

# MICCAI 2023 *Vancouver* CANADA

26<sup>TH</sup> INTERNATIONAL CONFERENCE ON  
MEDICAL IMAGE COMPUTING AND  
COMPUTER ASSISTED INTERVENTION  
8-12 OCTOBER 2023  
VANCOUVER CONVENTION CENTRE  
VANCOUVER / CANADA



PROGRAM  
BOOK



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## WELCOME



**CAROLINE ESSERT**  
*MICCAI Society President*

Dear **MICCAI 2023** attendees,

It is with great pleasure that I welcome you to MICCAI 2023, the 26th International Conference on Medical Image Computing and Computer Assisted Intervention, on behalf of the MICCAI Society Board. This year's edition is taking place from October 8<sup>th</sup> to 12<sup>th</sup> in Vancouver, British Columbia. The dynamic and modern Canadian city, surrounded by magnificent natural scenery, provides an exceptional backdrop for our conference.

Last year, the 2022 edition in Singapore has already started to restore the excitement of the face-to-face conference, which many of you were able to attend in person. As the world seems to be getting back on track and most travel restrictions have been lifted, we're delighted to seeing you all again this year at the major annual gathering of our community.

This year again, the conference promises to be an exceptional event, showcasing the latest advancements, groundbreaking research, and collaborative efforts that are shaping the future of our field. With an impressive lineup of speakers, engaging sessions, and opportunities for networking, MICCAI 2023 is the platform where ideas converge and knowledge flourishes.

The MICCAI 2023 team has put together a very appealing program that I invite you to discover in the pages of this booklet. In addition to the latest innovations presented during the traditional scientific sessions, let yourself be surprised by a few new features that will certainly spark your interest, such as the MSB Thesis Madness or the fireside chat with stalwarts. Clinical Translation sessions, as well as the 3rd edition ClinICCAI, reflects our commitment to pushing the boundaries of our community. The growing presence and interest of clinicians for MICCAI topics is a tremendous asset which, I'm sure, will generate fruitful exchanges and drive our discipline forward.



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I would like to express my sincere gratitude to the organizing committee, coordinated this year by Tanveer Syeda-Mahmood, the program chairs and area chairs, the MICCAI Society interest groups, satellite event organizers and committees, our PCO Dekon Congress and Tourism, the MICCAI admin team, and our esteemed sponsors for their unwavering support in making this event possible. Not forgetting, naturally, the invaluable contribution of all the authors who share their latest findings, and the exceptional involvement of over a thousand reviewers. The success of MICCAI 2023 lies in your contributions and the collective pursuit of excellence.

As we embark on this journey over the next few days, I encourage you to fully immerse yourself in the conference experience. Attend the thought-provoking sessions, network with fellow attendees, actively engage in discussions, seek opportunities for collaboration, and explore the research and innovation on display. The true essence of MICCAI lies in the connections we make and the ideas we foster. I am confident that you will find inspiration and insights that will fuel your own contributions to our field. Let us seize this opportunity to learn, grow, and inspire one another.

Once again, welcome to MICCAI 2023. May this conference be a source of inspiration, knowledge, and lasting connections for all.

Warm regards,

**Caroline Essert**  
MICCAI Society President

## WELCOME



**TANVEER SYEDA-MAHMOOD**  
*MICCAI General Chair*

Dear **MICCAI 2023** Colleagues,

On behalf of the entire organizing committee, we are delighted to welcome you to the 26th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI) in the beautiful city of Vancouver, Canada. The days of COVID-19 pandemic are at last behind us and it gives us great pleasure to see so many of you attending the conference in person in this scenic location at the Vancouver Convention Center surrounded by mountains in Canada's densest and most ethnically diverse city with its thriving art, theatre and music.

We have a packed agenda of technical and social events arranged for you during the conference which we hope you will avail to have an outstanding conference experience. This edition of the conference features 33 physical workshops, 15 online workshops, 15 tutorials, and 29 challenges along with the main technical program. Co-located with the conference is also the 3rd Conference on Clinical Translation on Medical Image Computing and Computer-Assisted Intervention (CLINICCAI) continuing with our trend of making it inclusive for clinicians and engineers alike.

This year, we also received the largest number of submissions so far, with over 2300 submissions representing approximately a 30% increase compared to 2022. In the end, we accepted 730 papers accepted, with 68 orals and the remaining presented in poster form. These papers comprising ten volumes of Lecture Notes in Computer Science (LNCS) proceedings were selected after a rigorous double-blind peer review process supervised by 4 program chairs, 133 area chairs and over 1600 reviewers, with representation from several countries across all major continents. This year we also made special efforts to maintain gender balance in all aspects of technical review process so that nearly 31% of women scientists could be included in the decision making process. Among the exciting lineup of speakers this year are Turing Award winner Yann LeCun and leading experts Jocelyne Troccaz and Mihaela van der Schaar who will share their field experiences.

In keeping with the innovative spirit of the conference, we have introduced several new features in this year's program. First, to accommodate the growing number of submissions while keeping the quality of the program high, we are introducing a dual track format for the conference. Secondly, in the spirit of bringing together clinicians and engineers more closely at MICCAI, clinicians were appointed as



Clinical Chairs for the first time, and two sessions one focused on MIC and another on CAI are now part of the main oral program sessions.) To encourage and guide young and emerging scientists, we will be holding a Ph.D Thesis 3-minute Madness Event run by the MICCAI Student Board (MSB). Also featuring new this year will a “fireside chat with the experts” event reflecting on the evolution and state of our field and a lightweight fun poster spotlight event polling the audience for the posters that attracted their attention for whatever reason. In keeping with the latest developments in generative AI, the conference also benefitted from the use of large language models (GPT-3) for suggestions on session titles and topic grouping.

Pulling a nearly 2000 audience conference together is a large scale effort staffed by over 50 members of the organizing committee and the MICCAI society staff to whom we express sincere gratitude. In particular, we would like to express our profound thanks to the Program Chairs, Hayit Greenspan, Anant Madabhushi, Parvin Mousavi, and Tim Salcudean and MICCAI Submission System Manager Kitty Wong who did an enormous amount of meticulous work throughout the paper submission, review, program planning, and proceeding preparation process to prepare an outstanding technical program. We are especially appreciative of the effort and dedication of our Satellite Events Chair, Bennett Landman who tirelessly coordinated the organization of over 90 satellite events consisting of workshops, challenges and tutorials in conjunction with workshop chairs Hongzhi Wang, Alistair Young, tutorial chairs Islem Rekik, Guoyan Zheng, and challenge chairs, Lena Maier-Hein, Jayashree Kalpathy-Kramer, Alexander Seitel who worked hard to assemble a strong program for the satellite events. Special mention this year also goes to our first-time Clinical Chairs, Drs. Curtis Langlotz, Charles Kahn, and Masaru Ishii who helped us select papers for the clinical sessions and organized the clinical sessions.

We acknowledge the contributions of our Keynote Chairs, William Wells and Alejandro Frangi who secured our keynote speakers. Our publication chairs, Kevin Zhou and Ron Summers helped in our efforts to make the MICCAI papers indexed in PubMed. It was a challenging year for fundraising for the conference due to the recovery of the economy after COVID pandemic. Despite this situation, our industrial sponsorship chairs led by Mohammad Yaqub, Le Lu, Yanwu Xu along with Dekon’s Mehmet Eldegez worked tirelessly to secure sponsors in innovative ways, for which we are grateful. In particular, we are grateful to our platinum sponsors United Imaging, University of British Columbia, and gold sponsors Siemens, Canon, ClaroNov, Alibaba whose significant funding support helped us meet the budget of the conference. Special thanks goes to our local arrangement chair Purang Abolmaesumi who not only helped secure some of this funding from UBC but also helped with matters of immigration and student volunteer support.

An active body of MICCAI Student Board led by Camila Gonzalez and our 2023 student representatives Nathaniel Braman and Vaishnavi Subramanian helped put together student-run networking and social events including a novel Ph.D. thesis 3-minute madness event to give spotlight to new graduates for their careers. Similarly, Women in MICCAI chairs Xiaoxiao Li and Jayanthi Sivaswamy and RISE chairs, Islem Rekik, Pingkun Yan, and Andrea Lara further strengthened the quality of our technical program by their organized events. Our local arrangement chairs Purang Abolmaesumi and



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Mehdi Moradi helped coordinate the visits to the local sites in Vancouver both during the selection of the site and organization of our local activities during the conference. Our Young Investigator chairs Marius Linguraru, Archana Venkataraman, Antonio Porras Perez helped secure funding from NIH for early career scientist participation in the conference. Our communications chair Ehsan Adeli along with Diana Cunningham was active in making the conference visible on social media platforms and circulating the newsletters. Niharika DSouza was our cross-committee liaison providing note-taking support for all our meetings. We are grateful to all these organization committee members for their active contributions that made the conference successful.

We would like to thank MICCAI society chair Caroline Essert, and the MICCAI board for their approvals, support and feedback that provided clarity on various aspects of running the conference. Behind the scenes, we acknowledge the contributions of the MICCAI secretariat personnel, Janette Wallace, and Johanne Langford, who kept a close eye on logistics and budgets, and Diana Cunningham and Anna Van Vliet for including our conference announcements in a timely manner in the MICCAI society newsletters, and to John Baxter for introducing the new virtual platform in time for the conference.

Finally, the physical organization of the conference at the site, budget financials, fund raising, and the smooth running of events would not have been possible without our Professional Conference Organization team from Dekon Congress & Tourism led by Mehmet Eldegez. The model of having a PCO run the conference used at MICCAI significantly reduces the work of general chairs for which we are particularly grateful. Lastly, as members of the MICCAI community you have helped strengthen the conference program as both authors and reviewers for which we are grateful.

With all that hard work behind us, let us all enjoy the conference program and events now. Welcome to Vancouver!

Tanveer Syeda-Mahmood  
James Duncan  
Russ Taylor  
General Chairs, MICCAI 2023

## MICCAI BOARD

<b>Caroline Essert</b> (President, General Chair 2021)	University of Strasbourg, France
<b>Leo Joskowicz</b> ( <i>outgoing President, General Chair 2020</i> )	The Hebrew University of Jerusalem, Israel
<b>S. Kevin Zhou</b> (Treasurer)	University of Science and Technology of China
<b>Linwei Wang</b> (Secretary)	Rochester Institute of Technology, USA
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<b>Jinah Park</b> (General Chair 2025)	Korea Advanced Institute of Science & Technology (KAIST), South Korea

### MICCAI Society Staff Members

<b>Janette Wallace</b>	MICCAI Society Board Secretariat
<b>Johanne Langford</b>	MICCAI Society Board Assistant
<b>Anna Van Vliet</b>	Marketing and Communications Coordinator
<b>Diana Cunningham</b>	Marketing and Communications Consultant
<b>Kitty Wong</b>	Abstract Database Coordinator
<b>John Baxter</b>	Society Membership Coordinator
<b>Jessica Guillemette</b>	Administrative and Technical Support
<b>Silvina Ré</b>	Webmaster



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Alexander Seitel  
Lena Maier-Hein (Advisor)

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Charles Kahn, M.D. Ph.D  
Masaru Ishii, M.D. Ph.D

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Mehdi Moradi

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Alex Frangi

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### PUBLICATIONS CHAIRS

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#### VIRTUAL PLATFORM MANAGER

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## MICCAI 2023 FLOOR PLAN

GROUND LEVEL



### Satellite Events Meeting Rooms M1-M20

LEVEL 1





## GENERAL INFORMATION

### Registration Desk

The registration desk will be located on the Entrance Level of Vancouver Convention Center East Building.

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

8 October 2023, Sunday	: 07:00 - 19:30
9 October 2023, Monday	: 07:00 - 18:30
10 October 2023, Tuesday	: 07:00 - 19:00
11 October 2023, Wednesday	: 07:00 - 18:00
12 October 2023, Thursday	: 07:00 - 16:30

### Exhibition - Opening Hours

Vancouver Convention Center East Building - Exhibit Hall B-C will be used as the exhibition area. The exhibition hours are as below;

9 October 2023, Monday	: 08:00 - 18:00
10 October 2023, Tuesday	: 08:00 - 18:00
11 October 2023, Wednesday	: 08:00 - 17:30

### Lunches and Coffee Breaks for Main Conference

Lunches and coffee breaks are included in the registration and will be served at Vancouver Convention Center East Building - Exhibit Hall B-C where the exhibition area and the poster area are located. Coffee Break and Lunch Break times are as follows;

#### 9 October 2023, Monday

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

#### 10 October 2023, Tuesday

09:30 - 10:00	Coffee Break
12:00 - 13:00	Lunch Break
16:00 - 16:30	Coffee Break

#### 11 October 2023, Wednesday

09:30 - 10:00	Coffee Break
12:00 - 13:00	Lunch Break
14:30 - 15:00	Coffee Break

### Lunches and Coffee Breaks for Satellite Events

Lunches and coffee breaks are included in the satellite event registration and will be served at the Vancouver Convention Center East Building - Exhibit Hall B-C. The satellite events room will be located at Level 1 so during the breaks the participants should come one level below to have their coffee and lunch breaks. Coffee Break and Lunch Break times are as follows;

## GENERAL INFORMATION

### 8 October 2023, Sunday

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

### 12 October 2023, Thursday

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

### Name Badges

Please always wear your name badges. Only MICCAI 2023 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. The Wifi credentials are as below;

**Wireless Name** : **MICCAI 2023**  
**Password** : **20MICCAI23**

### Poster Presentations

Vancouver Convention Center East Building - Exhibit Hall B-C will be used as the poster area. All accepted papers are to be presented as posters at the conference. During the assigned poster sessions, one of the authors must present the paper at the poster. The posters may be mounted beginning at 07:00 on Monday, October 9, and must be removed on Wednesday, October 11, after 16:00. Posters left behind will be discarded.

### Poster Identifiers

Each poster is assigned a unique identifier. The letter indicates the day of the poster presentation, and the number indicates the session number and the order of the poster.

### 9 October 2023, Monday

Session	Time	Poster Labels
Interventions, Guidance and Clinical Applications Computational Pathology	13:00 - 14:30	M-01-1 / M-01-143
Machine Learning - Learning Strategies	16:00 - 17:30	M-02-1 / M-02-117

### 10 October 2023, Tuesday

Session	Time	Poster Labels
Machine Learning - Explainability, Bias, and Uncertainty	09:30 - 11:00	T-03-1 / T-03-126
Computer Aided Diagnosis and Treatment	13:00 - 14:30	T-04-1 / T-04-120

## GENERAL INFORMATION

### 11 October 2023, Wednesday

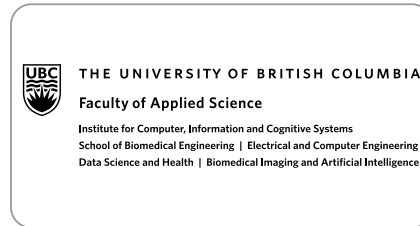
Session	Time	Poster Labels
Image Segmentation	09:30 - 11:00	W-05-1 / W-05-119
Image Reconstruction and Registration	14:30 - 16:00	W-06-1 / W-06-105

### Oral Presentations

For Oral sessions, presentations will be given live followed by a live Q&A. The sessions will be streamed from the virtual platform for virtual attendees. All sessions will be broadcast LIVE from the platform where the virtual conference attendees can participate in real-time. The detailed oral presentation program can be found on the following pages.

## SPONSORS

### PLATINUM SPONSORS



### GOLD SPONSORS



### SILVER SPONSORS



### BRONZE SPONSORS



### START-UP SPONSORS



## PROGRAM OVERVIEW

### 8 October 2023, Sunday

08:00 - 10:00	Morning Workshops/Challenges/Tutorials	LEVEL 1 MEETING ROOMS
10:00 - 10:30	Coffee Break	EXHIBIT HALL B+C
10:30 - 12:30	Morning Workshops/Challenges/Tutorials	LEVEL 1 MEETING ROOMS
12:30 - 13:30	Lunch Break	EXHIBIT HALL B+C
13:30 - 15:30	Afternoon Workshops/Challenges/Tutorials	LEVEL 1 MEETING ROOMS
15:30 - 16:00	Coffee Break	EXHIBIT HALL B+C
16:00 - 18:00	Afternoon Workshops/Challenges/Tutorials	LEVEL 1 MEETING ROOMS
18:00 - 19:30	Welcome Reception	EXHIBIT HALL B+C

### 9 October 2023, Monday

08:00 - 09:00	Opening Ceremony & Chairs Reports	EXHIBIT HALL A
09:00 - 10:30	Oral Session 1 <b>Clinical Translation I – Medical Image Computing</b>	EXHIBIT HALL A
09:00 - 10:30	Oral Session 2 <b>Computational Pathology</b>	BALLROOM A
10:30 - 11:00	Coffee Break	EXHIBIT HALL B+C
11:00 - 12:00	Keynote Session 1 Mihaela van der Schaar <b>Synthetic Data: Powerful creation not second rate copy</b>	EXHIBIT HALL A
12:00 - 13:00	Lunch Break	EXHIBIT HALL B+C
12:00 - 13:00	Ph.D Thesis and EC Challenge Event	BALLROOM A
13:00 - 14:30	Poster session 1 <b>Interventions, Guidance and Clinical Applications</b> <b>Computational Pathology</b>	EXHIBIT HALL B+C

## PROGRAM OVERVIEW

14:30 - 16:00	Oral Session 3 <b>Machine Learning I - Semi-Supervised &amp; Self-Supervised</b>	EXHIBIT HALL A
14:30 - 16:00	Oral Session 4 <b>Computer-Assisted Interventions and Surgery</b>	BALLROOM A
16:00 - 16:30	Coffee Break	EXHIBIT HALL B+C
16:00 - 17:30	Poster Session 2 <b>Machine Learning - Learning Strategies</b>	EXHIBIT HALL B+C
17:30 - 18:30	Fireside Chat/Debate Russ Taylor, Jim Duncan, Nicholas Ayache, Jocelyne Troccaz, Chair: Tanveer Syeda-Mahmood	EXHIBIT HALL A
18:30 - 19:30	MSB Networking Event	BALLROOM A

### 10 October 2023, Tuesday

08:00 - 09:30	Oral Session 5 <b>Machine Learning II - Towards Transparent AI</b>	EXHIBIT HALL A
08:00 - 09:30	Oral Session 6 <b>Neuroimaging - Morphology to Functionality</b>	BALLROOM A
09:30 - 10:00	Coffee Break	EXHIBIT HALL B+C
09:30 - 11:00	Poster Session 3 <b>Machine Learning - Explainability, Bias, and Uncertainty</b>	EXHIBIT HALL B+C
11:00 - 12:00	Keynote Session 2 Dr. Yann LeCun <b>Towards AI systems that can learn, reason, and plan</b>	EXHIBIT HALL A
12:00 - 13:00	Lunch Break	EXHIBIT HALL B+C
12:00 - 13:00	Women in MICCAI session	BALLROOM A
13:00 - 14:30	Poster Session 4 <b>Computer Aided Diagnosis and Treatment</b>	EXHIBIT HALL B+C



14:30 - 16:00 **MICCAI Society Spotlight**  
**SIG Challenges**  
**Enduring Impact and Fellow Distinguished Awards** EXHIBIT HALL A

16:00 - 16:30 Coffee Break EXHIBIT HALL B+C

16:30 - 18:00 Oral Session 7  
**Computer-aided Diagnosis with Longitudinal and Multi-modal Data** EXHIBIT HALL A

16:30 - 18:00 Oral Session 8  
**Surgical Visualization and Data Science** BALLROOM A

**19:30 - 23:00 Gala Dinner @ Vancouver Convention Center West Building Ballroom A-B-C-D**

## 11 October 2023, Wednesday

08:00 - 09:30 Oral Session 9  
**Segmentation - Methods and Applications** EXHIBIT HALL A

08:00 - 09:30 Oral Session 10  
**Clinical Translation II – Computer Assisted Intervention** BALLROOM A

09:30 - 10:00 Coffee Break EXHIBIT HALL B+C

09:30 - 11:00 Poster Session 5  
**Image Segmentation** EXHIBIT HALL B+C

11:00 - 12:00 Keynote Session 3  
Dr. Jocelyne Troccaz  
**When Vaucanson meets Hippocrate:  
Promises and Reality of Medical Robotics** EXHIBIT HALL A

12:00 - 13:00 Lunch Break EXHIBIT HALL B+C

12:00 - 13:00 RISE Event LEVEL 1 - MEETING ROOM 1

13:00 - 14:30 Oral Session 11  
**Machine Learning III - Advances in Learning Strategies** EXHIBIT HALL A

13:00 - 14:30 Oral Session 12  
**Physics-based Image Formation and Reconstruction** BALLROOM A

14:30 - 15:00 Coffee Break EXHIBIT HALL B+C



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14:30 - 16:00	Poster Session 6 <b>Image Reconstruction and Registration</b>	<i>EXHIBIT HALL B+C</i>
16:00 - 17:30	Charting the Future: Poster Highlights from MICCAI	<i>EXHIBIT HALL A</i>
	MICCAI Paper Awards	<i>EXHIBIT HALL A</i>
	Closing ceremony and 2024 preview	<i>EXHIBIT HALL A</i>

**12 October 2023, Thursday**

08:00 - 10:00	Morning Workshops/Challenges/Tutorials	<i>LEVEL 1 MEETING ROOMS</i>
10:00 - 10:30	Coffee Break	<i>EXHIBIT HALL B+C</i>
10:30 - 12:30	Morning Workshops/Challenges/Tutorials	<i>LEVEL 1 MEETING ROOMS</i>
12:30 - 13:30	Lunch Break	<i>EXHIBIT HALL B+C</i>
13:30 - 15:30	Afternoon Workshops/Challenges/Tutorials	<i>LEVEL 1 MEETING ROOMS</i>
15:30 - 16:00	Coffee Break	<i>EXHIBIT HALL B+C</i>
16:00 - 18:00	Afternoon Workshops/Challenges/Tutorials	<i>LEVEL 1 MEETING ROOMS</i>

## KEYNOTES



### MIHAELA VAN DER SCHAAR

*Synthetic Data: Powerful creation not second rate copy*

**Monday, 9 October 2023 / 11:00-12:00**

**EXHIBIT HALL A - MAIN HALL**

Mihaela van der Schaar is the John Humphrey Plummer Professor of Machine Learning, Artificial Intelligence and Medicine at the University of Cambridge and a Fellow at The Alan Turing Institute in London. In addition to leading the van der Schaar Lab, Mihaela is founder and director of the Cambridge Centre for AI in Medicine (CCAIM).

Mihaela was elected IEEE Fellow in 2009. She has received numerous awards, including the Oon Prize on Preventative Medicine from the University of Cambridge (2018), a National Science Foundation CAREER Award (2004), 3 IBM Faculty Awards, the IBM Exploratory Stream Analytics Innovation Award, the Philips Make a Difference Award and several best paper awards, including the IEEE Darlington Award.

Mihaela is personally credited as inventor on 35 USA patents (the majority of which are listed here), many of which are still frequently cited and adopted in standards. She has made over 45 contributions to international standards for which she received 3 ISO Awards. In 2019, a Nesta report determined that Mihaela was the most-cited female AI researcher in the U.K.

For more information, please click: [www.vanderschaar-lab.com](http://www.vanderschaar-lab.com)

## KEYNOTES



### YANN LECUN

*Towards AI systems that can learn, reason, and plan*

**Tuesday, 10 October 2023 / 11:00-12:00**

**EXHIBIT HALL A - MAIN HALL**

Yann LeCun is VP and Chief AI Scientist at Meta and Silver Professor at NYU affiliated with the Courant Institute and the Center for Data Science. He was the founding Director of Facebook AI Research and of the NYU Center for Data Science. He received an EE Diploma from ESIEE (Paris) in 1983, a PhD in Computer Science from Sorbonne Université (Paris) in 1987. After a postdoc at the University of Toronto, he joined AT&T Bell Laboratories. He became head of the Image Processing Research Department at AT&T Labs-Research in 1996, and joined NYU in 2003 after a short tenure at the NEC Research Institute. In late 2013, LeCun became Director of AI Research at Facebook, while remaining on the NYU Faculty part-time. He was visiting professor at Collège de France in 2016. His research interests include machine learning and artificial intelligence, with applications to computer vision, natural language understanding, robotics, and computational neuroscience. He is best known for his work in deep learning and the invention of the convolutional network method which is widely used for image, video and speech recognition. He is a member of the US National Academy of Sciences, National Academy of Engineering, and the French Académie des Sciences, a Chevalier de la Légion d'Honneur, a fellow of AAAI and AAAS, the recipient of the 2022 Princess of Asturias Award, the 2014 IEEE Neural Network Pioneer Award, the 2015 IEEE Pattern Analysis and Machine Intelligence Distinguished Researcher Award, the 2016 Lovie Award for Lifetime Achievement, the University of Pennsylvania Pender Award, and honorary doctorates from IPN, Mexico, EPFL, and Université Côte d'Azur. He is the recipient of the 2018 ACM Turing Award (with Geoffrey Hinton and Yoshua Bengio) for "conceptual and engineering breakthroughs that have made deep neural networks a critical component of computing".

## KEYNOTES



### GRETCHEN PURCELL JACKSON

#### *Scientific Evidence to Support Computational Technology Adoption in Clinical Settings*

**Tuesday, 10 October 2023 / 13:00-14:00 (CLINICAI) LEVEL 1 - MEETING ROOM 1**

Gretchen Purcell Jackson is vice president and scientific medical officer at Intuitive and an associate professor of surgery, pediatrics, and biomedical informatics at the Vanderbilt University Medical Center (VUMC). Dr. Jackson is an internationally recognized biomedical informatician and accomplished clinical surgeon with over 30 years of contributions to informatics research and surgical science. She earned her BS in electrical engineering and biological sciences, MD, and PhD in medical information sciences from Stanford University. Before joining Intuitive in 2022, Dr. Jackson spent 12 years as an academic surgeon scientist at VUMC then served as the chief health and science officer for IBM Watson Health from 2018 to 2021. Dr. Jackson is a president and chair of the board of directors for the American Medical Informatics Association (AMIA) and an elected fellow of the American College of Medical Informatics (FACMI) and AMIA (FAMIA). She is also an elected member of the Society for University Surgeons, the Southern Surgical Association, and the American Surgical Association.

## KEYNOTES



### JOCELYNE TROCCAZ

*When Vaucanson meets Hippocrate: promises and reality of medical robotics*

**Wednesday, 11 October 2023 / 11:00-12:00**

**EXHIBIT HALL A - MAIN HALL**

Jocelyne TROCCAZ is CNRS Senior scientist in the TIMC laboratory in Grenoble, France. She received a Ph.D. in Computer Science from the Institut National Polytechnique de Grenoble in 1986 and has been a teaching assistant from 1984 to 1988 of the Grenoble University. She is a CNRS researcher since 1988 and holds a position of Research Director since 1998. Until 1990, her activity was in the field of automatic robot programming for industrial and spatial robotics. She moved to Medical Robotics in 1990. Her research activity is about image-guided robotics and more generally image-guided assistance for diagnosis and therapy. She has tight collaborations with clinical teams of Grenoble University Hospital and La Pitié Salpêtrière Paris Hospital and she brought significant innovations to several clinical domains (urology, radiotherapy, cardiac surgery, orthopedics, etc.). Thanks to transfer to industrial partners hundreds of thousands of patients, worldwide, benefited from technology and systems she developed.

From 1996 to 2013, she has been Director of the Computer Assisted Medical Interventions research group of the TIMC laboratory. She has coordinated the French Medical Robotic Platform Network (Robotex, program 2011-2020) and was responsible of the French Research Network about Computer Assisted Medical Interventions (2012-2025 program). From 2019 she is one of the two animators of a Chair CAMI Assistant in the MIAI@Grenoble-Alpes center for Artificial Intelligence launched in 2019.

