MICCAI 2024

Marrakesh MOROCCO

27TH INTERNATIONAL CONFERENCE ON MEDICAL IMAGE COMPUTING AND COMPUTER ASSISTED INTERVENTION

6-10 OCTOBER 2024

PALMERAIE ROTANA RESORT

MARRAKESH / MOROCCO

PROGRAM BOOK

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WELCOME

Dear MICCAI 2024 attendees,

On behalf of the MICCAI Society, it is my honor and pleasure to welcome you to the 27th International Conference on Medical Image Computing and Computer-Assisted Intervention — MICCAI 2024, held this year in the vibrant and historic city of Marrakesh, Morocco. Marrakesh has long been a crossroads of culture, innovation, and discovery — making it the perfect setting for our gathering of visionary minds from around the world. This year's conference is especially historic as it marks the first time MICCAI is being held on the African continent—a milestone that celebrates our society's growth and commitment to fostering a truly global community.

Marrakesh with its rich history and stunning landscapes, provide an inspiring setting for our conference. While you are here, I hope you will take some time to explore the city's unique blend of tradition and modernity — from the vibrant souks and historic medina to the beauty of the Atlas Mountains just beyond. This unique destination reflects the very spirit of MICCAI as we work together to push the boundaries of medical imaging and computer-assisted interventions.

At MICCAI, we celebrate not only the advancements in medical imaging, computer-assisted interventions, and artificial intelligence but also the global collaboration that makes our work possible. This year's conference reflects the latest research and innovations across disciplines, with a program full of groundbreaking technical papers, engaging keynote sessions, thought-provoking workshops, and hands-on tutorials. I encourage you to take advantage of the diverse opportunities to learn, share your expertise, and engage with peers who, like you, are passionate about shaping the future of healthcare. Hosting MICCAI in Africa also underscores the importance of expanding the global reach of our research, opening new avenues for collaboration, and recognizing the significant contributions from regions that are playing an increasingly important role in shaping the future of medical technology. The AFRICAI network launched this year is an example of this trend. We are proud to take this step in broadening our horizons and creating new opportunities for the MICCAI community to engage with the world.

I would like to extend my deepest gratitude to our dedicated organizing committee, led this year by Karim Lekadir and Julia Schnabel, the program chairs and area chairs led by Marius Linguraru, the numerous committees and satellite event organizers, our PCO Dekon Congress and Tourism, the MICCAI admin team, but also our generous sponsors, the reviewers, the volunteers, and all those whose hard work and dedication have made this conference possible. Lastly, warmest thanks to each of you, our delegates, for your invaluable contributions to MICCAI 2024. Your presence and participation are what make this conference such a dynamic and influential forum.

I hope you will find the conference to be a rewarding experience, filled with new insights, lasting connections, and inspiring conversations. Whether this is your first time attending MICCAI or you are a longtime member of our community, whether you are here to present your work, learn from experts, or establish new partnerships, I am confident that you will leave Marrakesh with renewed energy and exciting ideas to bring to your own work.

Welcome to MICCAI 2024 — and welcome to Marrakesh!
Warm regards,

Caroline Essert
MICCAI Society president

Julia Schnabel
General Chair, MICCAI 2024

Karim Lekadir
General Chair, MICCAI 2024

Dear MICCAI 2024 Colleagues,

On behalf of the entire organizing committee, we are delighted to welcome you to the 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) in stunning Marrakesh, Morocco. In a year of many firsts, the MICCAI conference sets its stage in Africa for the very first time!

We have a packed agenda of technical and social events arranged for you during the conference and we hope you will have an outstanding conference experience in Marrakesh.

MICCAI 2024 received the largest number of submissions in the conference history, with an increase of 21% compared to 2023. In the end, we accepted 857 papers, which is in line with the conference's historical acceptance rate of 30%. These papers comprising twelve volumes of Lecture Notes in Computer Science (LNCS) proceedings were selected after a rigorous double-blind peer review process supervised by 5 program chairs, 153 area chairs and over 2050 reviewers, with representation from 49 countries across all major continents. About a third (29.4%) of our area chairs self-identified as women. Six main conference papers have the primary author based in Africa, including South Africa. Three papers originated from Latin America, all from Colombia. We welcome the increase in diversity at MICCAI while we acknowledge that much more needs to be done.

In keeping with the innovative spirit of the conference, we introduced several new features in this year's program. First, new this year to the main conference is a "Debate on AI" session. Second, to celebrate the first MICCAI conference in Africa, the "MICCAI for Health Equity" session was introduced, which highlights new approaches and applications that enhance access to healthcare and improve health outcomes for all. This session showcases how innovation can bridge healthcare gaps and offer affordable and high-quality care to under-served populations worldwide. Furthermore, co-located with the conference is also the 4th Conference on Clinical Translation on Medical Image Computing and Computer-Assisted Intervention (CLINICCAI) on October 8, and the 1st Open Data Session on October 7.

In terms of satellite events, this edition of the conference features 41 workshops, 12 tutorials, 46 onsite challenges and 4 online challenges, covering a diversity of themes in both MIC and CAI.To host as many exciting new and established events as possible, all satellite events have been organized into half-day sessions.

In the spirit of showcasing more African research and diversifying our program, a "MICCAI Meets Africa" workshop will be held on Sunday, October 6. It will showcase new research and innovation in the field of MICCAI to address Africa-specific healthcare challenges and promote practical solutions for resource-limited settings. Furthermore, we are excited to bring you a special session "From MICCAI to AFRICAI" on Wednesday afternoon, just before the closure of the main conference. The event will introduce the AFRICAI Special Interest Group for promoting continuation in MICCAI research and collaborations across the African continent beyond MICCAI 2024.

To further our mission of enhancing diversity and inclusion at MICCAI, we offered travel grants to candidates from lower-to-middle-income countries as well as from countries historically under-represented in the MICCAI community. Support for these grants was offered through the MICCAI Society Travel Grants, African Travel Grants, and RISE-MICCAI grants. We supported the travel of attendees from Africa (including Benin, Egypt, Ghana, Kenya, Morocco, Nigeria, Senegal, South Africa, Tunisia, Tanzania, Kenya and Uganda), Asia (including Bangladesh, India, Nepal, Pakistan, Sri Lanka, and Vietnam), and Latin America (including Mexico). We also provided partial support to additional participants through the MICCAI Society Registration Grants. Funding was been made possible by the generous support from the MICCAI Society, donations from individuals in the MICCAI community, and financial support from non-commercial and AFRICAI sponsors, namely GH Labs, Children's National Hospital, Pierre Fabre, Computer Assisted Medical Interventions Labex, Multidisciplinary Institute in Artificial Intelligence Grenoble Alpes, Frugal Biomedical Innovation Program - Western University, The International Society of Radiology, Medtronic, Pasqual Maragall Foundation, Delft Imaging, Artificial Intelligence in Medicine Lab - Universitat de Barcelona, and Cadi Ayyad University and National Center for Scientific and Technical Research - Morocco. Congratulations to all awardees!

Pulling a 2000+ audience conference together for the first MICCAI conference in Africa 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, Marius George Linguraru, Qi Dou, Aasa Feragen, Matina Giannarou, Ben Glocker 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 also acknowledge the special contributions of our keynote chairs, Tina Kapur and Olivier Salvado, who organized keynote talks from a diverse set of experts, namely Alexandra Golby (Americas), Michael Bronstein (Europe) and Aisha Walcott (Africa).

Our workshop chairs Maria A. Zuluaga, Hervé Lombaert, Nicola Rieke, African workshop chairs Udunna Anazodo, Tinashe Mutsvangwa, Celia Cintas, tutorial chairs Tammy Riklin, Ender Konukoglu, challenge chairs Shadi Albarqouni, Yunusa Mohammed, Spyridon Bakas, African challenge commissioners Victor Campello, Udunna Anazodo, Rachid Jennane, and Open Data chairs Martijn Starmans, Apostolia Tsirikoglou, worked tirelessly to assemble a strong program for the Satellite Events.

Even though was a challenging year for fundraising for the conference partially due to the economy and the novelty of hosting MICCAI in Africa, our industrial sponsorship chairs Sandrine Voros, Mohammad Yaqub, Nassir Navab, Natasha Lepore, Kensaku Mori, Smriti Joshi, Mustafa Elattar, Albert Chung, Laura Igual and Clarisa Sánchez along with Dekon's Mehmet Eldegez worked tirelessly to secure sufficient sponsorship in innovative ways, for which we are extremely grateful.

The MICCAI Student Board led by Naren Akash RJ put together student-run networking and social events including a Ph.D. thesis madness and early career challenge event to offer spotlight to new graduates for their careers. Similarly, Women in MICCAI president Ruogo Fang and RISE president Islem Rekik further strengthen the quality of our technical program by their focused events. The contribution of the Diversity & Inclusion chairs Islem Rekik and Jihad Zahir, and the CLINICCAI program chairs, Joël L. Lavanchy, Mariam Aboian, Idriss Ahmedou, Sandrine De Ribaupierre, Bassma Elsabaa, Daniel A. Hashimoto, Abdourahmane Ndong, Nicolas Padoy, Saad Slimani, Juan Verde, and Joe Yeong, is invaluable to the diversity of attendees and program subjects.

The local chairs Jihad Zahir, Mohammed El Hassouni, Ilyass Ouazzani and Noussair Lazrak recruited Moroccan-based volunteers, prepared invitation letters to attendees, and organized the posters for the welcome reception. They also helped coordinate the visits to the local sites in Marrakesh both during the selection of the site and organization of our local activities during the conference. Our career development and students chairs Antonio Porras and Anees Kazi facilitated programs for career development. Our communications chairs Noussair Lazrak and Cecilia Judmann along with Diana Cunningham were active in making the conference visible on social media platforms and circulating the newsletters. Cecilia Judmann, Deborah Carraro, Veronika Zimmer, and Paloma Fernández Torres were our Executive Associates who provided support to all the committee meetings. The AFRICAI chairs, Marawan Elbatel, Ismaël Koné, Hasnae Zerouaoui, and Jean-Rassaire Fouefack organized monthly webinars for capacity building in Africa, which contributed to an increase of paper submissions from Africa and raised awareness for MICCAI in Africa. We are grateful to all the organizing committee members for their strong contributions that made the conference successful.

We would like to thank the MICCAI Society Board of Directors and its Chair, Caroline Essert, for their support and feedback that provided guidance on organizing a successful conference. Behind the scenes, we acknowledge the contributions of the MICCAI Society secretariat personnel, Janette Wallace and Johanne Langford, who kept oversight of logistics and budgets, and Diana Cunningham and Anna Van Vliet for timely conference announcements in the MICCAI Society newsletters. The site organization of the conference in Marrakech, budget financials, fund raising, and the smooth running of events would not have been possible without our Professional Conference Organization team from Dekon Congress and Tourism led by Mehmet Eldegez.

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

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ABOUT MICCAI

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

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

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

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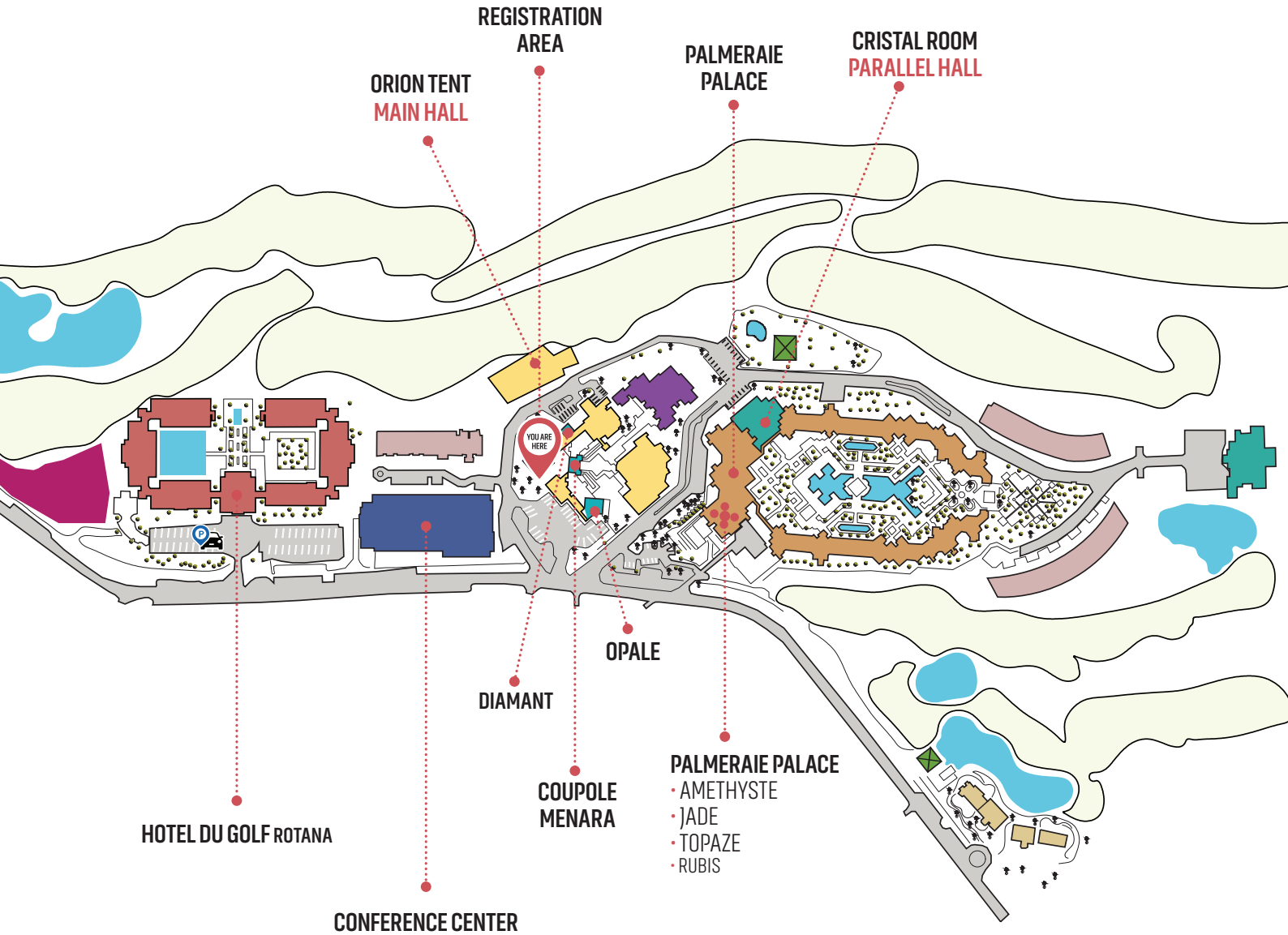
MICCAI 2024 FLOOR PLAN

