir Araujo
09:00–09:15	Explainable AI for Automated User-specific Feedback in Surgical Skill Acquisition Catalina Gomez, Lalithkumar Seenivasan, Xinrui Zou, Jeewoo Yoon, Sirui Chu, Ariel Leong, Patrick Kramer, Yu-Chun Ku, Jose L. Porras, Alejandro Martin-Gomez, Masaru Ishii, Mathias Unberath
09:15–09:30	Beyond Manual Annotation: A Human-AI Collaborative Framework for Medical Image Segmentation Using Only “Better or Worse” Expert Feedback Yizhe Zhang
09:30–09:45	A methodology for clinically driven interactive segmentation evaluation Parhom Esmaeili, Pedro Borges, Virginia Fernandez, Eli Gibson, Sebastien Ourselin, M.Jorge Cardoso
09:45-10:30	Poster Session & Coffee Break

Session 2 Title: Keynote 2, Spotlight Presentations, Panel Discussion, and Awards

Session Chairs: Qianhui Men, Xiaoqing Guo

Time	Paper Title
10:30–11:00	Keynote Talk 2 Prof. Nassir Navab, Director of the Laboratories for Computer Aided Medical Procedures, Technical University of Munich
11:00–11:35	Spotlight Talks

- 11:00–11:05 Learning What is Worth Learning: Active and Sequential Domain Adaptation for Multi-modal Gross Tumor Volume Segmentation
 Jingyun Yang, Guoqing Zhang, Jingge Wang, Yang Li
- 11:05–11:10 Real-Time, Dynamic, and Highly Generalizable Ultrasound Image Simulation-Guided Procedure Training System for Musculoskeletal Minimally Invasive Treatment
 Xiandi Wang, Zekun Jiang, Mengqi Tang, Ying Han, Dan Pu, Kang Li
- 11:10–11:15 Guided Active Learning for Medical Image Segmentation
 Bernhard Föllmer, Vladimir Serafimovski, Kenrick Schulze, Federico Biavati, Sebastian Stober, Wojciech Samek, Marc Dewey
- 11:15–11:20 Simulating Inter-observer Variability Across Clinical Experience Levels
 Haley Gillett, Emma Stanley, Raissa Souza, Matthias Wilms, Nils Forkert
- 11:20–11:25 Perceptual Evaluation of GANs and Diffusion Models for Generating X-rays
 Denis Parra
- 11:25–11:35 Q&A for Spotlight Talks
- 11:35–11:55** Panel Discussion
- 11:55–12:05** Closing

iMIMIC – Interpretability of Machine Intelligence in Medical Image Computing

DCC1- Room 1F-109

Session 1 Title: Oral Presentations – Part I

Session Chairs: Mauricio Reyes, Wilson Silva

- 08:00–08:45 Keynote: Explainable Artificial Intelligence: Recent Advances and Applications in Medical Domains
Jaesik Choi (Korea Advanced Institute of Science & Technology, Republic of Korea)
- 08:45–09:00 Distribution-Based Masked Medical Vision-Language Model Using Structured Reports
Shreyank Gowda (University of Nottingham); Ruichi Zhang (Xiamen University); Xiao Gu (University of Oxford); Ying Weng (University of Nottingham Ningbo); Lu Yang (Xiamen University)
- 09:00–09:15 VLEER: Vision and Language Embeddings for Explainable Whole Slide Image Representation
Anh Nguyen (Korea University); Keunho Byeon (Korea University); Kyungeun Kim (Seegene Medical Foundation); Jin Tae Kwak (Korea University)

09:15–09:30 Do Segmentation Models Understand Vascular Structure? A Blob-Based Saliency Framework
Guillaume Garret (Institut Pascal); Carole Frindel (CREATIS); Antoine Vacavant (Institut Pascal)

09:30–09:45 Hybrid Explanation-Guided Learning for Transformer-Based Chest X-Ray Diagnosis
Shelley Zixin Shu (University of Bern); Haozhe Luo (University of Bern); Alexander Poellinger (Inselspital); Mauricio Reyes (University of Bern)

09:45–10:15 Coffee Break + Poster Presentations

Session 2 Title: Oral Presentations – Part II

Session Chairs: Mauricio Reyes, Wilson Silva

10:15–10:30 Interpretable Networks to Model the Accumulation of Tau Protein in the Brain
Nicolas Honnorat (UTHSCSA); Mohamad Hbaes (UTHSCSA)

10:30–10:45 Segmenting Thalamic Nuclei: T1 Maps Provide a Reliable and Efficient Solution
Anqi Feng (Johns Hopkins University); Zhangxing Bian; Samuel Remedios; Savannah Hays; Blake Dewey; Jiachen Zhuo (University of Maryland); Dan Benjamini (NIH); Jerry Prince (Johns Hopkins University)

10:45–11:00 Radiomic fingerprints for knee MR images assessment
Yaxi Chen; Simin Ni; Shaheer Saeed; Aleksandra Ivanova; Rikin Hargunani (Royal National Orthopaedic Hospital); Chaozong Liu; Jie Huang; Yipeng Hu (University College London)

11:00–11:15 Prototype-Enhanced Confidence Modeling for Robust Cross-Modal Medical Image-Report Retrieval
Shreyank Gowda (University of Nottingham); Xiaobo Jin (Xi'an Jiaotong-Liverpool University); Christian Wagner (University of Nottingham)

11:15–11:30 Awards

11:30–12:30 Closing Remarks & Informal Networking

Learning with Longitudinal Medical Images and Data (LMID) **DCC1- Room 1F-108**

1:30 - 1:35 Welcome and Introduction

1:35 - 2:20 Keynote 1

2:18 - 2:30 SSL-AD: Spatiotemporal Self-Supervised Learning for Generalizability and Adaptability Across Alzheimer's Prediction Tasks and Datasets
Emily Kaczmarek (McGill University)*; Justin Szeto (McGill University); Brennan Nichyporuk (Mila - Quebec AI Institute); Tal Arbel (McGill University)

- 2:30 - 2:42 Unstable Prompts, Unreliable Segmentations: A Challenge for Longitudinal Lesion Analysis
Niels Rocholl (Radboudumc)*; Ewoud Smit (Radboudumc); Mathias Prokop (Radboudumc); Alessa Hering (Radboudumc)
- 2:42 - 2:54 Memorisation bias: AI predictions for data contributors are biased towards their health states in the training data
Moritz Knolle (Technische Universität München)*; Martin Menten (Technical University of Munich); Danie Rueckert (Technical University of Munich); Ben Glocker (Imperial College London); Georgios Kaissis (Technical University of Munich)
- 2:54 - 3:06 Semi-Disentangled Spatiotemporal Implicit Neural Representations of Longitudinal Neuroimaging Data for Trajectory Classification
Agampreet Aulakh (University of Calgary)*; Nils Daniel Forkert (University of Calgary); Matthias Wilms (University of Michigan)
- 3:06 - 3:18 Improving Virtual Contrast Enhancement using Longitudinal Data
Pierre Fayolle (Guerbet Research)*
- 3:18 - 3:30 CXR-TFT: Multi-Modal Temporal Fusion Transformer for Predicting Chest X-ray Trajectories
Mehak Arora
- 3:30- 4:00 Coffee Break
- 4:00 - 4:12 Spatio-Temporal Conditional Diffusion Models for Forecasting Future Multiple Sclerosis Lesion Masks Conditioned on Treatments
Gian Favero (McGill University)*; Ge Ya Luo (Mila - Quebec AI Institute); Nima Fathi (McGill University); Justin Szeto (McGill University); Douglas Arnold (McGill University); Brennan Nichyporuk (Mila - Quebec AI Institute); Christopher Pal (Mila - Quebec AI Institute); Tal Arbel (McGill University)
- 4:12 - 4:24 Mechanistic Learning with Guided Diffusion Models to Predict Spatio-Temporal Brain Tumor Growth
Daria Laslo (ETH Zurich)*; Efthymios Georgiou (University of Bern, Inselspital); Andreas Rauschecker (University of California San Francisco); Marius George Linguraru (Children's National); Sabine Mueller (University of California San Francisco); Catherine Jutzeler (ETH Zurich); Sarah Brueningk (University of Bern, Inselspital)
- 4:24 - 4:36 Longitudinal Brain Segmentation with Temporal Consistency for Neurodegenerative Analysis
Sheikh Adilina (Queensland University of Technology and Australian e-Health Research Centre, CSIRO)*; Leo Lebrat (Queensland University of Technology); Katie McMahon (Queensland University of Technology); Clinton Fookes (Queensland University of Technology); Pierrick Bourgeat (Australian e-Health Research Centre, CSIRO)