She is fellow member of the MICCAI (2010) and IEEE (2018) societies. She was recipient of several awards: French Academy of Surgery award (2014), CNRS Silver Medal (2015), MICCAI Enduring Impact Award (2022). In 2016, she received the highest French decoration (Légion d'Honneur). She is member of the French Academy of Surgery since 2014 and of the French Academy of Sciences since 2022.



# **SOCIAL EVENTS**



26<sup>TH</sup> INTERNATIONAL CONFERENCE ON MEDICAL IMAGE COMPUTING  
AND COMPUTER ASSISTED INTERVENTION  
8-12 OCTOBER 2023  
VANCOUVER / CANADA

## SOCIAL EVENTS

### **MICCAI 2023 Welcome Reception**

**8 October 2023 / 18:00 – 19:30**

Vancouver Convention Center East Building  
Exhibit Hall B-C



**MICCAI**

### **MICCAI 2023 Gala Dinner**

**10 October 2023 / 19:30 – 23:00**

Vancouver Convention Center West Building  
Ballroom A-B-C-D

MICCAI 2023 Gala Dinner will be hosted at the Vancouver Convention Center West Building. The building is 2 minutes walking distance from the Conference Venue. Open Buffet Dinner and drinks will be served and a local live band will perform as well.

**ORAL PRESENTATION  
PROGRAM**

## Oral 1: Clinical Translation I – Medical Image Computing

Monday, October 9, 09:00 to 10:30  
Exhibit Hall A – Main Hall

**Session Chairs:** Charles Kahn, University of Pennsylvania, USA  
Curtis Langlotz, Stanford University, USA

- 09:00-09:30      **From Algorithm to the Clinic: Critical issues to Consider during Translation of Image Analysis Advances into Daily Clinical Practice**  
Invited Session Speaker: Mariam Aboian, Yale School of Medicine, USA
- 09:30-09:45      **Shifting More Attention to Breast Lesion Segmentation in Ultrasound Videos**  
Speaker: Huazhu Fu, A\*STAR, Singapore
- 09:45-10:00      **Foundation Ark: Accruing and Reusing Knowledge for Superior and Robust Performance**  
Speaker: DongAo Ma, Arizona State University, USA
- 10:00-10:15      **CheXstray: A Real-Time Multi-Modal Monitoring Workflow for Medical Imaging AI**  
Speaker: Jameson Merkow, Microsoft, USA
- 10:15-10:30      **Thinking Like Sonographers: A Deep CNN Model for Diagnosing Gout from Musculoskeletal Ultrasound**  
Speaker: Zhi Cao, Nanjing University of Aeronautics and Astronautics, China

## Oral 2: Computational Pathology

Monday, October 9, 09:00 to 10:30  
Ballroom A – Parallel Hall

### Session Chairs:

Saad Nadeem, Memorial Sloan Kettering Cancer Center, USA  
Daniel Racoceanu, Sorbonne University, France

- 09:00-09:15      **Pathology-and-genomics Multimodal Transformer for Survival Outcome Prediction**  
Speaker: Kexin Ding, University of North Carolina at Charlotte, USA
- 09:15-09:30      **NASDM: Nuclei-Aware Semantic Histopathology Image Generation Using Diffusion Models**  
Speaker: Aman Shrivastava, University of Virginia, USA
- 09:30-09:45      **DAS-MIL: Distilling Across Scales for MIL Classification of Histological WSIs**  
Speaker: Gianpaolo Bontempo, University of Modena and Reggio Emilia, Italy
- 09:45-10:00      **MulHiST: Multiple Histological Staining for Thick Biological Samples via Unsupervised Image-to-Image Translation**  
Speaker: Lulin Shi, Hong Kong University of Science and Technology, China
- 10:00-10:15      **Multi-task Learning of Histology and Molecular Markers for Classifying Diffuse Glioma**  
Speaker: Xiaofei Wang, University of Cambridge, United Kingdom
- 10:15-10:30      **Gene-induced Multimodal Pre-training for Image-omic Classification**  
Speaker: Ting Jin, East China Normal University, China

## Oral 3: Machine Learning I – Semi-Supervised & Self-Supervised

Monday, October 9, 14:30 to 16:00

Exhibit Hall A – Main Hall

### Session Chairs:

Shekoofeh Azizi, Google, USA

Davood Karimi, Harvard University, USA

- 14:30-14:45      **Multi-modal Variational Autoencoders for normative modelling across multiple imaging modalities**  
Speaker: Ana Lawry Aguila, University College London, United Kingdom
- 14:45-15:00      **Towards AI-driven radiology education: A self-supervised segmentation-based framework for high-precision medical image editing**  
Speaker: Kazuma Kobayashi, National Cancer Center Research Institute, Japan
- 15:00-15:15      **Prompt-MIL: Boosting Multi-Instance Learning Schemes via Task-specific Prompt Tuning**  
Speaker: Jingwei Zhang, Stony Brook Universtiy, USA
- 15:15-15:30      **LOTUS: Learning to Optimize Task-based US representations**  
Speaker: Yordanka Velikova, Technical University of Munich, Germany
- 15:30-15:45      **Category-level Regularized Unlabeled-to-labeled Learning for Semi-supervised Prostate Segmentation with Multi-site Unlabeled Data**  
Speaker: Zhe Xu, The Chinese University of Hong Kong, Hong Kong SAR, China
- 15:45-16:00      **Correlation-Aware Mutual Learning for Semi-supervised Medical Image Segmentation**  
Speaker: Shengbo Gao, Deepwise AI Lab, China



## Oral 4: Computer Assisted Interventions and Surgery

Monday, October 9, 14:30 to 16:00  
Ballroom A – Parallel Hall

### Session Chairs:

Sophia Bano, University College London, UK  
Mathias Unberath, Johns Hopkins University, USA

- 14:30-14:45      **Detecting the Sensing Area of A Laparoscopic Probe in Minimally Invasive Cancer Surgery**  
Speaker: Baoru Huang, Imperial College London, United Kingdom
- 14:45-15:00      **FLIm-based In Vivo Classification of Residual Cancer in the Surgical Cavity during Transoral Robotic Surgery**  
Speaker: Mohamed Hassan, University of California Davis, USA
- 15:00-15:15      **FocalErrorNet: Uncertainty-aware focal modulation network for inter-modal registration error estimation in ultrasound-guided neurosurgery**  
Speaker: Soorena Salari, Concordia University, Canada
- 15:15-15:30      **From Tissue to Sound: Model-based Sonification of Medical Imaging**  
Speaker: Sasan Matinfar, Technical University of Munich, Germany
- 15:30-15:45      **ConTrack: Contextual Transformer for Device Tracking in X-ray**  
Speaker: Yue Zhang, Siemens Healthineers, USA
- 15:45-16:00      **A Transfer Learning Approach to Localise a Deep Brain Stimulation Target**  
Speaker: Ying-Qiu Zheng, University of Oxford, United Kingdom

## Oral 5: Machine Learning II – Towards Transparent AI

Tuesday, October 10, 08:00 to 09:30  
Exhibit Hall A – Main Hall

### Session Chairs:

Ruogu Fang, University of Florida, USA  
Zongyuan Ge, Monash University, Australia

- 08:00-08:15      **Interpretable Medical Image Classification using Prototype Learning and Privileged Information**  
Speaker: Luisa Gallée, Experimental Radiology, University Hospital Ulm, Germany
- 08:15-08:30      **How Reliable are the Metrics Used for Assessing Reliability in Medical Imaging?**  
Speaker: Mayank Gupta, Indian Institute of Technology Delhi, India
- 08:30-08:45      **Interpretable Deep Biomarker for Serial Monitoring of Carotid Atherosclerosis Based on Three-Dimensional Ultrasound Imaging**  
Speaker: Xueli Chen, City University of Hong Kong, Hong Kong SAR, China
- 08:45-9:00        **B-Cos Aligned Transformers Learn Human-Interpretable Features**  
Speaker: Manuel Tran, Technical University Munich, Germany
- 09:00-09:15      **An Explainable Geometric-Weighted Graph Attention Network for Identifying Functional Networks Associated with Gait Impairment**  
Speaker: Favour Nerrise, Stanford University, USA
- 09:15-09:30      **A Reliable and Interpretable Framework of Multi-view Learning for Liver Fibrosis Staging**  
Speaker: Zheyao Gao, Fudan University, China

## Oral 6: Neuroimaging – Morphology to Functionality

Tuesday, October 10, 08:00 to 09:30

Ballroom A – Parallel Hall

### Session Chairs:

Minjeong Kim, University of North Carolina at Greensboro, USA

Matthias Wilms, University of Calgary, Canada

- 08:00-08:15      **Dynamic Functional Connectome Harmonics**  
Speaker: Hoyt Patrick Taylor, University of North Carolina at Chapel Hill, USA
- 08:15-08:30      **Mixing Temporal Graphs with MLP for Longitudinal Brain Connectome Analysis**  
Speaker: Hyuna Cho, Pohang University of Science and Technology, South Korea
- 08:30-08:45      **Unified surface and volumetric inference on functional imaging data**  
Speaker: Thomas F. Kirk, University of Nottingham, United Kingdom
- 08:45-9:00      **Multi-task Joint Prediction of Infant Cortical Morphological and Cognitive Development**  
Speaker: Xinrui Yuan, The University of North Carolina at Chapel Hill, USA
- 09:00-09:15      **Flexible Unfolding of Circular Structures for Rendering Textbook-Style Cerebrovascular Maps**  
Speaker: Leonhard Rist, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
- 09:15-09:30      **Bidirectional Mapping with Contrastive Learning on Multimodal Neuroimaging Data**  
Speaker: Kai Ye, University of Pittsburgh, USA

## Oral 7: Computer Aided Diagnosis with Longitudinal and Multi-modal Data

Tuesday, October 10, 16:30 to 18:00  
Exhibit Hall A – Main Hall

### Session Chairs:

Samuel Kadoury, Polytechnique Montréal, Canada  
Mirabela Rusu, Stanford University, USA

- 16:30-16:45      **Longitudinal Multimodal Transformer Integrating Imaging and Latent Clinical Signatures From Routine EHRs for Pulmonary Nodule Classification**  
Speaker: Thomas Li, Vanderbilt University, USA
- 16:45-17:00      **Graph-theoretic automatic lesion tracking and detection of patterns of lesion changes in longitudinal CT studies**  
Speaker: Leo Joskowicz, Hebrew University of Jerusalem, Israel
- 17:00-17:15      **Utilizing Longitudinal Chest X-Rays and Reports to Pre-Fill Radiology Reports**  
Speaker: Qingqing Zhu, National Institutes of Health, USA
- 17:15-17:30      **Improving Outcome Prediction of Pulmonary Embolism by De-Biased Multi-Modality Model**  
Speaker: Shreyas Kulkarni, Brown University, USA
- 17:30-17:45      **Contrastive Masked Image-Text Modeling for Medical Visual Representation Learning**  
Speaker: Cheng Chen, Massachusetts General Hospital and Harvard Medical School, USA
- 17:45-18:00      **Multimodal Deep Fusion in Hyperbolic Space for Mild Cognitive Impairment Study**  
Speaker: Dajiang Zhu, The University of Texas at Arlington, USA

## Oral 8: Surgical Visualization and Data Science

Tuesday, October 10, 16:30 to 18:00  
Ballroom A – Parallel Hall

### Session Chairs:

Sandy Engelhardt, Heidelberg University Hospital, Germany  
Mobarakol Islam, University College London, UK

- 16:30-16:45      **Self-supervised Sim-to-Real Kinematics Reconstruction for Video-based Assessment of Intraoperative Suturing Skills**  
Zijun Cui, University of Southern California, USA
- 16:45-17:00      **POV-Surgery: A Dataset for Egocentric Hand and Tool Pose Estimation During Surgical Activities**  
Speaker: Rui Wang, ETH Zürich, Switzerland
- 17:00-17:15      **Intelligent Virtual B-scan Mirror (IVBM)**  
Speaker: Michael Sommersperger, Technical University of Munich, Germany
- 17:15-17:30      **EndoSurf: Neural Surface Reconstruction of Deformable Tissues with Stereo Endoscope Videos**  
Speaker: Xuelian Cheng, Monash University, Australia
- 17:30-17:45      **Neural LerPlane Representations for Fast 4D Reconstruction of Deformable Tissues**  
Speaker: Chen Yang, Shanghai Jiao Tong University, China
- 17:45-18:00      **ACT-Net: Anchor-context Action Detection in Surgery Videos**  
Speaker: Jiang Liu, University of Birmingham, United Kingdom

## Oral 9: Segmentation – Methods and Applications

Wednesday, October 11, 08:00 to 09:30  
Exhibit Hall A – Main Hall

### Session Chairs:

Ulas Bagci, Northwestern University, USA  
Herve Lombaert, ETS Montreal, Canada and Inria, France

- 08:00-08:15      **SwinMM: Masked Multi-view with Swin Transformers for 3D Medical Image Segmentation**  
Speaker: Yiqing Wang, Shanghai Jiao Tong University, China
- 08:15-08:30      **MultiTalent: A Multi-Dataset Approach to Medical Image Segmentation**  
Speaker: Constantin Ulrich, German Cancer Research Center, Germany
- 08:30-08:45      **Structure-Preserving Instance Segmentation via Skeleton-Aware Distance Transform**  
Speaker: Donglai Wei, Boston College, USA
- 08:45-09:00      **Pelvic Fracture Segmentation Using a Multi-scale Distance-weighted Neural Network**  
Speaker: Yanzhen Liu, Beihang University, China
- 09:00-09:15      **Robust and Generalisable Segmentation of Subtle Epilepsy-causing Lesions: a Graph Convolutional Approach**  
Speaker: Hannah Spitzer, LMU University Hospital, Germany
- 09:15-09:30      **CorSegRec: A Topology-Preserving Scheme for Extracting Fully-Connected Coronary Arteries from CT Angiography**  
Speaker: Dinggang Shen, ShanghaiTech University & Shanghai United Imaging Intelligence Co., Ltd., China

## Oral 10: Clinical Translation II – Computer Assisted Intervention

Wednesday, October 11, 08:00 to 09:30  
Ballroom A – Parallel Hall

### Session Chairs:

Masaru Ishii, Johns Hopkins Hospital, USA  
Daniel Hashimoto, University of Pennsylvania, USA

- 08:00-08:30      **Panel Discussion**  
Panelists:  
Mariam Aboian, Yale School of Medicine, USA  
Daniel Hashimoto, University of Pennsylvania, USA  
Russell Taylor, Johns Hopkins University, USA  
Sandrine de Ribaupierre, Western University, Canada
- 08:30-08:45      **From Mesh Completion to AI Designed Crown**  
Speaker: Golriz Hosseinimanesh, Polytechnique Montreal, Canada
- 08:45-09:00      **Optical Ultrasound Imaging for Endovascular Repair of Abdominal Aortic Aneurysms: A Pilot Study**  
Speaker: Adrien Desjardins, University College London, United Kingdom
- 09:00-09:15      **Estimated time to surgical procedure completion: An exploration of video analysis methods**  
Speaker: Yariv Colbeci, Theator, Israel
- 09:15-09:30      **Automatic Surgical Reconstruction for Orbital Blow-out Fracture via Symmetric Prior Anatomical Knowledge-Guided Adversarial Generative Network**  
Speaker: Jiangchang Xu, Shanghai Jiao Tong University, China

## Oral 11: Machine Learning III – Advances in Learning Strategies

Wednesday, October 11, 13:00 to 14:30  
Exhibit Hall A – Main Hall

### Session Chairs:

Bernhard Kainz, Imperial College London, UK and FAU Erlangen-Nürnberg, Germany  
Xiaoxiao Li, University of British Columbia, Canada

- 13:00-13:15      **Uncertainty and Shape-Aware Continual Test-Time Adaptation for Cross-Domain Segmentation of Medical Images**  
Speaker: Jiayi Zhu, University of New South Wales, Australia
- 13:15-13:30      **Open-Ended Medical Visual Question Answering Through Prefix Tuning of Language Models**  
Speaker: Tom van Sonsbeek, University of Amsterdam, the Netherlands
- 13:30-13:45      **Joint prediction of response to therapy, molecular traits, and spatial organisation in colorectal cancer biopsies**  
Speaker: Ruby Wood, University of Oxford, United Kingdom
- 13:45-14:00      **Speech Audio Synthesis from Tagged MRI and Non-Negative Matrix Factorization via Plastic Transformer**  
Speaker: Xiaofeng Liu, Harvard Medical School, USA
- 14:00-14:15      **Deployment of Image Analysis Algorithms under Prevalence Shifts**  
Speakers: Patrick Godau and Piotr Kalinowski, German Cancer Research Center (DKFZ), Germany
- 14:15-14:30      **ProtoASNet: Dynamic Prototypes for Inherently Interpretable and Uncertainty-Aware Aortic Stenosis Classification in Echocardiography**  
Speaker: Hooman Vaseli, University of British Columbia, Canada



## Oral 12: Physics-based Image Formation and Reconstruction

Wednesday, October 11, 13:00 to 14:30  
Ballroom A – Parallel Hall

### Session Chairs:

Angelica Aviles-Rivero, University of Cambridge, UK  
Hassan Rivaz, Concordia University, Canada

- 13:00-13:15      **BigFUSE: Global Context-Aware Image Fusion in Dual-View Light-Sheet Fluorescence Microscopy with Image Formation Prior**  
Speaker: Carsten Marr, Helmholtz Munich, Germany
- 13:15-13:30      **Physics-based Decoding Improves Magnetic Resonance Fingerprinting**  
Speaker: Pingfan Song, University of Cambridge, United Kingdom
- 13:30-13:45      **LLCaps: Learning to Illuminate Low-Light Capsule Endoscopy with Curved Wavelet Attention and Reverse Diffusion**  
Speaker: Long Bai, The Chinese University of Hong Kong, Hong Kong SAR, China
- 13:45-14:00      **Physics-Informed Neural Networks for Tissue Elasticity Reconstruction in Magnetic Resonance Elastography**  
Speaker: Matthew Ragoza, University of Pittsburgh, USA
- 14:00-14:15      **Learned Alternating Minimization Algorithm for Dual-Domain Sparse-View CT Reconstruction**  
Speaker: Chi Ding, University of Florida, USA
- 14:15-14:30      **Inter-slice Consistency for Unpaired Low-Dose CT Denoising using Boosted Contrastive Learning**  
Speaker: Jie Jing, Sichuan University, China

**POSTER PRESENTATION  
PROGRAM**

**Poster 1: Interventions, Guidance and Clinical Applications Computational Pathology**

**Monday, October 9, 2023, 13:00 to 14:30, Poster Hall**

**Session Chairs:**

Katharina Breininger, FAU Erlangen-Nürnberg, Germany

Yuankai Huo, Vanderbilt University, USA

Sang Hyun Park, DGIST, Korea

Leo Joskowicz, Hebrew University of Jerusalem, Israel

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- M-01-119**      **StainDiff: Transfer Stain Styles of Histology Images with Denoising Diffusion Probabilistic Models and Self-Ensemble**  
Yiqing Shen, Jing Ke
- M-01-120**      **Style-based Manifold for Weakly-supervised Disease Characteristic Discovery**  
Siyu Liu, Linfeng Liu, Craig Engstrom, Xuan Vinh To, Zongyuan Ge, Stuart Crozier, Fatima Nasrallah, Shekhar S. Chandra
- M-01-121**      **Surgical Action Triplet Detection by Mixed Supervised Learning of Instrument-Tissue Interactions**  
Saurav Sharma, Chinedu Innocent Nwoye, Didier Mutter, Nicolas Padoy
- M-01-122**      **Surgical Activity Triplet Recognition via Triplet Disentanglement**  
Yiliang Chen, Shengfeng He, Yueming Jin, Jing Qin
- M-01-123**      **Surgical Video Captioning with Mutual-Modal Concept Alignment**  
Zhen Chen, Qingyu Guo, Leo K. T. Yeung, Danny T. M. Chan, Zhen Lei, Hongbin Liu, Jinqiao Wang
- M-01-124**      **SurgicalGPT: End-to-End Language-Vision GPT for Visual Question Answering in Surgery**  
Lalithkumar Seenivasan, Mobarakol Islam, Gokul Kannan, Hongliang Ren

- M-01-125**      **Synthesis of Contrast-Enhanced Breast MRI Using T1- and Multi-b-Value DWI-based Hierarchical Fusion Network with Attention Mechanism**  
Tianyu Zhang, Luyi Han, Anna D'Angelo, Xin Wang, Yuan Gao, Chunyao Lu, Jonas Teuwen, Regina Beets-Tan, Tao Tan, Ritse Mann
- M-01-126**      **Synthesising Rare Cataract Surgery Samples with Guided Diffusion Models**  
Yannik Frisch, Moritz Fuchs, Antoine Sanner, Felix Anton Ucar, Marius Frenzel, Joana Wasielica-Poslednik, Adrian Gericke, Felix Mathias Wagner, Thomas Dratsch, Anirban Mukhopadhyay
- M-01-127**      **TCL: Triplet Consistent Learning for Odometry Estimation of Monocular Endoscope**  
Hao Yue, Yun Gu
- M-01-128**      **Tensor-based Multimodal Learning for Prediction of Pulmonary Arterial Wedge Pressure from Cardiac MRI**  
Prasun C. Tripathi, Mohammad N. I. Suvon, Lawrence Schobs, Shuo Zhou, Samer Alabed, Andrew J. Swift, Haiping Lu
- M-01-129**      **Thinking Like Sonographers: A Deep CNN Model for Diagnosing Gout from Musculoskeletal Ultrasound**  
Zhi Cao, Weijing Zhang, Keke Chen, Di Zhao, Daoqiang Zhang, Hongen Liao, Fang Chen
- M-01-130**      **Topology-Preserving Automatic Labeling of Coronary Arteries via Anatomy-aware Connection Classifier**  
Zhixing Zhang, Ziwei Zhao, Dong Wang, Shishuang Zhao, Yuhang Liu, Jia Liu, Liwei Wang
- M-01-131**      **Towards multi-modal anatomical landmark detection for ultrasound-guided brain tumor resection with contrastive learning**  
Soorena Salari, Amirhossein Rasoulia, Hassan Rivaz, Yiming Xiao
- M-01-132**      **TractCloud: Registration-free Tractography Parcellation with a Novel Local-global Streamline Point Cloud Representation**  
Tengfei Xue, Yuqian Chen, Chaoyi Zhang, Alexandra J. Golby, Nikos Makris, Yogesh Rathi, Weidong Cai, Fan Zhang, Lauren J. O'Donnell
- M-01-133**      **Transfer Learning-Assisted Survival Analysis of Breast Cancer Relying on the Spatial Interaction Between Tumor-Infiltrating Lymphocytes and Tumors**  
Yawen Wu, Yingli Zuo, Qi Zhu, Jianpeng Sheng, Daoqiang Zhang, Wei Shao
- M-01-134**      **Ultrasonic tracking of a rapid-exchange microcatheter with simultaneous pressure sensing for cardiovascular interventions**  
Sunish Mathews, Richard Caulfield, Callum Little, Malcolm Finlay, Adrien Desjardins
- M-01-135**      **Uncertainty Inspired Autism Spectrum Disorder Screening**  
Ying Zhang, Yaping Huang, Jiansong Qi, Sihui Zhang, Mei Tian, Yi Tian

- M-01-136**      **Unified surface and volumetric inference on functional imaging data**  
Thomas F. Kirk, Martin S. Craig, Michael A. Chappell
- M-01-137**      **UWAT-GAN: Fundus Fluorescein Angiography Synthesis via Ultra-wide-angle Transformation Multi-scale GAN**  
Zhaojie Fang, Zhanghao Chen, Pengxue Wei, Wangting Li, Shaochong Zhang, Ahmed Elazab, Gangyong Jia, Ruiquan Ge, Changmiao Wang
- M-01-138**      **UXDiff: Synthesis of X-ray Image from Ultrasound Coronal Image of Spine with Diffusion Probabilistic Network**  
Yihao Zhou, Chonglin Wu, Xinyi Wang, Yongping Zheng
- M-01-139**      **Vertex Correspondence in Cortical Surface Reconstruction**  
Anne-Marie Rickmann, Fabian Bongratz, Christian Wachinger
- M-01-140**      **Virtual Heart models help elucidate the role of border zone in sustained monomorphic Ventricular Tachycardia**  
Eduardo Castañeda, Masahito Suzuki, Hiroshi Ashikaga, Èric Lluch, Felix Meister, Viorel Mihalef, Chloé Audigier, Andreas Maier, Henry Halperin, Tiziano Passerini
- M-01-141**      **WarpEM: Dynamic Time Warping for Accurate Catheter Registration in EM-guided Procedures**  
Ardit Ramadani, Peter Ewert, Heribert Schunkert, Nassir Navab
- M-01-142**      **Wasserstein Distance-Preserving Vector Space of Persistent Homology**  
Tananun Songdechakraiwt, Bryan M. Krause, Matthew I. Banks, Kirill V. Nourski, Barry D. Van Veen
- M-01-143**      **Whole-Heart Reconstruction with Explicit Topology Integrated Learning**  
Huilin Yang, Roger Tam, Xiaoying Tang

**Poster 2: Machine Learning – Learning Strategies**

**Monday, Oct 9, 2023, 16:00 to 17:30, Poster Hall**

**Session Chairs:**

Jose Dolz, ETS Montreal, Canada

Fahmi Khalifa, Morgan State University, USA

Esther Puyol-Anton, King's College London, UK

Kenji Suzuki, Tokyo Institute of Technology, Japan

- M-02-001**      **3D Arterial Segmentation via Single 2D Projections and Depth Supervision in Contrast-Enhanced CT Images**  
Alina F. Dima, Veronika A. Zimmer, Martin J. Menten, Hongwei Bran Li, Markus Graf, Tristan Lemke, Philipp Raffler, Robert Graf, Jan S. Kirschke, Rickmer Braren, Daniel Rueckert
- M-02-002**      **3D Dental Mesh Segmentation Using Semantics-Based Feature Learning with Graph-Transformer**  
Fan Duan, Li Chen
- M-02-003**      **A Small-Sample Method with EEG Signals Based on Abductive Learning for Motor Imagery Decoding**  
Tianyang Zhong, Xiaozheng Wei, Enze Shi, Jiaying Gao, Chong Ma, Yaonai Wei, Songyao Zhang, Lei Guo, Junwei Han, Tianming Liu, Tuo Zhang
- M-02-004**      **Accurate and Robust Patient Height and Weight Estimation in Clinical Imaging using a Depth Camera**  
Birgi Tamersoy, Felix Alexandru Pîrvan, Santosh Pai, Ankur Kapoor
- M-02-005**      **Adapter Learning in Pretrained Feature Extractor for Continual Learning of Diseases**  
Wentao Zhang, Yujun Huang, Tong Zhang, Qingsong Zou, Wei-Shi Zheng, Ruixuan Wang
- M-02-006**      **Adaptive Region Selection for Active Learning in Whole Slide Image Semantic Segmentation**  
Jingna Qiu, Frauke Wilm, Mathias Öttl, Maja Schlereth, Chang Liu, Tobias Heimann, Marc Aubreville, Katharina Breininger
- M-02-007**      **Additional Positive Enables Better Representation Learning for Medical Images**  
Dewen Zeng, Yawen Wu, Xinrong Hu, Xiaowei Xu, Jingtong Hu, Yiyu Shi
- M-02-008**      **AMAE: Adaptation of Pre-Trained Masked Autoencoder for Dual-Distribution Anomaly Detection in Chest X-Rays**  
Behzad Bozorgtabar, Dwarikanath Mahapatra, Jean-Philippe Thiran
- M-02-009**      **AME-CAM: Attentive Multiple-Exit CAM for Weakly Supervised Segmentation on MRI Brain Tumor**  
Yu-Jen Chen, Xinrong Hu, Yiyu Shi, Tsung-Yi Ho