CONFERENCE VENUE LAYOUT



CONFERENCE CENTER

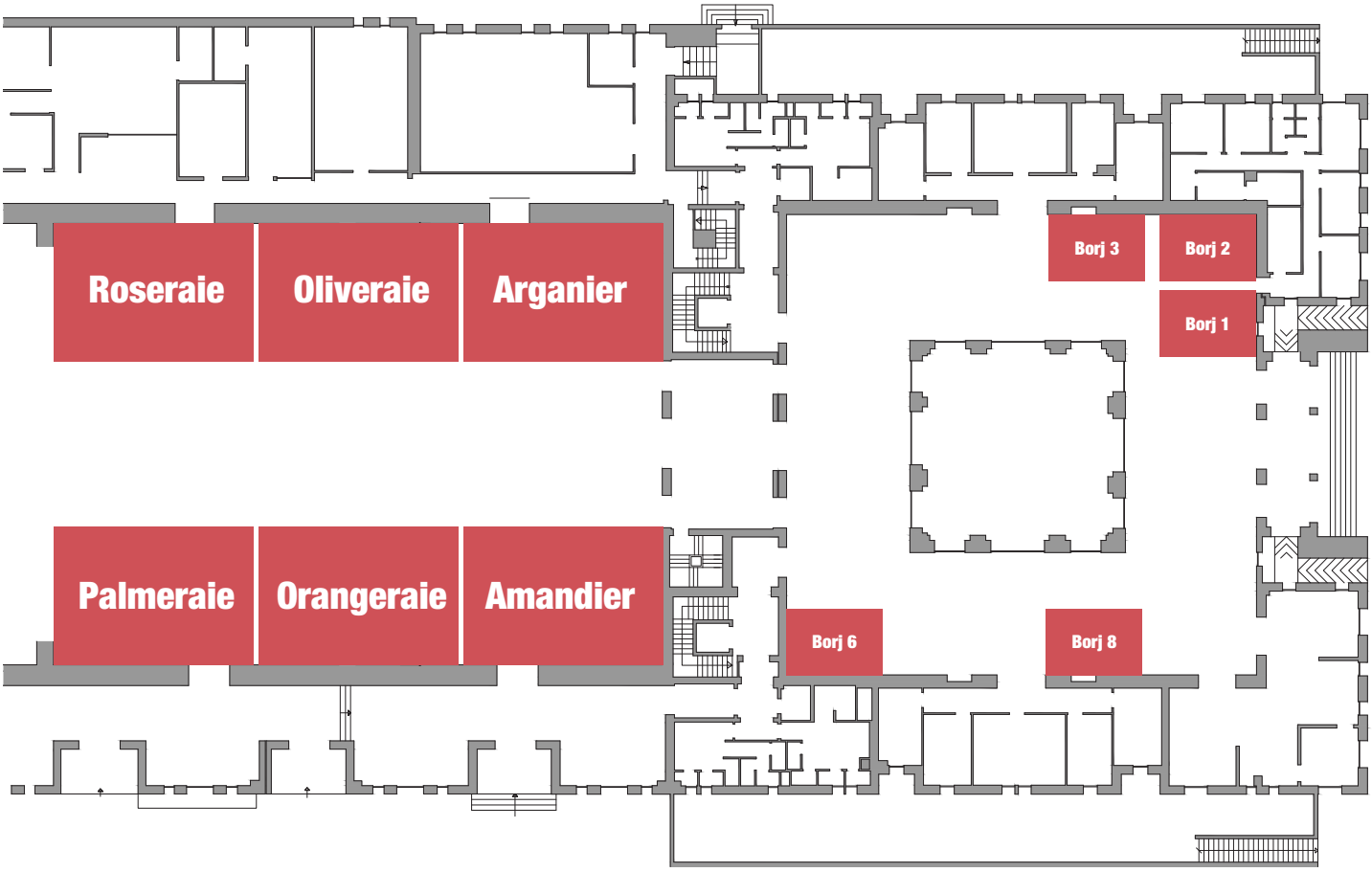
- OLIVERAIE
- ROSERAIE
- ORANGERAIE
- PALMERAIE
- PALMERAIE
- ARGANIER
- AMANDIER
- BORJ 1
- BORJ 2
- BORJ 3
- BORJ 6
- BORJ 8

PALMERAIE PALACE

- CRISTAL ROOM
- AMETHYSTE
- JADE
- TOPAZE
- RUBIS
- DIAMANT
- OPALE
- COUPOLE MENARA

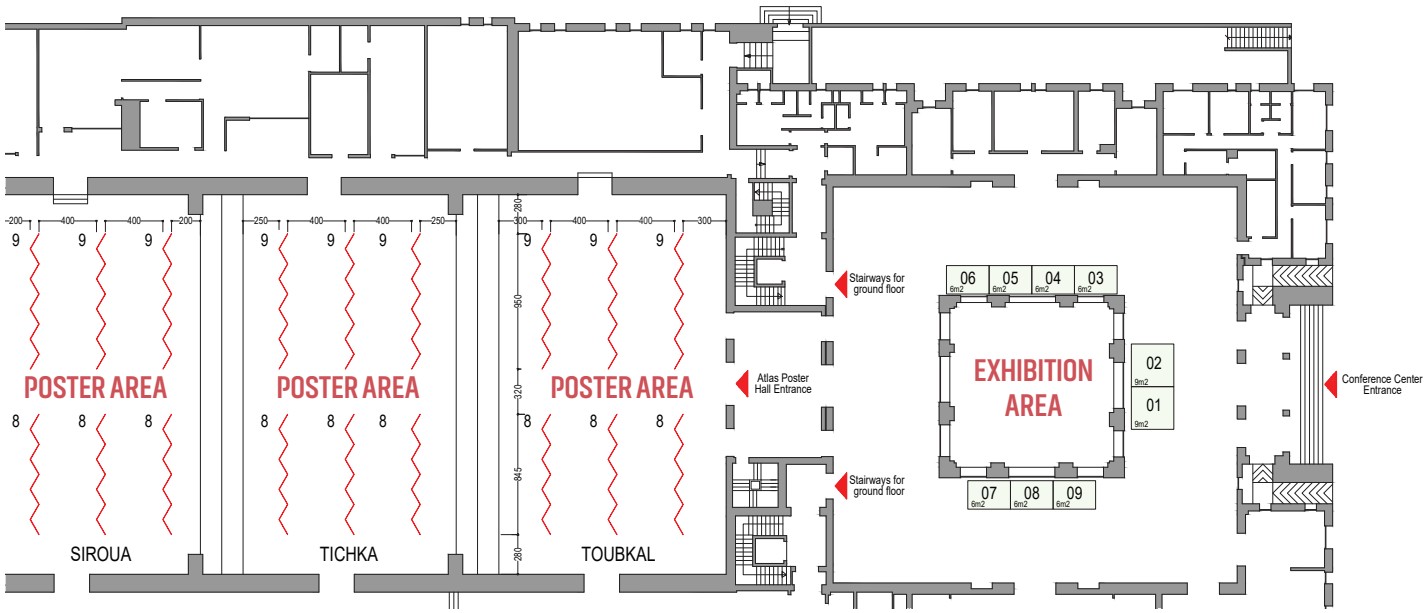
MICCAI 2024 FLOOR PLAN

CONFERENCE CENTER -1 FLOOR



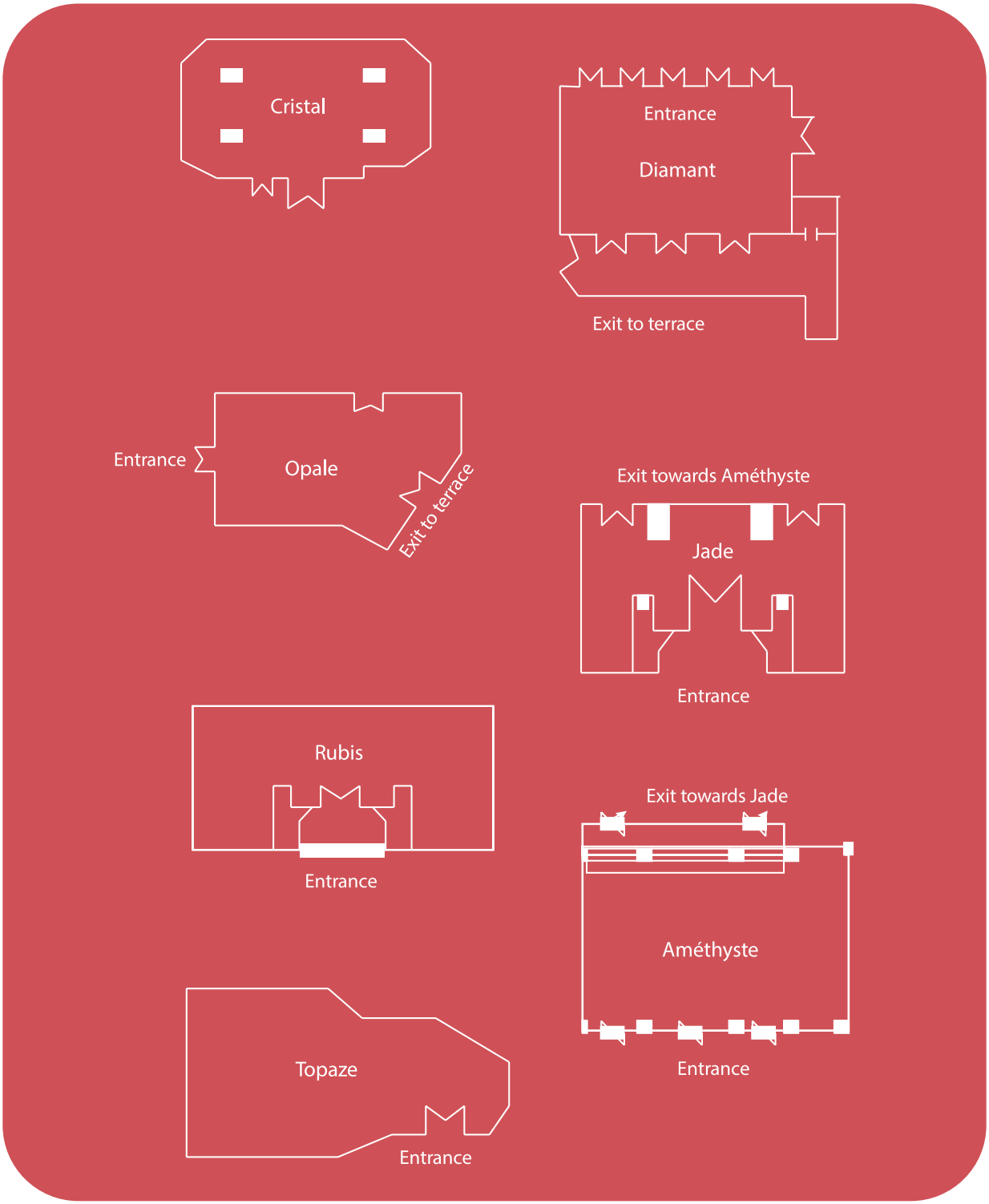
MICCAI 2024 FLOOR PLAN

CONFERENCE CENTER GROUND FLOOR



MICCAI 2024 FLOOR PLAN

PALMERIA PALACE MEETING ROOMS



PROGRAM OVERVIEW

6 October 2024, Sunday

08:00 - 10:00	**Morning Workshops/Challenges/Tutorials**	*Conference Center / Palmeraie Palace*
10:00 - 10:30	**Coffee Break**	
10:30 - 12:30	**Morning Workshops/Challenges/Tutorials**	*Conference Center / Palmeraie Palace*
12:30 - 13:30	**Lunch Break**	
13:30 - 15:30	**Afternoon Workshops/Challenges/Tutorials**	*Conference Center / Palmeraie Palace*
15:30 - 16:00	**Coffee Break**	
16:00 - 18:00	**Afternoon Workshops/Challenges/Tutorials**	*Conference Center / Palmeraie Palace*
18:300 - 19:00	**Welcome Reception**	*Hotel du Golf Rotana Pool Side*

7 October 2024, Monday

08:30 - 09:30	**Opening Ceremony & Chairs Reports**	*Orion Tent / Main Hall*
09:30 - 10:30	**Keynote Session 1** *Dr. Alexandra Golby* *Innovation in Image Guided Neurosurgery:* *A Vision Towards Clinical Impact and Equity*	*Orion Tent / Main Hall*
10:30 - 11:30	**Poster Session 1**: *Image Segmentation 1* *Health Equity and Surgical Scene Understanding*	*Atlas Room / Conference Center*
11:30 - 12:30	**Oral Session 1:** *Generative modelling:* *Image Reconstruction and Synthesis*	*Orion Tent / Main Hall*
11:30 - 12:30	**Oral Session 2:** *Surgical Scene Understanding*	*Crystal Room / Palmeraie Palace*
12:30 - 13:30	**Lunch Break**	
12:30 - 13:30	**WIM lunch event**	*Oliveraie Room / Conference Center*

PROGRAM OVERVIEW

13:30 - 14:30	**Oral & Spotlight Session 3:** *Machine Learning Strategies for MICCAI*	*Orion Tent / Main Hall*
13:30 - 14:30	**Oral & Spotlight Session 4:** *Health Equity: Care for All*	*Palmeraie Hotel / Crystal Room*
13:30-17:30	**Open Data**	
15:00 - 16:30	**Poster Session 2:** *Machine Learning:* *Learning Strategies and Clinical applications:* *Neuroimaging and Ultrasound*	*Conference Center / Atlas Room*
16:30-18:00	**Oral Session 5**: *Computer Aided Diagnosis*	*Orion Tent / Main Hall*
16:30-18:00	**Oral Session 6:** *Clinical Translation:* *Functional Imaging and Oncology*	*Crystal Room / Palmeraie Palace*
18:00-20:00	**MSB Academia & Industry Panel Discussion and Networking event**	*Diamant Room / Palmeraie Palace*