- 4:36 - 4:48 Two-Stage Decoupling Framework for Variable-Length Glaucoma Prognosis
Yiran Song (University of Minnesota); yikai zhang (University of Minnesota); Silvia Orenco-Nania (University of Minnesota); Nian Wang (UT Southwestern Medical Center); Fenglong Ma (The Pennsylvania State University); Rui Zhang (University of Minnesota); Yifan Peng (Weill Cornell Medicine); Mingquan Lin (University of Minnesota)*
- 4:48 - 5:00 AI-based response assessment and prediction in longitudinal imaging for brain metastases treated with stereotactic radiosurgery
Lorenz Kuhn (HES-SO)*; Daniel Abler (CHUV); Jonas Richiardi (CHUV); Andreas Hottinger (CHUV); Luis Schiappacasse (CHUV); Vincent Dunet (CHUV); Adrien Depeursinge (HES-SO); Vincent Andrearczyk (HES-SO)
- 5:00 - 5:12 Scalable Modeling of Nonlinear Network Dynamics in Neurodegenerative Disease **Daniel Semchin (Illinois Institute of Technology, Biomedical Engineering); Emile D'angremont (Amsterdam UMC); Marco Lorenzi (INRIA); Boris Gutman (Illinois Institute of Technology)***
- 5:12 - 5:24 CLIP-KOA: Enhancing Knee Osteoarthritis Diagnosis with Multi-Modal Learning and Symmetry-Aware Loss Functions
Yejin Jeong (Korea University)*; Donghun Lee (Korea University)
- 5:24 5:36 Closing Remarks

3rd Workshop on Foundation Models for General Medical AI **DCC1- Room 1F-112**

- 13:30 - 13:40 Opening Remarks
- 13:40 - 14:10 Keynote 1: Prof. Jing Ke, Shanghai Jiao Tong University
 Why Human Clinical Expertise Remains Indispensable in AI Pathology Image Interpretation
- 14:10 - 14:50 Oral Session 1
- 14:50 - 16:10 Poster Session / Coffee Break (15:30 - 16:00)
- 16:10 - 16:40 Keynote 2: Prof. Yue Gao, Tsinghua University
 Hypergraph Computation for Medical Data
- 16:40 - 17:10 Keynote 3: Prof. Jaewoo Kang, Korea University / AIGEN Sciences Inc.
 AI-driven Drug Discovery in the LLM Era
- 17:10 - 17:50 Oral Session 2
- 17:50 - 18:00 Closing / Awards

Medical Image Computing in Resource Constrained Settings Workshop & Knowledge Interchange (MIRASOL)

DCC1- Room 1F-111

Multimodal Learning for Clinical Decision Support (ML-CDS)

DCC1- Room 2F-204

- | | |
|--------------|--|
| 8.00-8.10 | Opening remarks |
| 8.10-9.00 | Keynote Talk: TBD |
| 9:00-10:00 | <p>Oral Session 1: Multimodal analysis and fusion:</p> <ol style="list-style-type: none"> 1. Multi-View and Multimodal Radiological Grading Using Spinal MRIs
Robin Y. Park, Rhydian Windsor, Amir Jamaludin, Andrew Zisserman 2. MRI-Supervised Ultra-Low Dose CT for 3D Liver Fat Fraction Mapping Lilach Arbel Isaschar, Lawrence Carl, Nahum Kiryati, Michael Green, Edith Michelle Marom, Arnaldo Mayer 3. Integrating Pathology and CT Imaging for Personalized Recurrence Risk Prediction in Renal Cancer
Daniël Boeke, Cedrik Blommestijn, Rebecca Wray, Kalina Chupetlovska, Shangqi Gao, Zeyu Gao, Regina Beets-Tan, Mireia Crispin-Ortuzar, James Jones, Wilson Silva, Ines Prata Machado 3. Expert-Driven Contextual Fusion of Multisequence MRI and Heterogeneous Clinical Data for Pancreatic Cancer Prognostic Prediction
Bolun Zeng, Haitao Sun, Xiaojun Chen |
| 10:00 -10.30 | Coffee Break |
| 10.30-11.30 | <p>Oral Session 2: Multimodal models for decision support</p> <ol style="list-style-type: none"> 4. X2CT-CLIP: Enable Multi-Abnormality Detection in Computed Tomography from Chest Radiography via Tri-Modal Contrastive Learning
Jianzhong You, Yuan Gao, Sangwook Kim, Chris McIntosh 5. No Modality Left Behind: Dynamic Model Generation for Incomplete Medical Data
Christoph Fürböck, Paul Weiser, Branko Mitic, Philipp Seeböck, Thomas Helbich, Georg Langs 6. From Pixels to Graphs: SAM-KG for Tumor Segmentation and Knowledge Graphs
Saeed al Alqarni, Suraj Kumar Sood, Syed Jawad Hussain Shah, Chi Lee, John Park, Chul Soo Ha, John Kang, Yugyung Lee 7. Multimodal Hypergraph Learning with Self-Attention for Early Alzheimer's Diagnosis and Risk Factor Identification
Liu Yi, Wenzheng Hu, Ao Zhang, Tengda Zhang, Gege Cai, Peng Yang, Tianfu Wang, Baiying Lei |
| 10:00-10.30 | Poster session |

11.30-12:00 Panel Discussion: Clinical decision support in the Gen AI era

12:00-12:05 Wrap-up

ODIN2025 - Oral and Dental Image aNalysis Workshop **DCC1- Room 1F-102**

Session 1 Title: Medical Imaging

Session Chairs: Federico Bolelli, Yaqi Wang

08:00-08:15 Opening

08:15-09:15 Keynote: Medical image analysis should be really open, not only pretend to be open (as OpenAI)
 Bram van Ginneken

09:15-10:00 Keynote: Tooth Segmentation - A Powerful Tool for Oral Health
 Huiyu Zhou

10:00-10:30 Coffee Break

10:00-11:00 Poster Session

Session 2 Title: Dentistry and Orthognathic Surgery

Session Chairs: Achraf Ben-Hamadou, Costantino Grana

11:00-11:40 Keynote: Digital Dentistry meets Data Science-Imaging, Reconstruction and the Role of AI
 Tabea Flügge

11:40-12:20 Keynote: Evolution of AI Medical Imaging in Orthognathic Surgery and Orthodontics
 Dahong Qian

12:20-12:30 Closing

12:30-14:00 Lunch break

Session 3 Title: ODIN Challenges

Session Chairs: Challenges Organizers

14:00-14:45 ToothFairy3: Fast and Interactive Multi-Structure Segmentation in CBCT Volumes
 (Overview and Participant Presentations)

14:45-15:30 3DTeethSeg2: 3D Teeth Scan Segmentation and Labeling
 (Overview and Participant Presentations)

15:30-16:00 Coffee Break

- 16:00-16:45 STSR: Semi-supervised Teeth Segmentation and Registration
(Overview and Participant Presentations)
- 16:45-17:45 Award Ceremony and Discussion of the Results
- 17:45-18:00 Closing

The 12th Ophthalmic Medical Image Analysis Workshop

DCC1- Room 1F-101

Welcome and Keynote

- 08:30-08:40 OMIA Opening Remarks
- 08:40-09:30 Keynote by Prof. Ryo Kawasaki, University of Osaka

Oral Session 1: Disease Screening

Session Chairs: TBD

- 09:30-09:45 Title: On the Limits of Uncertainty-Aware Fine-Tuning for Robust Diabetic Retinopathy Screening
Authors: Ting Xu; Jie Zhang; Meng Wang; Hongyu He; Dianbo Liu; Ching-Yu Cheng
- 09:45-10:00 Title: Retinal Imaging for Cardiovascular Screening: A Deep Learning Framework with Hierarchical Attention and Spatial Context Modeling
Authors: Sparsh Rastogi; Sahil Thakur; Vinay Arora
- 10:00-10:30 Coffee Break
- 10:30-11:00 Workshop Poster Session

Oral Session 2: Multimodal Foundation Models

Session Chairs: TBD

- 11:00-11:15 Title: BEAM: Boosting Fundus Image Enhancement via Adapted Text-to-Image Models
Authors: Ziheng Wang; Pujin Cheng; Xiaoying Tang
- 11:15-11:30 Title: Uncertainty-Aware Multimodal Fusion for Reliable Fundus Disease Classification Using a Vision-Language Foundation Model
Authors: Meng Wang; Tian Lin; Aidi Lin; Ke Zou; Ting Xu Yanda Meng; Dianbo Liu; Yih Chung Tham; Haoyu Chen; Huazhu Fu; Ching-Yu Cheng
- 11:30-11:45 Title: RetBench: Which Ophthalmic Foundation Model Performs Best and Why?
Authors: Ke Zou; Jocelyn Hui Lin Goh; Yukun Zhou; Samantha Min Er Yew; Meng Wang; Huazhu Fu; Ching-Yu Cheng; YihChung Tham

11:45-12:00 Title: Reasoning-Enhanced Vision-Language Model for Interpretable Diabetic Retinopathy Detection in Ultra-Wide-Field Fundus Images
 Authors: Zhenyu Tang; Lingzhi Chen; Lilong Wang; Yankai Jiang; Jun Li; Xiaosong Wang