- M-02-010**      **An Auto-Encoder to Reconstruct Structure with Cryo-EM Images via Theoretically Guaranteed Isometric Latent Space, and its Application for Automatically Computing the Conformational Pathway**  
Kimihiro Yamazaki, Yuichiro Wada, Atsushi Tokuhisa, Mutsuyo Wada, Takashi Katoh, Yuhei Umeda, Yasushi Okuno, Akira Nakagawa
- M-02-011**      **Anatomy-Driven Pathology Detection on Chest X-rays**  
Philip Müller, Felix Meissen, Johannes Brandt, Georgios Kaissis, Daniel Rueckert
- M-02-012**      **Automated CT Lung Cancer Screening Workflow using 3D Camera**  
Brian Teixeira, Vivek Singh, Birgi Tamersoy, Andreas Prokein, Ankur Kapoor
- M-02-013**      **Automatic Retrieval of Corresponding US Views in Longitudinal Examinations**  
Hamideh Kerdegari, Nhat Tran Huy Phung, Van Hao Nguyen, Thi Phuong Thao Truong, Ngoc Minh Thu Le, Thanh Phuong Le, Thi Mai Thao Le, Luigi Pisani, Linda Denehy, Vital Consortium, Reza Razavi, Louise Thwaites, Sophie Yacoub, Andrew P. King, Alberto Gomez
- M-02-014**      **Black-box Domain Adaptative Cell Segmentation via Multi-source Distillation**  
Xingguang Wang, Zhongyu Li, Xiangde Luo, Jing Wan, Jianwei Zhu, Ziqi Yang, Meng Yang, Cunbao Xu
- M-02-015**      **Brain Anatomy-Guided MRI Analysis for Assessing Clinical Progression of Cognitive Impairment with Structural MRI**  
Lintao Zhang, Jinjian Wu, Lihong Wang, Li Wang, David C. Steffens, Shijun Qiu, Guy G. Potter, Mingxia Liu
- M-02-016**      **BrainUSL: Unsupervised Graph Structure Learning for Functional Brain Network Analysis**  
Pengshuai Zhang, Guangqi Wen, Peng Cao, Jinzhu Yang, Jinyu Zhang, Xizhe Zhang, Xinrong Zhu, Osmar R. Zaiane, Fei Wang
- M-02-017**      **Can point cloud networks learn statistical shape models of anatomies?**  
Jadie Adams, Shireen Y. Elhabian
- M-02-018**      **CL-ADDA: Contrastive Learning with Amplitude-Driven Data Augmentation for fMRI-Based Individualized Predictions**  
Jiangcong Liu, Le Xu, Yun Guan, Hao Ma, Lixia Tian
- M-02-019**      **CLIP-Lung: Textual Knowledge-Guided Lung Nodule Malignancy Prediction**  
Yiming Lei, Zilong Li, Yan Shen, Junping Zhang, Hongming Shan
- M-02-020**      **Clustering disease trajectories in contrastive feature space for biomarker proposal in age-related macular degeneration**  
Robbie Holland, Oliver Leingang, Christopher Holmes, Philipp Anders, Rebecca Kaye, Sophie Riedl, Johannes C. Paetzold, Ivan Ezhov, Hrvoje Bogunović, Ursula Schmidt-Erfurth, Hendrik P. N. Scholl, Sobha Sivaprasad, Andrew J. Lotery, Daniel Rueckert, Martin J. Menten

- M-02-021**      **COLoSAL: A Benchmark for Cold-start Active Learning for 3D Medical Image Segmentation**  
Han Liu, Hao Li, Xing Yao, Yubo Fan, Dewei Hu, Benoit M. Dawant, Vishwesh Nath, Zhoubing Xu, Ipek Oguz
- M-02-022**      **Combating Medical Label Noise via Robust Semi-supervised Contrastive Learning**  
Bingzhi Chen, Zhanhao Ye, Yishu Liu, Zheng Zhang, Jiahui Pan, Biqing Zeng, Guangming Lu
- M-02-023**      **Community-Aware Transformer for Autism Prediction in fMRI Connectome**  
Anushree Bannadabhavi, Soojin Lee, Wenlong Deng, Rex Ying, Xiaoxiao Li
- M-02-024**      **Context-Aware Pseudo-Label Refinement for Source-Free Domain Adaptive Fundus Image Segmentation**  
Zheang Huai, Xinpeng Ding, Yi Li, Xiaomeng Li
- M-02-025**      **Continual Learning for Abdominal Multi-Organ and Tumor Segmentation**  
Yixiao Zhang, Xinyi Li, Huimiao Chen, Alan L. Yuille, Yaoyao Liu, Zongwei Zhou
- M-02-026**      **Correlation-Aware Mutual Learning for Semi-supervised Medical Image Segmentation**  
Shengbo Gao, Ziji Zhang, Jiechao Ma, Zihao Li, Shu Zhang
- M-02-027**      **Cross-adversarial local distribution regularization for semi-supervised medical image segmentation**  
Thanh Nguyen-Duc, Trung Le, Roland Bammer, He Zhao, Jianfei Cai, Dinh Phung
- M-02-028**      **Cross-Dataset Adaptation for Instrument Classification in Cataract Surgery Videos**  
Jay N. Paranjape, Shameema Sikder, Vishal M. Patel, S. Swaroop Vedula
- M-02-029**      **DAS-MIL: Distilling Across Scales for MIL Classification of Histological WSIs**  
Gianpaolo Bontempo, Angelo Porrello, Federico Bolelli, Simone Calderara, Elisa Ficarra
- M-02-030**      **Deblurring Masked Autoencoder is Better Recipe for Ultrasound Image Recognition**  
Qingbo Kang, Jun Gao, Kang Li, Qicheng Lao
- M-02-031**      **Decoupled Consistency for Semi-supervised Medical Image Segmentation**  
Faquan Chen, Jingjing Fei, Yaqi Chen, Chenxi Huang
- M-02-032**      **Deep probability contour framework for tumour segmentation and dose painting in PET images**  
Wenhui Zhang, Surajit Ray
- M-02-033**      **Deep Reinforcement Learning Based System for Intraoperative Hyperspectral Video Autofocusing**  
Charlie Budd, Jianrong Qiu, Oscar MacCormac, Martin Huber, Christopher Mower, Mirek Janatka, Théo Trotouin, Jonathan Shapey, Mads S. Bergholt, Tom Vercauteren

- M-02-034**      **Deep unsupervised clustering for conditional identification of subgroups within a digital pathology image set**  
Mariia Sidulova, Xudong Sun, Alexej Gossmann
- M-02-035**      **Development and Fast Transferring of General Connectivity-based Diagnosis Model to New Brain Disorders with Adaptive Graph Meta-learner**  
Yuxiao Liu, Mianxin Liu, Yuanwang Zhang, Dinggang Shen
- M-02-036**      **Disentangling Site Effects with Cycle-Consistent Adversarial Autoencoder for Multi-site Cortical Data Harmonization**  
Fenqiang Zhao, Zhengwang Wu, Dajiang Zhu, Tianming Liu, John Gilmore, Weili Lin, Li Wang, Gang Li
- M-02-037**      **Domain Adaptation for Medical Image Segmentation using Transformation-Invariant Self-Training**  
Negin Ghamsarian, Javier Gamazo Tejero, Pablo Márquez-Neila, Sebastian Wolf, Martin Zinkernagel, Klaus Schoeffmann, Raphael Sznitman
- M-02-038**      **Dual Conditioned Diffusion Models for Out-Of-Distribution Detection: Application to Fetal Ultrasound Videos**  
Divyanshu Mishra, He Zhao, Prमित Saha, Aris T. Papageorghiou, J. Alison Noble
- M-02-039**      **EdgeAL: An Edge Estimation Based Active Learning Approach for OCT Segmentation**  
Md Abdul Kadir, Hasan Md Tusfiqur Alam, Daniel Sonntag
- M-02-040**      **Exploring Brain Function-Structure Connectome Skeleton via Self-Supervised Graph-Transformer Approach**  
Yanqing Kang, Ruoyang Wang, Enze Shi, Jinru Wu, Sigang Yu, Shu Zhang
- M-02-041**      **Exploring Unsupervised Cell Recognition with Prior Self-activation Maps**  
Pingyi Chen, Chenglu Zhu, Zhongyi Shui, Jiatong Cai, Sunyi Zheng, Shichuan Zhang, Lin Yang
- M-02-042**      **Federated Condition Generalization on Low-dose CT Reconstruction via Cross-domain Learning**  
Shixuan Chen, Boxuan Cao, Yinda Du, Yaoduo Zhang, Ji He, Zhaoying Bian, Dong Zeng, Jianhua Ma
- M-02-043**      **Foundation Ark: Accruing and Reusing Knowledge for Superior and Robust Performance**  
DongAo Ma, Jiakuan Pang, Michael B. Gotway, Jianming Liang
- M-02-044**      **Foundation Model for Endoscopy Video Analysis via Large-scale Self-supervised Pre-train**  
Zhao Wang, Chang Liu, Shaoting Zhang, Qi Dou
- M-02-045**      **Full Image-index Remainder based Single Low-dose DR/CT Self-supervised Denoising**  
Yifei Long, Jiayi Pan, Yan Xi, Jianjia Zhang, Weiwen Wu
- M-02-046**      **Gall Bladder Cancer Detection from US Images with Only Image Level Labels**  
Soumen Basu, Ashish Papanai, Mayank Gupta, Pankaj Gupta, Chetan Arora

- M-02-047**      **Geometry-invariant abnormality detection**  
Ashay Patel, Petru-Daniel Tudosiu, Walter Hugo Lopez Pinaya, Olusola Adeleke, Gary Cook, Vicky Goh, Sébastien Ourselin, M. Jorge Cardoso
- M-02-048**      **GL-Fusion: Global-Local Fusion Network for Multi-view Echocardiogram Video Segmentation**  
Ziyang Zheng, Jiewen Yang, Xinpeng Ding, Xiaowei Xu, Xiaomeng Li
- M-02-049**      **Graph Convolutional Network with Morphometric Similarity Networks for Schizophrenia Classification**  
Hye Won Park, Seo Yeong Kim, Won Hee Lee
- M-02-050**      **Identification of Disease-sensitive Brain Imaging Phenotypes and Genetic Factors using GWAS Summary Statistics**  
Duo Xi, Dingnan Cui, Jin Zhang, Muheng Shang, Minjianan Zhang, Lei Guo, Junwei Han, Lei Du, Alzheimer's Disease Neuroimaging Initiative
- M-02-051**      **Incremental Learning for Heterogeneous Structure Segmentation in Brain Tumor MRI**  
Xiaofeng Liu, Helen A. Shih, Fangxu Xing, Emiliano Santarnecchi, Georges El Fakhri, Jonghye Woo
- M-02-052**      **Inter-slice Consistency for Unpaired Low-Dose CT Denoising using Boosted Contrastive Learning**  
Jie Jing, Tao Wang, Hui Yu, Zexin Lu, Yi Zhang
- M-02-053**      **Knowledge Boosting: Rethinking Medical Contrastive Vision-Language Pre-Training**  
Xiaofei Chen, Yuting He, Cheng Xue, Rongjun Ge, Shuo Li, Guanyu Yang
- M-02-054**      **L3DMC: Lifelong Learning using Distillation via Mixed-Curvature Space**  
Kaushik Roy, Peyman Moghadam, Mehrtash Harandi
- M-02-055**      **LOTUS: Learning to Optimize Task-based US representations**  
Yordanka Velikova, Mohammad Farid Azampour, Walter Simson, Vanessa Gonzalez Duque, Nassir Navab
- M-02-056**      **LSOR: Longitudinally-Consistent Self-Organized Representation Learning**  
Jiahong Ouyang, Qingyu Zhao, Ehsan Adeli, Wei Peng, Greg Zaharchuk, Kilian M. Pohl
- M-02-057**      **Many tasks make light work: Learning to localise medical anomalies from multiple synthetic tasks**  
Matthew Baugh, Jeremy Tan, Johanna P. Müller, Mischa Dombrowski, James Batten, Bernhard Kainz
- M-02-058**      **Masked Frequency Consistency for Domain-Adaptive Semantic Segmentation of Laparoscopic Images**  
Xinkai Zhao, Yuichiro Hayashi, Masahiro Oda, Takayuki Kitasaka, Kensaku Mori

- M-02-059**      **Masked Vision and Language Pre-training with Unimodal and Multimodal Contrastive Losses for Medical Visual Question Answering**  
Pengfei Li, Gang Liu, Jinlong He, Zixu Zhao, Shenjun Zhong
- M-02-060**      **MDA-SR: Multi-level Domain Adaptation Super-Resolution for Wireless Capsule Endoscopy Images**  
Tianbao Liu, Zefeyun Chen, Qingyuan Li, Yusi Wang, Ke Zhou, Weijie Xie, Yuxin Fang, Kaiyi Zheng, Zhanpeng Zhao, Side Liu, Wei Yang
- M-02-061**      **MedGen3D: A Deep Generative Framework for Paired 3D Image and Mask Generation**  
Kun Han, Yifeng Xiong, Chenyu You, Pooya Khosravi, Shanlin Sun, Xiangyi Yan, James S. Duncan, Xiaohui Xie
- M-02-062**      **MedIM: Boost Medical Image Representation via Radiology Report-guided Masking**  
Yutong Xie, Lin Gu, Tatsuya Harada, Jianpeng Zhang, Yong Xia, Qi Wu
- M-02-063**      **Mesh2SSM: From Surface Meshes to Statistical Shape Models of Anatomy**  
Krithika Iyer, Shireen Y. Elhabian
- M-02-064**      **MetaLR: Meta-tuning of Learning Rates for Transfer Learning in Medical Imaging**  
Yixiong Chen, Li Liu, Jingxian Li, Hua Jiang, Chris Ding, Zongwei Zhou
- M-02-065**      **M-FLAG: Medical Vision-Language Pre-training with Frozen Language Models and Latent Space Geometry Optimization**  
Che Liu, Sibao Cheng, Chen Chen, Mengyun Qiao, Weitong Zhang, Anand Shah, Wenjia Bai, Rossella Arcucci
- M-02-066**      **Mitosis Detection from Partial Annotation by Dataset Generation via Frame-Order Flipping**  
Kazuya Nishimura, Ami Katanaya, Shinichiro Chuma, Ryoma Bise
- M-02-067**      **Modeling Alzheimers' Disease Progression from Multi-task and Self-supervised Learning Perspective with Brain Networks**  
Wei Liang, Kai Zhang, Peng Cao, Pengfei Zhao, Xiaoli Liu, Jinzhu Yang, Osmar R. Zaiane
- M-02-068**      **Modularity-Constrained Dynamic Representation Learning for Interpretable Brain Disorder Analysis with Functional MRI**  
Qianqian Wang, Mengqi Wu, Yuqi Fang, Wei Wang, Lishan Qiao, Mingxia Liu
- M-02-069**      **Multi-Modal Semi-supervised Evidential Recycle Framework for Alzheimer's Disease Classification**  
Yingjie Feng, Wei Chen, Xianfeng Gu, Xiaoyin Xu, Min Zhang
- M-02-070**      **Multi-modal Variational Autoencoders for normative modelling across multiple imaging modalities**  
Ana Lawry Aguila, James Chapman, Andre Altmann

- M-02-071**      **Multiple Prompt Fusion for Zero-Shot Lesion Detection Using Vision-Language Models**  
Miaotian Guo, Huahui Yi, Ziyuan Qin, Haiying Wang, Aidong Men, Qicheng Lao
- M-02-072**      **Multi-scale Cross-restoration Framework for Electrocardiogram Anomaly Detection**  
Aofan Jiang, Chaoqin Huang, Qing Cao, Shuang Wu, Zi Zeng, Kang Chen, Ya Zhang, Yanfeng Wang
- M-02-073**      **Multi-Scale Self-Supervised Learning for Longitudinal Lesion Tracking with Optional Supervision**  
Anamaria Vizitiu, Antonia T. Mohaiu, Ioan M. Popdan, Abishek Balachandran, Florin C. Ghesu, Dorin Comaniciu
- M-02-074**      **Multi-Target Domain Adaptation with Prompt Learning for Medical Image Segmentation**  
Yili Lin, Dong Nie, Yuting Liu, Ming Yang, Daoqiang Zhang, Xuyun Wen
- M-02-075**      **OpenAL: An Efficient Deep Active Learning Framework for Open-Set Pathology Image Classification**  
Linhao Qu, Yingfan Ma, Zhiwei Yang, Manning Wang, Zhijian Song
- M-02-076**      **Open-Ended Medical Visual Question Answering Through Prefix Tuning of Language Models**  
Tom van Sonsbeek, Mohammad Mahdi Derakhshani, Ivona Najdenkoska, Cees G. M. Snoek, Marcel Worring
- M-02-077**      **PET Image Denoising with Score-Based Diffusion Probabilistic Models**  
Chenyu Shen, Ziyuan Yang, Yi Zhang
- M-02-078**      **PET-diffusion: Unsupervised PET Enhancement based on the Latent Diffusion Model**  
Caiwen Jiang, Yongsheng Pan, Mianxin Liu, Lei Ma, Xiao Zhang, Jiameng Liu, Xiaosong Xiong, Dinggang Shen
- M-02-079**      **Pick the Best Pre-trained Model: Towards Transferability Estimation for Medical Image Segmentation**  
Yuncheng Yang, Meng Wei, Junjun He, Jie Yang, Jin Ye, Yun Gu
- M-02-080**      **PLD-AL: Pseudo-Label Divergence-Based Active Learning in Carotid Intima-Media Segmentation for Ultrasound Images**  
Yucheng Tang, Yipeng Hu, Jing Li, Hu Lin, Xiang Xu, Ke Huang, Hongxiang Lin
- M-02-081**      **PMC-CLIP: Contrastive Language-Image Pre-training using Biomedical Documents**  
Weixiong Lin, Ziheng Zhao, Xiaoman Zhang, Chaoyi Wu, Ya Zhang, Yanfeng Wang, Weidi Xie
- M-02-082**      **Prompt-MIL: Boosting Multi-Instance Learning Schemes via Task-specific Prompt Tuning**  
Jingwei Zhang, Saarthak Kapse, Ke Ma, Prateek Prasanna, Joel Saltz, Maria Vakalopoulou, Dimitris Samaras

- M-02-083**      **PROnet: Point Refinement using Shape-guided Offset Map for Nuclei Instance Segmentation**  
Siwoo Nam, Jaehoon Jeong, Miguel Luna, Philip Chikontwe, Sang Hyun Park
- M-02-084**      **S2ME: Spatial-Spectral Mutual Teaching and Ensemble Learning for Scribble-supervised Polyp Segmentation**  
An Wang, Mengya Xu, Yang Zhang, Mobarakol Islam, Hongliang Ren
- M-02-085**      **Scribble-based 3D Multiple Abdominal Organ Segmentation via Triple-branch Multi-dilated Network with Pixel- and Class-wise Consistency**  
Meng Han, Xiangde Luo, Wenjun Liao, Shichuan Zhang, Shaoting Zhang, Guotai Wang
- M-02-086**      **Second-course Esophageal Gross Tumor Volume Segmentation in CT with Prior Anatomical and Radiotherapy Information**  
Yihua Sun, Hee Guan Khor, Sijuan Huang, Qi Chen, Shaobin Wang, Xin Yang, Hongen Liao
- M-02-087**      **Self-supervised dense representation learning for live-cell microscopy with time arrow prediction**  
Benjamin Gallusser, Max Stieber, Martin Weigert
- M-02-088**      **Self-Supervised Domain Adaptive Segmentation of Breast Cancer via Test-Time Fine-Tuning**  
Kyungsu Lee, Haeyun Lee, Georges El Fakhri, Jonghye Woo, Jae Youn Hwang
- M-02-089**      **Semi-supervised Pathological Image Segmentation via Cross Distillation of Multiple Attentions**  
Lanfeng Zhong, Xin Liao, Shaoting Zhang, Guotai Wang
- M-02-090**      **SLPD: Slide-level Prototypical Distillation for WSIs**  
Zhimiao Yu, Tiancheng Lin, Yi Xu
- M-02-091**      **SLPT: Selective Labeling Meets Prompt Tuning on Label-Limited Lesion Segmentation**  
Fan Bai, Ke Yan, Xiaoyu Bai, Xinyu Mao, Xiaoli Yin, Jingren Zhou, Yu Shi, Le Lu, Max Q.-H. Meng
- M-02-092**      **Smooth Attention for Deep Multiple Instance Learning: Application to CT Intracranial Hemorrhage Detection**  
Yunan Wu, Francisco M. Castro-Macías, Pablo Morales-Álvarez, Rafael Molina, Aggelos K. Katsaggelos
- M-02-093**      **Source-Free Domain Adaptation for Medical Image Segmentation via Prototype-Anchored Feature Alignment and Contrastive Learning**  
Qinji Yu, Nan Xi, Junsong Yuan, Ziyu Zhou, Kang Dang, Xiaowei Ding
- M-02-094**      **Source-Free Domain Adaptive Fundus Image Segmentation with Class-Balanced Mean Teacher**  
Longxiang Tang, Kai Li, Chunming He, Yulun Zhang, Xiu Li



- M-02-095**      **Spectral Adversarial MixUp for Few-Shot Unsupervised Domain Adaptation**  
Jiajin Zhang, Hanqing Chao, Amit Dhurandhar, Pin-Yu Chen, Ali Tajer, Yangyang Xu, Pingkun Yan
- M-02-096**      **Structured State Space Models for Multiple Instance Learning in Digital Pathology**  
Leo Fillioux, Joseph Boyd, Maria Vakalopoulou, Paul-Henry Cournède, Stergios Christodoulidis
- M-02-097**      **Towards Accurate Microstructure Estimation via 3D Hybrid Graph Transformer**  
Junqing Yang, Haotian Jiang, Tewodros Tassew, Peng Sun, Jiquan Ma, Yong Xia, Pew-Thian Yap, Geng Chen
- M-02-098**      **Towards Expert-Amateur Collaboration: Prototypical Label Isolation Learning for Left Atrium Segmentation with Mixed-Quality Labels**  
Zhe Xu, Jiangpeng Yan, Donghuan Lu, Yixin Wang, Jie Luo, Yefeng Zheng, Raymond Kai-yu Tong
- M-02-099**      **TPRO: Text-prompting-based Weakly Supervised Histopathology Tissue Segmentation**  
Shaoteng Zhang, Jianpeng Zhang, Yutong Xie, Yong Xia
- M-02-100**      **Tracking adaptation to improve SuperPoint for 3D reconstruction in endoscopy**  
O. León Barbed, José M. M. Montiel, Pascal Fua, Ana C. Murillo
- M-02-101**      **UM-CAM: Uncertainty-weighted Multi-resolution Class Activation Maps for Weakly-supervised Fetal Brain Segmentation**  
Jia Fu, Tao Lu, Shaoting Zhang, Guotai Wang
- M-02-102**      **Unsupervised 3D out-of-distribution detection with latent diffusion models**  
Mark S. Graham, Walter Hugo Lopez Pinaya, Paul Wright, Petru-Daniel Tudosiu, Yee H. Mah, James T. Teo, H. Rolf Jäger, David Werring, Parashkev Nachev, Sebastien Ourselin, M. Jorge Cardoso
- M-02-103**      **Unsupervised 3D registration through optimization-guided cyclical self-training**  
Alexander Bigalke, Lasse Hansen, Tony C. W. Mok, Mattias P. Heinrich
- M-02-104**      **Unsupervised Discovery of 3D Hierarchical Structure with Generative Diffusion Features**  
Nurislam Tursynbek, Marc Niethammer
- M-02-105**      **Unsupervised Domain Adaptation for Anatomical Landmark Detection**  
Haibo Jin, Haoxuan Che, Hao Chen
- M-02-106**      **Unsupervised Domain Transfer with Conditional Invertible Neural Networks**  
Kris K. Dreher, Leonardo Ayala, Melanie Schellenberg, Marco Hübner, Jan-Hinrich Nölke, Tim J. Adler, Silvia Seidlitz, Jan Sellner, Alexander Studier-Fischer, Janek Gröhl, Felix Nickel, Ullrich Köthe, Alexander Seitel, Lena Maier-Hein



- M-02-107**      **Unsupervised Learning for Feature Extraction and Temporal Alignment of 3D+t Point Clouds of Zebrafish Embryos**  
Zhu Chen, Ina Laube, Johannes Stegmaier
- M-02-108**      **UOD: Universal One-shot Detection of Anatomical Landmarks**  
Heqin Zhu, Quan Quan, Qingsong Yao, Zaiyi Liu, S. Kevin Zhou
- M-02-109**      **VesselVAE: Recursive Variational Autoencoders for 3D Blood Vessel Synthesis**  
Paula Feldman, Miguel Fainstein, Viviana Siless, Claudio Delrieux, Emmanuel Iarussi
- M-02-110**      **VISA-FSS: A Volume-Informed Self Supervised Approach for Few-Shot 3D Segmentation**  
Mohammad Mozafari, Adeleh Bitarafan, Mohammad Farid Azampour, Azade Farshad, Mahdieh Soleymani Baghshah, Nassir Navab
- M-02-111**      **vox2vec: A Framework for Self-supervised Contrastive Learning of Voxel-level Representations in Medical Images**  
Mikhail Goncharov, Vera Soboleva, Anvar Kurmukov, Maxim PISOV, Mikhail Belyaev
- M-02-112**      **Weakly Supervised Lesion Localization of Nascent Geographic Atrophy in Age-Related Macular Degeneration**  
Heming Yao, Adam Pely, Zhichao Wu, Simon S. Gao, Robyn H. Guymer, Hao Chen, Mohsen Hejrati, Miao Zhang
- M-02-113**      **Weakly-supervised Drug Efficiency Estimation with Confidence Score: Application to COVID-19 Drug Discovery**  
Nahal Mirzaie, Mohammad V. Sanian, Mohammad H. Rohban
- M-02-114**      **Weakly-supervised positional contrastive learning: application to cirrhosis classification**  
Emma Sarfati, Alexandre Bône, Marc-Michel Rohé, Pietro Gori, Isabelle Bloch
- M-02-115**      **What Do AEs Learn? Challenging Common Assumptions in Unsupervised Anomaly Detection**  
Cosmin I. Bercea, Daniel Rueckert, Julia A. Schnabel
- M-02-116**      **You've Got Two Teachers: Co-evolutionary Image and Report Distillation for Semi-supervised Anatomical Abnormality Detection in Chest X-ray**  
Jinghan Sun, Dong Wei, Zhe Xu, Donghuan Lu, Hong Liu, Liansheng Wang, Yefeng Zheng
- M-02-117**      **Zero-shot Nuclei Detection via Visual-Language Pre-trained Models**  
Yongjian Wu, Yang Zhou, Jiya Saiyin, Bingzheng Wei, Maode Lai, Jianzhong Shou, Yubo Fan, Yan Xu