8 October 2024, Tuesday

08:30 - 09:30	**Oral Session 7:** *Health Equity: Low Resource Settings*	*Orion Tent / Main Hall*
08:30 - 09:30	**Oral Session 8:** Image Registration	*Crystal Room / Palmeraie Palace*
08:30-18:00	**CLINICCAI**	Diamant Room / Palmeraie Palace
09:30 - 10:30	**Keynote Session 2**: *Dr. Michael Bronstein* *Geometric Deep Learning –* *from Euclid to Drug Design*	*Orion Tent / Main Hall*
10:30 - 11:30	**Poster Session 3:** *Transparency, Fairness and Uncertainty 1* *Image Formation and Reconstruction 1* *and Computer Aided Diagnosis 1*	*Conference Center / Atlas Room*
11:30-12:30	**Health Equity panel discussion followed by Industry Sponsor Event**	*Orion Tent / Main Hall*

PROGRAM OVERVIEW

12:30-13:30	**Lunch Break**	
12:30-13:30	**MSB lunch and PhD thesis madness**	*Oliveraie Room / Conference Center*
13:30-15:00	**Oral & Spotlight Session 9:** *Image Segmentation*	*Orion Tent / Main Hall*
13:30-15:00	**Oral & Spotlight Session 10:** *Foundation Models and Multimodal Data for MICCAI*	*Crystal Room / Palmeraie Palace*
15:00-16:30	**Poster Session 4:** *Image Segmentation 2, Surgical Data Science Computer Assisted Interventions and Surgery 1 and Foundation models and Multimodal Data*	*Atlas Room / Conference Center*
16:30-18:00	**Oral Session 11:** *Transparency, Fairness and Uncertainty*	*Orion Tent / Main Hall*
16:30-18:00	**Oral Session 12:** *Surgical Data Science*	*Crystal Room / Palmeraie Palace*
19:30-23:30	**Gala Dinner including Enduring Impact and Fellow Distinguished awards**	

9 October 2024, Wednesday

08:30 - 09:30	**Oral Session 13**: *Neuroimaging*	*Orion Tent / Main Hall*
08:30 - 09:30	**Oral Session 14:** *Computational Pathology*	*Crystal Room / Palmeraie Palace*
09:30 - 10:30	**Keynote Session 3**: Dr. Aisha Walcott-Bryant Driving innovation through collaboration: Transforming healthcare in Africa	*Orion Tent / Main Hall*
10:30-11:30	**Poster Session 5:** *Image Registration, Computer Aided Diagnosis 2 and Transparency, Fairness and Uncertainty 2*	*Atlas Room / Conference Center*
10:30-11:30	**International Funding for Excellence - from Individual Scientists to Consortia**	*Diamant Room / Palmeraie Palace*
11:30-12:30	**Debate on AI followed by Industry Sponsor Event**	*Orion Tent / Main Hall*

PROGRAM OVERVIEW

12:30-13:30	**RISE Lunch Event**	*Oliveraie Room / Conference Center*
12:30-13:30	**Lunch Break**	
13:30-15:00	**Oral & Spotlight Session 15:** *Computer Assisted Interventions*	*Orion Tent / Main Hall*
13:30-15:00	**Oral & Spotlight Session 16:** *Clinical Translation: Neuro, Spine and Ultrasound*	*Crystal Room / Palmeraie Palace*
13:30-16:30	**From MICCAI to AFRICAI**	*Diamant Room / Palmeraie Palace*
15:00-16:30	**Poster Session 6:** *Computer Assisted Interventions and Surgery 2* *Image Formation and Reconstruction 2* *and Clinical Translation*	*Atlas Room / Conference Center*
16:30 -18:00	**SIG for challenges report /** **MICCAI Paper Awards /** **Closing ceremony and 2025 preview**	*Orion Tent / Main Hall*

10 October 2024, Thursday

08:00 - 10:00	**Morning Workshops/Challenges/Tutorials**	*Conference Center / Palmeraie Palace*
10:00 - 10:30	**Coffee Break**	
10:30 - 12:30	**Morning Workshops/Challenges/Tutorials**	*Conference Center / Palmeraie Palace*
12:30 - 13:30	**Lunch Break**	
13:30 - 15:30	**Afternoon Workshops/Challenges/Tutorials**	*Conference Center / Palmeraie Palace*
15:30 - 16:00	**Coffee Break**	
16:00 - 18:00	**Afternoon Workshops/Challenges/Tutorials**	*Conference Center / Palmeraie Palace*

SHUTTLE TIME TABLES

SHUTTLE TIME TABLES

FARAH HOTEL

06.10.2024	07:00	from HOTEL to CONFERENCE CENTER
06.10.2024	19:45	from CONFERENCE CENTER to HOTEL
07.10.2024	07:30	from HOTEL to CONFERENCE CENTER
07.10.2024	18:30	from CONFERENCE CENTER to HOTEL
08.10.2024	07:45	from HOTEL to CONFERENCE CENTER
08.10.2024	NA*	from CONFERENCE CENTER to HOTEL
09.10.2024	07:45	from HOTEL to CONFERENCE CENTER
09.10.2024	18:30	from CONFERENCE CENTER to HOTEL
10.10.2024	07:45	from HOTEL to CONFERENCE CENTER
10.10.2024	18:15	from CONFERENCE CENTER to HOTEL

GRAND MOGADOR AGDAL

06.10.2024	07:00	from HOTEL to CONFERENCE CENTER
06.10.2024	19:45	from CONFERENCE CENTER to HOTEL
07.10.2024	07:30	from HOTEL to CONFERENCE CENTER
07.10.2024	18:30	from CONFERENCE CENTER to HOTEL
08.10.2024	07:45	from HOTEL to CONFERENCE CENTER
08.10.2024	NA*	from CONFERENCE CENTER to HOTEL
09.10.2024	07:45	from HOTEL to CONFERENCE CENTER
09.10.2024	18:30	from CONFERENCE CENTER to HOTEL
10.10.2024	07:45	from HOTEL to CONFERENCE CENTER
10.10.2024	18:15	from CONFERENCE CENTER to HOTEL

RELAX HOTEL

06.10.2024	07:00	from HOTEL to CONFERENCE CENTER
06.10.2024	19:45	from CONFERENCE CENTER to HOTEL
07.10.2024	07:30	from HOTEL to CONFERENCE CENTER
07.10.2024	18:30	from CONFERENCE CENTER to HOTEL
08.10.2024	07:45	from HOTEL to CONFERENCE CENTER
08.10.2024	NA*	from CONFERENCE CENTER to HOTEL
09.10.2024	07:45	from HOTEL to CONFERENCE CENTER
09.10.2024	18:30	from CONFERENCE CENTER to HOTEL
10.10.2024	07:45	from HOTEL to CONFERENCE CENTER
10.10.2024	18:15	from CONFERENCE CENTER to HOTEL

RYAD ENNAKHIL

06.10.2024	07:00	from HOTEL to CONFERENCE CENTER
06.10.2024	19:45	from CONFERENCE CENTER to HOTEL
07.10.2024	07:45	from HOTEL to CONFERENCE CENTER
07.10.2024	18:30	from CONFERENCE CENTER to HOTEL
08.10.2024	07:45	from HOTEL to CONFERENCE CENTER
08.10.2024	NA*	from CONFERENCE CENTER to HOTEL
09.10.2024	08:00	from HOTEL to CONFERENCE CENTER
09.10.2024	18:30	from CONFERENCE CENTER to HOTEL
10.10.2024	07:30	from HOTEL to CONFERENCE CENTER
10.10.2024	18:15	from CONFERENCE CENTER to HOTEL

RYAD PARC

07.10.2024	07:30	from HOTEL to CONFERENCE CENTER
07.10.2024	18:30	from CONFERENCE CENTER to HOTEL
08.10.2024	08:00	from HOTEL to CONFERENCE CENTER
08.10.2024	NA*	from CONFERENCE CENTER to HOTEL
09.10.2024	08:00	from HOTEL to CONFERENCE CENTER
09.10.2024	18:30	from CONFERENCE CENTER to HOTEL
10.10.2024	07:30	from HOTEL to CONFERENCE CENTER
10.10.2024	18:15	from CONFERENCE CENTER to HOTEL

VENUE - CITY CENTER SHUTTLE SCHEDULE

DATE	TIME
6.10.2024	19:45
7.10.2024	18:30
8.10.2024	N/A - GALA DINNER
9.10.2024	18:30
10.10.2024	18:30

** The shuttles to the city center will start operating at the times listed above. Please note that MICCAI 2024 does not take responsibility for shuttle capacity, and the service will operate on a first-come, first-served basis.*

**Please note that the shuttle service will not make any additional stops along the route, and we kindly ask you not make such a request from the driver.*

***N/A - GALA DINNER**

**There will be no return shuttles on the evening of October 8th; instead, shuttles will depart from the conference center to the Gala venue, and after the Gala Dinner, shuttles will be depart from the Gala venue to the Farah Hotel, Grand Mogador Agdal, Relax Hotel, Ryad Ennakhil, Ryad Parc and City Center.*

GENERAL INFORMATION

Registration Desk
The registration desk will be located in the open area between the Orion tent and the conference center building. You can find it by following the signs.

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

6 October 2024, Sunday	:	07:00-19:30
7 October 2024, Monday	:	07:00-18:30
8 October 2024, Tuesday	:	07:00-19:00
9 October 2024, Wednesday	:	07:00-18:00
10 October 2024 Thursday	:	07:00-16:30

Exhibition – Opening Hours
Conference Center first floor will be used as the exhibition area.
The exhibition Hours are as below;

7 October 2024, Monday	:	08:00-18:00
8 October 2024, Tuesday	:	08:00-18:00
9 October 2024, 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 in front of the conference center building, in the open area, under the tents.
Coffee Break and Lunch Break times are as follows;

7 October 2024, Monday

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

8 October 2024, Tuesday

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

9 October 2024, Wednesday

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

Lunches and Coffee Breaks for Satellite Events
Lunches and coffee breaks are included in the satellite event registration and will be served in front of the conference center building, in the open area, under the tents the.

6 October 2024, Sunday

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

10 October 2024, Thursday

10:00-10:30	Morning Coffee Break

GENERAL INFORMATION

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

Name Badges
Please always wear your name badges. Only MICCAI 2024 participants wearing official name badges will be allowed to access the conference site and attend the scientific and social programs.
Internet Access

Wifi access is available through the conference halls.

Wireless Name : MICCAI 2024
Password: 20miccai24

Poster Presentations
Conference Center first floor will be used as the poster area. All accepted papers are to be presented as posters at the conference. Posters should be hung half an hour before the session starts and taken down at the end of the day. Posters that are not taken down will be collected by us and sent for recycling.

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

7 October 2024 ,Monday

Session	Time	Poster Labels
Image Segmentation 1, Health Equity, and Surgical Scene Understanding	10:30-11:30	M-AM-001 / M-AM-283
Machine Learning: Learning Strategies and Clinical applications: Neuroimaging and Ultrasound	15:00-16:30	M-PM-002 /M-PM-286

8 October 2024, Tuesday

Session	Time	Poster Labels
Transparency, Fairness and Uncertainty 1, Image Formation and Reconstruction 1, and Computer Aided Diagnosis 1	10:30-11:30	T-AM-001 / T-AM-287
Image Segmentation 2, Surgical Data Science, Computer Assisted Intervention and Surgery 1, and Foundation Models and Multimodal Data	15:00-16:30	T-PM-002 /T-PM-284

9 October 2024, Wednesday

Session	Time	Poster Labels
Image Registration, Computer Aided Diagnosis 2, and Transparency, Fairness and Uncertainty 2	10:30-11:30	W-AM-001/ W-AM-285
Computer Assisted Interventions and Surgery 2, Image Formation and Reconstruction 2, and Clinical Translation	15:00-16:30	W-PM-002 /W-PM-284

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MICCAI

ISR The International Society of Radiology

Children's National Health System

BCN-AIM ARTIFICIAL INTELLIGENCE IN MEDICINE

fundació pasqual maragall PER UN FUTUR SENSE ALZHEIMER

DELFT IMAGING

CAMI COMPUTER ASSISTED MEDICAL INTERVENTIONS

CNRST

Pierre Fabre

UNIVERSITAT DE BARCELONA

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MICCAI 2024 – SATELLITE EVENTS

		6 October 2024	
Meeting Room Name	**Location**	**AM**	**PM**
Cristal Room	Palmeraie Palace	Machine Learning in Medical Imaging (MLMI)	The Third Workshop on Applications of Medical Artificial Intelligence (AMAI)
Oliveraie	Conference Center	The 5th Workshop on Advances in Simplifying Medical Ultrasound // Trackerless 3D Freehand Ultrasound Reconstruction Challenge	Workshop on Interpretability of Machine Intelligence in Medical Image Computing
Roseraie	Conference Center	Workshop on Biomedical Image Registration // Learn2Reg 2024 Challenge	Augmented Environments for Computer-Assisted Interventions
Orangeraie	Conference Center	Brain Tumor Segmentation (BraTS) Cluster of Challenges	Intrapartum Ultrasound Grand Challenge 2024 // Ultra-Widefield Fundus Imaging for Diabetic Retinopathy
Palmeraie	Conference Center	MICCAI meets Africa Workshop 2024	Computational Pathology with Multimodal Data
Arganier	Conference Center	DentalCluster	Challenges and emerging opportunities in Low-Field MRI
Amandier	Conference Center	Data Learning meets Computational Modelling: Successfully using Physics-Informed Neural Networks for Biomedical Applications	AI-based image segmentation and labeling with free open source software; 3D Slicer
Borj 1	Conference Center	13th MICCAI Workshop on Clinical Image-based Procedures: Towards Holistic Patient Models for Personalised Healthcare	Medical Out-of-Distribution Analysis Challenge 2024
Borj 2	Conference Center	Implicit Neural Representations for Medical Imaging	EARTH: Embodied AI and Robotics for HealTHcare
Borj 3	Conference Center	THE 1ST MICCAI STUDENT BOARD (MSB) WORKSHOP - EMERGE: Empowering Medical Information Computing Research through Early-career Expertise	Workshop on Multimodal Clinical Decision Support
Borj 6	Conference Center	The 3rd Workshop on Computational Mathematics Modeling in Cancer Analysis	Multi-class Brain Hemorrhage Segmentation in Non-contrast Computed Tomography under Limited Annotations // Automated Identification of Moderate-Severe Traumatic Brain Injury Lesions
Borj 8	Conference Center	GRaphs in biomedicAl Image anaLysis	Pelvic Bone Fragments with Injuries Segmentation Challenge // Energy-efficient Medical Image Processing
Diamant	Palmeraie Palace	Foundation Tutorial	2nd Workshop on Foundation Models for General Medical AI
Opale	Palmeraie Palace	Computational Diffusion Magnetic Resonance Imaging 2024	Diabetic Foot Ulcers Grand Challenge 2024 // Cross-Organ and Cross-Scanner Adenocarcinoma Segmentation Challenge
Coupole Menara	Palmeraie Palace	4th MICCAI Workshop on Shape in Medical Imaging	Graph Learning in Medical Image Analysis (GraphMIA)
Amethyste	Palmeraie Palace	MICCAI Workshop on Perlnatal, Preterm and Paediatric Image Analysis // Fetal Tissue Annotation Challenge	7th Workshop on PRedictive Intelligence in Medicine
Jade	Palmeraie Palace	Topology-Aware Anatomical Segmentation of the Circle of Willis for CTA and MRA	Mycetoma MicroImage: Detect and classify // LEarning biOchemical Prostate cAncer Reccurance from histopathology sliDes (LEOPARD)
Rubis	Palmeraie Palace	Cancer Prevention, detection, and intervenTion	MedShapeNet: A Large Repository of 3D Medical Shapes and a Python Toolbox for 3D Medical Shape Analysis
Topaze	Palmeraie Palace	MICCAI Workshop on Computational Biomechanics for Medicine XIX	Clinical AI in the Real-World: From Data-Centric AI to Dynamic Learning