Oral Session 3: Dataset and Segmentation

Session Chairs: TBD

12:00-12:15 Title: PASO: A Multipurpose Porcine Anterior Segment Dataset Featuring Spectral and Reconstructed OCT Volume Scans and Surgical Instrument Segmentation Masks
 Authors: Jonas Nienhaus; Rebekka Peter; Florian Kapeller; Katharina Dettelbacher; Ryan Sentosa; Eleonora Tagliabue; Hessam Roodaki; Wolfgang Drexler; Thomas Schlegl; Franziska Mathis-Ullrich; Tilman Schmoll; Rainer Leitgeb

12:15-12:30 Title: UncEGA-Net: Uncertainty-Guided Edge Attention for Optic Nerve Segmentation in Ultrasound Images
 Authors: Wenhui Li; Yanda Meng

12:30-13:30 Lunch and Break

13:30-14:00 Challenge Poster Session

14:00-14:15 GAVE Challenge Opening Remarks

14:15-15:00 GAVE Challenge Outstanding Teams' Presentations

15:00-15:30 Coffee Break

15:30-15:45 SICS-155 Challenge Opening Remarks

15:45-16:30 SICS-155 Challenge Outstanding Teams' Presentations

16:30-16:45 OphNet Challenge Opening Remarks

16:45-17:30 OphNet Challenge Outstanding Teams' Presentations

17:30-17:45 Challenges Award Ceremony

17:45-18:00 OMIA12 Award Ceremony
 OMIA Workshop & GAVE & SICS-155 & OphNet Challenges Closing

MICCAI Workshop on Perinatal Imaging, Placental and Preterm Image analysis (PIPPI 2025)

DCC1- Room 1F-107

Session 1 Title: Keynote & Poster Pitches

Session Chair: Roxane Licandro

- 13:30 - 13:40 Welcome Keynote: [Insert paper title]
- 13:40 - 14:30 PIPPI 2025 Keynote: Toward early neurodevelopmental biomarkers: Comprehensive fetal brain MRI analysis, Dr. Kiho Im (Boston Children's Hospital & Harvard Medical School)
- 14:30 - 15:00 Introduction to Poster session and 2min Power Pitch Poster Presentations
- 15:00 - 16:00 Break & Poster Session

Session 2 Title: Oral Session (8 min presentation + 2min Q&A each)

Session Chair: Roxane Licandro

- 16:00 - 16:10 NEUBORN: The Neurodevelopmental Evolution framework Using BiOmechanical Remodelling, Nashira Baena (King's College London) et al.
- 16:10 - 16:20 Robust Alignment of the Human Embryo in 3D Ultrasound using PCA and an Ensemble of Heuristic, Atlas-based and Learning-based Classifiers, Nikolai Herrmann (Erasmus MC) et al.
- 16:20 - 16:30 FetalExtract-LLM: Structured Information Extraction from Free-Text Fetal MRI Reports Based on Privacy-Ensuring Open-weights Large Language Models, Mingxuan Liu (Tsinghua University) et al.
- 16:30 - 16:40 Contrast-Invariant Self-supervised Segmentation for Quantitative Placental MRI, Xinliu Zhong (Emory University) et al.
- 16:40 - 16:50 PUUMA (Placental patch and whole-Uterus dual-branch U-Mamba-based Architecture): Functional MRI Prediction of Gestational Age at Birth and Preterm Risk, Diego Fajardo-Rojas (King's College London) et al.
- 16:50 - 17:00 Towards a comprehensive morphological, dynamic and functional investigation of the pediatric bowel on 0.55T, Michael Kitzberger (Uniklinikum Erlangen) et al.

Session 3 Title: PIPPI CIRCLE Debate & closing

Session Chair: Roxane Licandro

- 17:00 - 17:50 Should AI be used in early-life imaging?
 Dr. András Jakab (Neuroradiologist, University of Zurich, University Children's Hospital Zurich)
 Dr. Kiho Im (Engineer/Imaging, Boston Children's Hospital & Harvard Medical School)

Dr. Sandrine De Ribaupierre (Neurosurgeon, Western University)
 Dr. Bella Spektor-Fadida (University of Haifa)

17:50 - 18:00 PIPPI Best Paper Award and Closing

8th International Workshop on PRedictive Intelligence in Medicine **DCC1- Room 1F-107**

08:10 Introduction and Welcome

08:20 - 09:00 Keynote Speech 1 and Q&A session
 Dr Kayhan Batmanghelich - Boston University

09:00 - 09:40 Keynote Speech 2 and Q&A session
 Prof Udunna Anazodo - McGill University

09:40 - 10:00 Oral Session I

10:00 - 10:30 Coffee Break & Poster Session

10:30 - 11:10 Keynote Speech 3 and Q&A session
 Prof Qi Du - The Chinese University of Hong Kong

11:10 - 11:40 Oral Session II

11:40 - 12:20 Keynote Speech 4 and Q&A session
 Prof Karim Lekadir - University of Barcelona
 “Developing Predictive Intelligence Tools for Global Health: Lessons from Multi-National Research Projects in Low-Resource Settings”

12:20-12:30 Closing Remarks and Awards

Reconstruction and Motion Estimation in Medical Imaging **DCC2- Room 3F-301**

Session 1 Title: Reconstruction

Session Chairs: Lina Felsner & Andreas Maier

08:00-08:15 Welcome and Opening Remarks

08:15-09:00 Keynote: tba
 Jong Chul Ye

09:00-09:10 Robustness Evaluation of Multi-visit Magnetic Resonance Image Reconstruction
 Youssef Beauferris

09:10-09:20 NerT-CA: Efficient Dynamic Reconstruction from Sparse-view X-ray Coronary Angiography
 Kirsten Maas

- 09:20-09:20 INR meets Multi-Contrast MRI Reconstruction
Natascha Niessen
- 09:30-09:20 Markerless Tracking-Based Registration for Medical Image Motion Correction
Luisa Neubig
- 09:40-09:20 MCM: Mamba-based Cardiac Motion Tracking using Sequential Images in MRI
Jiahui Yin
- 09:50-10:00 Evaluating Deep Learning Based Domain Generalization for Motion Mitigation in Multi-Center Brain MRI
Saad Ashraf
- 10:00-10:30 Coffee Break

Session 2 Title: Motion Estimation

Session Chairs: Chen Qin & Thomas Küstner

- 10:30-11:15 Keynote: TBA
Julia Schnabel
- 11:15-11:25 Localized Fourier Neural Operator for Spatiotemporal Hemodynamic Upsampling in Aneurysm MRI
Kyriakos Flouris
- 11:25-11:35 LSTT: Latent Spatio-Temporal Transformer for Non-Rigid Motion Compensation in CBCT
Yipeng Sun
- 11:35-11:45 cIDIR: Conditioned Implicit Neural Representation for Regularized Deformable Image Registration
Sidaty El Hadramy
- 11:45-11:55 Self-supervised motion-compensated reconstruction for cardiac Cine MRI
Siyang Xu
- 11:55-12:05 Generating Realistic Synthetic Motion Curves for MRI Retrospective Motion Correction
Hristo Georgiev
- 12:05-12:15 Neural space-time modeling for motion-corrected MR reconstruction
Aizada Nurdinova
- 12:15-12:30 Closing

Shape in Medical Imaging (ShapeMI)

DCC1- Room 1F-106

Session 1

Session Chairs: Gijs Luijten

Time	Paper Title
08:00–8:10	Introduction: [Introduction to the ShapeMI workshop] Luijten, Gijs
08:10–08:55	Keynote: [3D Shape Analysis: From Discrete Optimization to Deep Spectral Matching] Bastian, Lennart
08:55–09:15	[Parametric shape models for vessels learned from segmentations via differentiable voxelization] Dima, Alina*; Shit, Suprosanna; Qiu, Huaqi; Holland, Robbie; Mueller, Tamara; Musio, Fabio; Yang, Kaiyuan; Menze, Bjoern; Braren, Rickmer; Makowski, Marcus; Rueckert, Daniel
09:15–09:35	[US-X Complete: A Multi-Modal Approach to Anatomical 3D Shape Recovery] Gafencu, Miruna-Alexandra*; Velikovva, Yordanka; Navab, Nassir; Azampour, Mohammad Farid
09:35–9:55	[Large Intestine 3D Shape Refinement Using Conditional Latent Point Diffusion Models] Mouheb, Kaouther*; Ghoghgh Nejad, Mobina; Dahal, Lavsén; Samei, Ehsan; Lafata, Kyle J.; Segars, W. Paul; Lo, Joseph Y.