**Poster 3: Machine Learning – Explainability, Bias, and Uncertainty**

**Tuesday, Oct 10, 2023, 09:30 to 11:00, Poster Hall**

**Session Chairs:**

Kayhan Batmanghelich, Boston University, USA

Magdalini Paschali, Stanford University, USA

Rachel Sparks, King's College London, UK

Jonghye Woo, Massachusetts General Hospital and Harvard Medical School, USA

- T-03-001      A coupled-mechanisms modelling framework for neurodegeneration**  
Tiantian He, Elinor Thompson, Anna Schroder, Neil P. Oxtoby, Ahmed Abdulaal, Frederik Barkhof, Daniel C. Alexander
- T-03-002      A flexible framework for simulating and evaluating biases in deep learning-based medical image analysis**  
Emma A.M. Stanley, Matthias Wilms, Nils D. Forkert
- T-03-003      A Model-Agnostic Framework for Universal Anomaly Detection of Multi-Organ and Multi-Modal Images**  
Yinghao Zhang, Donghuan Lu, Munan Ning, Liansheng Wang, Dong Wei, Yefeng Zheng
- T-03-004      A Motion Transformer for Single Particle Tracking in Fluorescence Microscopy Images**  
Yudong Zhang, Ge Yang
- T-03-005      A Privacy-Preserving Walk in the Latent Space of Generative Models for Medical Applications**  
Matteo Pennisi, Federica Proietto Salanitri, Giovanni Bellitto, Simone Palazzo, Ulas Bagci, Concetto Spampinato
- T-03-006      A Spatial-Temporal Deformable Attention based Framework for Breast Lesion Detection in Videos**  
Chao Qin, Jiale Cao, Huazhu Fu, Rao Muhammad Anwer, Fahad Shahbaz Khan
- T-03-007      A Video-based End-to-end Pipeline for Non-nutritive Sucking Action Recognition and Segmentation in Young Infants**  
Shaotong Zhu, Michael Wan, Elaheh Hatamimajoumerd, Kashish Jain, Samuel Zlota, Cholpady Vikram Kamath, Cassandra B. Rowan, Emma C. Grace, Matthew S. Goodwin, Marie J. Hayes, Rebecca A. Schwartz-Mette, Emily Zimmerman, Sarah Ostadabbas
- T-03-008      Adaptive Multi-scale Online Likelihood Network for AI-assisted Interactive Segmentation**  
Muhammad Asad, Helena Williams, Indrajeet Mandal, Sarim Ather, Jan Deprest, Jan D'hooge, Tom Vercauteren

- T-03-009**      **An Explainable Geometric-Weighted Graph Attention Network for Identifying Functional Networks Associated with Gait Impairment**  
Favour Nerrise, Qingyu Zhao, Kathleen L. Poston, Kilian M. Pohl, Ehsan Adeli
- T-03-010**      **An Interpretable and Attention-based Method for Gaze Estimation Using Electroencephalography**  
Nina Weng, Martyna Plomecka, Manuel Kaufmann, Ard Kastrati, Roger Wattenhofer, Nicolas Langer
- T-03-011**      **Aneurysm Pose Estimation with Deep Learning**  
Youssef Assis, Liang Liao, Fabien Pierre, René Anxionnat, Erwan Kerrien
- T-03-012**      **ArSDM: Colonoscopy Images Synthesis with Adaptive Refinement Semantic Diffusion Models**  
Yuhao Du, Yuncheng Jiang, Shuangyi Tan, Xusheng Wu, Qi Dou, Zhen Li, Guanbin Li, Xiang Wan
- T-03-013**      **Assignment Theory-Augmented Neural Network for Dental Arch Labeling**  
Tudor Dascalu, Bulat Ibragimov
- T-03-014**      **Asymmetric Contour Uncertainty Estimation for Medical Image Segmentation**  
Thierry Judge, Olivier Bernard, Woo-Jin Cho Kim, Alberto Gomez, Agisilaos Chatsias, Pierre-Marc Jodoin
- T-03-015**      **Attentive Deep Canonical Correlation Analysis for Diagnosing Alzheimer's Disease using Multimodal Imaging Genetics**  
Rong Zhou, Houliang Zhou, Brian Y. Chen, Li Shen, Yu Zhang, Lifang He
- T-03-016**      **Bidirectional Mapping with Contrastive Learning on Multimodal Neuroimaging Data**  
Kai Ye, Haoteng Tang, Siyuan Dai, Lei Guo, Johnny Yuehan Liu, Yalin Wang, Alex Leow, Paul M. Thompson, Heng Huang, Liang Zhan
- T-03-017**      **Boundary-weighted logit consistency improves calibration of segmentation networks**  
Neerav Karani, Neel Dey, Polina Golland
- T-03-018**      **Category-independent Visual Explanation for Medical Deep Network Understanding**  
Yiming Qian, Liangzhi Li, Huazhu Fu, Meng Wang, Qingsheng Peng, Yih Chung Tham, Chingyu Cheng, Yong Liu, Rick Siow Mong Goh, Xinxing Xu
- T-03-019**      **Centroid-aware feature recalibration for cancer grading in pathology images**  
Jaeung Lee, Keunho Byeon, Jin Tae Kwak
- T-03-020**      **Chest X-ray Image Classification: A Causal Perspective**  
Weizhi Nie, Chen Zhang, Dan Song, Yunpeng Bai, Keliang Xie, An-An Liu

- T-03-021**      **CheXstray: A Real-Time Multi-Modal Monitoring Workflow for Medical Imaging AI**  
Jameson Merkow, Arjun Soin, Jin Long, Joseph Paul Cohen, Smitha Saligrama, Christopher Bridge, Xiyu Yang, Stephen Kaiser, Steven Borg, Ivan Tarapov, Matthew P Lungren
- T-03-022**      **Class Specific Feature Disentanglement And Text Embeddings For Multi-Label Generalized Zero Shot CXR Classification**  
Dwarikanath Mahapatra, Antonio Jose Jimeno Yepes, Shiba Kuanar, Sudipta Roy, Behzad Bozorgtabar, Mauricio Reyes, Zongyuan Ge
- T-03-023**      **Client-Level Differential Privacy via Adaptive Intermediary in Federated Medical Imaging**  
Meirui Jiang, Yuan Zhong, Anjie Le, Xiaoxiao Li, Qi Dou
- T-03-024**      **Co-assistant Networks for Label Correction**  
Xuan Chen, Weiheng Fu, Tian Li, Xiaoshuang Shi, Hengtao Shen, Xiaofeng Zhu
- T-03-025**      **ConTrack: Contextual Transformer for Device Tracking in X-ray**  
Marc Demoustier, Yue Zhang, Venkatesh Narasimha Murthy, Florin C. Ghesu, Dorin Comaniciu
- T-03-026**      **Cross-modulated Few-shot Image Generation for Colorectal Tissue Classification**  
Amandeep Kumar, Ankan Kumar Bhunia, Sanath Narayan, Hisham Cholakkal, Rao Muhammad Anwer, Jorma Laaksonen, Fahad Shahbaz Khan
- T-03-027**      **CXR-CLIP: Toward Large Scale Chest X-ray Language-Image Pre-training**  
Kihyun You, Jawook Gu, Jiyeon Ham, Beomhee Park, Jiho Kim, Eun K. Hong, Woonhyuk Baek, Byungseok Roh
- T-03-028**      **Data AUDIT: Identifying Attribute Utility- and Detectability-Induced Bias in Task Models**  
Mitchell Pavlak, Nathan Drenkow, Nicholas Petrick, Mohammad Mehdi Farhangi, Mathias Unberath
- T-03-029**      **Debiasing Medical Visual Question Answering via Counterfactual Training**  
Chenlu Zhan, Peng Peng, Hanrong Zhang, Haiyue Sun, Chunnan Shang, Tao Chen, Hongsen Wang, Gaoang Wang, Hongwei Wang
- T-03-030**      **DeDA: Deep Directed Accumulator**  
Hang Zhang, Rongguang Wang, Renjiu Hu, Jinwei Zhang, Jiahao Li
- T-03-031**      **Deep Learning-Based Air Trapping Quantification using Paired Inspiratory-Expiratory Ultra-Low Dose CT**  
Sarah M. Muller, Sundaresh Ram, Katie J. Bayfield, Julia H. Reuter, Sonja Gestewitz, Lifeng Yu, Mark O. Wielpütz, Hans-Ulrich Kauczor, Claus P. Heussel, Terry E. Robinson, Brian J. Bartholmai, Charles R. Hatt, Paul D. Robinson, Craig J. Galban, Oliver Weinheimer
- T-03-032**      **Deep Learning-based Anonymization of Chest Radiographs: A Utility-preserving Measure for Patient Privacy**  
Kai Packhäuser, Sebastian Gündel, Florian Thamm, Felix Denzinger, Andreas Maier

- T-03-033**      **DeepGraphDMD: Interpretable Spatio-Temporal Decomposition of Non-linear Functional Brain Network Dynamics**  
Md Asadullah Turja, Martin Styner, Guorong Wu
- T-03-034**      **Deployment of Image Analysis Algorithms under Prevalence Shifts**  
Patrick Godau, Piotr Kalinowski, Evangelia Christodoulou, Annika Reinke, Minu Tizabi, Luciana Ferrer, Paul F. Jäger, Lena Maier-Hein
- T-03-035**      **DiffMix: Diffusion Model-based Data Synthesis for Nuclei Segmentation and Classification in Imbalanced Pathology Image Datasets**  
Hyun-Jic Oh, Won-Ki Jeong
- T-03-036**      **DiMix: Disentangle-and-Mix based domain generalizable medical image segmentation**  
Hyeongyu Kim, Yejee Shin, Dosik Hwang
- T-03-037**      **Distilling BlackBox to Interpretable models for Efficient Transfer Learning**  
Shantanu Ghosh, Ke Yu, Kayhan Batmanghelich
- T-03-038**      **Dynamic Graph Neural Representation Based Multi-modal Fusion Model for Cognitive Outcome Prediction in Stroke Cases**  
Shuting Liu, Baochang Zhang, Rong Fang, Daniel Rueckert, Veronika A. Zimmer
- T-03-039**      **ECL: Class-Enhancement Contrastive Learning for Long-tailed Skin Lesion Classification**  
Yilan Zhang, Jianqi Chen, Ke Wang, Fengying Xie
- T-03-040**      **Efficient Subclass Segmentation in Medical Images**  
Linrui Dai, Wenhui Lei, Xiaofan Zhang
- T-03-041**      **Enabling Geometry Aware Learning Through Differentiable Epipolar View Translation**  
Maximilian Rohleder, Charlotte Pradel, Fabian Wagner, Mareike Thies, Noah Maul, Felix Denzinger, Andreas Maier, Bjoern Kreher
- T-03-042**      **Enhance Early Diagnosis Accuracy of Alzheimer's Disease by Elucidating Interactions between Amyloid Cascade and Tau Propagation**  
Tingting Dan, Minjeong Kim, Won Hwa Kim, Guorong Wu
- T-03-043**      **Evidence Reconciled Neural Network for Out-of-Distribution Detection in Medical Images**  
Wei Fu, Yufei Chen, Wei Liu, Xiaodong Yue, Chao Ma
- T-03-044**      **Explainable Image Classification with Improved Trustworthiness for Tissue Characterisation**  
Alfie Roddan, Chi Xu, Serine Ajlouni, Irini Kakaletri, Patra Charalampaki, Stamatia Giannarou
- T-03-045**      **Explaining Massive-Training Artificial Neural Networks in Medical Image Analysis Task through Visualizing Functions within the Models**  
Ze Jin, Maolin Pang, Yuqiao Yang, Fahad Parvez Mahdi, Tianyi Qu, Ren Sasage, Kenji Suzuki

- T-03-046**      **FairAdaBN: Mitigating unfairness with adaptive batch normalization and its application to dermatological disease classification**  
Zikang Xu, Shang Zhao, Quan Quan, Qingsong Yao, S. Kevin Zhou
- T-03-047**      **Faithful Synthesis of Low-dose Contrast-enhanced Brain MRI Scans using Noise-preserving Conditional GANs**  
Thomas Pinetz, Erich Kobler, Robert Haase, Katerina Deike-Hofmann, Alexander Radbruch, Alexander Effland
- T-03-048**      **FedContrast-GPA: Heterogeneous Federated Optimization via Local Contrastive Learning and Global Process-aware Aggregation**  
Qin Zhou, Guoyan Zheng
- T-03-049**      **Federated Uncertainty-Aware Aggregation for Fundus Diabetic Retinopathy Staging**  
Meng Wang, Lianyu Wang, Xinxing Xu, Ke Zou, Yiming Qian, Rick Siow Mong Goh, Yong Liu, Huazhu Fu
- T-03-050**      **FedGrav: An Adaptive Federated Aggregation Algorithm for Multi-institutional Medical Image Segmentation**  
Zhifang Deng, Dandan Li, Shi Tan, Ying Fu, Xueguang Yuan, Xiaohong Huang, Yong Zhang, Guangwei Zhou
- T-03-051**      **FedIIC: Towards Robust Federated Learning for Class-Imbalanced Medical Image Classification**  
Nannan Wu, Li Yu, Xin Yang, Kwang-Ting Cheng, Zengqiang Yan
- T-03-052**      **FedSoup: Improving Generalization and Personalization in Federated Learning via Selective Model Interpolation**  
Minghui Chen, Meirui Jiang, Qi Dou, Zehua Wang, Xiaoxiao Li
- T-03-053**      **FE-STGNN: Spatio-Temporal Graph Neural Network with Functional and Effective Connectivity Fusion for MCI Diagnosis**  
Dongdong Chen, Lichi Zhang
- T-03-054**      **FeSVIBS: Federated Split Learning of Vision Transformer with Block Sampling**  
Faris Almalik, Naif Alkhunaizi, Ibrahim Almakky, Karthik Nandakumar
- T-03-055**      **Few Shot Medical Image Segmentation with Cross Attention Transformer**  
Yi Lin, Yufan Chen, Kwang-Ting Cheng, Hao Chen
- T-03-056**      **Fine-Tuning Network in Federated Learning for Personalized Skin Diagnosis**  
Kyungsu Lee, Haeyun Lee, Thiago Coutinho Cavalcanti, Sewoong Kim, Georges El Fakhri, Dong Hun Lee, Jonghye Woo, Jae Youn Hwang
- T-03-057**      **Fourier Test-time Adaptation with Multi-level Consistency for Robust Classification**  
Yuhao Huang, Xin Yang, Xiaoqiong Huang, Xinrui Zhou, Haozhe Chi, Haoran Dou, Xindi Hu, Jian Wang, Xuedong Deng, Dong Ni

- T-03-058**      **Frequency Domain Adversarial Training for Robust Volumetric Medical Segmentation**  
Asif Hanif, Muzammal Naseer, Salman Khan, Mubarak Shah, Fahad Shahbaz Khan
- T-03-059**      **From Mesh Completion to AI Designed Crown**  
Golriz Hosseinmanesh, Farnoosh Ghadiri, Francois Guibault, Farida Cheriet, Julia Keren
- T-03-060**      **Fully Bayesian VIB-DeepSSM**  
Jadie Adams, Shireen Y. Elhabian
- T-03-061**      **Gadolinium-Free Cardiac MRI Myocardial Scar Detection by 4D Convolution Factorization**  
Amine Amyar, Shiro Nakamori, Manuel Morales, Siyeop Yoon, Jennifer Rodriguez, Jiwon Kim, Robert M. Judd, Jonathan W. Weinsaft, Reza Nezafat
- T-03-062**      **GRACE: A Generalized and Personalized Federated Learning Method for Medical Imaging**  
Ruipeng Zhang, Ziqing Fan, Qinwei Xu, Jiangchao Yao, Ya Zhang, Yanfeng Wang
- T-03-063**      **How Reliable are the Metrics Used for Assessing Reliability in Medical Imaging?**  
Mayank Gupta, Soumen Basu, Chetan Arora
- T-03-064**      **Image2SSM: Reimagining Statistical Shape Models from Images with Radial Basis Functions**  
Hong Xu, Shireen Y. Elhabian
- T-03-065**      **Inflated 3D Convolution-Transformer for Weakly-supervised Carotid Stenosis Grading with Ultrasound Videos**  
Xinrui Zhou, Yuhao Huang, Wufeng Xue, Xin Yang, Yuxin Zou, Qilong Ying, Yuanji Zhang, Jia Liu, Jie Ren, Dong Ni
- T-03-066**      **Interpretable Medical Image Classification using Prototype Learning and Privileged Information**  
Luisa Gallée, Meinrad Beer, Michael Götz
- T-03-067**      **Joint optimization of a  $\beta$ -VAE for ECG task-specific feature extraction**  
Viktor van der Valk, Douwe Atsma, Roderick Scherptong, Marius Staring
- T-03-068**      **Label-preserving Data Augmentation in Latent Space for Diabetic Retinopathy Recognition**  
Zhihao Zhao, Junjie Yang, Shahrooz Faghihroohi, Kai Huang, Mathias Maier, Nassir Navab, M. Ali Nasseri
- T-03-069**      **Learnable Subdivision Graph Neural Network for Functional Brain Network Analysis and Interpretable Cognitive Disorder Diagnosis**  
Dongdong Chen, Mengjun Liu, Zhenrong Shen, Xiangyu Zhao, Qian Wang, Lichi Zhang
- T-03-070**      **Learning Transferable Object-Centric Diffeomorphic Transformations for Data Augmentation in Medical Image Segmentation**  
Nilesh Kumar, Prashna K. Gyawali, Sandesh Ghimire, Linwei Wang



- T-03-071**      **Localized Questions in Medical Visual Question Answering**  
Sergio Tascon-Morales, Pablo Márquez-Neila, Raphael Sznitman
- T-03-072**      **Localized Region Contrast for Enhancing Self-Supervised Learning in Medical Image Segmentation**  
Xiangyi Yan, Junayed Naushad, Chenyu You, Hao Tang, Shanlin Sun, Kun Han, Haoyu Ma, James S. Duncan, Xiaohui Xie
- T-03-073**      **Longitudinal Multimodal Transformer Integrating Imaging and Latent Clinical Signatures From Routine EHRs for Pulmonary Nodule Classification**  
Thomas Z. Li, John M. Still, Kaiwen Xu, Ho Hin Lee, Leon Y. Cai, Aravind R. Krishnan, Riqiang Gao, Mirza S. Khan, Sanja Antic, Michael Kammer, Kim L. Sandler, Fabien Maldonado, Bennett A. Landman, Thomas A. Lasko
- T-03-074**      **M3D-NCA: Robust 3D Segmentation with Built-in Quality Control**  
John Kalkhof, Anirban Mukhopadhyay
- T-03-075**      **Maximum Entropy on Erroneous Predictions: Improving model calibration for medical image segmentation**  
Agostina J. Larrazabal, César Martínez, Jose Dolz, Enzo Ferrante
- T-03-076**      **Mitigating Calibration Bias Without Fixed Attribute Grouping for Improved Fairness in Medical Imaging Analysis**  
Changjian Shui, Justin Szeto, Raghav Mehta, Douglas L. Arnold, Tal Arbel
- T-03-077**      **Mixing Temporal Graphs with MLP for Longitudinal Brain Connectome Analysis**  
Hyuna Cho, Guorong Wu, Won Hwa Kim
- T-03-078**      **MPBD-LSTM: A Predictive Model For Colorectal Liver Metastases Using Time Series Multi-phase Contrast-Enhanced CT Scans**  
Xueyang Li, Han Xiao, Weixiang Weng, Xiaowei Xu, Yiyu Shi
- T-03-079**      **Multi-Head Multi-Loss Model Calibration**  
Adrian Galdran, Johan W. Verjans, Gustavo Carneiro, Miguel A. González Ballester
- T-03-080**      **Multimodal brain age estimation using interpretable adaptive population-graph learning**  
Kyriaki-Margarita Bintsi, Vasileios Baltatzis, Rolandos Alexandros Potamias, Alexander Hammers, Daniel Rueckert
- T-03-081**      **Multi-objective point cloud autoencoders for explainable myocardial infarction prediction**  
Marcel Beetz, Abhirup Banerjee, Vicente Grau
- T-03-082**      **NeuroExplainer: Fine-Grained Attention Decoding to Uncover Cortical Development Patterns of Preterm Infants**  
Chenyu Xue, Fan Wang, Yuanzhuo Zhu, Hui Li, Deyu Meng, Dinggang Shen, Chunfeng Lian



- T-03-083**      **On the Relevance of Temporal Features for Medical Ultrasound Video Recognition**  
D. Hudson Smith, John Paul Lineberger, George H. Baker
- T-03-084**      **One-shot Federated Learning on Medical Data using Knowledge Distillation with Image Synthesis and Client Model Adaptation**  
Myeongkyun Kang, Philip Chikontwe, Soopil Kim, Kyong Hwan Jin, Ehsan Adeli, Kilian M. Pohl, Sang Hyun Park
- T-03-085**      **Partial Vessels Annotation-based Coronary Artery Segmentation with Self-training and Prototype Learning**  
Zheng Zhang, Xiaolei Zhang, Yaolei Qi, Guanyu Yang
- T-03-086**      **Partially Supervised Multi-Organ Segmentation via Affinity-aware Consistency Learning and Cross Site Feature Alignment**  
Qin Zhou, Peng Liu, Guoyan Zheng
- T-03-087**      **Path-based Heterogeneous Brain Transformer Network for Resting-State Functional Connectivity Analysis**  
Ruiyan Fang, Yu Li, Xin Zhang, Shengxian Chen, Jiale Cheng, Xiangmin Xu, Jieling Wu, Weili Lin, Li Wang, Zhengwang Wu, Gang Li
- T-03-088**      **Physics-based Decoding Improves Magnetic Resonance Fingerprinting**  
Juyeon Heo, Pingfan Song, Weiyang Liu, Adrian Weller
- T-03-089**      **Point Cloud Diffusion Models for Automatic Implant Generation**  
Paul Friedrich, Julia Wolleb, Florentin Bieder, Florian M. Thieringer, Philippe C. Cattin
- T-03-090**      **Prediction of Cognitive Scores by Joint Use of Movie-watching fMRI Connectivity and Eye Tracking via Attention-CensNet**  
Jiaxing Gao, Lin Zhao, Tianyang Zhong, Changhe Li, Zhibin He, Yaonai Wei, Shu Zhang, Lei Guo, Tianming Liu, Junwei Han, Tuo Zhang
- T-03-091**      **Prediction of Infant Cognitive Development with Cortical Surface-based Multimodal Learning**  
Jiale Cheng, Xin Zhang, Fenqiang Zhao, Zhengwang Wu, Xinrui Yuan, Li Wang, Weili Lin, Gang Li
- T-03-092**      **Pre-trained Diffusion Models for Plug-and-Play Medical Image Enhancement**  
Jun Ma, Yuanzhi Zhu, Chenyu You, Bo Wang
- T-03-093**      **Probabilistic Modeling Ensemble Vision Transformer Improves Complex Polyp Segmentation**  
Tianyi Ling, Chengyi Wu, Huan Yu, Tian Cai, Da Wang, Yincong Zhou, Ming Chen, Kefeng Ding
- T-03-094**      **Reconstructing the Hemodynamic Response Function via a Bimodal Transformer**  
Yoni Choukroun, Lior Golgher, Pablo Blinder, Lior Wolf

- T-03-095**      **Rectifying Noisy Labels with Sequential Prior: Multi-Scale Temporal Feature Affinity Learning for Robust Video Segmentation**  
Beilei Cui, Minqing Zhang, Mengya Xu, An Wang, Wu Yuan, Hongliang Ren
- T-03-096**      **Regular SE(3) Group Convolutions for Volumetric Medical Image Analysis**  
Thijs P. Kuipers, Erik J. Bekkers
- T-03-097**      **Reliable Multimodality Eye Disease Screening via Mixture of Student's t Distributions**  
Ke Zou, Tian Lin, Xuedong Yuan, Haoyu Chen, Xiaojing Shen, Meng Wang, Huazhu Fu
- T-03-098**      **Rethinking Semi-Supervised Federated Learning: How to co-train fully-labeled and fully-unlabeled client imaging data**  
Pramit Saha, Divyanshu Mishra, J. Alison Noble
- T-03-099**      **Retinal Thickness Prediction from Multi-modal Fundus Photography**  
Yihua Sun, Dawei Li, Seongho Kim, Ya Xing Wang, Jinyuan Wang, Tien Yin Wong, Hongen Liao, Su Jeong Song
- T-03-100**      **Reveal to Revise: An Explainable AI Life Cycle for Iterative Bias Correction of Deep Models**  
Frederik Pahde, Maximilian Dreyer, Wojciech Samek, Sebastian Lapuschkin
- T-03-101**      **Right for the Wrong Reason: Can Interpretable ML Techniques Detect Spurious Correlations?**  
Susu Sun, Lisa M. Koch, Christian F. Baumgartner
- T-03-102**      **Robust Hough and Spatial-To-Angular Transform Based Rotation Estimation for Orthopedic X-Ray Images**  
Magdalena Bachmaier, Maximilian Rohleder, Benedict Swartman, Maxim Privalov, Andreas Maier, Holger Kunze
- T-03-103**      **Robust vertebra identification using simultaneous node and edge predicting Graph Neural Networks**  
Vincent Bürgin, Raphael Prevost, Marijn F. Stollenga
- T-03-104**      **SATTA: Semantic-Aware Test-Time Adaptation for Cross-Domain Medical Image Segmentation**  
Yuhan Zhang, Kun Huang, Cheng Chen, Qiang Chen, Pheng-Ann Heng
- T-03-105**      **Scale Federated Learning for Label Set Mismatch in Medical Image Classification**  
Zhipeng Deng, Luyang Luo, Hao Chen
- T-03-106**      **Segmentation Distortion: Quantifying Segmentation Uncertainty under Domain Shift via the Effects of Anomalous Activations**  
Jonathan Lennartz, Thomas Schultz

- T-03-107**      **Self-aware and Cross-sample Prototypical Learning for Semi-supervised Medical Image Segmentation**  
Zhenxi Zhang, Ran Ran, Chunna Tian, Heng Zhou, Xin Li, Fan Yang, Zhicheng Jiao
- T-03-108**      **Self-Supervised Learning for Physiologically-Based Pharmacokinetic Modeling in Dynamic PET**  
Francesca De Benetti, Walter Simson, Magdalini Paschali, Hasan Sari, Axel Rominger, Kuangyu Shi, Nassir Navab, Thomas Wendler
- T-03-109**      **SFusion: Self-attention based N-to-One Multimodal Fusion Block**  
Zecheng Liu, Jia Wei, Rui Li, Jianlong Zhou
- T-03-110**      **SMRD: SURE-based Robust MRI Reconstruction with Diffusion Models**  
Batu Ozturkler, Chao Liu, Benjamin Eckart, Morteza Mardani, Jiaming Song, Jan Kautz
- T-03-111**      **Spatiotemporal Hub Identification in Brain Network by Learning Dynamic Graph Embedding on Grassmannian Manifold**  
Defu Yang, Hui Shen, Minghan Chen, Yitian Xue, Shuai Wang, Guorong Wu, Wentao Zhu
- T-03-112**      **SurfFlow: A Flow-Based Approach for Rapid and Accurate Cortical Surface Reconstruction from Infant Brain MRI**  
Xiaoyang Chen, Junjie Zhao, Siyuan Liu, Sahar Ahmad, Pew-Thian Yap
- T-03-113**      **Synthetic Augmentation with Large-scale Unconditional Pre-training**  
Jiarong Ye, Haomiao Ni, Peng Jin, Sharon X. Huang, Yuan Xue
- T-03-114**      **TauFlowNet: Uncovering Propagation Mechanism of Tau Aggregates by Neural Transport Equation**  
Tingting Dan, Minjeong Kim, Won Hwa Kim, Guorong Wu
- T-03-115**      **Temporal Uncertainty Localization to Enable Human-in-the-loop Analysis of Dynamic Contrast-enhanced Cardiac MRI Datasets**  
Dilek M. Yalcinkaya, Khalid Youssef, Bobak Heydari, Orlando Simonetti, Rohan Dharmakumar, Subha Raman, Behzad Sharif
- T-03-116**      **The Role of Subgroup Separability in Group-Fair Medical Image Classification**  
Charles Jones, Mélanie Roschewitz, Ben Glocker
- T-03-117**      **Thyroid Nodule Diagnosis in Dynamic Contrast-enhanced Ultrasound via Microvessel Infiltration Awareness**  
Haojie Han, Hongen Liao, Daoqiang Zhang, Wentao Kong, Fang Chen
- T-03-118**      **Toward Fairness Through Fair Multi-Exit Framework for Dermatological Disease Diagnosis**  
Ching-Hao Chiu, Hao-Wei Chung, Yu-Jen Chen, Yiyu Shi, Tsung-Yi Ho