MICCAI 2024 – SATELLITE EVENTS

		10 October 2024	
Meeting Room Name	**Location**	**AM**	**PM**
Cristal Room	Palmeraie Palace	The 11th Ophthalmic Medical Image Analysis Workshop // Structural-Functional Transition in Glaucoma Assessment Edition2 (STAGE2)	Deep Breast Workshop on AI and Imaging for Diagnostic and Treatment Challenges in Breast Care
Oliveraie	Conference Center	Uncertainty for safe utilisation of machine learning in medical imaging // Uncertainty Quantification in Medical Image Analysis	MICCAI Workshop on Advancing Data Solutions in Medical Imaging AI : be Joint Workshop of 4th MICCAI Workshop on Data Augmentation, Labeling, and Imperfections (DALI 2024), Big Task Small Data, 1001-AI (BTSD 2024), and 3rd MICCAI Workshop on Medical Image Learning with Limited and Noisy Data (MILLanD 2024)
Roseraie	Conference Center	2nd International Workshop on Medical Optical Imaging and Virtual Microscopy Image Analysis // Kidney Pathology Image Segmentation (KPIs) Challenge	Second Edition of Data Engineering in Medical Imaging
Orangeraie	Conference Center	Beyond Brain Tumor Segmentation (BraTS) Cluster of Challenges	Towards real world medical image analysis
Palmeraie	Conference Center	Deep Generative Models for Medical Image Computing and Computer Assisted Intervention	9th International Workshop on Simulation and Synthesis in Medical Imaging
Arganier	Conference Center	Automated Lesion Segmentation in Whole-Body PET/CT - Multitracer Multicenter generalization // Device-Independent diAbetic Macular edema ONset preDiction (DIAMOND)	Self-supervised learning for 3D light-sheet microscopy image segmentation
Amandier	Conference Center	Free	Monitoring Age-related macular degeneration Progression In Optical coherence tomography
Borj 1	Conference Center	The SAGES Critical View of Safety Challenge // Triphasic-aided Liver Lesion Segmentation in Non-contrast CT	AbdomenCluster
Borj 2	Conference Center	Free	Medical Image De-Identification Benchmark (MIDI-B)
Borj 3	Conference Center	Free	Cephalometric Landmark Detection in Lateral X-ray Images // Body Maps: Towards 3D Atlas of Human Body
Borj 6	Conference Center	Comprehensive Open Federated Ecosystem in Healthcare Optimized for Low-Resource Environments	Distributed, Collaborative and Federated Learning // Federated Tumour Segmentation Challenge
Borj 8	Conference Center	AI for Imaging Genomic Learning (AIIG 2024)	Joint MICCAI Workshops Fairness of AI in Medical Imaging and Ethical and Philosophical Issues in Medical Imaging
Diamant	Palmeraie Palace	Stroke Workshop on Imaging and Treatment Challenges // Ischemic Stroke Lesion Segmentation Challenge	Ninth International Skin Imaging Collaboration Workshop on Skin Image Analysis
Opale	Palmeraie Palace	Endoscopic Vision Challenge Cluster 2024 on Classification and Tracking	Endoscopic Vision Challenge Cluster 2024 on Segmentation
Coupole Menara	Palmeraie Palace	Statistical Atlases and Computational Modeling of the Heart	Universal Model for Cardiac MRI Reconstruction Challenge
Amethyste	Palmeraie Palace	Machine Learning in Clinical Neuroimaging	Long-tailed, multi-label, and zero-shot classification on chest X-rays
Jade	Palmeraie Palace	GNNs in Network Neuroscience	The First Workshop on Topology- and Graph-Informed Imaging Informatics
Rubis	Palmeraie Palace	5th International Workshop on Multiscale Multimodal Medical Imaging & The 1st Workshop on Machine Learning for Multimodal/-sensor Healthcare Data // Enlarged Perivascular Spaces (EPVS) Segmentation Challenge	Low field pediatric brain magnetic resonance Image Segmentation and quality Assurance
Topaze	Palmeraie Palace	AIPAD: AI in Pancreatic Disease Detection and Diagnosis // Personalized Incremental Learning in Medicine	Longitudinal Disease Tracking and Modelling with Medical Images and Data (LDTM)

SATELLITE EVENTS
DETAILED PROGRAM

SATELLITE EVENTS - DETAILED PROGRAM

6 OCTOBER SATELLITE EVENTS
WORKSHOPS

MICCAI meets Africa Workshop 2024
Half Day (8:00 AM to 12:30 AM) Conference Center-Palmeraie

THE 1st MICCAI STUDENT BOARD (MSB) WORKSHOP - EMERGE: Empowering Medical Information Computing Research through Early-career Expertise
Half Day (8:00 AM to 12:30 AM) Conference Cente- Borj 3

4th MICCAI Workshop on Shape in Medical Imaging
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace- Coupole Menara

MICCAI Workshop on Computational Biomechanics for Medicine XIX
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace- Topaze

7th Workshop on PRedictive Intelligence in Medicine
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace-Amethyste

The 5th Workshop on Advances in Simplifying Medical Ultrasound
Half Day (8:00 AM to 12:30 AM) Conference Center- Oliveraie

Machine Learning in Medical Imaging (MLMI)
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace - Cristal Room

Workshop on Interpretability of Machine Intelligence in Medical Image Computing
Half Day (1:30 PM to 6:00 PM) Conference Center- Oliveraie

EARTH: Embodied AI and Robotics for HealTHcare
Half Day (1:30 PM to 6:00 PM) Conference Center- Borj 2

2nd Workshop on Foundation Models for General Medical AI
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace- Diamant

Workshop on Biomedical Image Registration
Half Day (8:00 AM to 12:30 AM) Conference Center- Roseraie

Cancer Prevention, detection, and intervention
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace- Rubis

The 3rd Workshop on Computational Mathematics Modeling in Cancer Analysis
Half Day (8:00 AM to 12:30 AM) Conference Center- Borj 6

SATELLITE EVENTS - DETAILED PROGRAM

13th MICCAI Workshop on Clinical Image-based Procedures: Towards Holistic Patient Models for Personalised Healthcare
Half Day (8:00 AM to 12:30 AM) Conference Center- Borj 1

MICCAI Workshop on PerInatal, Preterm and Paediatric Image Analysis
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace- Amethyste

Computational Pathology with Multimodal Data
Half Day (1:30 PM to 6:00 PM) Conference Center- Palmeraie

Computational Diffusion Magnetic Resonance Imaging 2024
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace- Opale

Augmented Environments for Computer-Assisted Interventions
Half Day (1:30 PM to 6:00 PM) Conference Center- Roseraie

The Third Workshop on Applications of Medical Artificial Intelligence (AMAI)
Half Day (1:30 PM to 6:00 PM) Cristal Room- Palmeraie Palace

GRaphs in biomedicAl Image analysis
Half Day (8:00 AM to 12:30 AM) Conference Center- Borj 8

Workshop on Multimodal Clinical Decision Support
Half Day (1:30 PM to 6:00 PM) Conference Center- Borj 3

6 OCTOBER SATELLITE EVENTS
CHALLENGES

Brain Tumor Segmentation (BraTS) Cluster of Challenges
Half Day (8:00 AM to 12:30 AM) Conference Center- Orangeraie

Multi-class Brain Hemorrhage Segmentation in Non-contrast Computed Tomography under Limited Annotations
Half Day (1:30 PM to 6:00 PM) Conference Center- Borj 6

Intrapartum Ultrasound Grand Challenge 2024
Half Day (1:30 PM to 6:00 PM) Conference Center- Orangeraie

Fetal Tissue Annotation Challenge
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace- Amethyste

Automated Identification of Moderate-Severe Traumatic Brain Injury Lesions
Half Day (1:30 PM to 6:00 PM) Conference Center- Borj 6

SATELLITE EVENTS - DETAILED PROGRAM

Pelvic Bone Fragments with Injuries Segmentation Challenge
Half Day (1:30 PM to 6:00 PM) Conference Center- Borj 8

Topology-Aware Anatomical Segmentation of the Circle of Willis for CTA and MRA
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace- Jade

Medical Out-of-Distribution Analysis Challenge 2024
Half Day (1:30 PM to 6:00 PM) Conference Center- Borj 1

Energy-efficient Medical Image Processing
Half Day (1:30 PM to 6:00 PM) Conference Center- Borj 8

Mycetoma MicroImage: Detect and classify
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace- Jade

LEarning biOchemical Prostate cAncer Reccurance from histopathology sliDes (LEOPARD)
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace- Jade

Ultra-Widefield Fundus Imaging for Diabetic Retinopathy
Half Day (1:30 PM to 6:00 PM) Conference Cente- Orangeraie

Cross-Organ and Cross-Scanner Adenocarcinoma Segmentation Challenge
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace- Opale

Diabetic Foot Ulcers Grand Challenge 2024
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace- Opale

6 OCTOBER SATELLITE EVENTS
TUTORIALS

Graph Learning in Medical Image Analysis (GraphMIA)
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace- Coupole Menara

Implicit Neural Representations for Medical Imaging
Half Day (8:00 AM to 12:30 AM) Conference Center - Borj 2

Clinical AI in the Real-World: From Data-Centric AI to Dynamic Learning
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace- Topaze

Data Learning meets Computational Modelling: Successfully using Physics-Informed Neural Networks for Biomedical Applications
Half Day (8:00 AM to 12:30 AM) Conference Center – Amandier

SATELLITE EVENTS - DETAILED PROGRAM

AI-based image segmentation and labeling with free open source software; 3D Slicer
Half Day (8:00 AM to 12:30 AM) Conference Center – Amandier

MedShapeNet: A Large Repository of 3D Medical Shapes and a Python Toolbox for 3D Medical Shape Analysis
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace- Rubis

Challenges and emerging opportunities in Low-Field MRI
Half Day (1:30 PM to 6:00 PM) Conference Center- Arganier

10 OCTOBER SATELLITE EVENTS
WORKSHOPS

Joint MICCAI Workshops Fairness of AI in Medical Imaging and Ethical and Philosophical Issues in Medical Imaging
Half Day (1:30 PM to 6:00 PM) Conference Center – Borj 8

9th International Workshop on Simulation and Synthesis in Medical Imaging
Half Day (1:30 PM to 6:00 PM) Conference Center – Palmeraie

Machine Learning in Clinical Neuroimaging
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace– Amethyste

Ninth International Skin Imaging Collaboration Workshop on Skin Image Analysis
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace– Diamant

2nd International Workshop on Medical Optical Imaging and Virtual Microscopy Image Analysis
Half Day (8:00 AM to 12:30 AM) Conference Center– Roseraie

MICCAI Workshop on Advancing Data Solutions in Medical Imaging AI : be Joint Workshop of 4th MICCAI Workshop on Data Augmentation, Labeling, and Imperfections (DALI 2024), Big Task Small Data, 1001-AI (BTSD 2024), and 3rd MICCAI Workshop on Medical Image Learning with Limited and Noisy Data (MILLanD 2024)
Half Day (1:30 PM to 6:00 PM) Conference Center– Oliveraie

Stroke Workshop on Imaging and Treatment Challenges
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace– Diamant

5th International Workshop on Multiscale Multimodal Medical Imaging & The 1st Workshop on Machine Learning for Multimodal/-sensor Healthcare Data
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace– Rubis

SATELLITE EVENTS - DETAILED PROGRAM

AIPAD: AI in Pancreatic Disease Detection and Diagnosis
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace–Topzade

AI for Imaging Genomic Learning (AIIG 2024)
Half Day (8:00 AM to 12:30 AM) Conference Center– Borj 8

Statistical Atlases and Computational Modeling of the Heart
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace– Coupole Menara

The 11th Ophthalmic Medical Image Analysis Workshop
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace– Cristal Room

Deep Breast Workshop on AI and Imaging for Diagnostic and Treatment Challenges in Breast Care
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace– Cristal Room

Uncertainty for safe utilisation of machine learning in medical imaging
Half Day (8:00 AM to 12:30 AM) Conference Center– Oliveraie

Longitudinal Disease Tracking and Modelling with Medical Images and Data (LDTM)
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace– Topzade

Personalized Incremental Learning in Medicine
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace– Topzade

Second Edition of Data Engineering in Medical Imaging
Half Day (1:30 PM to 6:00 PM) Conference Center – Roseraie

The First Workshop on Topology- and Graph-Informed Imaging Informatics
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace– Jade

10 OCTOBER SATELLITE EVENTS
CHALLENGES

Monitoring Age-related macular degeneration Progression In Optical coherence tomography
Half Day (1:30 PM to 6:00 PM) Conference Center– Amandier

Beyond Brain Tumor Segmentation (BraTS) Cluster of Challenges
Half Day (8:00 AM to 12:30 AM) Conference Center– Orangeraie

Universal Model for Cardiac MRI Reconstruction Challenge
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace– Coupole Menara

SATELLITE EVENTS - DETAILED PROGRAM

Cephalometric Landmark Detection in Lateral X-ray Images
Half Day (1:30 PM to 6:00 PM) Conference Center– Borj 3