10:00–10:30 Coffee Break

Session 2 Title: [e.g., Oral Session 1: Neuroscience]

Session Chairs: [Gijs Luijten & Chair 2 Full Names]

10:30–11:15	Keynote: [The Role of Riemannian Geometry in Deep Learning] Fletcher, Tom
11:15–11:35	[Benchmarking Evaluation Metrics for Tubular Structure Segmentation in Biomedical Images] Decroocq, Meghane*; Poon, Charissa; Schlachter, Matthias; Skibbe, Henrik
11:35–11:55	[Anisotropic Fourier Features for Positional Encoding in Medical Imaging] Jabareen, Nabil*; Yuan, Dongsheng; Liu, Dingming; Ten, Foo-Wei; Lukassen, Sören
11:55–12:15	[Spherical Brownian Bridge Diffusion Models for Conditional Cortical Thickness Forecasting] Parthasarathy, Srivibha; Balaji, Sowjanya; Maik, Vivek*; Lakshmanan, Manojkumar; Sivaprakasam, Mohanasankar

12:15–12:30 Closing - Buffer time [Gijs Luijten]

Statistical Atlases and Computational Modelling of the Heart

DCC1- Room 1F-108

Session 1 Title: Keynote

Session Chairs: [TBD]

Time Paper Title

08:00-08:10 Welcome

08:10-08:45 Keynote: Biomechanics modeling enhanced by AI
 Associate Professor Hyun Jin Kim, KAIST

Session 2 Title: Oral Presentations

Session Chairs: [TBD]

08:45-09:00 Active Learning for Deep Learning-Based Hemodynamic Parameter Estimation
 Rygiel, P., Suk, J., Yeung, K., Brune, C., Wolterink, J.

09:00-09:15 LGESynthNet: Controlled Scar Synthesis for Improved Scar Segmentation in Cardiac LGE-MRI
 Imaging
 Jacob, A., Sharma, P., Rueckert, D.

09:15-09:30 A comprehensive Pipeline for Aortic Segmentation and Shape Analysis
 Shehata, N., Elsayy, A., Nagy, M., ElMahdy, M., Ali, M., Romeih, S., Aguib, H., Yacoub, M.,
 Glocker, B.

09:30-09:45 Fast multi-label parameterization of the left atrium by learned template morphing
 Castaneda, E., Raghunath, A., Meister, F., Weiss, M., Mihalef, V., Ashikaga, H., Maier, A.,
 Passerini, T., Lluch, È.

09:45-10:00 Groupwise Registration with Physics-Informed Test-Time Adaptation on Multi-parametric
 Cardiac MRI
 Li, X., Zhang, Y., Huang, L., Chang, H., Niendorf, T., Ku, M., Tao, Q., Yang, H.

10:00-10:30 Coffee Break

Session 2 Title: Flow and Posters

Session Chairs: [TBD]

Time Paper Title

10:30-10:45 Comprehensive 4D flow MRI characterization of left atrial hemodynamic flow components in
 hypertension and hypertrophic cardiomyopathy
 Casademunt, P., Morales, X., Elsayed, A., Zhao, D., Loncaric, F., Quill, G., Ramos, M., Doltra, A.,
 Sitges, M., Lowe, B., Young, A., Nash, M., Camara, O.

10:45-11:15 Poster Teasers

11:15-12:15 Poster Session

12:15-12:30 Closing

Uncertainty Quantification in Medical Image Analysis / Uncertainty for Safe Utilization of Machine

DCC1- Room 1F-105

Time	Title
08:00–08:05	Opening remarks
08:05-08:35	Part 1: General Introduction to uncertainty and domain Shift - <i>Vatsal Raina</i>
08:35-9:15	Part 2 - Uncertainty for Medical Image Analysis +Q&A - <i>Natalia Molchanova</i>
09:15-09:55	Part 3 - Multi-rater modeling +Q&A - <i>Meritxell Riera-Marin</i>
10:00–10:30	Coffee break:
10:30-11:30	Part 4 - Model calibration and conformal prediction + Q&A - <i>Adrian Galdran</i>
11:30-12:10	Invited lecture + Q&A - Uncertainty Quantification for Medical Foundation Models (tentative) - <i>Julio Silva-Rodriguez</i>
12:10-12:30	Spotlights from UNSURE workshop: MEGAN: Mixture of Experts for robust uncertainty estimation in Endoscopy Videos - <i>Krishna Chaitanya</i> Multi-Rater Calibration Error - <i>Meritxell Riera-Marin</i> Decoupling Clinical and Class Agnostic Features for Reliable Few-shot adaptation under shift - <i>Umaina Rahman</i>

Afternoon - UNSURE Workshop

Session 1

Session Chairs: [Carole Sudre & Cheng Ouyang]

Time	Title
14:00–14:10	Introduction: <i>Carole Sudre</i>
14:10–14:55	Keynote: <i>Lisa M. Koch</i>
14:55-15:15	Label-free estimation of clinically relevant performance metrics under distribution shifts <i>Tim Fluehmann, Alceu Bissoto, Trung Hoang, Lisa Koch</i>

15:15–15:35 Pseudo-D: Informing multi-view uncertainty estimation with calibrated neural training Dynamics
Ang Nan Gu, Michael Tsang, Hooman Vaseli, Teresa Tsang, Purang Amolmaesumi

15:35–16:55 Poster session + Coffee Break

Session 2

Session Chairs: [Chen Qin & Raghav Mehta]

Time	Title
16:55–17:15	Is Uncertainty Quantification a viable alternative to learned deferral <i>Anna Wundram, Christian Baumgartner</i>
17:15–17:35	Metric-Guided conformal bounds for probabilistic Image reconstruction <i>Matt Cheung, Tucker Netherton, Laurence Court, Ashok Veeraghavan, Guha Balakrishnan</i>
17:35–17:55	Numerical uncertainty in linear registration: an experimental study <i>Niusha Mirhakimi, Yohan Chatelain, Jean-Baptiste Poline, Tristan Glatard</i>
17:55–18:15	Panel discussion
18:15–18:30	Closing and Awards

CHALLENGES

23 SEPTEMBER 2025

CHALLENGES - 23 SEPTEMBER 2025

BraTS 2025 Lighthouse Challenge **DCC1- Room 1F-110**

- 08:00 - 10:00 BraTS 2025 Lighthouse Challenge - Classification Session**
 Pathology & Progression Challenges
For the detailed schedule please visit: <https://www.synapse.org/brats2025>
- 10:00 - 10:30 COFFEE BREAK**
- 10:30 - 12:30 BraTS 2025 Lighthouse Challenge - Generative Session**
 Global Synthesis & Inpainting Challenges
For the detailed schedule please visit: <https://www.synapse.org/brats2025>
- 12:30 - 13:30 LUNCH BREAK**
- 13:30 - 15:30 BraTS 2025 Lighthouse Challenge – Segmentation Session**
 Segmentation challenges & Poster session
For the detailed schedule please visit: <https://www.synapse.org/brats2025>
- 15:30 - 16:00 COFFEE BREAK**
- 16:00 - 18:00 BraTS 2025 Challenge – Segmentation Session II**
For the detailed schedule please visit: <https://www.synapse.org/brats2025>

SAGES Critical View of Safety Challenge **DCC1- Room 2F-209-210-211**

UNICORN Lighthouse Challenge: Unified beNchmark for Imaging in COMputational pathology, Radiology and Natural language **DCC1- Room 1F-109**

Session 1 Title: UNICORN challenge
Session Chairs: Alessa Hering and Joeran Bosma

- 08:00–08:15 Welcome by the UNICORN Organizers (Alessa Hering and Francesco Ciompi)
- 08:15–09:00 Keynote by Magdalini Paschali (Department of Radiology at Stanford)
 Title: Foundation Models in Radiology: What, How, When, Why and Why Not
 Abstract:

09:00-10:00 Introduction to the UNICORN Challenge (Datasets, Challenge Design and Baseline)

10:00-10:30 Coffee Break

Session 2 Title: Oral presentations challenge winner
Session Chairs: Rianne Weber and Michelle Stegeman

Time	Talk
10:30-10:45	Announcement of the challenge winners and award ceremony
10:45-11:20	Presentation by the winning teams Leaderboard ALL Tasks
11:20-11:40	Presentation by the winning teams Leaderboard Radiology Vision
12:40-12:00	Presentation by the winning teams Leaderboard Pathology Vision
12:00-12:20	Presentation by the winning teams Leaderboard Language
12:20-12:30	Presentation by the winning teams Leaderboard Vision-Language

Session 3 Title:
Session Chairs: Clement Grisi and Luc Builtjes

Time	Talk
13.30-14:15	Pushing the limits! New developments to make foundation model benchmarks possible on grand-challenge.org
14:15-14:45	Spotlights (short orals) all participants
14:45-15:30	Poster Session all participants

15:30-16:00 Coffee Break

Session 4 Title: Future of Foundation Models in Healthcare
Session Chairs: Francesco Ciompi and Marina D'Amato

Time	Talk
16.00-16:45	Keynote by Hao Chen (The Hong Kong University of Science and Technology) Title: One Model to Rule Them All: Multimodal Foundation Models for Biomedical Image Analysis
16:45-17:30	Future of UNICORN and Closing