- T-03-119**      **Towards AI-driven radiology education: A self-supervised segmentation-based framework for high-precision medical image editing**  
Kazuma Kobayashi, Lin Gu, Ryuichiro Hataya, Mototaka Miyake, Yasuyuki Takamizawa, Sono Ito, Hirokazu Watanabe, Yukihiro Yoshida, Hiroki Yoshimura, Tatsuya Harada, Ryuji Hamamoto
- T-03-120**      **Towards frugal unsupervised detection of subtle abnormalities in medical imaging**  
Geoffroy Oudoumanessah, Carole Lartizien, Michel Dojat, Florence Forbes
- T-03-121**      **Transferability-Guided Multi-Source Model Adaptation for Medical Image Segmentation**  
Chen Yang, Yifan Liu, Yixuan Yuan
- T-03-122**      **TransLiver: A Hybrid Transformer Model for Multi-phase Liver Lesion Classification**  
Xierui Wang, Hanning Ying, Xiaoyin Xu, Xiujun Cai, Min Zhang
- T-03-123**      **Triangular Analysis of Geographical Interplay of Lymphocytes (TriAnGIL): Predicting Immunotherapy Response in Lung Cancer**  
Sara Arabyarmohammadi, German Corredor, Yufei Zhou, Miguel López de Rodas, Kurt Schalper, Anant Madabhushi
- T-03-124**      **Uncovering Structural-Functional Coupling Alterations for Neurodegenerative Diseases**  
Tingting Dan, Minjeong Kim, Won Hwa Kim, Guorong Wu
- T-03-125**      **Understanding Silent Failures in Medical Image Classification**  
Till J. Bungert, Levin Kobelke, Paul F. Jäger
- T-03-126**      **Weakly Supervised Medical Image Segmentation via Superpixel-guided Scribble Walking and Class-wise Contrastive Regularization**  
Meng Zhou, Zhe Xu, Kang Zhou, Raymond Kai-yu Tong

**Poster 4: Computer Aided Diagnosis and Treatment**

**Tuesday, October 10, 2023, 13:00 to 14:30, Poster Hall**

**Session Chairs:**

Anees Kazi, MGH and Harvard Medical School, USA

Aristeidis Sotiras, Washington University in St. Louis, USA

Pingkun Yan, Rensselaer Polytechnic Institute, USA

Dajiang Zhu, University of Texas at Arlington, USA

- T-04-001      A Multimodal Disease Progression Model for Genetic Associations with Disease Dynamics**  
Nemo Fournier, Stanley Durrleman
- T-04-002      A Multi-Task Method for Immunofixation Electrophoresis Image Classification**  
Yi Shi, Rui-Xiang Li, Wen-Qi Shao, Xin-Cen Duan, Han-Jia Ye, De-Chuan Zhan, Bai-Shen Pan, Bei-Li Wang, Wei Guo, Yuan Jiang
- T-04-003      A Novel Multi-Task Model Imitating Dermatologists for Accurate Differential Diagnosis of Skin Diseases in Clinical Images**  
Yan-Jie Zhou, Wei Liu, Yuan Gao, Jing Xu, Le Lu, Yuping Duan, Hao Cheng, Na Jin, Xiaoyong Man, Shuang Zhao, Yu Wang
- T-04-004      A Reliable and Interpretable Framework of Multi-view Learning for Liver Fibrosis Staging**  
Zheyao Gao, Yuanye Liu, Fuping Wu, Nannan Shi, Yuxin Shi, Xiahai Zhuang
- T-04-005      A Style Transfer-based Augmentation Framework for Improving Segmentation and Classification Performance across Different Sources in Ultrasound Images**  
Bin Huang, Ziyue Xu, Shing-Chow Chan, Zhong Liu, Huiying Wen, Chao Hou, Qikai Huang, Meiqin Jiang, Changfeng Dong, Jie Zeng, Ruhai Zou, Bingsheng Huang, Xin Chen, Shuo Li
- T-04-006      A Texture Neural Network to Predict the Abnormal Brachial Plexus from Routine Magnetic Resonance Imaging**  
Weiguo Cao, Benjamin M. Howe, Nicholas G. Rhodes, Sumana Ramanathan, Panagiotis Korfiatis, Kimberly K. Amrami, Robert J. Spinner, Timothy L. Kline
- T-04-007      Acute Ischemic Stroke Onset Time Classification with Dynamic Convolution and Perfusion Maps Fusion**  
Peng Yang, Yuchen Zhang, Haijun Lei, Yueyan Bian, Qi Yang, Baiying Lei
- T-04-008      Adjustable Robust Transformer for High Myopia Screening in Optical Coherence Tomography**  
Xiao Ma, Zetian Zhang, Zexuan Ji, Kun Huang, Na Su, Songtao Yuan, Qiang Chen
- T-04-009      Anatomical Landmark Detection Using a Multiresolution Learning Approach with a Hybrid Transformer-CNN Model**  
Thanaporn Viriyasaranon, Serie Ma, Jang-Hwan Choi

- T-04-010**      **Anatomy-informed Data Augmentation for Enhanced Prostate Cancer Detection**  
Balint Kovacs, Nils Netzer, Michael Baumgartner, Carolin Eith, Dimitrios Bounias, Clara Meinzer, Paul F. Jäger, Kevin S. Zhang, Ralf Floca, Adrian Schrader, Fabian Isensee, Regula Gnirs, Magdalena Görtz, Viktoria Schütz, Albrecht Stenzinger, Markus Hohenfellner, Heinz-Peter Schlemmer, Ivo Wolf, David Bonekamp, Klaus H. Maier-Hein
- T-04-011**      **ASC: Appearance and Structure Consistency for Unsupervised Domain Adaptation in Fetal Brain MRI Segmentation**  
Zihang Xu, Haifan Gong, Xiang Wan, Haofeng Li
- T-04-012**      **Automatic Bleeding Risk Rating System of Gastric Varices**  
Yicheng Jiang, Luyue Shi, Wei Qi, Lei Chen, Guanbin Li, Xiaoguang Han, Xiang Wan, Siqi Liu
- T-04-013**      **Beyond the Snapshot: Brain Tokenized Graph Transformer for Longitudinal Brain Functional Connectome Embedding**  
Zijian Dong, Yilei Wu, Yu Xiao, Joanna Su Xian Chong, Yueming Jin, Juan Helen Zhou
- T-04-014**      **Boosting Breast Ultrasound Video Classification by the Guidance of Keyframe Feature Centers**  
Anlan Sun, Zhao Zhang, Meng Lei, Yuting Dai, Dong Wang, Liwei Wang
- T-04-015**      **CARL: Cross-aligned Representation Learning for Multi-view Lung Cancer Histology Classification**  
Yin Luo, Wei Liu, Tao Fang, Qilong Song, Xuhong Min, Minghui Wang, Ao Li
- T-04-016**      **CircleFormer: Circular Nuclei Detection in Whole Slide Images with Circle Queries and Attention**  
Hengxu Zhang, Pengpeng Liang, Zhiyong Sun, Bo Song, Erkang Cheng
- T-04-017**      **Cluster-Induced Mask Transformers for Effective Opportunistic Gastric Cancer Screening on Non-contrast CT Scans**  
Mingze Yuan, Yingda Xia, Xin Chen, Jiawen Yao, Junli Wang, Mingyan Qiu, Hexin Dong, Jingren Zhou, Bin Dong, Le Lu, Li Zhang, Zaiyi Liu, Ling Zhang
- T-04-018**      **Combat Long-tails in Medical Classification with Relation-aware Consistency and Virtual Features Compensation**  
Li Pan, Yupei Zhang, Qiushi Yang, Tan Li, Zhen Chen
- T-04-019**      **Conditional Physics-Informed Graph Neural Network For Fractional Flow Reserve Assessment**  
Baihong Xie, Xiujuan Liu, Heye Zhang, Chenchu Xu, Tiejong Zeng, Yixuan Yuan, Guang Yang, Zhifan Gao
- T-04-020**      **Contrastive Feature Decoupling for Weakly-supervised Disease Detection**  
Jih-Ciang Wu, Ding-Jie Chen, Chiou-Shann Fuh

- T-04-021**      **Contrastive Masked Image-Text Modeling for Medical Visual Representation Learning**  
Cheng Chen, Aoxiao Zhong, Dufan Wu, Jie Luo, Quanzheng Li
- T-04-022**      **Convolving Directed Graph Edges via Hodge Laplacian for Brain Network Analysis**  
Joonhyuk Park, Yechan Hwang, Minjeong Kim, Moo K. Chung, Guorong Wu, Won Hwa Kim
- T-04-023**      **c0OpD: Reformulating COPD classification on chest CT scans as anomaly detection using contrastive representations**  
Silvia D. Almeida, Carsten T. Lüth, Tobias Norajitra, Tassilo Wald, Marco Nolden, Paul F. Jäger, Claus P. Heussel, Jürgen Biederer, Oliver Weinheimer, Klaus H. Maier-Hein
- T-04-024**      **Coupling Bracket Segmentation and Tooth Surface Reconstruction on 3D Dental Models**  
Yuwen Tan, Xiang Xiang, Yifeng Chen, Hongyi Jing, Shiyang Ye, Chaoran Xue, Hui Xu
- T-04-025**      **COVID-19 Pneumonia Classification with Transformer from Incomplete Modalities**  
Eduard Lloret Carbonell, Yiqing Shen, Xin Yang, Jing Ke
- T-04-026**      **Cross-view Deformable Transformer for Non-displaced Hip Fracture Classification from Frontal-Lateral X-ray Pair**  
Zhonghang Zhu, Qichang Chen, Lequan Yu, Lianxin Wang, Defu Zhang, Baptiste Magnier, Liansheng Wang
- T-04-027**      **CT-guided, Unsupervised Super-resolution Reconstruction of Single 3D Magnetic Resonance Image?**  
Jiale Wang, Alexander F. Heimann, Moritz Tannast, Guoyan Zheng
- T-04-028**      **DeepSOZ: A Robust Deep Model for Joint Temporal and Spatial Seizure Onset Localization from Multichannel EEG Data**  
Deeksha M. Shama, Jiasen Jing, Archana Venkataraman
- T-04-029**      **Detecting domain shift in multiple instance learning for digital pathology using Fréchet Domain Distance**  
Milda Pocevičiūtė, Gabriel Eilertsen, Stina Garvin, Claes Lundström
- T-04-030**      **Detection of basal cell carcinoma in whole slide images**  
Hongyan Xu, Dadong Wang, Arcot Sowmya, Ian Katz
- T-04-031**      **Detection-free Pipeline for Cervical Cancer Screening of Whole Slide Images**  
Maosong Cao, Manman Fei, Jiangdong Cai, Luyan Liu, Lichi Zhang, Qian Wang
- T-04-032**      **DiffDP: Radiotherapy Dose Prediction via a Diffusion Model**  
Zhenghao Feng, Lu Wen, Peng Wang, Binyu Yan, Xi Wu, Jiliu Zhou, Yan Wang
- T-04-033**      **DiffMIC: Dual-Guidance Diffusion Network for Medical Image Classification**  
Yijun Yang, Huazhu Fu, Angelica I. Aviles-Rivero, Carola-Bibiane Schönlieb, Lei Zhu

- T-04-034**      **DiffULD: Diffusive Universal Lesion Detection**  
Peiang Zhao, Han Li, Ruiyang Jin, S. Kevin Zhou
- T-04-035**      **Diffusion-based Data Augmentation for Nuclei Image Segmentation**  
Xinyi Yu, Guanbin Li, Wei Lou, Siqi Liu, Xiang Wan, Yan Chen, Haofeng Li
- T-04-036**      **Diffusion-Based Hierarchical Multi-Label Object Detection to Analyze Panoramic Dental X-rays**  
Ibrahim Ethem Hamamci, Sezgin Er, Enis Simsar, Anjany Sekuboyina, Mustafa Gundogar, Bernd Stadlinger, Albert Mehl, Bjoern Menze
- T-04-037**      **Discovering Brain Network Dysfunction in Alzheimer's Disease Using Brain Hypergraph Neural Network**  
Hongmin Cai, Zhixuan Zhou, Defu Yang, Guorong Wu, Jiazhou Chen
- T-04-038**      **Distributionally Robust Image Classifiers for Stroke Diagnosis in Accelerated MRI**  
Boran Hao, Guoyao Shen, Ruidi Chen, Chad W. Farris, Stephan W. Anderson, Xin Zhang, Ioannis Ch. Paschalidis
- T-04-039**      **Diversity-preserving Chest Radiographs Generation from Reports in One Stage**  
Zeyi Hou, Ruixin Yan, Qizheng Wang, Ning Lang, Xiuzhuang Zhou
- T-04-040**      **Dynamic Curriculum Learning via In-Domain Uncertainty for Medical Image Classification**  
Chaoyi Li, Meng Li, Can Peng, Brian C. Lovell
- T-04-041**      **Dynamic Structural Brain Network Construction by Hierarchical Prototype Embedding GCN using T1-MRI**  
Yilin Leng, Wenju Cui, Chen Bai, Zirui Chen, Yanyan Zheng, Jian Zheng
- T-04-042**      **Enhancing Automatic Placenta Analysis through Distributional Feature Recomposition in Vision-Language Contrastive Learning**  
Yimu Pan, Tongan Cai, Manas Mehta, Alison D. Gernand, Jeffery A. Goldstein, Leena Mithal, Delia Mwinyelle, Kelly Gallagher, James Z. Wang
- T-04-043**      **Enhancing Breast Cancer Risk Prediction by Incorporating Prior Images**  
Hyeonsoo Lee, Junha Kim, Eunkyung Park, Minjeong Kim, Taesoo Kim, Thijs Kooi
- T-04-044**      **EPVT: Environment-aware Prompt Vision Transformer for Domain Generalization in Skin Lesion Recognition**  
Siyuan Yan, Chi Liu, Zhen Yu, Lie Ju, Dwarikanath Mahapatra, Victoria Mar, Monika Janda, Peter Soyer, Zongyuan Ge
- T-04-045**      **Eye-Guided Dual-Path Network for Multi-organ Segmentation of Abdomen**  
Chong Wang, Daoqiang Zhang, Rongjun Ge



- T-04-046**      **Fast Non-Markovian Diffusion Model for Weakly Supervised Anomaly Detection in Brain MR Images**  
Jinpeng Li, Hanqun Cao, Jiaze Wang, Furui Liu, Qi Dou, Guangyong Chen, Pheng-Ann Heng
- T-04-047**      **Fundus-Enhanced Disease-Aware Distillation Model for Retinal Disease Classification from OCT Images**  
Lehan Wang, Weihang Dai, Mei Jin, Chubin Ou, Xiaomeng Li
- T-04-048**      **Gradient and Feature Conformity-Steered Medical Image Classification with Noisy Labels**  
Xiaohan Xing, Zhen Chen, Zhifan Gao, Yixuan Yuan
- T-04-049**      **Graph-theoretic automatic lesion tracking and detection of patterns of lesion changes in longitudinal CT studies**  
Beniamin Di Veroli, Richard Lederman, Jacob Sosna, Leo Joskowicz
- T-04-050**      **GSDG: Exploring A Global Semantic-guided Dual-stream Graph Model for Automated Volume Differential Diagnosis and Prognosis**  
Shouyu Chen, Xin Guo, Jianping Zhu, Yin Wang
- T-04-051**      **HACL-Net: Hierarchical Attention and Contrastive Learning Network for MRI-Based Placenta Accreta Spectrum Diagnosis**  
Mingxuan Lu, Tianyu Wang, Hao Zhu, Mian Li
- T-04-052**      **HC-Net: Hybrid Classification Network for Automatic Periodontal Disease Diagnosis**  
Lanzhuju Mei, Yu Fang, Zhiming Cui, Ke Deng, Nizhuan Wang, Xuming He, Yiqiang Zhan, Xiang Zhou, Maurizio Tonetti, Dinggang Shen
- T-04-053**      **Hierarchical Vision Transformers for Disease Progression Detection in Chest X-Ray Images**  
Amarachi B. Mbakwe, Lyuyang Wang, Mehdi Moradi, Ismini Lourentzou
- T-04-054**      **How Does Pruning Impact Long-Tailed Multi-Label Medical Image Classifiers?**  
Gregory Holste, Ziyu Jiang, Ajay Jaiswal, Maria Hanna, Shlomo Minkowitz, Alan C. Legasto, Joanna G. Escalon, Sharon Steinberger, Mark Bittman, Thomas C. Shen, Ying Ding, Ronald M. Summers, George Shih, Yifan Peng, Zhangyang Wang
- T-04-055**      **Improved Prognostic Prediction of Pancreatic Cancer Using Multi-Phase CT by Integrating Neural Distance and Texture-Aware Transformer**  
Hexin Dong, Jiawen Yao, Yuxing Tang, Mingze Yuan, Yingda Xia, Jian Zhou, Hong Lu, Jingren Zhou, Bin Dong, Le Lu, Zaiyi Liu, Li Zhang, Yu Shi, Ling Zhang
- T-04-056**      **Improving Image-Based Precision Medicine with Uncertainty-Aware Causal Models**  
Joshua Durso-Finley, Jean-Pierre Falet, Raghav Mehta, Douglas L. Arnold, Nick Pawlowski, Tal Arbel
- T-04-057**      **Improving Outcome Prediction of Pulmonary Embolism by De-Biased Multi-Modality Model**  
Zhusi Zhong, Jie Li, Shreyas Kulkarni, Yang Li, Fayez H. Fayad, Helen Zhang, Sun Ho Ahn, Harrison Bai, Xinbo Gao, Michael K. Atalay, Zhicheng Jiao

- T-04-058**      **Improving Pathology Localization: Multi-Series Joint Attention Takes the Lead**  
Ashwin Raju, Micha Kornreich, Colin Hansen, James Browning, Jayashri Pawar, Richard Herzog, Benjamin Odry, Li Zhang
- T-04-059**      **Incomplete Multimodal Learning for Visual Acuity Prediction after Cataract Surgery Using Masked Self-Attention**  
Qian Zhou, Hua Zou, Haifeng Jiang, Yong Wang
- T-04-060**      **Interpretable Deep Biomarker for Serial Monitoring of Carotid Atherosclerosis Based on Three-Dimensional Ultrasound Imaging**  
Xueli Chen, Xinqi Fan, Bernard Chiu
- T-04-061**      **Joint prediction of response to therapy, molecular traits, and spatial organisation in colorectal cancer biopsies**  
Ruby Wood, Enric Domingo, Korsuk Sirinukunwattana, Maxime W Lafarge, Viktor H Koelzer, Timothy S Maughan, Jens Rittscher
- T-04-062**      **Learning Asynchronous Common and Individual Functional Brain Network for AD Diagnosis**  
Xiang Tang, Xiaocai Zhang, Mengting Liu, Jianjia Zhang
- T-04-063**      **Learning Large Margin Sparse Embeddings for Open Set Medical Diagnosis**  
Mingyuan Liu, Lu Xu, Jicong Zhang
- T-04-064**      **Learning Robust Classifier for Imbalanced Medical Image Dataset with Noisy Labels by Minimizing Invariant Risk**  
Jinpeng Li, Hanqun Cao, Jiase Wang, Furui Liu, Qi Dou, Guangyong Chen, Pheng-Ann Heng
- T-04-065**      **Learning with Synthesized Data for Generalizable Lesion Detection in Real PET Images**  
Xinyi Yang, Bennett Chin, Michael Silosky, Daniel Litwiller, Debashis Ghosh, Fuyong Xing
- T-04-066**      **Lesion-aware Contrastive Learning for Diabetic Retinopathy Diagnosis**  
Shuai Cheng, Qingshan Hou, Peng Cao, Jinzhu Yang, Xiaoli Liu, Osmar R. Zaiane
- T-04-067**      **Liver Tumor Screening and Diagnosis in CT with Pixel-Lesion-Patient Network**  
Ke Yan, Xiaoli Yin, Yingda Xia, Fakai Wang, Shu Wang, Yuan Gao, Jiawen Yao, Chunli Li, Xiaoyu Bai, Jingren Zhou, Ling Zhang, Le Lu, Yu Shi
- T-04-068**      **M&M: Tackling False Positives in Mammography with a Multi-view and Multi-instance Learning Sparse Detector**  
Yen Nhi Truong Vu, Dan Guo, Ahmed Taha, Jason Su, Thomas Paul Matthews
- T-04-069**      **Machine Learning for Automated Mitral Regurgitation Detection from Cardiac Imaging**  
Ke Xiao, Erik Learned-Miller, Evangelos Kalogerakis, James Priest, Madalina Fiterau

- T-04-070**      **Merging-Diverging Hybrid Transformer Networks for Survival Prediction in Head and Neck Cancer**  
Mingyuan Meng, Lei Bi, Michael Fulham, Dagan Feng, Jinman Kim
- T-04-071**      **Multimodal Deep Fusion in Hyperbolic Space for Mild Cognitive Impairment Study**  
Lu Zhang, Saiyang Na, Tianming Liu, Dajiang Zhu, Junzhou Huang
- T-04-072**      **Multi-modality contrastive learning for sarcopenia screening from hip X-rays and clinical information**  
Qiangguo Jin, Changjiang Zou, Hui Cui, Changming Sun, Shu-Wei Huang, Yi-Jie Kuo, Ping Xuan, Leilei Cao, Ran Su, Leyi Wei, Henry B.L. Duh, Yu-Pin Chen
- T-04-073**      **Multi-task Learning of Histology and Molecular Markers for Classifying Diffuse Glioma**  
Xiaofei Wang, Stephen Price, Chao Li
- T-04-074**      **Multi-View Vertebra Localization and Identification from CT Images**  
Han Wu, Jiadong Zhang, Yu Fang, Zhentao Liu, Nizhuan Wang, Zhiming Cui, Dinggang Shen
- T-04-075**      **MUVF-YOLOX: A Multi-modal Ultrasound Video Fusion Network for Renal Tumor Diagnosis**  
Junyu Li, Han Huang, Dong Ni, Wufeng Xue, Dongmei Zhu, Jun Cheng
- T-04-076**      **Overall Survival Time Prediction of Glioblastoma on Preoperative MRI Using Lesion Network Mapping**  
Xingcan Hu, Li Xiao, Xiaoyan Sun, Feng Wu
- T-04-077**      **Parse and Recall: Towards Accurate Lung Nodule Malignancy Prediction like Radiologists**  
Jianpeng Zhang, Xianghua Ye, Jianfeng Zhang, Yuxing Tang, Minfeng Xu, Jianfei Guo, Xin Chen, Zaiyi Liu, Jingren Zhou, Le Lu, Ling Zhang
- T-04-078**      **PAS-Net: Rapid Prediction of Antibiotic Susceptibility from Fluorescence Images of Bacterial Cells Using Parallel Dual-branch Network**  
Wei Xiong, Kaiwei Yu, Liang Yang, Baiying Lei
- T-04-079**      **Pathology-and-genomics Multimodal Transformer for Survival Outcome Prediction**  
Kexin Ding, Mu Zhou, Dimitris N. Metaxas, Shaoting Zhang
- T-04-080**      **Patients and Slides are Equal: A Multi-level Multi-instance Learning Framework for Pathological Image Analysis**  
Fei Li, Mingyu Wang, Bin Huang, Xiaoyu Duan, Zhuya Zhang, Ziyin Ye, Bingsheng Huang
- T-04-081**      **Performance Metrics for Probabilistic Ordinal Classifiers**  
Adrian Galdran
- T-04-082**      **Polar-Net: A Clinical-Friendly Model for Alzheimer's Disease Detection in OCTA Images**  
Shouyue Liu, Jinkui Hao, Yanwu Xu, Huazhu Fu, Xinyu Guo, Jiang Liu, Yalin Zheng, Yonghuai Liu, Jiong Zhang, Yitian Zhao

- T-04-083**      **Positive Definite Wasserstein Graph Kernel for Brain Disease Diagnosis**  
Kai Ma, Xuyun Wen, Qi Zhu, Daoqiang Zhang
- T-04-084**      **Privacy-preserving Early Detection of Epileptic Seizures in Videos**  
Deval Mehta, Shobi Sivathamboo, Hugh Simpson, Patrick Kwan, Terence O'Brien, Zongyuan Ge
- T-04-085**      **Progressive Attention Guidance for Whole Slide Vulvovaginal Candidiasis Screening**  
Jiangdong Cai, Honglin Xiong, Maosong Cao, Luyan Liu, Lichi Zhang, Qian Wang
- T-04-086**      **Prompt-based Grouping Transformer for Nucleus Detection and Classification**  
Junjia Huang, Haofeng Li, Weijun Sun, Xiang Wan, Guanbin Li
- T-04-087**      **ProtoASNet: Dynamic Prototypes for Inherently Interpretable and Uncertainty-Aware Aortic Stenosis Classification in Echocardiography**  
Hooman Vaseli, Ang Nan Gu, S. Neda Ahmadi Amiri, Michael Y. Tsang, Andrea Fung, Nima Kondori, Armin Saadat, Purang Abolmaesumi, Teresa S. M. Tsang
- T-04-088**      **Radiomics-Informed Deep Learning for Classification of Atrial Fibrillation Sub-Types from Left-Atrium CT Volumes**  
Weihang Dai, Xiaomeng Li, Taihui Yu, Di Zhao, Jun Shen, Kwang-Ting Cheng
- T-04-089**      **Rad-ReStruct: A Novel VQA Benchmark and Method for Structured Radiology Reporting**  
Chantal Pellegrini, Matthias Keicher, Ege Özsoy, Nassir Navab
- T-04-090**      **Recruiting the best teacher modality: A customized knowledge distillation method for IF based nephropathy diagnosis**  
Ning Dai, Lai Jiang, Yibing Fu, Sai Pan, Mai Xu, Xin Deng, Pu Chen, Xiangmei Chen
- T-04-091**      **Representation, Alignment, Fusion: A Generic Transformer-based Framework for Multi-modal Glaucoma Recognition**  
You Zhou, Gang Yang, Yang Zhou, Dayong Ding, Jianchun Zhao
- T-04-092**      **Reversing the Abnormal: Pseudo-Healthy Generative Networks for Anomaly Detection**  
Cosmin I. Bercea, Benedikt Wiestler, Daniel Rueckert, Julia A. Schnabel
- T-04-093**      **Revisiting Feature Propagation and Aggregation in Polyp Segmentation**  
Yanzhou Su, Yiqing Shen, Jin Ye, Junjun He, Jian Cheng
- T-04-094**      **Robust and Generalisable Segmentation of Subtle Epilepsy-causing Lesions: a Graph Convolutional Approach**  
Hannah Spitzer, Mathilde Ripart, Abdulah Fawaz, Logan Z. J. Williams, MELD project, Emma C. Robinson, Juan Eugenio Iglesias, Sophie Adler, Konrad Wagstyl
- T-04-095**      **Robust Exclusive Adaptive Sparse Feature Selection for Biomarker Discovery and Early Diagnosis of Neuropsychiatric Systemic Lupus Erythematosus**  
Tianhong Quan, Ye Yuan, Yu Luo, Teng Zhou, Jing Qin