Federated Tumor Segmentation (FeTS) Challenge
Half Day (1:30 PM to 6:00 PM) Conference Center– Borj 6

Automated Lesion Segmentation in Whole-Body PET/CT - Multitracer Multicenter generalization
Half Day (8:00 AM to 12:30 AM) Conference Center– Arganier

Endoscopic Vision Challenge Cluster 2024 on Classification and Tracking
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace – Opale

Endoscopic Vision Challenge Cluster 2024 on Segmentation
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace – Opale

Ischemic Stroke Lesion Segmentation Challenge
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace – Diamant

Device-Independent diAbetic Macular edema ONset preDiction (DIAMOND)
Half Day (8:00 AM to 12:30 AM) Conference Center– Arganier

Long-tailed, multi-label, and zero-shot classification on chest X-rays
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace – Amethyste

Self-supervised learning for 3D light-sheet microscopy image segmentation
Half Day (1:30 PM to 6:00 PM) Conference Center– Arganier

Body Maps: Towards 3D Atlas of Human Body
Half Day (1:30 PM to 6:00 PM) Conference Center– Borj 3

The SAGES Critical View of Safety Challenge
Half Day (8:00 AM to 12:30 AM) Conference Center– Borj 1

Triphasic-aided Liver Lesion Segmentation in Non-contrast CT
Half Day (1:30 PM to 6:00 PM) Conference Center– Borj 1

Enlarged Perivascular Spaces (EPVS) Segmentation Challenge
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace– Rubis

Low field pediatric brain magnetic resonance Image Segmentation and quality Assurance
Half Day (1:30 PM to 6:00 PM) Palmeraie Palace– Rubis

Medical Image De-Identification Benchmark (MIDI-B)
Half Day (1:30 PM to 6:00 PM) Conference Center– Borj 2

SATELLITE EVENTS - DETAILED PROGRAM

Towards real world medical image analysis
Half Day (1:30 PM to 6:00 PM) Conference Center– Orangeraie

10 OCTOBER SATELLITE EVENTS
TUTORIALS

GNNs in Network Neuroscience
Half Day (8:00 AM to 12:30 AM) Palmeraie Palace- Jade

Comprehensive Open Federated Ecosystem in Healthcare Optimized for Low-Resource Environments
Half Day (8:00 AM to 12:30 AM) Conference Center- Borj 6

Distributed, Collaborative and Federated Learning
Half Day (1:30 PM to 6:00 PM) Conference Center– Borj 6

KEYNOTES

DR. ALEXANDRA J. GOLBY

Innovation in Image Guided Neurosurgery: A Vision Towards Clinical Impact and Equity

Dr. Alexandra J. Golby is a Neurosurgeon, Director of Image-guided Neurosurgery, Co-director of the Advanced Multi-modality Image guided OR (AMIGO), and Director of the clinical fMRI service at Brigham and Women's Hospital in Boston. She is Professor of Neurosurgery and Professor of Radiology at Harvard Medical School. Dr. Golby holds the Haley Distinguished Chair in the Neurosciences at BWH. She is also Principal Investigator of Golby Lab, a surgical brain mapping laboratory. Dr. Golby has special clinical interests in brain surgery for patients with brain tumors and epilepsy, especially those lesions which are intimately associated with critical brain structures. Her translational research is focused on advanced imaging and image guidance to improve care for patients undergoing intracranial neurosurgery. She has developed numerous technologies to help guide presurgical planning and intraoperative decision making. She works closely with scientists across many disciplines including computer science, applied mathematics, MR and ultrasound physics, and biomedical engineering and is very involved with mentoring young clinicians and scientists. Dr. Golby was a recent Fulbright Global Scholar pursuing work to foster interdisciplinary collaborations between technical experts and clinicians in host countries Rwanda and Morocco.

DR. MICHAEL BRONSTEIN

Geometric Deep Learning – from Euclid to Drug Design

Michael Bronstein is the DeepMind Professor of AI at the University of Oxford. He previously served as Head of Graph Learning Research at Twitter, professor at Imperial College London, and held visiting appointments at Stanford, MIT, and Harvard. He is the recipient of the Royal Society Wolfson Research Merit Award, Royal Academy of Engineering Silver Medal, Turing World-Leading AI Research Fellowship, five ERC grants, two Google Faculty Research Awards, and two Amazon AWS ML Research Awards. He is a Member of the Academia Europaea, Fellow of IEEE, IAPR, BCS, and ELLIS, ACM Distinguished Speaker, and World Economic Forum Young Scientist. In addition to his academic career, Michael is a serial entrepreneur and founder of multiple startup companies, including Novafora, Invision (acquired by Intel in 2012), Videocites, and Fabula AI (acquired by Twitter in 2019). He is the Chief Scientist at VantAI and scientific advisor at Recursion Pharmaceuticals. Michael Bronstein has just been announced as the founding scientific director of the AITHYRA Institute of Biomedical AI in Vienna.

KEYNOTES

DR. AISHA WALCOTT
Driving innovation through collaboration: Transforming healthcare in Africa

Dr. Aisha Walcott is a Senior Staff Research Scientist and co-lead for Google Research Africa with sites in Accra, Ghana, and Nairobi, Kenya. She has over a decade of experience working in Africa and leading teams to develop innovative technologies that leverage AI and computing to address some of Africa's most pressing challenges and to explore the many incredible opportunities. Aisha is currently leading and driving Google Research Africa's food security agriculture research, where she and her team are developing AI technology and tools that address food insecurity in Africa and globally.

Prior to her time at Google, Aisha was a Senior Technical Staff Member at IBM Research Africa, and led projects in developing AI tools for a range of areas including global health and healthcare, water management and access, as well as mobility and transportation. Currently, she serves as the Associate Vice President for IEEE (Institute of Electrical and Electronics Engineers) Robotics and Automation Society's Technical Education Program, is on the board for the African Institute for Mathematical Sciences (AIMS) doctoral research program in data science, and was recently on the program committee for the Second US-Africa Frontiers in Science program by the National Academies of Science Engineering and Medicine (NASEM). Lastly, Aisha is a Workshops co-chair for the International Conference on Learning and Representations 2024 (ICLR'24).

Dr. Walcott earned her PhD in the Electrical Engineering and Computer Science Department at MIT with a focus on robotics. Her work has led to several recognitions, over 35 patents, and over 30 publications.

SOCIAL EVENTS

SOCIAL EVENTS

MICCAI 2024 Welcome Reception

8 October 2024 / 18:30 – 19:00

Hotel du Golf Rotana Pool Side

Gala Dinner - Chez Ali Marrakech: A Journey Through Moroccan Culture

Nestled in the heart of Marrakech's Palmeraie, Chez Ali is more than just a restaurant; it is an immersive cultural experience that transports visitors into the rich traditions and history of Morocco. Known for its legendary "Fantasia" show and traditional Moroccan hospitality, Chez Ali offers a glimpse into the country's vibrant past, diverse customs, and dynamic folklore.

Date: Tuesday, October 8, 2024
Location: Chez Ali
Time: 19:30 - 23:30

Transportation: Buses will start to depart from the Conference Centre starting from 18:30. After the gala dinner transportation to the city center will be provided. For the ones that has booked their hotel through MICCAI 2024 Platform direct transportation to the hotels will be provided. Please check the signs at the buses to get into the right vehicle and feel free to contact the staff onsite for any possible question you might have.

ORAL AND SPOTLIGHT PRESENTATIONS

ORAL AND SPOTLIGHT PRESENTATIONS

Oral Session 1: Generative modelling: Image Reconstruction and Synthesis Monday, October 7, 2024, 11:30 to 12:30 Orion Tent (Main Hall) Session Chairs: Bernhard Kainz, Imperial College London, UK and FAU Erlangen-Nürnberg, Germany Can Zhao, Nvidia, United States	Oral Session 2: Surgical Scene Understanding Monday, October 7, 2024, 11:30 to 12:30 Crystal Room (Dual Track Hall) Session Chairs: Sophia Bano, University College London, UK Mathias Unberath, Johns Hopkins University, USA
Myocardial Scar Enhancement in LGE Cardiac MRI using Localized Diffusion Speaker: Marta Hasny, Technical University of Munich, Germany Center-to-Edge Denoising Diffusion Probabilistic Models with Cross-domain Attention for Undersampled MRI Reconstruction Speaker: Shuo Li, Case Western Reserve University, USA Masked Residual Diffusion Probabilistic Model with Regional Asymmetry Prior for Generating Perfusion Maps from Multi-phase CTA Speaker: Yuxin Cai, Huazhong University of Science and Technology, China Diffusion as Sound Propagation: Physics-inspired Model for Ultrasound Image Generation Speaker: Marina Domínguez, MCML, Germany	Depth-Driven Geometric Prompt Learning for Laparoscopic Liver Landmark Detection Speaker: Jialun Pei, The Chinese University of Hong Kong, Hong Kong SAR Enhanced Scale-aware Depth Estimation for Monocular Endoscopic Scenes with Geometric Modeling Speaker: Ruofeng Wei, The Chinese University of Hong Kong, Hong Kong SAR Structure-preserving Image Translation for Depth Estimation in Colonoscopy Speaker: Shuxian Wang, UNC Chapel Hill, USA Transferring Relative Monocular Depth to Surgical Vision with Temporal Consistency Speaker: Charlie Budd, King's College London, UK

ORAL AND SPOTLIGHT PRESENTATIONS

Oral & Spotlight Session 3: Machine Learning Strategies for MICCAI Monday, October 7, 2024, 13:30 to 15:00 Orion Tent (Main Hall) Session Chairs: Olivier Colliot, CNRS, France Sahar Selim Soussa, Nile University, Egypt	Oral & Spotlight Session 4: Health Equity: Care for All Monday, October 7, 2024, 13:30 to 15:00 Crystal Room (Dual Track Hall) Session Chairs: Xiaoxiao Li, University of British Columbia, Canada Saad Nadeem, Memorial Sloan Kettering Cancer Center, USA
<u>Oral Presentations:</u> Diffusion-based Domain Adaptation for Medical Image Segmentation using Stochastic Step Alignment Speaker: Wen Ji, Hong Kong University of Science and Technology, Hong Kong SAR CoReEcho: Continuous Representation Learning for 2D+time Echocardiography Analysis Speaker: Fadillah Maani, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates Few Slices Suffice: Multi-Faceted Consistency Learning with Active Cross-Annotation for Barely-supervised 3D Medical Image Segmentation Speaker: Zhe Xu and Xinyao Wu, The Chinese University of Hong Kong, Hong Kong SAR Self-Supervised k-Space Regularization for Motion-Resolved Abdominal MRI Using Neural Implicit k-Space Representations Speaker: Veronika Spieker, Helmholtz Munich / Technical University of Munich, Germany A Clinical-oriented Lightweight Network for High-resolution Medical Image Enhancement Speaker: Osmar R. Zaiane, Alberta Machine Intelligence Institute, University of Alberta, Canada	<u>Oral Presentations:</u> S-SYNTH: Knowledge-Based, Synthetic Generation of Skin Images Speaker: Niloufar Saharkhiz, FDA, USA PASSION for Dermatology: Bridging the Diversity Gap with Pigmented Skin Images from Sub-Saharan Africa Speaker: Philippe Gottfrois, University Basel/ University Hospital Basel, Switzerland Towards Rapid Mycetoma Species Diagnosis: A Deep Learning Approach for Stain-Invariant Classification on H&E Images from Senegal Speaker: Kpêtchéhoué Merveille Santi ZINSOU, University of Gaston Berger, Senegal FD-SOS: Vision-Language Open-Set Detectors for Bone Fenestration and Dehiscence Detection from Intraoral Images Speaker: Marawan Elbatel, The Hong Kong University of Science and Technology, Hong Kong SAR EchoMEN: Combating Data Imbalance in Ejection Fraction Regression via Multi-Expert Network Speaker: Song Lai, City University of Hong Kong, Hong Kong SAR
<u>Spotlight Presentations:</u> Advancing Text-Driven Chest X-Ray Generation with Policy-Based Reinforcement Learning Speaker: Woojung Han, Yonsei University, South Korea Few-shot Adaptation of Medical Vision-Language Models Speaker: Julio Silva-Rodríguez, École de technologie supérieure (ÉTS), Canada Physics informed neural networks for estimation of tissue properties from multi-echo configuration state MRI Speaker: Samuel Adams-Tew, University of Utah, USA	<u>Spotlight Presentations:</u> RadiomicsFill-Mammo: Synthetic Mammogram Mass Manipulation with Radiomics Features Speaker: Inye Na, Sungkyunkwan University, South Korea FairDiff: Fair Segmentation with Point-Image Diffusion Speaker: Wenyi Li, Institute for AI Industry Research (AIR), Tsinghua University, China SlicerTMS: Real-Time Visualization of Transcranial Magnetic Stimulation for Mental Health Treatment Speaker: Loraine Franke, University of Massachusetts Boston, USA

ORAL AND SPOTLIGHT PRESENTATIONS

Oral Session 5: Computer Aided Diagnosis Monday, October 7, 2024, 16:30 to 18:00 Orion Tent (Main Hall) Session Chairs: Ulas Bagci, Northwestern University, USA Lei Li, University of Southampton, United Kingdom	Oral Session 6: Clinical Translation: Functional Imaging and Oncology Monday, October 7, 2024, 16:30 to 18:00 Crystal Room (Dual Track Hall) Session Chairs: Jana Hutter, King's College London, UK Wenjia Bai, Imperial College London, UK
Aligning Medical Images with General Knowledge from Large Language Models Speaker: Yi Lin, The Hong Kong University of Science and Technology, Hong Kong SAR, China	Biophysics-based data assimilation of longitudinal tau and amyloid-β PET scans Speaker: George Biros, The University of Texas at Austin, USA
Cardiovascular Disease Detection from Multi-View Chest X-rays with BI-Mamba Speaker: Pingkun Yan, Rensselaer Polytechnic Institute, USA	MetaAD: Metabolism-Aware Anomaly Detection for Parkinson's Disease in 3D 18F-FDG PET Speaker: Zhenrong Shen, Shanghai Jiao Tong University, China
Deep Learning for Cancer Prognosis Prediction Using Portrait Photos by StyleGAN Embedding Speaker: Amr Hagag, University Hospital Erlangen, Germany	Genomics-guided Representation Learning for Pathologic Pan-cancer Tumor Microenvironment Subtype Prediction Speaker: Fangliangzi Meng, Tongji University, China
Topological GCN for Improving Detection of Hip Landmarks from B-Mode Ultrasound Images Speaker: Jun Shi, Shanghai University, China	Ordinal Learning: Longitudinal Attention Alignment Model for Predicting Time to Future Breast Cancer Events from Mammograms Speaker: Xin Wang, The Netherlands Cancer Institute, The Netherlands
TAPoseNet: Teeth Alignment based on Pose estimation via multi-scale Graph Convolutional Network Speaker: Qingxin Deng, Shenzhen University, China	MMFusion: Multi-modality Diffusion Model for Lymph Node Metastasis Diagnosis in Esophageal Cancer Speaker: Chengyu Wu, Shandong University, China
3D Spine Shape Estimation from Single 2D DXA Speaker: Emmanuelle Bourigault, University of Oxford, UK	Is this hard for you? Personalized human difficulty estimation for skin lesion diagnosis Speaker: Peter Johannes Tejlgaard Kampen, Technical University of Denmark, Denmark