**Automated Identification of ModerateSevere Traumatic Brain Injury
Lesions 2025**

DCC2- Room 3F-302

**CARE 2025: Comprehensive Analysis & computing of REal-world medical
images**

DCC1- Room 1F-103

**Combining HIstology, Medical Imaging (Radiology), and molEcular Data
for Medical pRognosis and diAgnosis.**

IBS Building - 3F-R1-R3

**Deep-learning Evaluation for Enhanced Prognostics - Prostate Specific
Membrane Antigen**

DCC2- Room 3F-302

16:00 - 18:00

Introduction – 5 Minutes

Background – Biology and Treatment of Metastatic Prostate Cancer, PET Imaging Biomarkers for staging with PSMA and FDG Tracers. - 10 minutes

Challenge Design – Acknowledgment of multi-disciplinary clinical team involved in challenge planning. Description of dataset, prior algorithm development and baseline benchmark model. 5 minutes

Performance Summary of All Teams – Breakdown of final leaderboard grand challenge scoring criteria + additional metrics descriptive of relative performance between algorithms. Recognition of all participants contributions to validation/testing phases. 5 minutes

Invited Presentations from Top 5 Models – Description of algorithm with method refinements, experiments to improve performance applicable to challenge design. Up to 10 minutes per presenter. Awards presented to on-site attendees. (50 minutes total)

Discussion of Overall Techniques – Common approaches tested by all entrants and insights from best performing methods. Highlight specific challenging cases and scope for future refinement focused on anatomical regions or pathological features. 10 minutes

Scope for Future Challenge (DEEP-PSMA II) – Description of possible clinical tasks for hosting future algorithm challenges including response prediction and whole-body PET deformable image registration. 10 minutes

Question and Answer Panel – Open for attendees and participants to discuss specific points of top algorithms, general queries relating to clinical translation, recommendations for future adaptations of DEEP-PSMA challenge. 15 minutes.

Fast, Low-resource, Accurate, Robust, and Effectual Medical Image Analysis

DCC2- Room 3F-301

Head and neCK TumOR (HECKTOR) Lesion Segmentation, Diagnosis and Prognosis using Multimodal Data

IBS Building - 3F-R6

1:30 PM - 1:45 PM	Welcome Remarks
1:45 PM - 2:15 PM	Challenge Overview and Vision
2:15 PM - 3:00 PM	Top Participants Presentation: Task 1
3:00 PM - 3:30 PM	Keynote Speech
3:30 PM - 4:00 PM	Break
4:00 PM - 4:45 PM	Tutorial: Deep Learning for Cancer Diagnosis and Prognosis
4:45 PM - 5:30 PM	Top Participants Presentation: Task 2 & 3
5:30 PM - 6:00 PM	Winners Announcement & Closing Remarks

Benchmarking of Artificial Intelligence and Radiologists for Nodule Risk Estimation in Lung Cancer Screening on CT: The LUNA25 Challenge

DCC2- Room 3F-302

13:30 – 13:45	Opening by Colin Jacobs, including an opening lecture about the current landscape of AI for lung cancer screening
13:45 – 14:05	Dré Peeters presents the design and result of the LUNA25 Challenge and announces the winning teams
14:05 – 15:05	Each team in the top 5 presents their work and methods, starting with the team ranked 5 up to rank 1 (10min presentation + 2min Q/A).
15:05 – 15:15	Bogdan Obreja presents about the future plans, next steps and paper writing
15:15 – 15:30	Discussion and extended Q/A for the organizers and winning teams

Mitosis Domain Generalization Challenge 2025

IBS Building - 3F-R1-R3

08:15 - 09:00	Welcome & Introduction to the challenge
09:00 - 09:30	Talks and pitches (Europe / US)
09:30 - 10:00	invited talk
10:30 - 11:00	Talks and pitches (online / onsite)
11:00 - 12:00	Results, Discussion round, Awards, Conclusion

Medical Out-of-Distribution Analysis Challenge 2025

IBS Building - 3F-R6

SegRap: Segmentation of Gross Tumor Volume and Lymph Node Clinical Target Volume for Radiotherapy Planning of Nasopharyngeal Carcinoma

DCC1 - Room 1F-104

Self-Supervised Learning for 3D Medical Imaging

IBS Building - 3F-R6

10:30 – 10:45	Opening Words
10:45 – 11:00	Invited Keynote Talk — Seyed-Ahmad Ahmadi (NVIDIA)
11:00 – 11:15	Challenge Introduction & Results Presentation
11:15 – 12:15	Presentations by Winning Teams
12:15 – 12:30	Closing Discussion

The Trauma THOMPSON Challenge 2025

DCC1 - Room 1F-103

8:00 – 8:10 AM

- **Welcome & Opening Remarks**
 - Introduction to the Trauma THOMPSON Challenge
 - Overview of the five tasks

8:10 – 8:25 AM

- **Task 1 Winner Presentation**
 - Algorithm and paper presentation (15 minutes)

8:25 – 8:40 AM

• **Task 2 Winner Presentation**

- Algorithm and paper presentation (15 minutes)

8:40 – 8:55 AM

• **Task 3 Winner Presentation**

- Algorithm and paper presentation (15 minutes)

8:55 – 9:10 AM

• **Task 4 Winner Presentation**

- Algorithm and paper presentation (15 minutes)

9:10 – 9:25 AM

• **Task 5 Winner Presentation**

- Algorithm and paper presentation (15 minutes)

9:25 – 9:55 AM

• **Panel Discussion & Q&A**

- Cross-task discussion among winners
- Audience questions

9:55 – 10:00 AM

• **Closing Remarks**

- Future directions of Trauma THOMPSON Challenge
- Acknowledgments

TrackRAD Real-time Tumor Tracking for MRI-guided Radiotherapy
DCC1 - Room 1F-103

10:30 – 10:50 Welcome and introduction to TrackRAD2025

10:50 – 11:05 Winning team #1

11:05 – 11:20 Winning team #2

11:20 – 11:35 Winning team #3

11:35 – 11:50 Winning team #4

11:50 – 12:05 Winning team #5

12:05 – 12:20 Prize giveaway

12:20 - 12:30 Summary and closing statements

Ultra-Low-Field MRI Image Enhancement Challenge

DCC2 – Room 3F-302

10:30 – 12:30

Welcome Speech (10 mins)

- Agenda:
 - Brief overview of ULF-EnC 2025 and its objectives
 - Acknowledgement of sponsors, collaborators, and participants
 - Outline of the workshop schedule

2. Oral Presentations – Top 3 Teams (45 mins)

- Format: 15 minutes per team (10 min talk + 5 min Q&A)

3. Award Presentation – Top 3 Teams (10 mins)

- Agenda:
 - Announce rankings (3rd, 2nd, and 1st)
 - Award certificates/trophies

4. Thank You Speech (5 mins)

5. Poster Presentation & Networking (50 mins)

- Format: Open networking session
 - Poster displays from other participating teams
 - Informal discussions between researchers, students, industry partners, and clinicians

Challenge for Vision-Language Modeling in 3D Medical Imaging

DCC2 – Room 3F-303

09:00 – 09:15	Opening & Introduction – Welcome by Organizers, Overview of VLM3D Challenge
09:15 – 10:00	Keynote Session – Advances in Vision-Language Models for 3D Medical Imaging
10:00 – 10:30	Coffee Break & Networking
10:30 – 12:00	Task 1 Presentations – Radiology Report Generation
12:00 – 13:15	Lunch Break
13:15 – 14:30	Task 2 Presentations – Multi-Abnormality Classification
14:30 – 14:45	Coffee Break
14:45 – 15:45	Task 3 Presentations – Self-Supervised Multi-Abnormality Localization
15:45 – 16:00	Short Break
16:00 – 17:00	Task 4 Presentations – Text-Conditional 3D Chest CT Generation
17:00 – 17:30	Panel Discussion, Future Directions & Awards – Closing Remarks

27 SEPTEMBER 2025

CHALLENGES - 27 SEPTEMBER 2025

Automated Lesion Segmentation in WholeBody PET/CT and Longitudinal CT

IBS Building - 3F-R1-R3

Foundation Model for Cardiac MRI Reconstruction: Meeting the Real-world Challenge of Multi-center, Multi-vendor, and Multiple Diseases

IBS Building - 3F-R1-R3

CURVAS - Pancreatic Ductal AdenoCarcinoma Vascular Invasion

DCC1- Room 2F-205

13:30 - 13:50	Challenge presentation + 5 min Q&A
14:00 - 14:15	Winner 1 algorithm presentation + 5 min Q&A
14:20 - 14:35	Winner 2 algorithm presentation + 5 min Q&A
14:40 - 14:55	Winner 3 algorithm presentation + 5 min Q&A
15:00 - 15:15	Challenge closing + 5 min Q&A

Dehazing Echocardiography Challenge 2025

DCC1- Room 1F-104

13:30-13:40	Opening and Challenge Overview
13:40-17:00	Team Presentations (Top 1-10)
Each team: 15-minute presentation + 5-minute Q&A	
17:00-17:10	Awards Ceremony
17:10-17:20	Summary Discussion and Closing