- T-04-096**      **SCOL: Supervised Contrastive Ordinal Loss for Abdominal Aortic Calcification Scoring on Vertebral Fracture Assessment Scans**  
Afsah Saleem, Zaid Ilyas, David Suter, Ghulam Mubashar Hassan, Siobhan Reid, John T. Schousboe, Richard Prince, William D. Leslie, Joshua R. Lewis, Syed Zulqarnain Gilani
- T-04-097**      **Self- and Semi-Supervised Learning for Gastroscopic Lesion Detection**  
Xuanye Zhang, Kaige Yin, Siqi Liu, Zhijie Feng, Xiaoguang Han, Guanbin Li, Xiang Wan
- T-04-098**      **Self-feedback Transformer: A Multi-label Diagnostic Model for Real-world Pancreatic Neuroendocrine Neoplasms Data**  
Mingyu Wang, Yi Li, Bin Huang, Chenglang Yuan, Yangdi Wang, Yanji Luo, Bingsheng Huang
- T-04-099**      **Self-Supervised Polyp Re-Identification in Colonoscopy**  
Yotam Intrator, Natalie Aizenberg, Amir Livne, Ehud Rivlin, Roman Goldenberg
- T-04-100**      **SHSRCNet: Super-resolution And Classification Network For Low-resolution Breast Cancer Histopathology Image**  
Luyuan Xie, Cong Li, Zirui Wang, Xin Zhang, Boyan Chen, Qingni Shen, Zhonghai Wu
- T-04-101**      **STAR-Echo: A Novel Biomarker for Prognosis of MACE in Chronic Kidney Disease Patients using Spatiotemporal Analysis and Transformer-Based Radiomics Models.**  
Rohan Dhamdhere, Gourav Modanwal, Mohamed H.E. Makhoulouf, Neda Shafiabadi Hassani, Satvika Bharadwaj, Pingfu Fu, Ioannis Milioglou, Mahboob Rahman, Sadeer Al-Kindi, Anant Madabhushi
- T-04-102**      **TabAttention: Learning Attention Conditionally on Tabular Data**  
Michał K. Grzeszczyk, Szymon Płotka, Beata Rebizant, Katarzyna Kosińska-Kaczyńska, Michał Lipa, Robert Brawura-Biskupski-Samaha, Przemysław Korzeniowski, Tomasz Trzciński, Arkadiusz Sitek
- T-04-103**      **TCEIP: Text Condition Embedded Regression Network for Dental Implant Position Prediction**  
Xinquan Yang, Jinheng Xie, Xuguang Li, Xuechen Li, Xin Li, Linlin Shen, Yongqiang Deng
- T-04-104**      **Text-guided Foundation Model Adaptation for Pathological Image Classification**  
Yunkun Zhang, Jin Gao, Mu Zhou, Xiaosong Wang, Yu Qiao, Shaoting Zhang, Dequan Wang
- T-04-105**      **Topology Repairing of Disconnected Pulmonary Airways and Vessels: Baselines and a Dataset**  
Ziqiao Weng, Jiancheng Yang, Dongnan Liu, Weidong Cai
- T-04-106**      **Towards Generalizable Diabetic Retinopathy Grading in Unseen Domains**  
Haoxuan Che, Yuhan Cheng, Haibo Jin, Hao Chen
- T-04-107**      **Towards Novel Class Discovery: A Study in Novel Skin Lesions Clustering**  
Wei Feng, Lie Ju, Lin Wang, Kaimin Song, Zongyuan Ge

- T-04-108**      **Transformer-based end-to-end classification of variable-length volumetric data**  
Marzieh Oghbaie, Teresa Araújo, Taha Emre, Ursula Schmidt-Erfurth, Hrvoje Bogunović
- T-04-109**      **Transformer-based tooth segmentation, identification and pulp calcification recognition in CBCT**  
Shangxuan Li, Chichi Li, Yu Du, Li Ye, Yanshu Fang, Cheng Wang, Wu Zhou
- T-04-110**      **Treatment Outcome Prediction for Intracerebral Hemorrhage via Generative Prognostic Model with Imaging and Tabular Data**  
Wenao Ma, Cheng Chen, Jill Abrigo, Calvin Hoi-Kwan Mak, Yuqi Gong, Nga Yan Chan, Chu Han, Zaiyi Liu, Qi Dou
- T-04-111**      **Uncovering Heterogeneity in Alzheimer's Disease from Graphical Modeling of the Tau Spatiotemporal Topography**  
Jiaxin Yue, Yonggang Shi
- T-04-112**      **Unsupervised classification of congenital inner ear malformations using DeepDiffusion for latent space representation**  
Paula López Diez, Jan Margeta, Khassan Diab, François Patou, Rasmus R. Paulsen
- T-04-113**      **Utilizing Longitudinal Chest X-Rays and Reports to Pre-Fill Radiology Reports**  
Qingqing Zhu, Tejas Sudharshan Mathai, Pritam Mukherjee, Yifan Peng, Ronald M. Summers, Zhiyong Lu
- T-04-114**      **VF-HM: Vision Loss Estimation using Fundus Photograph for High Myopia**  
Zipei Yan, Dong Liang, Linchuan Xu, Jiahang Li, Zhengji Liu, Shuai Wang, Jiannong Cao, Chea-su Kee
- T-04-115**      **Vision Transformer based Multi-Class Lesion Detection in IVOCT**  
Zixuan Wang, Yifan Shao, Jingyi Sun, Zhili Huang, Su Wang, Qiyong Li, Jinsong Li, Qian Yu
- T-04-116**      **Visual Grounding of Whole Radiology Reports for 3D CT Images**  
Akimichi Ichinose, Taro Hatsutani, Keigo Nakamura, Yoshiro Kitamura, Satoshi Iizuka, Edgar Simo-Serra, Shoji Kido, Noriyuki Tomiyama
- T-04-117**      **Visual-Attribute Prompt Learning for Progressive Mild Cognitive Impairment Prediction**  
Luoyao Kang, Haifan Gong, Xiang Wan, Haofeng Li
- T-04-118**      **Xplainer: From X-Ray Observations to Explainable Zero-Shot Diagnosis**  
Chantal Pellegrini, Matthias Keicher, Ege Özsoy, Petra Jiraskova, Rickmer Braren, Nassir Navab
- T-04-119**      **YONA: You Only Need One Adjacent Reference-frame for Accurate and Fast Video Polyp Detection**  
Yuncheng Jiang, Zixun Zhang, Ruimao Zhang, Guanbin Li, Shuguang Cui, Zhen Li
- T-04-120**      **You Don't Have to Be Perfect to Be Amazing: Unveil the Utility of Synthetic Images**  
Xiaodan Xing, Federico Felder, Yang Nan, Giorgos Papanastasiou, Simon Walsh, Guang Yang

**Poster 5: Image Segmentation**

Wednesday, October 11, 2023, 09:30 to 11:30, Poster Hall

**Session Chairs:**

Adrian Galdran, Universitat Pompeu Fabra, Spain

Mattias Heinrich, University of Luebeck, Germany

Yutong Xie, University of Adelaide, Australia

- W-05-001**      **3D Medical Image Segmentation with Sparse Annotation via Cross-Teaching between 3D and 2D Networks**  
Heng Cai, Lei Qi, Qian Yu, Yinghuan Shi, Yang Gao
- W-05-002**      **3D Mitochondria Instance Segmentation with Spatio-Temporal Transformers**  
Omkar Thawakar, Rao Muhammad Anwer, Jorma Laaksonen, Orly Reiner, Mubarak Shah, Fahad Shahbaz Khan
- W-05-003**      **A General Stitching Solution for Whole-Brain 3D Nuclei Instance Segmentation from Microscopy Images**  
Ziquan Wei, Tingting Dan, Jiaqi Ding, Mustafa Dere, Guorong Wu
- W-05-004**      **A Sheaf Theoretic Perspective for Robust Prostate Segmentation**  
Ainkaran Santhirasekaram, Karen Pinto, Mathias Winkler, Andrea Rockall, Ben Glocker
- W-05-005**      **A2FSeg: Adaptive Multi-Modal Fusion Network for Medical Image Segmentation**  
Zirui Wang, Yi Hong
- W-05-006**      **ACC-UNet: A Completely Convolutional UNet model for the 2020s**  
Nabil Ibtehaz, Daisuke Kihara
- W-05-007**      **ACTION++: Improving Semi-supervised Medical Image Segmentation with Adaptive Anatomical Contrast**  
henyu You, Weicheng Dai, Yifei Min, Lawrence Staib, Jas Sekhon, James S. Duncan
- W-05-008**      **Adult-like Phase and Multi-scale Assistance for Isointense Infant Brain Tissue Segmentation**  
Jiameng Liu, Feihong Liu, Kaicong Sun, Mianxin Liu, Yuhang Sun, Yuyan Ge, Dinggang Shen
- W-05-009**      **Anatomical-aware Point-Voxel Network for Couinaud Segmentation in Liver CT**  
Xukun Zhang, Yang Liu, Sharib Ali, Xiao Zhao, Mingyang Sun, Minghao Han, Tao Liu, Peng Zhai, Zhiming Cui, Peixuan Zhang, Xiaoying Wang, Lihua Zhang
- W-05-010**      **Annotator Consensus Prediction for Medical Image Segmentation with Diffusion Models**  
Tomer Amit, Shmuel Shichrur, Tal Shaharabany, Lior Wolf



- W-05-011**      **Anti-Adversarial Consistency Regularization for Data Augmentation: Applications to Robust Medical Image Segmentation**  
Hyuna Cho, Yubin Han, Won Hwa Kim
- W-05-012**      **Ariadne's Thread: Using Text Prompts to Improve Segmentation of Infected Areas from Chest X-ray images**  
Yi Zhong, Mengqiu Xu, Kongming Liang, Kaixin Chen, Ming Wu
- W-05-013**      **Automatic Segmentation of Internal Tooth Structure from CBCT Images using Hierarchical Deep Learning**  
SaeHyun Kim, In-Seok Song, Seung Jun Baek
- W-05-014**      **BerDiff: Conditional Bernoulli Diffusion Model for Medical Image Segmentation**  
Tao Chen, Chenhui Wang, Hongming Shan
- W-05-015**      **Boundary Difference Over Union Loss For Medical Image Segmentation**  
Fan Sun, Zhiming Luo, Shaozi Li
- W-05-016**      **Breast Ultrasound Tumor Classification Using a Hybrid Multitask CNN-Transformer Network**  
Bryar Shareef, Min Xian, Aleksandar Vakanski, Haotian Wang
- W-05-017**      **CAS-Net: Cross-view Aligned Segmentation by Graph Representation of Knees**  
Zixu Zhuang, Xin Wang, Sheng Wang, Zhenrong Shen, Xiangyu Zhao, Mengjun Liu, Zhong Xue, Dinggang Shen, Lichi Zhang, Qian Wang
- W-05-018**      **Category-level Regularized Unlabeled-to-labeled Learning for Semi-supervised Prostate Segmentation with Multi-site Unlabeled Data**  
Zhe Xu, Donghuan Lu, Jiangpeng Yan, Jinghan Sun, Jie Luo, Dong Wei, Sarah Frisken, Quanzheng Li, Yefeng Zheng, Raymond Kai-yu Tong
- W-05-019**      **Certification of Deep Learning Models for Medical Image Segmentation**  
Othmane Laousy, Alexandre Araujo, Guillaume Chassagnon, Nikos Paragios, Marie-Pierre Revel, Maria Vakalopoulou
- W-05-020**      **Class-Aware Feature Alignment for Domain Adaptive Mitochondria Segmentation**  
Dan Yin, Wei Huang, Zhiwei Xiong, Xuejin Chen
- W-05-021**      **Collaborative modality generation and tissue segmentation for early-developing macaque brain MR images**  
Xueyang Wu, Tao Zhong, Shujun Liang, Li Wang, Gang Li, Yu Zhang
- W-05-022**      **Conditional Diffusion Models for Weakly Supervised Medical Image Segmentation**  
Xinrong Hu, Yu-Jen Chen, Tsung-Yi Ho, Yiyu Shi



- W-05-023**      **Conditional Temporal Attention Networks for Neonatal Cortical Surface Reconstruction**  
Qiang Ma, Liu Li, Vanessa Kyriakopoulou, Joseph V. Hajnal, Emma C. Robinson, Bernhard Kainz, Daniel Rueckert
- W-05-024**      **Consistency-guided Meta-Learning for Bootstrapping Semi-Supervised Medical Image Segmentation**  
Qingyue Wei, Lequan Yu, Xianhang Li, Wei Shao, Cihang Xie, Lei Xing, Yuyin Zhou
- W-05-025**      **ConvFormer: Plug-and-Play CNN-Style Transformers for Improving Medical Image Segmentation**  
Xian Lin, Zengqiang Yan, Xianbo Deng, Chuansheng Zheng, Li Yu
- W-05-026**      **CorSegRec: A Topology-Preserving Scheme for Extracting Fully-Connected Coronary Arteries from CT Angiography**  
Yuehui Qiu, Zihan Li, Yining Wang, Pei Dong, Dijia Wu, Xinnian Yang, Qingqi Hong, Dinggang Shen
- W-05-027**      **DARC: Distribution-Aware Re-Coloring Model for Generalizable Nucleus Segmentation**  
Shengcong Chen, Changxing Ding, Dacheng Tao, Hao Chen
- W-05-028**      **DAST: Differentiable Architecture Search with Transformer for 3D Medical Image Segmentation**  
Dong Yang, Ziyue Xu, Yufan He, Vishwesh Nath, Wenqi Li, Andriy Myronenko, Ali Hatamizadeh, Can Zhao, Holger R. Roth, Daguang Xu
- W-05-029**      **DBTrans: A Dual-Branch Vision Transformer for Multi-modal Brain Tumor Segmentation**  
Xinyi Zeng, Pinxian Zeng, Cheng Tang, Peng Wang, Binyu Yan, Yan Wang
- W-05-030**      **DCAug: Domain-aware & Content-consistent Cross-cycle Framework for Tumor Augmentation**  
Qikui Zhu, Lei Yin, Qian Tang, Yanqing Wang, Yanxiang Cheng, Shuo Li
- W-05-031**      **Deep Mutual Distillation for Semi-Supervised Medical Image Segmentation**  
Yushan Xie, Yuejia Yin, Qingli Li, Yan Wang
- W-05-032**      **Devil is in Channels: Contrastive Single Domain Generalization for Medical Image Segmentation**  
Shishuai Hu, Zehui Liao, Yong Xia
- W-05-033**      **DHC: Dual-debiased Heterogeneous Co-training Framework for Class-imbalanced Semi-supervised Medical Image Segmentation**  
Haonan Wang, Xiaomeng Li
- W-05-034**      **Dice Semimetric Losses: Optimizing the Dice Score with Soft Labels**  
Zifu Wang, Teodora Popordanoska, Jeroen Bertels, Robin Lemmens, Matthew B. Blaschko

- W-05-035**      **Diffusion Kinetic Model for Breast Cancer Segmentation in Incomplete DCE-MRI**  
Tianxu Lv, Yuan Liu, Kai Miao, Lihua Li, Xiang Pan
- W-05-036**      **Diffusion Transformer U-Net for Medical Image Segmentation**  
G. Jignesh Chowdary, Zhaozheng Yin
- W-05-037**      **Do we really need that skip-connection? Understanding its interplay with task complexity**  
Amith Kamath, Jonas Willmann, Nicolaus Andratschke, Mauricio Reyes
- W-05-038**      **DOMINO++: Domain-aware Loss Regularization for Deep Learning Generalizability**  
Skylar E. Stolte, Kyle Volle, Aprinda Indahlastari, Alejandro Albizu, Adam J. Woods, Kevin Brink, Matthew Hale, Ruogu Fang
- W-05-039**      **Dose Guidance for Radiotherapy-oriented Deep Learning Segmentation**  
Elias Rüfenacht, Robert Poel, Amith Kamath, Ekin Ermis, Stefan Scheib, Michael K. Fix, Mauricio Reyes
- W-05-040**      **EchoGLAD: Hierarchical Graph Neural Networks for Left Ventricle Landmark Detection on Echocardiograms**  
Masoud Mokhtari, Mobina Mahdavi, Hooman Vaseli, Christina Luong, Purang Abolmaesumi, Teresa S. M. Tsang, Renjie Liao
- W-05-041**      **Edge-aware Multi-task Network for Integrating Quantification Segmentation and Uncertainty Prediction of Liver Tumor on Multi-modality Non-contrast MRI**  
Xiaojiao Xiao, Qinmin Vivian Hu, Guanghui Wang
- W-05-042**      **EdgeMixup: Embarrassingly Simple Data Alteration to Improve Lyme Disease Lesion Segmentation and Diagnosis Fairness**  
Haolin Yuan, John Aucott, Armin Hadzic, William Paul, Marcia Villegas de Flores, Philip Mathew, Philippe Burlina, Yinzhi Cao
- W-05-043**      **EGE-UNet: an Efficient Group Enhanced UNet for skin lesion segmentation**  
Jiacheng Ruan, Mingye Xie, Jingsheng Gao, Ting Liu, Yuzhuo Fu
- W-05-044**      **Elongated Physiological Structure Segmentation via Spatial and Scale Uncertainty-aware Network**  
Yinglin Zhang, Ruiling Xi, Huazhu Fu, Dave Towey, RuiBin Bai, Risa Higashita, Jiang Liu
- W-05-045**      **EoFormer: Edge-oriented Transformer for Brain Tumor Segmentation**  
Dong She, Yueyi Zhang, Zheyu Zhang, Hebei Li, Zihan Yan, Xiaoyan Sun
- W-05-046**      **Evolutionary normalization optimization boosts semantic segmentation network performance**  
Luisa Neubig, Andreas M. Kist

- W-05-047**      **Factor Space and Spectrum for Medical Hyperspectral Image Segmentation**  
Boxiang Yun, Qingli Li, Lubov Mitrofanova, Chunhua Zhou, Yan Wang
- W-05-048**      **FEDD - Fair, Efficient, and Diverse Diffusion-based Lesion Segmentation and Malignancy Classification**  
Héctor Carrión, Narges Norouzi
- W-05-049**      **Few-Shot Medical Image Segmentation via a Region-enhanced Prototypical Transformer**  
Yazhou Zhu, Shidong Wang, Tong Xin, Haofeng Zhang
- W-05-050**      **Fine-grained Hand Bone Segmentation via Adaptive Multi-dimensional Convolutional Network and Anatomy-constraint Loss**  
Bolun Zeng, Li Chen, Yuanyi Zheng, Ron Kikinis, Xiaojun Chen
- W-05-051**      **FocalUNETR: A Focal Transformer for Boundary-aware Prostate Segmentation using CT Images**  
Chengyin Li, Yao Qiang, Rafi Ibn Sultan, Hassan Bagher-Ebadian, Prashant Khanduri, Indrin J. Chetty, Dongxiao Zhu
- W-05-052**      **Frequency-mixed Single-source Domain Generalization for Medical Image Segmentation**  
Heng Li, Haojin Li, Wei Zhao, Huazhu Fu, Xiuyun Su, Yan Hu, Jiang Liu
- W-05-053**      **From Sparse to Precise: A Practical Editing Approach for Intracardiac Echocardiography Segmentation**  
Ahmed H. Shahin, Yan Zhuang, Noha El-Zehiry
- W-05-054**      **Guiding the Guidance: A Comparative Analysis of User Guidance Signals for Interactive Segmentation of Volumetric Images**  
Zdravko Marinov, Rainer Stiefelhagen, Jens Kleesiek
- W-05-055**      **HartleyMHA: Self-Attention in Frequency Domain for Resolution-Robust and Parameter-Efficient 3D Image Segmentation**  
Ken C. L. Wong, Hongzhi Wang, Tanveer Syeda-Mahmood
- W-05-056**      **H-DenseFormer: An Efficient Hybrid Densely Connected Transformer for Multimodal Tumor Segmentation**  
Jun Shi, Hongyu Kan, Shulan Ruan, Ziqi Zhu, Minfan Zhao, Liang Qiao, Zhaohui Wang, Hong An, Xudong Xue
- W-05-057**      **HENet: Hierarchical Enhancement Network for Pulmonary Vessel Segmentation in Non-contrast CT Images**  
Wenqi Zhou, Xiao Zhang, Dongdong Gu, Sheng Wang, Jiayu Huo, Rui Zhang, Zhihao Jiang, Feng Shi, Zhong Xue, Yiqiang Zhan, Xi Ouyang, Dinggang Shen

- W-05-058 High-Resolution Cranial Defect Reconstruction by Iterative, Low-Resolution, Point Cloud Completion Transformers**  
Marek Wodzinski, Mateusz Daniol, Daria Hemmerling, Mirosław Socha
- W-05-059 Implicit Anatomical Rendering for Medical Image Segmentation with Stochastic Experts**  
Chenyu You, Weicheng Dai, Yifei Min, Lawrence Staib, James S. Duncan
- W-05-060 Instructive Feature Enhancement for Dichotomous Medical Image Segmentation**  
Lian Liu, Han Zhou, Jiongquan Chen, Sijing Liu, Wenlong Shi, Dong Ni, Deng-Ping Fan, Xin Yang
- W-05-061 Ischemic stroke segmentation from a cross-domain representation in multimodal diffusion studies**  
Santiago Gómez, Daniel Mantilla, Brayan Valenzuela, Andrés Ortiz, Daniela D Vera, Paul Camacho, Fabio Martínez
- W-05-062 Joint Dense-Point Representation for Contour-Aware Graph Segmentation**  
Kit Mills Bransby, Greg Slabaugh, Christos Bourantas, Qianni Zhang
- W-05-063 Joint Segmentation and Sub-Pixel Localization in Structured Light Laryngoscopy**  
Jann-Ole Henningson, Marion Semmler, Michael Döllinger, Marc Stamminger
- W-05-064 Label-Free Nuclei Segmentation Using Intra-Image Self Similarity**  
Long Chen, Han Li, S. Kevin Zhou
- W-05-065 Laplacian-Former: Overcoming the Limitations of Vision Transformers in Local Texture Detection**  
Reza Azad, Amirhossein Kazerouni, Babak Azad, Ehsan Khodapanah Aghdam, Yury Velichko, Ulas Bagci, Dorit Merhof
- W-05-066 Learnable Cross-modal Knowledge Distillation for Multi-modal Learning with Missing Modality**  
Hu Wang, Congbo Ma, Jianpeng Zhang, Yuan Zhang, Jodie Avery, Louise Hull, Gustavo Carneiro
- W-05-067 Learnable Query Initialization for Surgical Instrument Instance Segmentation**  
Rohan Raju Dhanakshirur, K. N. Ajay Shastry, Kaustubh Borgavi, Ashish Suri, Prem Kumar Kalra, Chetan Arora
- W-05-068 Learning Ontology-based Hierarchical Structural Relationship for Whole Brain Segmentation**  
Junyan Lyu, Pengxiao Xu, Fatima Nasrallah, Xiaoying Tang
- W-05-069 Learning Reliability of Multi-Modality Medical Images for Tumor Segmentation via Evidence-Identified Denoising Diffusion Probabilistic Models**  
Jianfeng Zhao, Shuo Li

- W-05-070**      **MDViT: Multi-domain Vision Transformer for Small Medical Image Segmentation Datasets**  
Siyi Du, Nourhan Bayasi, Ghassan Hamarneh, Rafeef Garbi
- W-05-071**      **Medical Boundary Diffusion Model for Skin Lesion Segmentation**  
Jiacheng Wang, Jing Yang, Qichao Zhou, Liansheng Wang
- W-05-072**      **MedNeXt: Transformer-driven Scaling of ConvNets for Medical Image Segmentation**  
Saikat Roy, Gregor Koehler, Constantin Ulrich, Michael Baumgartner, Jens Petersen, Fabian Isensee, Paul F. Jäger, Klaus H. Maier-Hein
- W-05-073**      **Memory Replay for Continual Medical Image Segmentation through Atypical Sample Selection**  
Sutanu Bera, Vinay Ummadi, Debashis Sen, Subhamoy Mandal, Prabir Kumar Biswas
- W-05-074**      **M-GenSeg: Domain Adaptation For Target Modality Tumor Segmentation With Annotation-Efficient Supervision**  
Malo Alefsen, Eugene Vorontsov, Samuel Kadoury
- W-05-075**      **Minimal-supervised Medical Image Segmentation via Vector Quantization Memory**  
Yanyu Xu, Menghan Zhou, Yangqin Feng, Xinxing Xu, Huazhu Fu, Rick Siow Mong Goh, Yong Liu
- W-05-076**      **MI-SegNet: Mutual Information-Based US Segmentation for Unseen Domain Generalization**  
Yuan Bi, Zhongliang Jiang, Ricarda Clarenbach, Reza Ghotbi, Angelos Karlas, Nassir Navab
- W-05-077**      **Morphology-inspired Unsupervised Gland Segmentation via Selective Semantic Grouping**  
Qixiang Zhang, Yi Li, Cheng Xue, Xiaomeng Li
- W-05-078**      **Multimodal CT and MR Segmentation of Head and Neck Organs-at-Risk**  
Gašper Podobnik, Primož Strojani, Primož Peterlin, Bulat Ibragimov, Tomaž Vrtovec
- W-05-079**      **Multi-shot Prototype Contrastive Learning and Semantic Reasoning for Medical Image Segmentation**  
Yuhui Song, Xiuquan Du, Yanping Zhang, Chenchu Xu
- W-05-080**      **MultiTalent: A Multi-Dataset Approach to Medical Image Segmentation**  
Constantin Ulrich, Fabian Isensee, Tassilo Wald, Maximilian Zenk, Michael Baumgartner, Klaus H. Maier-Hein
- W-05-081**      **NISF: Neural Implicit Segmentation Functions**  
Nil Stolt-Ansó, Julian McGinnis, Jiazhen Pan, Kerstin Hammernik, Daniel Rueckert
- W-05-082**      **One-Shot Traumatic Brain Segmentation with Adversarial Training and Uncertainty Rectification**  
Xiangyu Zhao, Zhenrong Shen, Dongdong Chen, Sheng Wang, Zixu Zhuang, Qian Wang, Lichi Zhang

- W-05-083**      **Pelvic Fracture Segmentation Using a Multi-scale Distance-weighted Neural Network**  
Yanzhen Liu, Sutuke Yibulayimu, Yudi Sang, Gang Zhu, Yu Wang, Chunpeng Zhao, Xinbao Wu
- W-05-084**      **Pick and Trace: Instance Segmentation for Filamentous Objects with a Recurrent Neural Network**  
Yi Liu, Su Peng, Jeffrey Caplan, Chandra Kambhamettu
- W-05-085**      **Pre-operative Survival Prediction of Diffuse Glioma Patients with Joint Tumor Subtyping**  
Zhenyu Tang, Zhenyu Zhang, Huabing Liu, Dong Nie, Jing Yan
- W-05-086**      **Punctate White Matter Lesion Segmentation in Preterm Infants Powered by Counterfactually Generative Learning**  
Zehua Ren, Yongheng Sun, Miaomiao Wang, Yuying Feng, Xianjun Li, Chao Jin, Jian Yang, Chunfeng Lian, Fan Wang
- W-05-087**      **QCResUNet: Joint Subject-level and Voxel-level Prediction of Segmentation Quality**  
Peijie Qiu, Satrajit Chakrabarty, Phuc Nguyen, Soumyendu Sekhar Ghosh, Aristeidis Sotiras
- W-05-088**      **RBGNet: Reliable Boundary-Guided Segmentation of Choroidal Neovascularization**  
Tao Chen, Yitian Zhao, Lei Mou, Dan Zhang, Xiayu Xu, Mengting Liu, Huazhu Fu, Jiong Zhang
- W-05-089**      **RCS-YOLO: A Fast and High-Accuracy Object Detector for Brain Tumor Detection**  
Ming Kang, Chee-Ming Ting, Fung Fung Ting, Raphaël C.W. Phan
- W-05-090**      **Robust Segmentation via Topology Violation Detection and Feature Synthesis**  
Liu Li, Qiang Ma, Cheng Ouyang, Zeju Li, Qingjie Meng, Weitong Zhang, Mengyun Qiao, Vanessa Kyriakopoulou, Joseph V. Hajnal, Daniel Rueckert, Bernhard Kainz
- W-05-091**      **Robust T-Loss for Medical Image Segmentation**  
Alvaro Gonzalez-Jimenez, Simone Lionetti, Philippe Gottfrois, Fabian Gröger, Marc Pouly, Alexander A. Navarini
- W-05-092**      **Scale-aware Test-time Click Adaptation for Pulmonary Nodule and Mass Segmentation**  
Zhihao Li, Jiancheng Yang, Yongchao Xu, Li Zhang, Wenhui Dong, Bo Du
- W-05-093**      **Scaling Up 3D Kernels with Bayesian Frequency Re-Parameterization for Medical Image Segmentation**  
Ho Hin Lee, Quan Liu, Shunxing Bao, Qi Yang, Xin Yu, Leon Y. Cai, Thomas Z. Li, Yuankai Huo, Xenofon Koutsoukos, Bennett A. Landman
- W-05-094**      **SegNetr: Rethinking the local-global interactions and skip connections in U-shaped networks**  
Junlong Cheng, Chengrui Gao, Fengjie Wang, Min Zhu
- W-05-095**      **Self-adaptive Adversarial Training for Robust Medical Segmentation**  
Fu Wang, Zeyu Fu, Yanghao Zhang, Wenjie Ruan