ORAL AND SPOTLIGHT PRESENTATIONS

Oral Session 7: Health Equity: Low Resource Settings **Tuesday, October 8, 2024, 8:30 to 9:30** **Orion Tent (Main Hall)** **Session Chairs:** **Chen (Cherise) Chen, University of Sheffield, UK** **Prateek Prasanna, Stony Brook University, USA**	Oral Session 8: Image Registration **Tuesday, October 8, 2024, 8:30 to 9:30** **Crystal Room (Dual Track Hall)** **Session Chairs:** **Jelmer Wolterink, University of Twente, Netherlands** **Fatemeh Zabihollahy, University of Toronto, Canada**
TinyU-Net: Lighter yet Better U-Net with Cascaded Multi-Receptive Fields **Speaker: Junren Chen, Sichuan University, China** **UnWave-Net: Unrolled Wavelet Network for Compton Tomography Image Reconstruction** **Speaker: Ishak Ayad, ENSEA & CY Cergy Paris University, France** **Rethinking Histology Slide Digitization Workflows for Low-Resource Settings** **Speaker: Talat Zehra, Jinnah Sindh medical university, Pakistan** **SpeChrOmics: A Biomarker Characterization Framework for Medical Hyperspectral Imaging** **Speaker: Ajibola S. Oladokun, University of Cape Town, South Africa**	**Large-Scale 3D Infant Face Model** **Speaker: Till Schnabel, ETH Zürich, Switzerland** **NODER: Image Sequence Regression Based on Neural Ordinary Differential Equations** **Speaker: Yi Hong, Shanghai Jiao Tong University, China** **Aligning and Restoring Imperfect ssEM images for Continuity Reconstruction** **Speaker: Haiyang Yan, Institute of Automation, Chinese Academy of Sciences, China** **IM-MoCo: Self-supervised MRI Motion Correction using Motion-Guided Implicit Neural Representations** **Speaker: Ziad Al-Haj Hemidi, Universität zu Lübeck, Germany**

ORAL AND SPOTLIGHT PRESENTATIONS

Oral & Spotlight Session 9: Image Segmentation Tuesday, October 8, 2024, 13:30 to 15:00 Orion Tent (Main Hall) Session Chairs: Masahiro Oda, Nagoya University, Japan Chen Qin, Imperial College London, UK	Oral & Spotlight Session 10: Foundation Models and Multimodal Data for MICCAI Tuesday, October 8, 2024, 13:30 to 15:00 Crystal Room (Dual Track Hall) Session Chairs: Davood Karimi, Harvard University, USA Nadieh Khalili, Radboud UMC, Netherlands
<u>Oral Presentations:</u> DPMNet: Dual-Path MLP-based Network for Aneurysm Image Segmentation Speaker: Xue Zhao, China University of Petroleum (East China), China HRDecoder: High-Resolution Decoder Network for Fundus Image Lesion Segmentation Speaker: Ziyuan Ding, Central South University, China PEMMA: Parameter-Efficient Multi-Modal Adaptation for Medical Image Segmentation Speaker: Nada Saadi, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates CT-based brain ventricle segmentation via diffusion Schrödinger Bridge without target domain ground truths Speaker: Yiming Xiao, Concordia Univeristy, Canada IterMask2: Iterative Unsupervised Anomaly Segmentation via Spatial and Frequency Masking for Brain Lesions in MRI Speaker: Ziyun Liang, University of Oxford, UK	<u>Oral Presentations:</u> Whole Heart 3D+T Representation Learning Through Sparse 2D Cardiac MR Images Speaker: Yundi Zhang, AI in Medicine and Healthcare/Technical University of Munich, Germany ProstNFound: Integrating Foundation Models with Ultrasound Domain Knowledge and Clinical Context for Robust Prostate Cancer Detection Speaker: Paul Wilson, Queen's University, Canada DB-SAM: Delving into High Quality Universal Medical Image Segmentation Speaker: Chao Qin, Mohamed Bin Zayed University of Artificial Intelligence, United Arab Emirates Learning to Segment Multiple Organs from Multimodal Partially Labeled Datasets Speaker: Yefeng Zheng, Tencent, China M4oE: A Foundation Model for Medical Multimodal Image Segmentation with Mixture of Experts Speaker: Yiqing Shen, Johns Hopkins University, USA
<u>Spotlight Presentations:</u> FRCNet: Frequency and Region Consistency for Semi-supervised Medical Image Segmentation Speaker: Huazhu Fu, Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A*STAR), Singapore SegMamba: Long-range Sequential Modeling Mamba For 3D Medical Image Segmentation Speaker: Zhaohu Xing, The Hong Kong University of Science and Technology (Guangzhou), China Swin SMT: Global Sequential Modeling for Enhancing 3D Medical Image Segmentation Speaker: Maciej Chrabaszcz, Warsaw University of Technology, Poland	<u>Spotlight Presentations:</u> Black-Box Adaptation for Medical Image Segmentation Speaker: Jay N. Paranjape, Johns Hopkins University, USA DRIM: Learning Disentangled Representations from Incomplete Multimodal Healthcare Data Speaker: Lucas Robinet, Oncopole Claudius Regaud, France An approach to building foundation models for brain image analysis Speaker: Davood Karimi, Harvard Medical School, USA

ORAL AND SPOTLIGHT PRESENTATIONS

Oral Session 11: Transparency, Fairness and Uncertainty **Tuesday, October 8, 2024, 16:30 to 18:00** **Orion Tent (Main Hall)** **Session Chairs:** **Tanveer Syeda-Mahmood, IBM Research, USA** **Lequan Yu, University of Hong Kong, Hong Kong SAR**	Oral Session 12: Surgical Data Science **Tuesday, October 8, 2024, 16:30 to 18:00** **Crystal Room (Dual Track Hall)** **Session Chairs:** **Ruogu Fang, University of Florida, United States** **Mobarakol Islam, University College London, UK**
A Large-scale Multi Domain Leukemia Dataset for the White Blood Cells Detection with Morphological Attributes for Explainability **Speaker: Abdul Rehman, Information Technology University, Pakistan**	**PitVQA: Image-grounded Text Embedding LLM for Visual Question Answering in Pituitary Surgery** **Speaker: Runlong He, University College London, UK**
Follow the Radiologist: Clinically Relevant Multi-View Cues for Breast Cancer Detection from Mammograms **Speaker: Kshitiz Jain, Indian Institute of Technology Delhi, India**	**ORacle: Large Vision-Language Models for Knowledge-Guided Holistic OR Domain Modeling** **Speaker: Ege Özsoy, TUM, Germany**
Learning a Clinically-Relevant Concept Bottleneck for Lesion Detection in Breast Ultrasound **Speaker: Arianna Bunnell, University of Hawaii Cancer Center, USA**	**Deep intra-operative illumination calibration of hyperspectral cameras** **Speaker: Alexander Baumann, Siemens AG/German Cancer Research Center/Heidelberg University, Germany**
BiasPruner: Debiased Continual Learning for Medical Image Classification **Speaker: Nourhan Bayasi, University of British Columbia, Canada**	**SALI: Short-term Alignment and Long-term Interaction Network for Colonoscopy Video Polyp Segmentation** **Speaker: Qiang Hu, Huazhong University of Science and Technology, China**
Are We Ready for Out-of-Distribution Detection in Digital Pathology? **Speaker: Ji-Hun Oh, UIUC, USA**	**VideoCutMix: Temporal Segmentation of Surgical Videos in Scarce Data Scenarios** **Speaker: Rohan Raju Dhanakshirur, Indian Institute of Technology, Delhi, India**
Geometric Transformation Uncertainty for Improving 3D Fetal Brain Pose Prediction from Freehand 2D Ultrasound Videos **Speaker: Jayroop Ramesh, University of Oxford, UK**	**TeleOR: Real-time Telemedicine System for Full-Scene Operating Room** **Speaker: Yixuan Wu, Zhejiang University, China**

ORAL AND SPOTLIGHT PRESENTATIONS

Oral Session 13: Neuroimaging	Oral Session 14: Computational Pathology
Wednesday, October 9, 2024, 8:30 to 9:30 **Orion Tent (Main Hall)** **Session Chairs:** **Samuel Kadoury, Polytechnique Montréal, Canada** **Anees Kazi, Harvard Medical School, USA**	**Wednesday, October 9, 2024, 8:30 to 9:30** **Crystal Room (Dual Track Hall)** **Session Chairs:** **Anne Martel, Sunnybrook Research Institute, Canada** **Sang Hyun Park, Daegu Gyeongbuk Institute of Science and Technology, Korea**
Enhancing Spatiotemporal Disease Progression Models via Latent Diffusion and Prior Knowledge **Speaker: Lemuel Puglisi, University of Catania, Italy**	**WsiCaption: Multiple Instance Generation of Pathology Reports for Gigapixel Whole-Slide Images** **Speaker: Pingyi Chen, Westlake University, China**
Longitudinally Consistent Individualized Prediction of Infant Cortical Morphological Development **Speaker: Xinrui Yuan, University of North Carolina at Chapel Hill, USA**	**DSCENet: Dynamic Screening and Clinical-Enhanced Multimodal Fusion for MPNs Subtype Classification** **Speaker: Yuan Zhang, Southeast University, China**
BrainWaveNet: Wavelet-based Transformer for Autism Spectrum Disorder Diagnosis **Speaker: Ah-Yeong Jeong, Korea University, South Korea**	**Joint multi-task learning improves weakly-supervised biomarker prediction in computational pathology** **Speaker: Omar S. M. El Nahhas, EKFZ for Digital Health, Germany**
TractOracle: towards an anatomically-informed reward function for RL-based tractography **Speaker: Antoine Théberge, Université de Sherbrooke, Canada**	**Enhancing Gene Expression Prediction from Histology Images with Spatial Transcriptomics Completion** **Speaker: Gabriel Mejia and Daniela Ruiz, Center for Research and Formation in Artificial Intelligence (CinfonIA), Universidad de los Andes, Colombia**

ORAL AND SPOTLIGHT PRESENTATIONS

Oral & Spotlight Session 15: Computer Assisted Interventions Wednesday, October 9, 2024, 13:30 to 15:00 Orion Tent (Main Hall) Session Chairs: Tina Kapur, Brigham and Women's Hospital, USA Yoshito Otake, Nara Institute of Science and Technology, Japan	Oral & Spotlight Session 16: Clinical Translation: Neuro, Spine and Ultrasound Wednesday, October 9, 2024, 13:30 to 15:00 Crystal Room (Dual Track Hall) Session Chairs: Syed Zulqarnain Gilani, Edith Cowan University, Australia Archana Venkataraman, Johns Hopkins University, USA
Oral Presentations: Topological SLAM in colonoscopies leveraging deep features and topological priors Speaker: Javier Morlana, University of Zaragoza, Spain EndoSelf: Self-Supervised Monocular 3D Scene Reconstruction of Deformable Tissues with Neural Radiance Fields on Endoscopic Videos Speaker: Wenda Li, Nagoya University, Japan LighTDiff: Surgical Endoscopic Image Low-Light Enhancement with T-Diffusion Speaker: Tong Chen, The University of Sydney, Australia Keypoint Matching for Instrument-Free 3D Registration in Video-based Surgical Navigation Speaker: Tânia Baptista, Universidade de Coimbra, Portugal Transforming Surgical Interventions with Embodied Intelligence for Ultrasound Robotics Speaker: Huan Xu, CAIR, HKISI-CAS, Hong Kong SAR	Oral Presentations: RoCoSDF: Row-Column Scanned Neural Signed Distance Fields for Freehand 3D Ultrasound Imaging Shape Reconstruction Speaker: Hongbo Chen, ShanghaiTech University, China Hybrid-Structure-Oriented Transformer for Arm Musculoskeletal Ultrasound Segmentation Speaker: Lingyu Chen, Nanjing University of Aeronautics and Astronautics, China Quantitative Assessment of Thyroid Nodules through Ultrasound Imaging Analysis Speaker: Young-Min Kim, KAIST, South Korea SimBrainNet: Evaluating Brain Network Similarity for Attention Disorders Speaker: Debashis Das Chakladar, Luleå University of Technology, Sweden Knowledge-Guided Prompt Learning for Lifespan Brain MR Image Segmentation Speaker: Lin Teng, ShanghaiTech University, China
Spotlight Presentations: Vision-Based Neurosurgical Guidance: Unsupervised Localization and Camera-Pose Prediction Speaker: Gary Sarwin, ETH Zurich, Switzerland Two Projections Suffice for Cerebral Vascular Reconstruction Speaker: Alexandre Cafaro, Université Paris-Saclay, France DCrownFormer: Morphology-aware Point-to-Mesh Generation Transformer for Dental Crown Prosthesis from 3D Scan Data of Antagonist and Preparation Teeth Speaker: Su Yang, Seoul National University, South Korea	Spotlight Presentations: PRISM: A Promptable and Robust Interactive Segmentation Model with Visual Prompts Speaker: Hao Li, Vanderbilt University, USA A Patient-Specific Framework for Autonomous Spinal Fixation via a Steerable Drilling Robot Speaker: Susheela Sharma, The University of Texas at Austin, USA Automated Spinal MRI Labelling from Reports Using a Large Language Model Speaker: Robin Y. Park, University of Oxford, UK

POSTER PRESENTATIONS

POSTER PRESENTATIONS

Poster Session 1: Image Segmentation 1, Health Equity, and Surgical Scene Understanding
Monday, October 7, 2024, 10:30 to 11:30