Dehazing Echocardiography Challenge 2025

DCC1- Room 1F-104

Endoscopic Vision Challenge 2025

DCC1- Room 2F-209-210-211

- 09.00 Opening
- 09.15 RARE: Recognition of Anomalies in low-pREvalence cancer
- 10.00 Coffee Break
- 10.30 Keynote Prof. Fiona Kolbinger
Translational Medical Image Computing, Purdue University
Validation matters: Interdisciplinary perspective on interdisciplinary problems
- 11.00 STIR: Surgical Tissue Tracking Using the STIR
(Surgical Tattoos in Infrared) Dataset
- 11.45 OSS: Open Suturing Skills
- 12.30 Lunch
- 13.30 Keynote Dr. Pete Moutney
CEO Odin Vision
Endoscopic AI: From EndoVis to Patients Worldwide
- 14.15 SurgVu: Surgical Visual Understanding
- 15.00 Coffee Break
- 16.00 Keynote Fereshteh Mahvar
Google Health
Exploring surgical data with MedGemma & Gemma 3
- 16.45 Closing
- 17.00 Reception

FOMO: Foundation Model Challenge for Brain MRI 2025

IBS Building - 3F-R6

- 13:30 - 13:40 Introduction and opening
- 13:40 - 14:25 Keynote 1: Prof. Julia A. Schnabel (TUM). Foundation Models for Detecting the Unknown in Brain MRI.
- 14:25 - 14:50 Challenge design and motivation

14:50 - 15:30	Presentations from participants
15:30 - 16:00	Break
16:00 - 16:45	Keynote 2: Prof. Marc Niethammer (UCSD). Towards more general approaches for medical image registration.
16:45 - 17:15	Presentations from participants
17:15 - 18:00	Results and award ceremony

Multimodal survival and recurrence prediction in head and neck oncology

IBS Building - 3F-R1-R3

Learn2Reg 2025

DCC2- Room 3F-301

1:30 pm	Keynote by Prof. Mirabela Rusu, Ph.D.
1:50 pm	Opening of Learn2Reg 2025
1:55 pm	ReMIND2Reg Oral Presentation (Each is 6 min + 2 min)
2:35 pm	LUMIR Oral Presentation (Each is 6 min + 2 min)
3:15 pm	Learn2Reg 2025 Awards
3:30 pm	Learn2Reg Posters

Low-field Pediatric Brain Magnetic Resonance Image Segmentation and Quality Assurance Challenge 2025

IBS Building - 3F-R4-R5

13:30 - 18:00

Session 1 (2 hours)

0:00 - 0:20	Welcome & Introduction (organizers overview, challenge background, goals)
0:20 - 0:40	Task 1 (Quality Assurance): Team 1
0:40 - 1:00	Task 1 (Quality Assurance): Team 2
1:00 - 1:20	Task 1 (Quality Assurance): Team 3
1:20 - 1:40	Task 2a (Hippocampus Segmentation): Team 1
1:40 - 2:00	Task 2a (Hippocampus Segmentation): Team 2
2:00 - 2:15	Coffee / Networking Break

Session 2 (1 hour 45 min)

2:15 - 2:35	Task 2a (Hippocampus Segmentation): Team 3
2:35 - 2:55	Task 2b (Basal Ganglia Segmentation): Team 1
2:55 - 3:15	Task 2b (Basal Ganglia Segmentation): Team 2
3:15 - 3:35	Task 2b (Basal Ganglia Segmentation): Team 3
3:35 - 3:55	Challenge Results and Final Award Distribution
3:55 - 4:00	Closing Remarks, Next Steps

Multi-class Brain Hemorrhage Segmentation in Non-contrast Computed Tomography

IBS Building - 3F-R1-R3

8:00 – 8:10	Welcome and Summary of the Challenge
8:10 – 9:00	Presentations by 5 teams (ranking 4 to 8), 10 min each, including Q&A
9:00 – 9:10	Break
9:10 – 9:50	Presentations by top 3 teams, 12 min each, including Q&A
9:50 – 10:00	Close of the challenge, proposal for next yearß

Multi Camera Robust Diagnosis of Fundus Diseases

DCC1- Room 2F-205

Pancreatic Tumor Segmentation in Therapeutic and Diagnostic MRI

DCC1- Room 1F-103

13.30–14.10: Introduction & Clinical Background

- 13.30: Welcome and introduction by the organizers.
- 13.40: Clinical overview of pancreatic cancer and the role of MRI. *Speaker: TBD*
- 13.55: Radiotherapy in pancreatic cancer: challenges and opportunities. *Speaker: TBD*

14.10–14.25: Challenge Overview

- Presentation of the PANTHER challenge design, datasets, baseline models, and evaluation process. *Speakers: Challenge organizers*

14.25–14.35: Break Opportunity for questions from the audience.

14.35–15.20: Participant Presentations -Task 1 (Pancreatic Tumor Segmentation in Diagnostic MRI)

- 14.35: Team A – *Title TBD*
- 14.45: Team B – *Title TBD*
- 14.55: Team C – *Title TBD*
- 15.05: Team D – *Title TBD*

15.20–15.30: Break

15.30–16.15: Participant Presentations – Task 2 (Pancreatic Tumor Segmentation in MR-Linac Images)

- 15.30: Team E – *Title TBD*
- 15.40: Team F – *Title TBD*
- 15.50: Team G – *Title TBD*
- 16.00: Team H – *Title TBD*

16.15–17.15: Results & External Evaluation

- 16.16: Results presentation and performance on external test set
- 16.45: Q&A and panel discussion with participating teams

17.15–17.55: Award Ceremony

- Best performing teams on Task 1
- Best performing teams on Task 2
- Most innovative method
- Best presentation

17.55–18.00: Closing statement by organizers

Foundation-Model-Driven Parkinson's Disease Auto Diagnosis Challenge
DCC2 - Room 3F-301

16:00 – 18:00

1. Opening Introduction (3 minutes)

Brief overview of Parkinson's Disease and the motivation behind the challenge. Introduction to the goals and significance of the competition.

2. Competition Recap (5 minutes)

Summary of the competition rules, timeline, evaluation metrics, registration statistics, and an overview of the participating teams and final winners.

3. Winning Team Presentations (45 minutes)

Six winning teams will present their methodologies and key results (7 minutes per team, including Q&A).

4. Award Ceremony and Closing Remarks (7 minutes)

Presentation of awards to the winning teams by the organizers. Concluding remarks highlighting the outcomes of the challenge and future directions.

REport Generation of pathology using PanAsia Giga-pixel WSIs
DCC2 - Room 1F-103

**SELMA3D 2025: Self-supervised learning for 3D light-sheet microscopy
image segmentation**

DCC2 - Room 1F-103

1. Introduction (15 minutes)

- 08:00 - 08:15
 - Overview of the challenge.
 - Introduction of the dataset.
 - Explanation of the criteria for evaluation.
 - Introduction of the challenge organization team.
 - Welcome and introduction of participants.
 - Brief presentations of general results from participants.

2. Participant presentations (45 minutes)

- 08:15 – 09:00
 - The top 5 teams will each have a 10-minute presentation to showcase and discuss their methods, followed by 5 minutes for Q&A.

3. Prizes and Closing remarks (20 minutes):

- 09:00 – 09:20
 - Announcement of winners.
 - Discussion and Q&A.

Liver Lesion Segmentation in Non-Contrast CT: Triphasic-Aided, Multi-Center, and MultiVendor Challenge **IBS Building - 3F-R4-R5**

8:00-8:15 **Welcome & Introduction (5 minutes)**

Overview of the event schedule.

Brief introduction of the challenge.

Introduction of the organizers.

Challenge Problem Overview (10 minutes)

Explanation of Clinical Problem

Explanation of the challenge task.

Description of the dataset(s) provided.

Presenter: Marawan Elbatel

Task-1&3: Tri-phasic Liver Lesion Segmentation

8:15-8:30 Data and Evaluation Metrics Overview:

Analysis of the dataset used for Tasks 1 and 3, including dataset characteristics (e.g., number of lesions, resolution).

Data sources, including pre-processing steps undertaken before making the data available to participants (i.e., registration).

Explanation of the specific evaluation metrics used to assess submissions (e.g., Dice Coefficient, Recall, Precision).

The rationale behind choosing these metrics and how they relate to clinical relevance.

Clarification on how the final scores are calculated, including any weighting of different metrics.