- W-05-096**      **Self-supervised learning via inter-modal reconstruction and feature projection networks for label-efficient 3D-to-2D segmentation**  
José Morano, Guilherme Aresta, Dmitrii Lachinov, Julia Mai, Ursula Schmidt-Erfurth, Hrvoje Bogunović
- W-05-097**      **Semi-supervised Class Imbalanced Deep Learning for Cardiac MRI Segmentation**  
Yuchen Yuan, Xi Wang, Xikai Yang, Ruijiang Li, Pheng-Ann Heng
- W-05-098**      **Semi-supervised Domain Adaptive Medical Image Segmentation through Consistency Regularized Disentangled Contrastive Learning**  
Hritam Basak, Zhaozheng Yin
- W-05-099**      **Shape-Aware 3D Small Vessel Segmentation with Local Contrast Guided Attention**  
Zhiwei Deng, Songnan Xu, Jianwei Zhang, Jiong Zhang, Danny J. Wang, Lirong Yan, Yonggang Shi
- W-05-100**      **Shifting More Attention to Breast Lesion Segmentation in Ultrasound Videos**  
Junhao Lin, Qian Dai, Lei Zhu, Huazhu Fu, Qiong Wang, Weibin Li, Wenhao Rao, Xiaoyang Huang, Liansheng Wang
- W-05-101**      **SimPLE: Similarity-Aware Propagation Learning for Weakly-Supervised Breast Cancer Segmentation in DCE-MRI**  
Yuming Zhong, Yi Wang
- W-05-102**      **Structure-decoupled Adaptive Part Alignment Network for Domain Adaptive Mitochondria Segmentation**  
Rui Sun, Huayu Mai, Naisong Luo, Tianzhu Zhang, Zhiwei Xiong, Feng Wu
- W-05-103**      **Structure-Preserving Instance Segmentation via Skeleton-Aware Distance Transform**  
Zudi Lin, Donglai Wei, Aarush Gupta, Xingyu Liu, Deqing Sun, Hanspeter Pfister
- W-05-104**      **SwinMM: Masked Multi-view with Swin Transformers for 3D Medical Image Segmentation**  
Yiqing Wang, Zihan Li, Jieru Mei, Zihao Wei, Li Liu, Chen Wang, Shengtian Sang, Alan L. Yuille, Cihang Xie, Yuyin Zhou
- W-05-105**      **SwinUNETR-V2: Stronger Swin Transformers with Stagewise Convolutions for 3D Medical Image Segmentation**  
Yufan He, Vishwesh Nath, Dong Yang, Yucheng Tang, Andriy Myronenko, Daguang Xu
- W-05-106**      **SwIPE: Efficient and Robust Medical Image Segmentation with Implicit Patch Embeddings**  
Yeja Zhang, Pengfei Gu, Nishchal Sapkota, Danny Z. Chen
- W-05-107**      **Text-Guided Cross-Position Attention for Segmentation: Case of Medical Image**  
Go-Eun Lee, Seon Ho Kim, Jungchan Cho, Sang Tae Choi, Sang-Il Choi
- W-05-108**      **Transformer-based Annotation Bias-aware Medical Image Segmentation**  
Zehui Liao, Shishuai Hu, Yutong Xie, Yong Xia



- W-05-109**      **TransNuSeg: A Lightweight Multi-Task Transformer for Nuclei Segmentation**  
Zhenqi He, Mathias Unberath, Jing Ke, Yiqing Shen
- W-05-110**      **Treasure in Distribution: A Domain Randomization based Multi-Source Domain Generalization for 2D Medical Image Segmentation**  
Ziyang Chen, Yongsheng Pan, Yiwen Ye, Hengfei Cui, Yong Xia
- W-05-111**      **Trust your neighbours: Penalty-based constraints for model calibration**  
Balamurali Murugesan, Sukesh Adiga Vasudeva, Bingyuan Liu, Herve Lombaert, Ismail Ben Ayed, Jose Dolz
- W-05-112**      **TSegFormer: 3D Tooth Segmentation in Intraoral Scans with Geometry Guided Transformer**  
Huimin Xiong, Kunle Li, Kaiyuan Tan, Yang Feng, Joey Tianyi Zhou, Jin Hao, Haochao Ying, Jian Wu, Zuozhu Liu
- W-05-113**      **Uncertainty and Shape-Aware Continual Test-Time Adaptation for Cross-Domain Segmentation of Medical Images**  
Jiayi Zhu, Bart Bolsterlee, Brian V. Y. Chow, Yang Song, Erik Meijering
- W-05-114**      **Uncertainty-informed Mutual Learning for Joint Medical Image Classification and Segmentation**  
Kai Ren, Ke Zou, Xianjie Liu, Yidi Chen, Xuedong Yuan, Xiaoqing Shen, Meng Wang, Huazhu Fu
- W-05-115**      **UniSeg: A Prompt-driven Universal Segmentation Model as well as A Strong Representation Learner**  
Yiwen Ye, Yutong Xie, Jianpeng Zhang, Ziyang Chen, Yong Xia
- W-05-116**      **Unpaired Cross-modal Interaction Learning for COVID-19 Segmentation on Limited CT images**  
Qingbiao Guan, Yutong Xie, Bing Yang, Jianpeng Zhang, Zhibin Liao, Qi Wu, Yong Xia
- W-05-117**      **UPCoL: Uncertainty-informed Prototype Consistency Learning for Semi-supervised Medical Image Segmentation**  
Wenjing Lu, Jiahao Lei, Peng Qiu, Rui Sheng, Jinhua Zhou, Xinwu Lu, Yang Yang
- W-05-118**      **Wall thickness estimation from short axis ultrasound images via temporal compatible deformation learning**  
Ang Zhang, Guijuan Peng, Jialan Zheng, Jun Cheng, Xiaohua Liu, Qian Liu, Yuanyuan Sheng, Yingqi Zheng, Yumei Yang, Jie Deng, Yingying Liu, Wufeng Xue, Dong Ni
- W-05-119**      **WeakPolyp: You Only Look Bounding Box for Polyp Segmentation**  
Jun Wei, Yiwen Hu, Shuguang Cui, S. Kevin Zhou, Zhen Li



**Poster 6: Image Reconstruction and Registration**

Wednesday, October 11, 2023, 14:30 to 16:00, Poster Hall

**Session Chairs:**

Moti Freiman, Technion - Israel Institute of Technology, Israel  
Yoshito Otake, Nara Institute of Science and Technology, Japan  
Lequan Yu, The University of Hong Kong, Hong Kong SAR  
Ghada Zamzmi, National Institute of Health, USA

- W-06-001**      **3D Teeth Reconstruction from Panoramic Radiographs using Neural Implicit Functions**  
Sihwa Park, Seongjun Kim, In-Seok Song, Seung Jun Baek
- W-06-002**      **A denoised Mean Teacher for domain adaptive point cloud registration**  
Alexander Bigalke, Mattias P. Heinrich
- W-06-003**      **A Semantic-guided and Knowledge-based Generative Framework for Orthodontic Visual Outcome Preview**  
Yizhou Chen, Xiaojun Chen
- W-06-004**      **Accurate multi-contrast MRI super-resolution via a dual cross-attention transformer network**  
Shoujin Huang, Jingyu Li, Lifeng Mei, Tan Zhang, Ziran Chen, Yu Dong, Linzheng Dong, Shaojun Liu, Mengye Lyu
- W-06-005**      **Adaptive Supervised PatchNCE Loss for Learning H&E-to-IHC Stain Translation with Inconsistent Groundtruth Image Pairs**  
Fangda Li, Zhiqiang Hu, Wen Chen, Avinash Kak
- W-06-006**      **Alias-Free Co-Modulated Network for Cross-Modality Synthesis and Super-Resolution of MR Images**  
Zhiyun Song, Xin Wang, Xiangyu Zhao, Sheng Wang, Zhenrong Shen, Zixu Zhuang, Mengjun Liu, Qian Wang, Lichi Zhang
- W-06-007**      **An automated pipeline for quantitative T2\* fetal body MRI and segmentation at low field**  
Kelly Payette, Alena Uus, Jordina Aviles Verdera, Carla Avena Zampieri, Megan Hall, Lisa Story, Maria Deprez, Mary A. Rutherford, Joseph V. Hajnal, Sebastien Ourselin, Raphael Tomi-Tricot, Jana Hutter
- W-06-008**      **An Explainable Deep Framework: Towards Task-Specific Fusion for Multi-to-One MRI Synthesis**  
Luyi Han, Tianyu Zhang, Yunzhi Huang, Haoran Dou, Xin Wang, Yuan Gao, Chunyao Lu, Tao Tan, Ritse Mann
- W-06-009**      **An Unsupervised Multispectral Image Registration Network for Skin Diseases**  
Songhui Diao, Wenxue Zhou, Chenchen Qin, Jun Liao, Junzhou Huang, Wenming Yang, Jianhua Yao

- W-06-010**      **AngioMoCo: Learning-based Motion Correction in Cerebral Digital Subtraction Angiography**  
Ruisheng Su, Matthijs van der Sluijs, Sandra Cornelissen, Wim van Zwam, Aad van der Lugt,  
Wiro Niessen, Danny Ruijters, Theo van Walsum, Adrian Dalca
- W-06-011**      **ASCON: Anatomy-aware Supervised Contrastive Learning Framework for Low-dose CT  
Denoising**  
Zhihao Chen, Qi Gao, Yi Zhang, Hongming Shan
- W-06-012**      **BigFUSE: Global Context-Aware Image Fusion in Dual-View Light-Sheet Fluorescence  
Microscopy with Image Formation Prior**  
Yu Liu, Gesine Müller, Nassir Navab, Carsten Marr, Jan Huisken, Tingying Peng
- W-06-013**      **Building A Bridge: Close The Domain Gap in CT Metal Artifact Reduction**  
Tao Wang, Hui Yu, Yan Liu, Huaiqiang Sun, Yi Zhang
- W-06-014**      **CDiffMR: Can We Replace the Gaussian Noise with K-Space Undersampling for Fast MRI?**  
Jiahao Huang, Angelica I. Aviles-Rivero, Carola-Bibiane Schönlieb, Guang Yang
- W-06-015**      **CoLa-Diff: Conditional Latent Diffusion Model for Multi-Modal MRI Synthesis**  
Lan Jiang, Ye Mao, Xiangfeng Wang, Xi Chen, Chao Li
- W-06-016**      **Co-Learning Semantic-aware Unsupervised Segmentation for Pathological Image  
Registration**  
Yang Liu, Shi Gu
- W-06-017**      **Computationally Efficient 3D MRI Reconstruction with Adaptive MLP**  
Eric Z. Chen, Chi Zhang, Xiao Chen, Yikang Liu, Terrence Chen, Shanhui Sun
- W-06-018**      **Content-Preserving Diffusion Model for Unsupervised AS-OCT image Despeckling**  
Sanqian Li, Risa Higashita, Huazhu Fu, Heng Li, Jingxuan Niu, Jiang Liu
- W-06-019**      **Contrastive Diffusion Model with Auxiliary Guidance for Coarse-to-Fine PET Reconstruction**  
Zeyu Han, Yuhan Wang, Luping Zhou, Peng Wang, Binyu Yan, Jiliu Zhou, Yan Wang, Dinggang  
Shen
- W-06-020**      **CortexMorph: fast cortical thickness estimation via diffeomorphic registration using  
VoxelMorph**  
Richard McKinley, Christian Rummel
- W-06-021**      **CT Kernel Conversion Using Multi-Domain Image-to-Image Translation with Generator-  
Guided Contrastive Learning**  
Changyong Choi, Jiheon Jeong, Sangyoon Lee, Sang Min Lee, Namkug Kim
- W-06-022**      **CTFlow: Mitigating Effects of Computed Tomography Acquisition and Reconstruction with  
Normalizing Flows**  
Leihao Wei, Anil Yadav, William Hsu

- W-06-023**      **CycleSTTN: A Learning-Based Temporal Model for Specular Augmentation in Endoscopy**  
Rema Daher, O. León Barbed, Ana C. Murillo, Francisco Vasconcelos, Danail Stoyanov
- W-06-024**      **Dense Transformer based Enhanced Coding Network for Unsupervised Metal Artifact Reduction**  
Wangduo Xie, Matthew B. Blaschko
- W-06-025**      **Differentiable Beamforming for Ultrasound Autofocusing**  
Walter Simson, Louise Zhuang, Sergio J. Sanabria, Neha Antil, Jeremy J. Dahl, Dongwoon Hyun
- W-06-026**      **DiffuseIR: Diffusion Models For Isotropic Reconstruction of 3D Microscopic Images**  
Mingjie Pan, Yulu Gan, Fangxu Zhou, Jiaming Liu, Ying Zhang, Aimin Wang, Shanghang Zhang, Dawei Li
- W-06-027**      **DISA: Differentiable Similarity Approximation for Universal Multimodal Registration**  
Matteo Ronchetti, Wolfgang Wein, Nassir Navab, Oliver Zettinig, Raphael Prevost
- W-06-028**      **DisAsymNet: Disentanglement of Asymmetrical Abnormality on Bilateral Mammograms using Self-adversarial Learning**  
Xin Wang, Tao Tan, Yuan Gao, Luyi Han, Tianyu Zhang, Chunyao Lu, Regina Beets-Tan, Ruisheng Su, Ritse Mann
- W-06-029**      **DisC-Diff: Disentangled Conditional Diffusion Model for Multi-Contrast MRI Super-Resolution**  
Ye Mao, Lan Jiang, Xi Chen, Chao Li
- W-06-030**      **DMCVR: Morphology-Guided Diffusion Model for 3D Cardiac Volume Reconstruction**  
Xiaoxiao He, Chaowei Tan, Ligong Han, Bo Liu, Leon Axel, Kang Li, Dimitris N. Metaxas
- W-06-031**      **DRMC: A Generalist Model with Dynamic Routing for Multi-Center PET Image Synthesis**  
Zhiwen Yang, Yang Zhou, Hui Zhang, Bingzheng Wei, Yubo Fan, Yan Xu
- W-06-032**      **Dual Arbitrary Scale Super-Resolution for Multi-Contrast MRI**  
Jiamiao Zhang, Yichen Chi, Jun Lyu, Wenming Yang, Yapeng Tian
- W-06-033**      **Dual Domain Motion Artifacts Correction for MR Imaging Under Guidance of K-space Uncertainty**  
Jiazhen Wang, Yizhe Yang, Yan Yang, Jian Sun
- W-06-034**      **DULDA: Dual-domain Unsupervised Learned Descent Algorithm for PET image reconstruction**  
Rui Hu, Yunmei Chen, Kyungsang Kim, Marcio Aloisio Bezerra Cavalcanti Rockenbach, Quanzheng Li, Huafeng Liu

- W-06-035**      **Estimation of 3T MR images from 1.5T images regularized with Physics based Constraint**  
Prabhjot Kaur, Atul Singh Minhas, Chirag Kamal Ahuja, Anil Kumar Sao
- W-06-036**      **Fast Reconstruction for Deep Learning PET Head Motion Correction**  
Tianyi Zeng, Jiazhen Zhang, Eléonore V. Lieftrig, Zhuotong Cai, Fuyao Chen, Chenyu You, Mika Naganawa, Yihuan Lu, John A. Onofrey
- W-06-037**      **Feature-Conditioned Cascaded Video Diffusion Models for Precise Echocardiogram Synthesis**  
Hadrien Reynaud, Mengyun Qiao, Mischa Dombrowski, Thomas Day, Reza Razavi, Alberto Gomez, Paul Leeson, Bernhard Kainz
- W-06-038**      **FreeSeed: Frequency-band-aware and Self-guided Network for Sparse-view CT Reconstruction**  
Chenglong Ma, Zilong Li, Junping Zhang, Yi Zhang, Hongming Shan
- W-06-039**      **FSDiffReg: Feature-wise and Score-wise Diffusion-guided Unsupervised Deformable Image Registration for Cardiac Images**  
Yi Qin, Xiaomeng Li
- W-06-040**      **Generating High-Resolution 3D CT with 12-bit Depth using a Diffusion Model with Adjacent Slice and Intensity Calibration Network**  
Jiheon Jeong, Ki Duk Kim, Yujin Nam, Kyungjin Cho, Jiseon Kang, Gil-Sun Hong, Namkug Kim
- W-06-041**      **Generating Realistic Brain MRIs via a Conditional Diffusion Probabilistic Model**  
Wei Peng, Ehsan Adeli, Tomas Bosschieter, Sang Hyun Park, Qingyu Zhao, Kilian M. Pohl
- W-06-042**      **Global k-Space Interpolation for Dynamic MRI Reconstruction using Masked Image Modeling**  
Jiazhen Pan, Suprosanna Shit, Özgün Turgut, Wenqi Huang, Hongwei Bran Li, Nil Stolt-Ansó, Thomas Küstner, Kerstin Hammernik, Daniel Rueckert
- W-06-043**      **GSMorph: Gradient Surgery for cine-MRI Cardiac Deformable Registration**  
Haoran Dou, Ning Bi, Luyi Han, Yuhao Huang, Ritse Mann, Xin Yang, Dong Ni, Nishant Ravikumar, Alejandro F. Frangi, Yunzhi Huang
- W-06-044**      **H2GM: A Hierarchical Hypergraph Matching Framework for Brain Landmark Alignment**  
Zhibin He, Wuyang Li, Tuo Zhang, Yixuan Yuan
- W-06-045**      **Implicit neural representations for joint decomposition and registration of gene expression images in the marmoset brain**  
Michal Byra, Charissa Poon, Tomomi Shimogori, Henrik Skibbe
- W-06-046**      **Importance Weighted Variational Cardiac MRI Registration Using Transformer and Implicit Prior**  
Kangrong Xu, Qirui Huang, Xuan Yang

- W-06-047**      **Improved flexibility and interpretability of large vessel stroke prognostication using image synthesis and multi-task learning**  
Minyan Zeng, Yutong Xie, Minh-Son To, Lauren Oakden-Rayner, Luke Whitbread, Stephen Bacchi, Alix Bird, Luke Smith, Rebecca Scroop, Timothy Kleinig, Jim Jannes, Lyle J Palmer, Mark Jenkinson
- W-06-048**      **Improved Multi-Shot Diffusion-Weighted MRI with Zero-Shot Self-Supervised Learning Reconstruction**  
Jaejin Cho, Yohan Jun, Xiaoqing Wang, Caique Kobayashi, Berkin Bilgic
- W-06-049**      **Infusing physically inspired known operators in deep models of ultrasound elastography**  
Ali K. Z. Tehrani, Hassan Rivaz
- W-06-050**      **Inverse Consistency by Construction for Multistep Deep Registration**  
Hastings Greer, Lin Tian, Francois-Xavier Vialard, Roland Kwitt, Sylvain Bouix, Raul San Jose Estepar, Richard Rushmore, Marc Niethammer
- W-06-051**      **InverseSR: 3D Brain MRI Super-Resolution Using a Latent Diffusion Model**  
Jueqi Wang, Jacob Levman, Walter Hugo Lopez Pinaya, Petru-Daniel Tudosiu, M. Jorge Cardoso, Razvan Marinescu
- W-06-052**      **JCCS-PFGM: A Novel Circle-Supervision based Poisson Flow Generative Model for Multiphase CECT Progressive Low-Dose Reconstruction with Joint Condition**  
Rongjun Ge, Yuting He, Cong Xia, Daoqiang Zhang
- W-06-053**      **Learned Alternating Minimization Algorithm for Dual-Domain Sparse-View CT Reconstruction**  
Chi Ding, Qingchao Zhang, Ge Wang, Xiaojing Ye, Yunmei Chen
- W-06-054**      **Learning Deep Intensity Field for Extremely Sparse-View CBCT Reconstruction**  
Yiqun Lin, Zhongjin Luo, Wei Zhao, Xiaomeng Li
- W-06-055**      **Learning with Domain-Knowledge for Generalizable Prediction of Alzheimer's Disease from Multi-Site Structural MRI**  
Yanjie Zhou, Youhao Li, Feng Zhou, Yong Liu, Liyun Tu
- W-06-056**      **LightNeuS: Neural Surface Reconstruction in Endoscopy using Illumination Decline**  
Víctor M. Batlle, José M. M. Montiel, Pascal Fua, Juan D. Tardós
- W-06-057**      **LLCaps: Learning to Illuminate Low-Light Capsule Endoscopy with Curved Wavelet Attention and Reverse Diffusion**  
Long Bai, Tong Chen, Yanan Wu, An Wang, Mobarakol Islam, Hongliang Ren
- W-06-058**      **Low-dose CT image super-resolution network with dual-guidance feature distillation and dual-path content communication**  
Jianning Chi, Zhiyi Sun, Tianli Zhao, Huan Wang, Xiaosheng Yu, Chengdong Wu

- W-06-059**      **LUCYD: A Feature-Driven Richardson-Lucy Deconvolution Network**  
Tomáš Chobola, Gesine Müller, Veit Dausmann, Anton Theileis, Jan Taucher, Jan Huisken, Tingying Peng
- W-06-060**      **MEPNet: A Model-Driven Equivariant Proximal Network for Joint Sparse-View Reconstruction and Metal Artifact Reduction in CT Images**  
Hong Wang, Minghao Zhou, Dong Wei, Yuexiang Li, Yefeng Zheng
- W-06-061**      **Mitral Regurgitation Quantification from Multi-channel Ultrasound Images via Deep Learning**  
Keming Tang, Zhenyi Ge, Rongbo Ling, Jun Cheng, Wufeng Xue, Cuizhen Pan, Xianhong Shu, Dong Ni
- W-06-062**      **MoCoSR: Respiratory Motion Correction and Super-Resolution for 3D Abdominal MRI**  
Weitong Zhang, Berke Basaran, Qingjie Meng, Matthew Baugh, Jonathan Stelter, Phillip Lung, Uday Patel, Wenjia Bai, Dimitrios Karampinos, Bernhard Kainz
- W-06-063**      **ModeT: Learning Deformable Image Registration via Motion Decomposition Transformer**  
Haiqiao Wang, Dong Ni, Yi Wang
- W-06-064**      **ModusGraph: Automated 3D and 4D Mesh Model Reconstruction from cine CMR with Improved Accuracy and Efficiency**  
Yu Deng, Hao Xu, Sashya Rodrigo, Steven E. Williams, Michelle C. Williams, Steven A. Niederer, Kuberan Pushparajah, Alistair Young
- W-06-065**      **Motion Compensated Unsupervised Deep Learning for 5D MRI**  
Joseph Kettelkamp, Ludovica Romanin, Davide Piccini, Sarv Priya, Mathews Jacob
- W-06-066**      **MRIS: A Multi-modal Retrieval Approach for Image Synthesis on Diverse Modalities**  
Boqi Chen, Marc Niethammer
- W-06-067**      **MSKdeX: Musculoskeletal (MSK) decomposition from an X-ray image for fine-grained estimation of lean muscle mass and muscle volume**  
Yi Gu, Yoshito Otake, Keisuke Uemura, Masaki Takao, Mazen Soufi, Yuta Hiasa, Hugues Talbot, Seiji Okada, Nobuhiko Sugano, Yoshinobu Sato
- W-06-068**      **MulHiST: Multiple Histological Staining for Thick Biological Samples via Unsupervised Image-to-Image Translation**  
Lulin Shi, Yan Zhang, Ivy H. M. Wong, Claudia T. K. Lo, Terence T. W. Wong
- W-06-069**      **Multi-IMU with Online Self-Consistency for Freehand 3D Ultrasound Reconstruction**  
Mingyuan Luo, Xin Yang, Zhongnuo Yan, Junyu Li, Yuanji Zhang, Jiongquan Chen, Xindi Hu, Jikuan Qian, Jun Cheng, Dong Ni
- W-06-070**      **Multi-perspective Adaptive Iteration Network for Metal Artifact Reduction**  
Haiyang Mao, Yanyang Wang, Hengyong Yu, Weiwen Wu, Jianjia Zhang

- W-06-071**      **NASDM: Nuclei-Aware Semantic Histopathology Image Generation Using Diffusion Models**  
Aman Shrivastava, P. Thomas Fletcher
- W-06-072**      **Noise Conditioned Weight Modulation for Robust and Generalizable Low Dose CT Denoising**  
Sutanu Bera, Prabir Kumar Biswas
- W-06-073**      **Noise2Aliasing: Unsupervised Deep Learning for View Aliasing and Noise Reduction in 4DCBCT**  
Samuele Papa, Efstratios Gavves, Jan-Jakob Sonke
- W-06-074**      **Non-iterative Coarse-to-fine Transformer Networks for Joint Affine and Deformable Image Registration**  
Mingyuan Meng, Lei Bi, Michael Fulham, Dagan Feng, Jinman Kim
- W-06-075**      **Nonuniformly Spaced Control Points based on Variational Cardiac Image Registration**  
Haosheng Su, Xuan Yang
- W-06-076**      **Optimizing the 3D Plate Shape for Proximal Humerus Fractures**  
Marilyn Keller, Marcell Krall, James Smith, Hans Clement, Alexander M. Kerner, Andreas Gradischar, Ute Schäfer, Michael J. Black, Annelie Weinberg, Sergi Pujades
- W-06-077**      **PCMC-T1: Free-breathing myocardial T1 mapping with Physically-Constrained Motion Correction**  
Eyal Hanania, Ilya Volovik, Lilach Barkat, Israel Cohen, Moti Freiman
- W-06-078**      **Personalized Patch-based Normality Assessment of Brain Atrophy in Alzheimer's Disease**  
Jianwei Zhang, Yonggang Shi
- W-06-079**      **Physics-Informed Neural Networks for Tissue Elasticity Reconstruction in Magnetic Resonance Elastography**  
Matthew Ragoza, Kayhan Batmanghelich
- W-06-080**      **PIViT: Large Deformation Image Registration with Pyramid-Iterative Vision Transformer**  
Tai Ma, Xinru Dai, Suwei Zhang, Ying Wen
- W-06-081**      **Predicting Diverse Functional Connectivity from Structural Connectivity Based on Multi-Contexts Discriminator GAN**  
Xiang Gao, Xin Zhang, Lu Zhang, Xiangmin Xu, Dajiang Zhu
- W-06-082**      **Progressively Coupling Network for Brain MRI Registration in Few-shot Situation**  
Zuopeng Tan, Hengyu Zhang, Feng Tian, Lihe Zhang, Weibing Sun, Huchuan Lu
- W-06-083**      **Reflectance Mode Fluorescence Optical Tomography with Consumer-Grade Cameras**  
Mykhaylo Zayats, Christopher Hansen, Ronan Cahill, Gareth Gallagher, Ra'ed Malallah, Amit Joshi, Sergiy Zhuk