M-AM-001 **7T MRI Synthesization from 3T Acquisitions**
Qiming Cui, Duygu Tosun, Pratik Mukherjee, Reza Abbasi-Asl

M-AM-003 **A Curvature-Guided Coarse-to-Fine Framework for Enhanced Whole Brain Segmentation**
Fenqiang Zhao, Yuxing Tang, Le Lu, Ling Zhang

M-AM-005 **A Hyperreflective Foci Segmentation Network for OCT Images with Multi-dimensional Semantic Enhancement**
Xingguo Wang, Yuhui Ma, Xinyu Guo, Yalin Zheng, Jiong Zhang, Yonghuai Liu, Yitian Zhao

M-AM-007 **A New Benchmark In Vivo Paired Dataset for Laparoscopic Image De-smoking**
Wenyao Xia, Victoria Fan, Terry Peters, Elvis C. S. Chen

M-AM-009 **A New Dataset and Baseline Model for Rectal Cancer Risk Assessment in Endoscopic Ultrasound Videos**
Jiansong Zhang, Shengnan Wu, Peizhong Liu, Linlin Shen

M-AM-011 **A New Perspective to Boost Performance Fairness For Medical Federated Learning**
Yunlu Yan, Lei Zhu, Yuexiang Li, Xinxing Xu, Rick Siow Mong Goh, Yong Liu, Salman Khan, Chun-Mei Feng

M-AM-013 **A Novel Adaptive Hypergraph Neural Network for Enhancing Medical Image Segmentation**
Shurong Chai, Rahul K. JAIN, Shaocong Mo, Jiaqing Liu, Yulin Yang, Yinhao Li, Tomoko Tateyama, Lanfen Lin, Yen-Wei Chen

M-AM-015 **A Universal and Flexible Framework for Unsupervised Statistical Shape Model Learning**
Nafie El Amrani, Dongliang Cao, Florian Bernard

M-AM-017 **Achieving Fairness Through Channel Pruning for Dermatological Disease Diagnosis**
Qingpeng Kong, Ching-Hao Chiu, Dewen Zeng, Yu-Jen Chen, Tsung-Yi Ho, Jingtong Hu, Yiyu Shi

M-AM-019 **Adaptive Smooth Activation Function for Improved Organ Segmentation and Disease Diagnosis**
Koushik Biswas, Debesh Jha, Nikhil Kumar Tomar, Meghana Karri, Amit Reza, Gorkem Durak, Alpay Medetalibeyoglu, Matthew Antalek, Yury Velichko, Daniela Ladner, Amir Borhani, Ulas Bagci

M-AM-021 **Advancing Sensorless Freehand 3D Ultrasound Reconstruction with a Novel Coupling Pad**
Ling Dai, Kaitao Zhao, Zhongyu Li, Jihua Zhu, Libin Liang

POSTER PRESENTATIONS

M-AM-023 **Airway segmentation based on topological structure enhancement using multi-task learning**
Xuan Yang, Lingyu Chen, Yuchao Zheng, Longfei Ma, Fang Chen, Guochen Ning, Hongen Liao

M-AM-025 **Algebraic Sphere Surface Fitting for Accurate and Efficient Mesh Reconstruction from Cine CMR Images**
Jin He, Weizhou Liu, Shifeng Zhao, Yun Tian, Shuo Wang

M-AM-027 **Algorithmic Fairness in Lesion Classification by Mitigating Class Imbalance and Skin Tone Bias**
Faizanuddin Ansari, Tapabrata Chakraborti, Swagatam Das

M-AM-029 **AMONuSeg: A Histological Dataset for African Multi-Organ Nuclei Semantic Segmentation**
Hasnae Zerouaoui, Gbenga Peter Oderinde, Rida Lefdali, Karima Echihabi, Stephen Peter Akpulu, Nosereme Abel Agbon, Abraham Sunday Musa, Yousef Yeganeh, Azade Farshad, Nassir Navab

M-AM-031 **An Empirical Study on the Fairness of Foundation Models for Multi-Organ Image Segmentation**
Qing Li, Yizhe Zhang, Yan Li, Jun Lyu, Meng Liu, Longyu Sun, Mengting Sun, Qirong Li, Wenyue Mao, Xinran Wu, Yajing Zhang, Yinghua Chu, Shuo Wang, Chengyan Wang

M-AM-033 **Analyzing Adjacent B-Scans to Localize Sickle Cell Retinopathy In OCTs**
Ashuta Bhattarai, Jing Jin, Chandra Kambhamettu

M-AM-035 **Analyzing Cross-Population Domain Shift in Chest X-Ray Image Classification and Mitigating the Gap with Deep Supervised Domain Adaptation**
Aminu Musa, Mariya Ibrahim Adamu, Habeebah Adamu Kakudi, Monica Hernandez, Yusuf Lawal

M-AM-037 **Anatomy-guided Pathology Segmentation**
Alexander Jaus, Constantin Seibold, Simon Reiß, Lukas Heine, Anton Schily, Moon Kim, Fin Hendrik Bahnsen, Ken Herrmann, Rainer Stiefelhagen, Jens Kleesiek

M-AM-039 **Automated Robust Muscle Segmentation in Multi-level Contexts using a Probabilistic Inference Framework**
Jinge Wang, Guilin Chen, Xuefeng Wang, Nan Wu, Terry Jianguo Zhang

M-AM-041 **Automatic Mandibular Semantic Segmentation of Teeth Pulp Cavity and Root Canals, and Inferior Alveolar Nerve on Pulpy3D Dataset**
Mahmoud Gamal, Marwa Baraka, Marwan Torki

M-AM-043 **BGDiffSeg: a Fast Diffusion Model for Skin Lesion Segmentation via Boundary Enhancement and Global Recognition Guidance**
Yilin Guo, Qingling Cai

POSTER PRESENTATIONS

M-AM-045 **BGF-YOLO: Enhanced YOLOv8 with Multiscale Attentional Feature Fusion for Brain Tumor Detection**
Ming Kang, Chee-Ming Ting, Fung Fung Ting, Raphaël C.-W. Phan

M-AM-047 **Boosting FFPE-to-HE Virtual Staining with Cell Semantics from Pretrained Segmentation Model**
Yihuang Hu, Qiong Peng, Zhicheng Du, Guojun Zhang, Huisi Wu, Jingxin Liu, Hao Chen, Liansheng Wang

M-AM-049 **Cache-Driven Spatial Test-Time Adaptation for Cross-Modality Medical Image Segmentation**
Xiang Li, Huihui Fang, Changmiao Wang, Mingsi Liu, Lixin Duan, Yanwu Xu

M-AM-051 **Causal Intervention for Brain tumor Segmentation**
Hengxin Liu, Qiang Li, Weizhi Nie, Zibo Xu, Anan Liu

M-AM-053 **Causality-Informed Fusion Network for Automated Assessment of Parkinsonian Body Bradykinesia**
Yuyang Quan, Chencheng Zhang, Rui Guo, Xiaohua Qian

M-AM-055 **Centerline-Diameters Data Structure for Interactive Segmentation of Tube-shaped Objects**
Ilyas Sirazitdinov, Dmitry V. Dylov

M-AM-057 **Class-aware Mutual Mixup with Triple Alignments for Semi-Supervised Cross-domain Segmentation**
Zhuotong Cai, Jingmin Xin, Tianyi Zeng, Siyuan Dong, Nanning Zheng, James S. Duncan

M-AM-059 **Common Vision-Language Attention for Text-Guided Medical Image Segmentation of Pneumonia**
Yunpeng Guo, Xinyi Zeng, Pinxian Zeng, Yuchen Fei, Lu Wen, Jiliu Zhou, Yan Wang

M-AM-061 **Conditional diffusion model with spatial attention and latent embedding for medical image segmentation**
Behzad Hejrati, Soumyanil Banerjee, Carri Glide-Hurst, Ming Dong

M-AM-063 **Contrast Representation Learning from Imaging Parameters for Magnetic Resonance Image Synthesis**
Honglin Xiong, Yu Fang, Kaicong Sun, Yulin Wang, Xiaopeng Zong, Weijun Zhang, Qian Wang

M-AM-065 **Controllable Counterfactual Generation for Interpretable Medical Image Classification**
Shiyu Liu, Fan Wang, Zehua Ren, Chunfeng Lian, Jianhua Ma

M-AM-067 **Convex Segments for Convex Objects using DNN Boundary Tracing and Graduated Optimization**
Jimut B. Pal, Suyash P. Awate

M-AM-069 **Cross-graph Interaction and Diffusion Probability Models for Lung Nodule Segmentation**
Huaqiang Su, Haijun Lei, Chen Guoliang, Baiying Lei

POSTER PRESENTATIONS

M-AM-071 **CS3: Cascade SAM for Sperm Segmentation**
Yi Shi, Xu-Peng Tian, Yun-Kai Wang, Tie-Yi Zhang, Bing Yao, Hui Wang, Yong Shao, Cen-Cen Wang, Rong Zeng, De-Chuan Zhan

M-AM-073 **CUTS: A Deep Learning and Topological Framework for Multigranular Unsupervised Medical Image Segmentation**
Chen Liu, Matthew Amodio, Liangbo L. Shen, Feng Gao, Arman Avesta, Sanjay Aneja, Jay C. Wang, Lucian V. Del Priore, Smita Krishnaswamy

M-AM-075 **Cycle-consistent Learning for Fetal Cortical Surface Reconstruction**
Xiuyu Dong, Zhengwang Wu, Laifa Ma, Ya Wang, Kaibo Tang, He Zhang, Weili Lin, Gang Li

M-AM-077 **Data-Algorithm-Architecture Co-Optimization for Fair Neural Networks on Skin Lesion Dataset**
Yi Sheng, Junhuan Yang, Jinyang Li, James Alaina, Xiaowei Xu, Yiyu Shi, Jingtong Hu, Weiwen Jiang, Lei Yang

M-AM-079 **Debiased Noise Editing for Fair Medical Image Classification**
Ruinan Jin, Wenlong Deng, Minghui Chen, Xiaoxiao Li

M-AM-081 **Decoupled Training for Semi-supervised Medical Image Segmentation with Worst-Case-Aware Learning**
Ankit Das, Chandan Gautam, Hisham Cholakkal, Pritee Agrawal, Feng Yang, Ramasamy Savitha, Yong Liu

M-AM-083 **DeepRepViz: Identifying potential confounders in deep learning model predictions**
Roshan Prakash Rane, JiHoon Kim, Arjun Umesha, Didem Stark, Marc-André Schulz, Kerstin Ritter

M-AM-085 **DiffDGSS: Generalizable Retinal Image Segmentation with Deterministic Representation from Diffusion Models**
Yingpeng Xie, Junlong Qu, Hai Xie, Tianfu Wang, Baiying Lei

M-AM-087 **Differentiable Soft Morphological Filters for Medical Image Segmentation**
Lisa Guzzi, Maria A. Zuluaga, Fabien Lareyre, Gilles Di Lorenzo, Sébastien Goffart, Andrea Chierici, Juliette Raffort, Hervé Delingette

M-AM-089 **DiffRect: Latent Diffusion Label Rectification for Semi-supervised Medical Image Segmentation**
Xinyu Liu, Wuyang Li, Yixuan Yuan

M-AM-091 **Diffusion-Enhanced Transformation Consistency Learning for Retinal Image Segmentation**
Xiang Li, Huihui Fang, Mingsi Liu, Yanwu Xu, Lixin Duan

POSTER PRESENTATIONS

M-AM-093 **Diff-VPS: Video Polyp Segmentation via a Multi-task Diffusion Network with Adversarial Temporal Reasoning**
Yingling Lu, Yijun Yang, Zhaohu Xing, Qiong Wang, Lei Zhu

M-AM-095 **Diversified and Structure-realistic Fundus Image Synthesis for Diabetic Retinopathy Lesion Segmentation**
Xiaoyi Feng, Minqing Zhang, Mengxian He, Mengdi Gao, Hao Wei, Wu Yuan

M-AM-097 **DomainAdapt: Leveraging Multitask Learning and Domain Insights for Children's Nutritional Status Assessment**
Misaal Khan, Richa Singh, Mayank Vatsa, Kuldeep Singh

M-AM-099 **DTCA: Dual-Branch Transformer with Cross-Attention for EEG and Eye Movement Data Fusion**
Xiaoshan Zhang, Enze Shi, Sigang Yu, Shu Zhang

M-AM-101 **Dynamic Position Transformation and Boundary Refinement Network for Left Atrial Segmentation**
Fangqiang Xu, Wenxuan Tu, Fan Feng, Malitha Gunawardhana, Jiayuan Yang, Yun Gu, Jichao Zhao

M-AM-103 **Efficient Cortical Surface Parcellation via Full-Band Diffusion Learning at Individual Space**
Yuanzhuo Zhu, Chunfeng Lian, Xianjun Li, Fan Wang, Jianhua Ma

M-AM-105 **Efficient In-Context Medical Segmentation with Meta-driven Visual Prompt Selection**
Chenwei Wu, David Restrepo, Zitao Shuai, Zhongming Liu, Liyue Shen

M-AM-107 **EgoSurgery-Phase: A Dataset of Surgical Phase Recognition from Egocentric Open Surgery Videos**
Ryo Fujii, Masashi Hatano, Hideo Saito, Hiroki Kajita

M-AM-109 **Embracing Massive Medical Data**
Yu-Cheng Chou, Zongwei Zhou, Alan Yuille

M-AM-111 **EMF-former: An Efficient and Memory-Friendly Transformer for Medical Image Segmentation**
Zhaoquan Hao, Hongyan Quan, Yinbin Lu

M-AM-113 **EM-Net: Efficient Channel and Frequency Learning with Mamba for 3D Medical Image Segmentation**
Ao Chang, Jiajun Zeng, Ruobing Huang, Dong Ni

M-AM-115 **Enabling Text-free Inference in Language-guided Segmentation of Chest X-rays via Self-guidance**
Shuchang Ye, Mingyuan Meng, Mingjian Li, Dagan Feng, Jinman Kim

POSTER PRESENTATIONS

M-AM-117 **Enhancing Federated Learning Performance Fairness via Collaboration Graph-based Reinforcement Learning**
Yuexuan Xia, Benteng Ma, Qi Dou, Yong Xia

M-AM-119 **Enhancing Label-efficient Medical Image Segmentation with Text-guided Diffusion Models**
Chun-Mei Feng