Presenter: Marawan Elbatel

8:30-9:45 Top-performing team + Q&A

9:45-10:00 Results Summary and Awards Announcement

Xiaomeng Li

10:00 – 10:30 Coffee Break

Task-2: Interactive Liver Lesion Segmentation

10:30 - 10:40 Welcome & The Interactive Segmentation Initiative

Marinov Zdravko

- 10:40 - 11:20 NVIDIA Keynote
VISTA3D: A Unified Segmentation Foundation Model For 3D Medical Imaging
Yufan He
- 11:20 - 12:00 Keynote
The Hidden Backbone of AI in Medicine: Data Annotation at Essen
Moon Kim
- 12:00 - 12:30 Award Ceremony of Top Performing Teams for Task 2
Marinov Zdravko

TUTORIALS

23 SEPTEMBER 2025

TUTORIALS - 23 SEPTEMBER 2025

Tutorial on Federated Learning in Healthcare: Comprehensive Open Federated Ecosystem **IBS Building - 3F-R4-R5**

13:30 - 13:50	Introduction to MLCommons Alex Karargyris
13:50 - 14:10	Federated Learning in Medical Imaging Spyridon Bakas
14:10 - 14:40	Practical Use of FL with NVFlare for Large Foundation Models Holger Roth
14:40 - 15:10	FL Training using FedBioMed Sergen Cansiz
15:10 - 15:30	Clinical Translation of Federated Learning with Regulatory Oversight Marius Linguraru
15:30 - 16:00	Coffee break
16:00 - 17:00	Hands-on: NV Flare Holger Roth
17:00 - 18:00	Hands-on: Federated Benchmarking with MedPerf Alex Karargyris

Tutorial on Challenges and Opportunities in Wireless Capsule Endoscopy **IBS Building - 3F-R4-R5** **Welcome and Introduction to the Tutorial**

08:30-09:10	Intelligent Wireless Capsule Endoscopy: Advances and Challenges Dr. Dimitris Iakovidis
09:10-10:10	Edible Foundation Models
10:10-10:30	Coffee Break
10:30-11:10	Computer Vision for Endoscopic Image Analysis – From Diagnostics to Intraoperative Applications Dr. Sharib Ali
11:10-11:40	From High-level Research to Commercial Implementation – Pains and Gains Bettina Eriksen

From Foundational to Multimodal Models for Medical Imaging (FMLLM)
DCC1- Room 1F-112

08:00 - 08:50	M1. Introduction to Foundation Models
08:50 - 09:20	M2. Vision-Language Models (VLMs)
09:20 - 10:00	M3. Fine-tuning foundation models
10:00 - 10:30	Coffee break
10:30 - 11:10	M4. Foundational models for segmentation
11:10 - 11:50	M5. Techniques for Improving LLM performance
11:50 - 12:30	M6. Deployment considerations of generative AI
12:30 - 13:30	Lunch break
13:30 - 14:00	A1. Expanding Large Language Models to Vision: Multimodal LLMs (MLLMs)
14:00 - 14:30	A2. Multimodal LLMs for Pathology
14:30 - 15:00	A3. Multimodal LLMs for Radiology
15:00 - 15:30	A4. Multimodal LLMs for Segmentation
15:30 - 16:00	Coffee break
16:00 - 16:30	A5. Multimodal LLMs for Radiology Report
16:30 - 17:00	A6. Report Evaluation and Error Detection
17:00 - 17:30	A7. Error Detection and Fact Checking with Knowledge Graph

Generative Models for Synthesizing Medical Images (GenAI-Medical)
DCC1- Room 1F-106

08:00 - 08:30	Introduction and overview Kilian Pohl
09:15 - 10:00	Deep Structural Causal Model Ben Glocker

- 10:00 - 12:00 Generating and Evaluating Anatomical Plausibility in Brain Morphometry and Longitudinal Change
Qingyu Zhao
- 12:00 - 12:30 Panel discussion

Hosting a challenge on Grand Challenge

DCC1- Room 1F-105

- 09:00 - 09:30 Welcome and introduction to challenges on GC
Harm van Zeeland
- 10:00 - 10:30 Short break
- 10:30 - 11:15 Deep dive #1: uploading and managing hidden test data
Chris van Run
- 11:15 - 12:30 Deep dive #2: algorithm containers
Harm van Zeeland
- 12:30 - 13:30 Lunch break
- 13:30 - 15:00 Deep dive #3: custom evaluation methods & leaderboard set-up
Chris van Run
- 15:00 - 15:30 Wrap-up, Q&A

3rd Graph Learning in Medical Image Analysis (GraphMedIA)

DCC1- Room 1F-102

- 08:00 - 08:10 Welcome Remarks
Angelica I Aviles-Rivero
- 08:10 - 08:45 Lecture 1: Semi-Supervised Graph Learning for Medical Image Analysis
Angelica I Aviles-Rivero
- 08:45 - 09:20 Lecture 2: Graph Neural Network
Yanqi Cheng
- 09:20 - 10:00 Lecture 3: Graph Transformer
Chun-Wun (Sam) Cheng
- 10:00 - 10:30 Coffee Break

- 10:30 - 11:05 Lecture 4: Higher-Order Learning -- Hypergraph Computation for Medical Data
Yue Gao
- 11:05 - 11:40 Lecture 5: Whole slide pathological Image analysis based on hypergraph computation
Jiahao Huang
- 11:40 - 12:15 Lecture 5: Graph Learning for MRI Reconstruction
Lequan Yu
- 12:15 - 12:30 Closing Remarks
Angelica I Aviles-Rivero

Tutorial on Hyperbolic Learning for Medical Imaging
IBS Building - 2F-25

- 08:00 - 09:00 Foundations on Non-Euclidean Geometry
Simone Lionetti
- 09:00 - 10:00 Deep Learning in Hyperbolic Space
Alvaro Gonzalez-Jimenez
- 10:00 - 10:30 Coffee Break
- 10:30 - 12:15 Hands-on Hyperbolic Network Training
Alvaro Gonzalez-Jimenez
- 12:15 - 12:30 Learning and Conclusions
Alvaro Gonzalez-Jimenez

27 SEPTEMBER 2025

TUTORIALS - 27 SEPTEMBER 2025

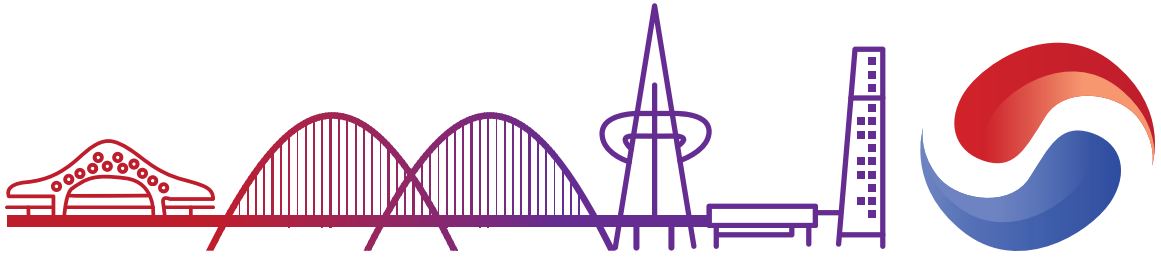
MedShapeNet 2.0: A Large Repository of 3D Medical Shapes and a Python Toolbox for 3D Medical Shape Analysis **DCC1-1F-106**

08:00–08:10	Opening & Program Overview MSc. Gijs Luijten
08:10–08:20	Benchmark-Ready 3D Anatomical Shape Classification and Dataset – MSN Tomáš Kršička
08:20–08:40	Skull Implants Generation and Categorization – MSN (IEEE Access 2024, IEEE Paper) Dr. Titipat Achakulvisut
08:40–09:00	Hierarchical Feature Learning for Medical Point Clouds via SSM – MSN (arXiv: 2504.13015) Guoqing Zhang
09:00–09:20	Developing a Generative Implicit Medical Shape Model on MedShapeNet (arXiv: 2505.08919) Hantao Zhang
09:20–09:35	Leveraging Geometric Artery Data to Improve Wall Shear Stress Assessment – MSN Julian Suk
09:35–09:55	Shape Analysis and Overview of Projects (Publications) Prof. Simone Melzi / F. Maccarone
09:55–10:30	Coffee Break
10:30–10:45	Scalable Toolkit for Modeling 3D Surface-Based Brain Geometry Yanghee Im
10:45–11:05	3D Shape in Medical Imaging – MSN (arXiv: 2508.02482, arXiv: 2504.19402) Khoa Tuan Nguyen (tentative)
11:05–11:25	Point Cloud-Based Shape Registration for Computer-Assisted Intervention Wang Manning
11:25–11:40	ShapeKit – A Flexible Toolkit for Refining Anatomical Shapes Pedro Salvador Bassi
11:40–12:10	MedShapeNet and Registration Zhe Min, Xinzhe Du & Shixing Ma
12:10–12:15	Closing & Outlook MSc. Gijs Luijten