- W-06-084**      **REStoring Clarity: Unpaired Retina Image Enhancement using Scattering Transform**  
Ellen Jieun Oh, Yechan Hwang, Yubin Han, Taegeun Choi, Geunyoung Lee, Won Hwa Kim
- W-06-085**      **Revealing Anatomical Structures in PET to Generate CT for Attenuation Correction**  
Yongsheng Pan, Feihong Liu, Caiwen Jiang, Jiawei Huang, Yong Xia, Dinggang Shen
- W-06-086**      **Revolutionizing Space Health (Swin-FSR): Advancing Super-Resolution of Fundus Images for SANS Visual Assessment Technology**  
Khondker Fariha Hossain, Sharif Amit Kamran, Joshua Ong, Andrew G. Lee, Alireza Tavakkoli
- W-06-087**      **Robust estimation of the microstructure of the early developing brain using deep learning**  
Hamza Kebiri, Ali Gholipour, Rizhong Lin, Lana Vasung, Davood Karimi, Meritxell Bach Cuadra
- W-06-088**      **S3M: Scalable Statistical Shape Modeling through Unsupervised Correspondences**  
Lennart Bastian, Alexander Baumann, Emily Hoppe, Vincent Bürgin, Ha Young Kim, Mahdi Saleh, Benjamin Busam, Nassir Navab
- W-06-089**      **SAMConvex: Fast Discrete Optimization for CT Registration using Self-supervised Anatomical Embedding and Correlation Pyramid**  
Zi Li, Lin Tian, Tony C. W. Mok, Xiaoyu Bai, Puyang Wang, Jia Ge, Jingren Zhou, Le Lu, Xianghua Ye, Ke Yan, Dakai Jin
- W-06-090**      **Self-Supervised MRI Reconstruction with Unrolled Diffusion Models**  
Yilmaz Korkmaz, Tolga Cukur, Vishal M. Patel
- W-06-091**      **Simulation-based parameter optimization for fetal brain MRI super-resolution reconstruction**  
Priscille de Dumast, Thomas Sanchez, H el ene Lajous, Meritxell Bach Cuadra
- W-06-092**      **Single-subject Multi-contrast MRI Super-resolution via Implicit Neural Representations**  
Julian McGinnis, Suprosanna Shit, Hongwei Bran Li, Vasiliki Sideri-Lampretsa, Robert Graf, Maik Dannecker, Jiazhen Pan, Nil Stolt-Ans o, Mark M uhlau, Jan S. Kirschke, Daniel Rueckert, Benedikt Wiestler
- W-06-093**      **Solving Low-Dose CT Reconstruction via GAN with Local Coherence**  
Wenjje Liu, Hu Ding
- W-06-094**      **SPR-Net: Structural Points based Registration for Coronary Arteries across Systolic and Diastolic Phases**  
Xiao Zhang, Feihong Liu, Yuning Gu, Xiaosong Xiong, Caiwen Jiang, Jun Feng, Dinggang Shen
- W-06-095**      **StructuRegNet: Structure-guided Multimodal 2D-3D Registration**  
Amaury Leroy, Alexandre Cafaro, Gr egoire Gessain, Anne Champagnac, Vincent Gr egoire, Eric Deutsch, Vincent Lepetit, Nikos Paragios



- W-06-096**      **Structure-Preserving Synthesis: MaskGAN for Unpaired MR-CT Translation**  
Minh Hieu Phan, Zhibin Liao, Johan W. Verjans, Minh-Son To
- W-06-097**      **Topology-Preserving Computed Tomography Super-resolution Based on Dual-stream Diffusion Model**  
Yuetan Chu, Longxi Zhou, Gongning Luo, Zhaowen Qiu, Xin Gao
- W-06-098**      **Trackerless Volume Reconstruction from Intraoperative Ultrasound Images**  
Sidaty El hadramy, Juan Verde, Karl-Philippe Beaudet, Nicolas Padoy, Stéphane Cotin
- W-06-099**      **Transformer-based Dual-domain Network for Few-view Dedicated Cardiac SPECT Image Reconstructions**  
Huidong Xie, Bo Zhou, Xiongchao Chen, Xueqi Guo, Stephanie Thorn, Yi-Hwa Liu, Ge Wang, Albert Sinusas, Chi Liu
- W-06-100**      **TriDo-Former: A Triple-Domain Transformer for Direct PET Reconstruction from Low-Dose Sinograms**  
Jiaqi Cui, Pinxian Zeng, Xinyi Zeng, Peng Wang, Xi Wu, Jiliu Zhou, Yan Wang, Dinggang Shen
- W-06-101**      **Twelve-Lead ECG Reconstruction from Single-Lead Signals Using Generative Adversarial Networks**  
Jinho Joo, Gihun Joo, Yeji Kim, Moo-Nyun Jin, Junbeom Park, Hyeonseung Im
- W-06-102**      **Unified Brain MR-Ultrasound Synthesis using Multi-Modal Hierarchical Representations**  
Reuben Dorent, Nazim Haouchine, Fryderyk Kogel, Samuel Joutard, Parikshit Juvekar, Erickson Torio, Alexandra J. Golby, Sebastien Ourselin, Sarah Frisken, Tom Vercauteren, Tina Kapur, William M. Wells III
- W-06-103**      **Weakly Supervised Cerebellar Cortical Surface Parcellation with Self-Visual Representation Learning**  
Zhengwang Wu, Jiale Cheng, Fenqiang Zhao, Ya Wang, Yue Sun, Dajiang Zhu, Tianming Liu, Valerie Jewells, Weili Lin, Li Wang, Gang Li
- W-06-104**      **X2Vision : 3D CT Reconstruction from Biplanar X-Rays with Deep Structure Prior**  
Alexandre Cafaro, Quentin Spinat, Amaury Leroy, Pauline Maury, Alexandre Munoz, Guillaume Beldjoudi, Charlotte Robert, Eric Deutsch, Vincent Grégoire, Vincent Lepetit, Nikos Paragios
- W-06-105**      **X-Ray to CT Rigid Registration Using Scene Coordinate Regression**  
Pragyan Shrestha, Chun Xie, Hidehiko Shishido, Yuichi Yoshii, Itaru Kitahara

**CLINICCAI  
DETAILED PROGRAM**

Tuesday October 10, 2023

Room : Meeting Room 1

8:00-8:15 Welcome and Introduction

**Surgery and Endoscopy**

**08:15-08:25 A Comparison of Recognition Performance for Key Anatomical Structures between Artificial Intelligence and Surgeons in Laparoscopic Colorectal Surgery: A Prospective Observational Study**

*Daichi Kitaguchi (National Cancer Center Hospital East)\*; Norihito Kosugi (National Cancer Center Hospital East); Yuto Ishikawa (National Cancer Center Hospital East); Kazuyuki Hayashi (National Cancer Center Hospital East); Hiro Hasegawa (National Cancer Center Hospital East); Nobuyoshi Takeshita (National Cancer Center Hospital East); Masaaki Ito (National Cancer Center Hospital East)*

**8:25-8:35 Improving Augmented Reality Surgery through first-in-human real time AI-powered instrument segmentation.**

*Pieter De Backer (Orsi Academy)\*; Jasper Hofman (Orsi Academy); Ilaria Manghi (University of Modena and Reggio Emilia); Jente Simoens (Orsi Academy); Julie Lippens (Ghent University); Tim Oosterlinck (KU Leuven); Charlotte Debbaut (Ghent University); Ruben De Groote (OLV Hospital Aalst); Hannes Van Den Bossche (AZ West Hospital); Charles Van Praet (Ghent University Hospital); Mathieu D'Hondt (AZ Groeninge Hospital); Federica Ferraguti (University of Modena and Reggio Emilia); Zhjin Li (NVIDIA); Oliver Kutter (NVIDIA); Karel Decaestecker (AZ Maria Middelaers Hospital); Alex Mottrie (Orsi Academy)*

**8:35-8:45 Deep Multimodal Fusion for Classification of Surgical Feedback Components in Robot-Assisted Surgery.**

*Rafal D Kocielnik (California Institute of Technology)\*; Andrew Hung (University of Southern California); Elyssa Wong (University of Southern California); Timothy Chu (University of Southern California); De-An Huang (NVIDIA); Animashree Anandkumar (Caltech)*

**8:45-8:55 Validation Study of an AI Support System for Intraoperative Recognition of Anatomical Structures in Laparoscopic/Robot-assisted Hysterectomy.**

*Nobuyoshi Takeshita (National Cancer Center Hospital East)\**

8:55-9:05

**Computer aided detection system for Barrett's neoplasia improves endoscopic detection by general endoscopists: an ex-vivo benchmarking study.**

Martijn Jong (Amsterdam UMC)\*; Kiki Fockens (Amsterdam UMC); Jelmer Jukema (Amsterdam UMC); Tim G.W. Boers (Eindhoven University of Technology); Carolus H.J. Kusters (Eindhoven University of Technology); Joost van der Putten (Eindhoven University of Technology); Roos Pouw (Amsterdam UMC); Lucas Duits (Amsterdam UMC); Nahid Montazeri (Amsterdam UMC); Bas Weusten (St. Antoniusziekenhuis); Lorenza Alvarez-Herrero (St. Antoniusziekenhuis); Martin Houben (Haga Ziekenhuis); Wouter Nagengast (UMC Groningen); Jessie Westerhof (UMC Groningen); Alaa Alkhalaf (Isala Ziekenhuis); Rosalie Mallant-Hent (Flevoziekenhuis); Pieter Scholten (OLVG); Krish Ragunath (Royal Perth Hospital); Stefan Seewald (Hirslanden Klinik); Peter Elbe (Karolinska Hospital); Francisco Baldaque Silva (Karolinska Hospital); Maximilien Barret (Cochin Hospital); Jacobo Ortiz Fernandez-Sordo (Nottingham University Hospitals NHS Trust); Guiomar Moral Villarejo (Nottingham University Hospitals NHS Trust); Oliver Pech (St. John of God Hospital Regensburg); Torsten Beyna (Evangelisches Krankenhaus Düsseldorf); Fons van der Sommen (Dept. Electrical Engineering, Eindhoven University of Technology, Eindhoven, NL); P. H. N. de With (Eindhoven University of Technology); Albert De Groof (Amsterdam UMC); Jacques Bergman (Amsterdam UMC)

9:05-9:15

**Surgery and Endoscopy Discussion**

**Surgery beyond Endoscopy**

09:15-09:25

**Surgical Team: Measuring the Shared Cognition and Performance.**

Bin Zheng (Surgical Simulation Research Lab, Dept. of Surgery, University of Alberta)\*; Xianta Jiang (Memorial University of Newfoundland); M. Stella Atkins (Simon Fraser University); Roman Bednarik (University of Eastern Finland)

09:25-09:35

**Sarcopenia and Hypoalbuminemia are associated with decreased overall survival after Nephrectomy and IVC Thrombectomy for renal cell carcinoma.**

Andrew Wood (Cleveland Clinic Foundation)\*

09:35-09:45

**The SAGES Critical View of Safety Challenge - Infrastructure of a Biomedical Data Challenge from the Perspective of a Clinical Society.**

Jennifer Eckhoff (Surgical Artificial Intelligence and Innovation Laboratory)\*; Xiang Li (Massachusetts General Hospital and Harvard Medical School); Yutong Ban (MIT/MGH); Deepak Alapatt (IHU Strasbourg); Jean-Paul Mazellier (IHU Strasbourg); Pietro Mascagni (Fondazione Policlinico Universitario Agostino Gemelli IRCCS); Zhiliang Lyu (Massachusetts General Hospital, Surgical Artificial Intelligence and Innovation Laboratory (SAIIL)); Sarah Choksi (Northwell Health); Filippo Filicori (Northwell Health); Guy Rosman (MIT); Danial Hashimoto (University of Pennsylvania); Quanzheng Li (Massachusetts General Hospital and Harvard Medical School); Nicolas Padoy (University of Strasbourg); Ozanan Meireles (Massachusetts General Hospital).

- 09:45-09:55**      **Using Deep Learning to Assess Teamwork During Cardiac Surgery.**  
*Mahdi Ebnali (MGB/Harvard Medical School)\*; Marco Zenati (VA Boston Healthcare System, West Roxbury, MA); Vaibhav Unhelkar (Department of Computer Science, Rice University, Houston, TX); Steven Yule (Department of Clinical Surgery, University of Edinburgh, Scotland); Roger Dias (Department of Emergency Medicine, Mass General Brigham, Boston, MA)*
- 09:55-10:05**      **Surgery beyond Endoscopy Discussion**
- 10:05-11:00**      **Coffee Break and Social**
- 11:00-12:00**      **MICCAI Keynote (LeCun)**
- 12:00-13:00**      **Lunch**  
We encourage you to check out the Women in MICCAI Lunch Panel
- 13:00-14:00**      **CLINICCAI Keynote Lecture**  
Gretchen Jackson, MD PhD FACS, FACMI, FAMIA  
"Scientific Evidence to Support Computational Technology Adoption in Clinical Settings"
- Subspecialty Medicine and Pathology**
- 14:00-14:10**      **Validation of machine learning models for estimation of left ventricular ejection fraction on point-of-care ultrasound: Insights on features that impact performance.**  
*Christina Luong (Vancouver General Hospital)\*; Mohammad Jafari (UBC); Delaram Behnami (UBC); Yaksh Shah (UBC); Lynn Straatman (UBC); Nathan Van Woudenberg (University of British Columbia); Leah Christoff (Vancouver General Hospital); Nancy Gwadry (Vancouver General Hospital); Nathaniel Hawkins (UBC); Eric Sayre (Arthritis Research Canada); Darwin Yeung (UBC); Michael Tsang (Vancouver General Hospital); Ken Gin (Vancouver General Hospital); John Jue (Vancouver General Hospital); Parvathy Nair (Vancouver General Hospital); Purang Abolmaesumi (The Univ. of British Columbia); Teresa Tsang (Vancouver General Hospital)*
- 14:10-14:20**      **Deep learning-based segmentation of coronary arteries in x-ray coronary angiography.**  
*Mitchel Molenaar (Amsterdam UMC)\**
- 14:20-14:30**      **Robot-Assisted SEEG Electrode Placement for Epilepsy in Pediatric Patients: Workflow Comparison between Frame-Based and Frameless approaches.**  
*Sandrine de Ribaupierre (Western University, Canada)\*; Juan S Botta (Western University); Greydon Gilmore (Western University); Jonathan Lau (Western University); Roy Eagleson (Western University, Canada)*
- 14:30-14:40**      **Feasibility of Ultrasound Screening for Hip Dysplasia in Primary Care Clinics Using AI**  
*Jacob Jaremko (University of Alberta)\**

- 14:40-14:50**      **H&E 2.0: deep learning-enabled identification of tumor-specific CD39+CD8+ T cells in marker-free images for predicting immunotherapy response.**  
*Willa Yim (IMCB, A\*STAR)\*; Felicia Wee (ASTAR IMCB); Jia Meng (IMCB, A\*STAR); Jeffrey Lim (IMCB, A\*STAR); Craig Joseph (IMCB, A\*STAR); Xinru Lim (IMCB, A\*STAR); Kai Soon Ng (IMCB, A\*STAR); Jiangfeng Ye (IMCB, A\*STAR); Zhen Wei Neo (IMCB, A\*STAR); Li Yen Chong (IMCB, A\*STAR); Chan Way Ng (SigN, A\*STAR); Tony Lim (Singapore General Hospital); Mai Chan Lau (BII A\*STAR); Joe Yeong (Singapore General Hospital).*
- 14:50-15:00**      **HE2.0 web server: an image database supports interactive visualization towards AI-empowered pathology training.**  
*Joe Yeong (Singapore General Hospital); Minh Nguyen (BII); Willa Yim (IMCB, A\*STAR); Felicia Wee (ASTAR IMCB); Xinyun Feng (NUS); Marcia Zhang (NUS); Menaka Rajapakse (SigN); Jeffrey Lim (IMCB); Chandra Verma (BII); Mai Chan Lau (BII A\*STAR)\**
- 15:00-15:10**      **Subspecialty Medicine and Pathology Discussion**
- 15:10-15:30**      **Break**
- Radiology**
- 15:30-15:40**      **Transformer-Based Image Synthesis for Radiation Dose Reduction in Multi-Phase CT Imaging of the Kidneys.**  
*Andrew L Wentland (University of Wisconsin School of Medicine & Public Health)\*; Syed Jamal safdar Gardezi (University of Wisconsin School of Medicine & Public Health, Department of Radiology).*
- 15:40-15:50**      **Automated Brain Tumor Subregion Segmentation on Multi-Parametric MRI Sequences of Pediatric Brain Tumors Across Multiple Institutions and Histologies.**  
*Ali Nabavizadeh (University of Pennsylvania)\*; Jeffrey Ware (University of Pennsylvania); Nastaran Khalili (Children's Hospital of Philadelphia); Debanjan Haldar (Children's Hospital of Philadelphia); Ariana Familiar (Children's Hospital of Philadelphia); Karthik Viswanathan (Children's Hospital of Philadelphia); Sina Bagheri (Children's Hospital of Philadelphia); Hannah Anderson (Children's Hospital of Philadelphia); Phillip B. Storm (Children's Hospital of Philadelphia); Adam Resnick (Children's Hospital of Philadelphia); Christos Davatzikos (University of Pennsylvania); Arastoo Vossough (vossough@chop.edu); Anahita Fathi Kazerooni (Children's Hospital of Philadelphia)*
- 15:50-16:00**      **Prediction of hematoma expansion in acute intracerebral hemorrhage using a multimodal neural network model.**  
*Dietmar Frey (Charité University Medicine Berlin)\**
- 16:00-16:10**      **Diagnosis of Pulmonary Emboli in Low Resource Settings with Rapid Serial Radiographs and IV Contrast Dual-Subtraction Radiography.**  
*Philip Edgcumbe (University Of British Columbia)\*; Duncan Ferguson (University Of British Columbia); Joshua F Ho (University Of British Columbia)*

- 16:10-16:20**      **Automated segmentation of the humeral cortex and subacromial bursa with rotator cuff tear detection on shoulder ultrasound using deep learning.**  
*Jacob Jaremko (University of Alberta)\**
- 16:20-16:30**      **Radiology Discussion**
- 16:30-17:15**      **CLINICCAI Panel**  
Interdisciplinary clinical translation
- 17:15-17:30**      **Closing Remarks**

# **SATELLITE EVENTS**



## 8 OCTOBER SATELLITE EVENTS

### WORKSHOPS

**(W) The 14<sup>th</sup> International Workshop on Machine Learning in Medical Imaging**

(MLMI 2023) Full Day (8:00 AM to 6:00 PM) [Meeting Room 1](#)

**(W) iMIMIC & Care-AI: Towards Interpretable and Responsible AI for Medical Image Computing**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 5](#)

**(W) MICCAI Workshop on Time-Series Data Analytics and Learning / Workshop on Lesion Evaluation and Assessment with Follow-up (LEAF)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 6](#)

**(W) Deep Generative Models for Medical Image Computing and Computer Assisted Intervention (DGM4MICCAI)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 7](#)

**(W) The 2nd Workshop on Computational Mathematics Modeling in Cancer Analysis (CMMCA2023)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 14](#)

**(W) AMAI 2023 - The Second Workshop on Applications of Medical Artificial Intelligence (AMAI)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 15](#)

**(W) The Big Task Small Data - 1001 AI for Medical Imaging (BTSD - 1001AI) Workshop**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 17](#)

**(W) Shape in Medical Imaging (ShapeMI)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 18](#)

**(W) Augmented Environments for Computer-Assisted Interventions (AE-CAI)**

Full Day (8:00 AM to 6:00 PM) [Meeting Room 19](#)

**(W) 4th International Workshop on Multiscale Multimodal Medical Imaging (MMMI 2023)**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 15](#)

**(W) MILLanD2023: Medical Image Learning with Limited and Noisy Data.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 17](#)

**(W) 8th International Workshop on Simulation and Synthesis in Medical Imaging (SASHIMI) / Synthesizing computed tomography for radiotherapy.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 2](#)

**(W) BrainLesion workshop / Cross-Modality Domain Adaptation for Medical Image Segmentation.**

Full Day (8:00 AM to 6:00 PM) [Meeting Room 11](#)

**(W) Ambient Intelligence for Healthcare' & 'Computational and Affective Intelligence for Computer Assisted Interventions.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 5](#)

**(W) 6th Workshop on PRedictive Intelligence in MEDicine (PRIME 2023)**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 6](#)

**(W) Harmonizing different diffusion MRI acquisitions / Computational Diffusion MRI (CDMRI)**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 20](#)

**(W) Data Engineering in Medical Imaging (DEMI)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 3](#)

## 8 OCTOBER SATELLITE EVENTS

### CHALLENGES

**(C) 2023 Kidney and Kidney Tumor Segmentation Challenge (KITS23).**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 2](#)

**(C) 8th International Workshop on Simulation and Synthesis in Medical Imaging (SASHIMI) / Synthesizing computed tomography for radiotherapy.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 2](#)

**(C) ASMUS 2023: The 4th International Workshop on Advances in Simplifying Medical UltraSound / MR to Ultrasound Registration Challenge.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 8](#)

**Cranio-facial image analysis challenge**

Half Day 1:30 PM to 6:00 PM [Meeting Room 4](#)

**(C) Automatic Registration Of Breast cAncer Tissue 2023.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 4](#)

**(C) BrainLesion workshop / Cross-Modality Domain Adaptation for Medical Image Segmentation.**

Full Day (8:00 AM to 6:00 PM) [Meeting Room 11](#)

**(C) Endoscopic Vision Challenge 2023.**

Full Day (8:00 AM to 12:30 AM) [Meeting Room 12](#)

**(C) Fast, Low-resource, and Accurate oRgan and Pancancer sEgmentation in Abdomen CT.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 18](#)

**(C) Harmonizing different diffusion MRI acquisitions / Computational Diffusion MRI (CDMRI)**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 20](#)

**(C) Learn2Reg 2023.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 14](#)

**(C) Machine Learning in Clinical Neuroimaging (MLCN) / Surface Learning for Clinical Neuroimaging: regressing clinical phenotypes for cortical surface metrics.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 16](#)

**(C) Mediastinal Lymph Node Quantification (LNQ): Segmentation of Heterogeneous CT Data.** Half Day (1:30 PM to 6:00 PM) [Meeting Room 7](#)

**(C) Surgical Planning in Pediatric Neuroblastoma.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 3](#)

**(C) Towards the Automatic Segmentation, Modeling and Meshing of the Aortic Vessel Tree from Multicenter Acquisitions.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 16](#)

**(C) DELTA: Dental Diagnosis and Landmark Detection Techniques Advancement Workshop.**

Half Day (1:30 PM to 6:00 PM) [Oceanview Suite 1](#)

**(C) Tooth Fairy: Supervised and Semi-Supervised Maxillofacial Image Segmentation Challenge**

Half Day (8:00 AM to 12:30 AM) [Oceanview Suite 1](#)

## 8 OCTOBER SATELLITE EVENTS

### TUTORIALS

**(T) NCI Imaging Data Commons: Curated data and cloud-based reproducible AI workflows.**

Full Day (8:00 AM to 6:00 PM) [Meeting Room 9](#)

**(T) Reproducibility in machine learning with medical imaging: principles and practice.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 13](#)

**(T) Diffusion Models in Medical Imaging and Analysis.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 8](#)

**(T) Uncertainty Quantification in Medical Image Analysis.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 20](#)

**(T) Federated Learning for Healthcare.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 13](#)

**(T) Developing for the Medical AI Project Lifecycle with MONAI.**

Full Day (8:00 AM to 6:00 PM) [Meeting Room 10](#)

## 12 OCTOBER SATELLITE EVENTS

### WORKSHOPS

**(W) Uncertainty for safe utilization of machine learning in Medical Imaging (UNSURE)**

Full Day (8:00 AM to 6:00 PM) [Meeting Room 9](#)

**(W) 4th MICCAI Workshop on “Distributed, Collaborative and Federated Learning” (DeCaF)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 11](#)

**(W) SWITCH2023: Stroke Workshop on Imaging and Treatment Challenges.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 15](#)

**(W) 1st Workshop on foundation models for general medical AI.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 17](#)

**(W) Statistical Atlases and Computational Modelling of the Heart.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 19](#)

**(W) Eighth International Skin Imaging Collaboration (ISIC) Workshop on Skin Image Analysis.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 3](#)

**(W) 12th MICCAI Workshop on Clinical Image-based Procedures (CLIP 2023): Towards Holistic Patient Models for Personalised Healthcare.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 4](#)

**(W) AITreat - AI for Treatment REsponse Assessment and predicTion (MICCAI + ESR)**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 5](#)

**(W) Cancer Prevention through early detecTion (CaPTion)**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 7](#)

**(W) The Third MICCAI Workshop on Data Augmentation, Labeling, and Imperfections (DALI)**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 14](#)

**(W) Ethical and Philosophical Issues in Medical Imaging (EPIMI 2023) / Fairness of AI in Medical Imaging.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 15](#)

**(W) MICCAI Workshop on Perinatal Imaging, Placental and Preterm Image analysis (PIPPI 2023)**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 17](#)

**(W) 5th MICCAI workshop on “Domain Adaptation and Representation Transfer (DART): Learning Transferable, Interpretable, and Robust Representations”**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 18](#)

**(W) OMIA-X - The 10th Ophthalmic Medical Image Analysis Workshop / Myopic Maculopathy Analysis Challenge 2023 / Structural-Functional Transition in Glaucoma Assessment (STAGE)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 4](#)

**(W) Virtual Synopses and Awards.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 12](#)

## 12 OCTOBER SATELLITE EVENTS

### CHALLENGES

**(C) Automatic Region-based Coronary Artery Disease diagnostics using x-ray angiography images: Structured description of the challenge design.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 13](#)

**(C) Automatic Structure Segmentation for Radiotherapy Planning Challenge 2023.**

Half Day (8:00 AM to 12:30 AM)

[Meeting Room 5](#)

**(C) Brain Tumor Segmentation Challenge (BraTS) 2023.**

Full Day (8:00 AM to 6:00 PM) [Meeting Room 1](#)

**(C) Cardiac MRI Reconstruction Challenge.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 11](#)

**(C) MICCAI Learn2Learn Challenge.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 10](#)

**(C) Medical Out-of-Distribution Analysis Challenge 2023.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 6](#)

**(C) OMIA-X - The 10th Ophthalmic Medical Image Analysis Workshop / Myopic Maculopathy Analysis Challenge 2023 / Structural-Functional Transition in Glaucoma Assessment (STAGE).**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 4](#)

**(C) Pubic Symphysis-Fetal Head Segmentation from Transperineal Ultrasound Images)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 20](#)

**(C) Segmentation of the Mitral Valve from 3D Transesophageal Echocardiography.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 19](#)

**(C) The Trauma THOMPSON Challenge.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 14](#)

**(C) Circle of Willis Benchmark Event.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 13](#)

**(C) Energy-efficient Medical Image Processing Challenge.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 16](#)

**(C) Virtual Synopses and Awards.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 12](#)

## 12 OCTOBER SATELLITE EVENTS

### TUTORIALS

**(T) Do you want to work in the medical device industry? Understanding regulatory and software engineering requirements and processes.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 12](#)

**(T) Dynamic AI in a Clinical Open World: Learn the technical, clinical and regulatory aspects of developing Lifelong Learning solutions.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 2](#)

**(T) Topology-Driven Image Analysis.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 3](#)

**(T) Graph and Hypergraph Learning in Medical Image Analysis (GraphMedia)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 18](#)

**(T) Make your Results Reproducible with the Virtual Imaging Platform (VIP)**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 16](#)

**(T) MIC and CAI with Humans In The Loop.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 7](#)

**(T) Reaching the clinic: Designing ML for deployment, with examples from global health.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 2](#)

**(T) CauseMIC: Causality in Medical Image Computing.**

Half Day (8:00 AM to 12:30 AM) [Meeting Room 10](#)

**(T) Tutorial on Ethics in AI for Medical Imaging.**

Half Day (1:30 PM to 6:00 PM) [Meeting Room 8](#)

# MICCAI

# 2023



*Vancouver*  
CANADA

26<sup>TH</sup> INTERNATIONAL CONFERENCE ON  
MEDICAL IMAGE COMPUTING AND  
COMPUTER ASSISTED INTERVENTION  
8-12 OCTOBER 2023

VANCOUVER CONVENTION CENTRE  
VANCOUVER / CANADA

## ORGANIZING SECRETARIAT

 **DEKON**  
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