SATELLITE EVENTS

23 September 2025					
Meeting Room Name	Location	8:00-10:00	10:30-12:30	13:30-15:30	16:00-18:00
DCC2-3F-301	DCC 2	14th MICCAI Workshop on Clinical Image-based Procedures (CLIP 2025): Towards Holistic Patient Models for Personalised Healthcare		Fast, Low-resource, Accurate, Robust, and Effectual Medical Image Analysis	
DCC2-3F-302	DCC 2	Automated Identification of Moderate-Severe Traumatic Brain Injury Lesions 2025	Ultra-Low-Field MRI Image Enhancement Challenge	Benchmarking of Artificial Intelligence and Radiologists for Nodule Risk Estimation in Lung Cancer Screening on CT: The LUNA25 Challenge	Deep-learning Evaluation for Enhanced Prognostics - Prostate Specific Membrane Antigen
DCC2-3F-303	DCC 2	Challenge for Vision-Language Modeling in 3D Medical Imaging			
DCC1-1F-101	DCC 1	Multimodal Large Language Models in Clinical Practice			
DCC1-1F-102	DCC 1	3rd Graph Learning in Medical Image Analysis (GraphMedIA)		AMAI 2025 - The Fourth Workshop on Applications of Medical Artificial Intelligence (AMAI)	
DCC1-1F-103	DCC 1	The Trauma THOMPSON Challenge 2025	TrackRAD Real-time Tumor Tracking for MRI-guided Radiotherapy	CARE 2025: Comprehensive Analysis & computing of REal-world medical images	
DCC1-1F-104	DCC 1	SegRap: Segmentation of Gross Tumor Volume and Lymph Node Clinical Target Volume for Radiotherapy Planning of Nasopharyngeal Carcinoma		TopBrain Segmentation Challenge for Whole Brain Vessel Anatomy and SWITCH2025: Stroke Workshop on Imaging and Treatment Challenges	
DCC1-1F-105	DCC 1	Hosting a challenge on Grand Challenge			
DCC1-1F-106	DCC 1	Generative Models for Synthesizing Medical Images (GenAI-Medical)		10 th International Workshop on Simulation and Synthesis in Medical Imaging (SASHIMI 2025)	
DCC1-1F-107	DCC 1	EMA: Efficient Medical AI			
DCC1-1F-108	DCC 1	Workshop on MICCAI challenges on Women's Health		Computer-Aided Pelvic Imaging for Female Health	
DCC1-1F-112	DCC 1	From Foundational to Multimodal Models for Medical Imaging (FMLLM)			
DCC1-1F-109	DCC 1	UNICORN Lighthouse Challenge: Unified beNchmark for Imaging in COmputational pathology, Radiology and Natural language			
DCC1-1F-110	DCC 1	BraTS 2025 Lighthouse Challenge			
DCC1-1F-111	DCC 1	Fairness of AI in Medical Imaging (FAIMI): Addressing Biases for Equitable Healthcare Outcomes		FAIMI 2025: The 3rd International Workshop on Fairness of AI in Medical Imaging	
DCC1-2F-206-207-208	DCC 1	Bridging Regulatory Science and Medical Imaging Evaluation (BRIDGE)		Fifth MICCAI workshop on Deep Generative Models for Medical Image Computing and Computer Assisted Intervention (DGM4MICCAI)	
DCC1-2F-209-210-211	DCC 1	SAGES Critical View of Safety Challenge			
DCC1-2F-204	DCC 1	COLlaborative Intelligence and Autonomy in Image-guided Surgery (COLAS)		Tenth International Skin Imaging Collaboration (ISIC) Workshop on Skin Image Analysis	
DCC1-2F-205	DCC 1	MSB EMERGE: Empowering MEDical information computing and Research through early-career Guidance and Expertise		Workshop on Digital Twin for Healthcare	
DCC1-3F-301	DCC 1	MLMI 2025 Workshop			
IBS-2F-100	IBS	Deep-Breath2025: 2 nd Deep Breast Workshop on AI and Imaging for Diagnostic and Treatment Challenges in Breast Care			
IBS-2F-200	IBS	Augmented Environments for Computer-Assisted Interventions (AE-CAI)			
IBS-3F-R1-R3	IBS	Mitosis Domain Generalization Challenge 2025		Combining Histology, Medical Imaging (Radiology), and molEcular Data for Medical pRognosis and diAgnosis.	
IBS-3F-R4-R5	IBS	Tutorial on Challenges and Opportunities in Wireless Capsule Endoscopy		Tutorial on Federated Learning in Healthcare: Comprehensive Open Federated Ecosystem	
IBS-3F-R6	IBS	Medical Out-of-Distribution Analysis Challenge 2025	Self-Supervised Learning for 3D Medical Imaging	HEad and neCK TumOR (HECKTOR) Lesion Segmentation, Diagnosis and Prognosis using Multimodal Data	
IBS-2F-25	IBS	Tutorial on Hyperbolic Learning for Medical Imaging			

27 September 2025					
Meeting Room Name	Location	8:00-10:00	10:30-12:30	13:30-15:30	16:00-18:00
DCC2-3F-301	DCC 2	Reconstruction and Motion Estimation in Medical Imaging		Learn2Reg 2025	Foundation-Model-Driven Parkinson's Disease Auto Diagnosis Challenge
DCC2-3F-302	DCC 2				
DCC2-3F-303	DCC 2				
DCC1-1F-101	DCC 1	The 12 th Ophthalmic Medical Image Analysis Workshop			
DCC1-1F-102	DCC 1	ODIN2025 - Oral and Dental Image aNalysis Workshop			
DCC1-1F-103	DCC 1	SELMA3D 2025: Self-supervised learning for 3D light-sheet microscopy image segmentation	REport Generation of pathology using Pan-Asia Giga-pixel WSIs	Pancreatic Tumor Segmentation in Therapeutic and Diagnostic MRI	
DCC1-1F-104	DCC 1			Dehazing Echocardiography Challenge 2025	
DCC1-1F-105	DCC 1	Uncertainty Quantification in Medical Image Analysis / Uncertainty for Safe Utilization of Machine Learning in Medical Imaging			
DCC1-1F-106	DCC 1	MedShapeNet 2.0: A Large Repository of 3D Medical Shapes and a Python Toolbox for 3D Medical Shape Analysis		Shape in Medical Imaging (ShapeMI)	
DCC1-1F-107	DCC 1	8th International Workshop on PRedictive Intelligence in Medicine		MICCAI Workshop on Perinatal Imaging, Placental and Preterm Image analysis (PIPPI 2025)	
DCC1-1F-108	DCC 1	Statistical Atlases and Computational Modelling of the Heart		Learning with Longitudinal Medical Images and Data (LMID)	
DCC1-1F-112	DCC 1	Emerging LLM/LMM Applications in Medical Imaging (ELAMI)		3 rd Workshop on Foundation Models for General Medical AI	
DCC1-1F-109	DCC 1	iMIMIC - Interpretability of Machine Intelligence in Medical Image Computing		CREATE: Clinical-driven Robotics and Embodied AI Technology	
DCC1-1F-110	DCC 1	Third Edition of Data Engineering in Medical Imaging (DEMI)			
DCC1-1F-111	DCC 1	Medical Image Computing in Resource Constrained Settings Workshop & Knowledge Interchange (MIRASOL)			
DCC1-2F-206-207-208	DCC 1	6th MICCAI Workshop on "Distributed, Collaborative and Federated Learning" (DeCaF)		MICCAI Workshop on Human-AI Collaboration (HAIC)	
DCC1-2F-209-210-211	DCC 1	Endoscopic Vision Challenge 2025			
DCC1-2F-204	DCC 1	Multimodal Learning for Clinical Decision Support (ML-CDS)		The 4th Workshop on Computational Mathematics Modeling in Cancer Analysis	
DCC1-2F-205	DCC 1	MICCAI 2025 Workshop on Computational Diffusion MRI		CURVAS - Pancreatic Ductal AdenoCarcinoma Vascular Invasion	Multi Camera Robust Diagnosis of Fundus Diseases
DCC1-3F-301	DCC 1	COMputational PATHology and multimodal data Workshop		Agentic AI for Medicine	
IBS-2F-100	IBS	ASMUS 2025: The 6 th International Workshop on Advances in Simplifying Medical UltraSound			
IBS-2F-200	IBS	7 th Workshop on "GRaphs in biomedical AI Image anaLysis (GRAIL)			
IBS-3F-R1-R3	IBS	Multi-class Brain Hemorrhage Segmentation in Non-contrast Computed Tomography	Multimodal survival and recurrence prediction in head and neck oncology	Automated Lesion Segmentation in Whole-Body PET/CT and Longitudinal CT	Foundation Model for Cardiac MRI Reconstruction: Meeting the Real-world Challenge of Multi-center, Multi-vendor, and Multiple Diseases
IBS-3F-R4-R5	IBS	Liver Lesion Segmentation in Non-Contrast CT: Triphasic-Aided, Multi-Center, and Multi-Vendor Challenge		Low-field Pediatric Brain Magnetic Resonance Image Segmentation and Quality Assurance Challenge 2025	
IBS-3F-R6	IBS			FOMO: Foundation Model Challenge for Brain MRI 2025	



MICCAI 2025

**28th INTERNATIONAL CONFERENCE ON MEDICAL IMAGE
COMPUTING AND COMPUTER ASSISTED INTERVENTION**

23-27 September 2025

DAEJEON, REPUBLIC OF KOREA

From Concept to Clinical | Pan-Asian Connection

ORGANIZING SECRETARIAT

DEKON
CONGRESS & TOURISM

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