M-AM-121 **Ensembled Cold-Diffusion Restorations for Unsupervised Anomaly Detection**
Sergio Naval Marimont, Vasilis Siomos, Matthew Baugh, Christos Tzelepis, Bernhard Kainz, Giacomo Tarroni

M-AM-123 **Evaluating the Fairness of Neural Collapse in Medical Image Classification**
Kaouther Mouheb, Marawan Elbatel, Stefan Klein, Esther E. Bron

M-AM-125 **Exploring Spatio-Temporal Interpretable Dynamic Brain Function with Transformer for Brain Disorder Diagnosis**
Lanting Li, Liuzeng Zhang, Peng Cao, Jinzhu Yang, Fei Wang, Osmar R. Zaiane

M-AM-127 **Fair and Accurate Skin Disease Image Classification by Alignment with Clinical Labels**
Aayushman, Hemanth Gaddey, Vidhi Mittal, Manisha Chawla, Gagan Raj Gupta

M-AM-129 **FairQuantize: Achieving Fairness Through Weight Quantization for Dermatological Disease Diagnosis**
Yuanbo Guo, Zhenge Jia, Jingtong Hu, Yiyu Shi

M-AM-131 **FedIA: Federated Medical Image Segmentation with Heterogeneous Annotation Completeness**
Yangyang Xiang, Nannan Wu, Li Yu, Xin Yang, Kwang-Ting Cheng, Zengqiang Yan

M-AM-133 **FedMRL: Data Heterogeneity Aware Federated Multi-agent Deep Reinforcement Learning for Medical Imaging**
Pranab Sahoo, Ashutosh Tripathi, Sriparna Saha, Samrat Mondal

M-AM-135 **Few-Shot 3D Volumetric Segmentation with Multi-Surrogate Fusion**
Meng Zheng, Benjamin Planche, Zhongpai Gao, Terrence Chen, Richard J. Radke, Ziyan Wu

M-AM-137 **FM-ABS: Promptable Foundation Model Drives Active Barely Supervised Learning for 3D Medical Image Segmentation**
Zhe Xu, Cheng Chen, Donghuan Lu, Jinghan Sun, Dong Wei, Yefeng Zheng, Quanzheng Li, Raymond Kai-yu Tong

M-AM-139 **From Pixel to Cancer: Cellular Automata in Computed Tomography**
Yuxiang Lai, Xiaoxi Chen, Angtian Wang, Alan Yuille, Zongwei Zhou

POSTER PRESENTATIONS

M-AM-141 **FUNAvg: Federated Uncertainty Weighted Averaging for Datasets with Diverse Labels**
Malte Tolle, Fernando Navarro, Sebastian Eble, Ivo Wolf, Bjoern Menze, Sandy Engelhardt

M-AM-143 **GEM: Context-Aware Gaze EstiMation with Visual Search Behavior Matching for Chest Radiograph**
Shaonan Liu, Wenting Chen, Jie Liu, Xiaoling Luo, Linlin Shen

M-AM-145 **H2ASeg: Hierarchical Adaptive Interaction and Weighting Network for Tumor Segmentation in PET/CT Images**
Jinpeng Lu, Jingyun Chen, Linghan Cai, Songhan Jiang, Yongbing Zhang

M-AM-147 **Hemodynamic-Driven Multi-Prototypes Learning for One-Shot Segmentation in Breast Cancer DCE-MRI**
Xiang Pan, Shiyun Nie, Tianxu Lv, Lihua Li

M-AM-149 **HistoSyn: Histomorphology-Focused Pathology Image Synthesis**
Chong Yin, Siqi Liu, Vincent Wai-Sun Wong, Pong C. Yuen

M-AM-151 **HySparK: Hybrid Sparse Masking for Large Scale Medical Image Pre-Training**
Fenghe Tang, Ronghao Xu, Qingsong Yao, Xueming Fu, Quan Quan, Heqin Zhu, Zaiyi Liu, S. Kevin Zhou

M-AM-153 **Implicit Representation Embraces Challenging Attributes of Pulmonary Airway Tree Structures**
Minghui Zhang, Hanxiao Zhang, Xin You, Guang-Zhong Yang, Yun Gu

M-AM-155 **InstaSAM: Instance-aware Segment Any Nuclei Model with Point Annotations**
Siwoo Nam, Hyun Namgung, Jaehoon Jeong, Miguel Luna, Soopil Kim, Philip Chikontwe, Sang Hyun Park

M-AM-157 **Intraoperative Registration by Cross-Modal Inverse Neural Rendering**
Maximilian Fehrentz, Mohammad Farid Azampour, Reuben Dorent, Hassan Rasheed, Colin Galvin, Alexandra Golby, William M. Wells, Sarah Frisken, Nassir Navab, Nazim Haouchine

M-AM-159 **k-t Self-Consistency Diffusion: A Physics-Informed Model for Dynamic MR Imaging**
Ye Liu, Zhuo-Xu Cui, Kaicong Sun, Ting Zhao, Jing Cheng, Yuliang Zhu, Dinggang Shen, Dong Liang

M-AM-161 **Learning Representations by Maximizing Mutual Information Across Views for Medical Image Segmentation**
Weihao Weng, Xin Zhu

M-AM-163 **Letting Osteocytes Teach SR-microCT Bone Lacunae Segmentation: A Feature Variation Distillation Method via Diffusion Denoising**
Isabella Poles, Marco D. Santambrogio, Eleonora D'Arnese

POSTER PRESENTATIONS

M-AM-165 **Leveraging the Mahalanobis Distance to enhance Unsupervised Brain MRI Anomaly Detection**
Finn Behrendt, Debayan Bhattacharya, Robin Mieling, Lennart Maack, Julia Krüger, Roland Opfer, Alexander Schlaefer

M-AM-167 **LGS: A Light-weight 4D Gaussian Splatting for Efficient Surgical Scene Reconstruction**
Hengyu Liu, Yifan Liu, Chenxin Li, Wuyang Li, Yixuan Yuan

M-AM-169 **Lost in Tracking: Uncertainty-guided Cardiac Cine MRI Segmentation at Right Ventricle Base**
Yidong Zhao, Yi Zhang, Orlando Simonetti, Yuchi Han, Qian Tao

M-AM-171 **Low-Rank Continual Pyramid Vision Transformer: Incrementally Segment Whole-Body Organs in CT with Light-Weighted Adaptation**
Vince Zhu, Zhanghexuan Ji, Dazhou Guo, Puyang Wang, Yingda Xia, Le Lu, Xianghua Ye, Wei Zhu, Dakai Jin

M-AM-173 **Low-Rank Mixture-of-Experts for Continual Medical Image Segmentation**
Qian Chen, Lei Zhu, Hangzhou He, Xinliang Zhang, Shuang Zeng, Qiushi Ren, Yanye Lu

M-AM-175 **MCAD: Multi-modal Conditioned Adversarial Diffusion Model for High-Quality PET Image Reconstruction**
Jiaqi Cui, Xinyi Zeng, Pinxian Zeng, Bo Liu, Xi Wu, Jiliu Zhou, Yan Wang

M-AM-177 **MedContext: Learning Contextual Cues for Efficient Volumetric Medical Segmentation**
Hanan Gani, Muzammal Naseer, Fahad Khan, Salman Khan

M-AM-179 **MedMLP: An Efficient MLP-like Network for Zero-shot Retinal Image Classification**
Menghan Zhou, Yanyu Xu, Zhi Da Soh, Huazhu Fu, Rick Siow Mong Goh, Ching-Yu Cheng, Yong Liu, Liangli Zhen

M-AM-181 **MemWarp: Discontinuity-Preserving Cardiac Registration with Memorized Anatomical Filters**
Hang Zhang, Xiang Chen, Renjiu Hu, Dongdong Liu, Gaolei Li, Rongguang Wang

M-AM-183 **MetaStain: Stain-generalizable Meta-learning for Cell Segmentation and Classification with Limited Exemplars**
Aishik Konwer, Prateek Prasanna

M-AM-185 **MetaUNETR: Rethinking Token Mixer Encoding for Efficient Multi-Organ Segmentation**
Pengju Lyu, Jie Zhang, Lei Zhang, Wenjian Liu, Cheng Wang, Jianjun Zhu

M-AM-187 **Mining Gold from the Sand: Weakly Supervised Histological Tissue Segmentation with Activation Relocalization and Mutual Learning**
Siyang Feng, Jiale Chen, Zhenbing Liu, Wentao Liu, Zimin Wang, Rushi Lan, Xipeng Pan

POSTER PRESENTATIONS

M-AM-189 **Mitigating attribute amplification in counterfactual image generation**
Tian Xia, Mélanie Roschewitz, Fabio De Sousa Ribeiro, Charles Jones, Ben Glocker

M-AM-191 **ModelMix: A New Model-Mixup Strategy to Minimize Vicinal Risk across Tasks for Few-scribble based Cardiac Segmentation**
Ke Zhang, Vishal M. Patel

M-AM-193 **MoreStyle: Relax Low-frequency Constraint of Fourier-based Image Reconstruction in Generalizable Medical Image Segmentation**
Haoyu Zhao, Wenhui Dong, Rui Yu, Zhou Zhao, Bo Du, Yongchao Xu

M-AM-195 **MOST: Multi-Formation Soft Masking for Semi-Supervised Medical Image Segmentation**
Xinyu Liu, Zhen Chen, Yixuan Yuan

M-AM-197 **Multi-category Graph Reasoning for Multi-modal Brain Tumor Segmentation**
Dongzhe Li, Baoyao Yang, Weide Zhan, Xiaochen He

M-AM-199 **Multilevel Causality Learning for Multi-label Gastric Atrophy Diagnosis**
Xiaoxiao Cui, Shanzhi Jiang, Baolin Sun, Yiran Li, Yankun Cao, Zhen Li, Chaoyang Lv, Zhi Liu, Lizhen Cui, Shuo Li

M-AM-201 **Multi-modality 3D CNN Transformer for Assisting Clinical Decision in Intracerebral Hemorrhage**
Zicheng Xiong, Kai Zhao, Like Ji, Xujun Shu, Dazhi Long, Shengbo Chen, Fuxing Yang

M-AM-203 **Multi-stage Multi-granularity Focus-tuned Learning Paradigm for Medical HSI Segmentation**
Haichuan Dong, Runjie Zhou, Boxiang Yun, Huihui Zhou, Benyan Zhang, Qingli Li, Yan Wang

M-AM-205 **Neural Cellular Automata for Lightweight, Robust and Explainable Classification of White Blood Cell Images**
Michael Deutges, Ario Sadafi, Nassir Navab, Carsten Marr

M-AM-207 **nnU-Net Revisited: A Call for Rigorous Validation in 3D Medical Image Segmentation**
Fabian Isensee, Tassilo Wald, Constantin Ulrich, Michael Baumgartner, Saikat Roy, Klaus Maier-Hein, Paul Jäger

M-AM-209 **Ocular Stethoscope: Auditory Support for Retinal Membrane Peeling**
Sasan Matinfar, Shervin Dehghani, Michael Sommersperger, Koorosh Faridpooya, Merle Fairhurst, Nassir Navab

M-AM-211 **On Instabilities of Unsupervised Denoising Diffusion Models in Magnetic Resonance Imaging Reconstruction**
Tianyu Han, Sven Nebelung, Firas Khader, Jakob Nikolas Kather, Daniel Truhn

POSTER PRESENTATIONS

M-AM-213 **Overlay Mantle-Free for Semi-Supervised Medical Image Segmentation**
Jiacheng Liu, Wenhua Qian, Jinde Cao, Peng Liu

M-AM-215 **Pair Shuffle Consistency for Semi-supervised Medical Image Segmentation**
Jianjun He, Chenyu Cai, Qiong Li, Andy J Ma

M-AM-217 **Patch-Slide Discriminative Joint Learning for Weakly-Supervised Whole Slide Image Representation and Classification**
Jiahui Yu, Xuna Wang, Tianyu Ma, Xiaoxiao Li, Yingke Xu

M-AM-219 **Perspective+ Unet: Enhancing Segmentation with Bi-Path Fusion and Efficient Non-Local Attention for Superior Receptive Fields**
Jintong Hu, Siyan Chen, Zhiyi Pan, Sen Zeng, Wenming Yang

M-AM-221 **Polyp-Mamba: Polyp Segmentation with Visual Mamba**
Zhongxing Xu, Feilong Tang, Zhe Chen, Zheng Zhou, Weishan Wu, Yuyao Yang, Yu Liang, Jiyu Jiang, Xuyue Cai, Jionglong Su

M-AM-223 **Progressive Growing of Patch Size: Resource-Efficient Curriculum Learning for Dense Prediction Tasks**
Stefan M. Fischer, Lina Felsner, Richard Osuala, Johannes Kiechle, Daniel M. Lang, Jan C. Peeken, Julia A. Schnabel

M-AM-225 **Progressively Correcting Soft Labels via Teacher Team for Knowledge Distillation in Medical Image Segmentation**
Yaqi Wang, Peng Cao, Qingshan Hou, Linqi Lan, Jinzhu Yang, Xiaoli Liu, Osmar R. Zaiane

M-AM-227 **QueryNet: A Unified Framework for Accurate Polyp Segmentation and Detection**
Jiaxing Chai, Zhiming Luo, Jianzhe Gao, Licun Dai, Yingxin Lai, Shaozi Li

M-AM-229 **Quest for Clone: Test-time Domain Adaptation for Medical Image Segmentation by Searching the Closest Clone in Latent Space**
Hritam Basak, Zhaozheng Yin

M-AM-231 **Region Attention Transformer for Medical Image Restoration**
Zhiwen Yang, Haowei Chen, Ziniu Qian, Yang Zhou, Hui Zhang, Dan Zhao, Bingzheng Wei, Yan Xu

M-AM-233 **Rethinking Cell Counting Methods: Decoupling Counting and Localization**
Zixuan Zheng, Yilei Shi, Chunlei Li, Jingliang Hu, Xiao Xiang Zhu, Lichao Mou

M-AM-235 **SAM Guided Task-Specific Enhanced Nuclei Segmentation in Digital Pathology**
Bishal R. Swain, Kyung J. Cheoi, Jaepil Ko

POSTER PRESENTATIONS

M-AM-237 **SANGRE: a Shallow Attention Network Guided by Resolution Expansion for MR Image Segmentation**
Ying He, Marc E. Miquel, Qianni Zhang

M-AM-239 **SegMamba: Long-range Sequential Modeling Mamba For 3D Medical Image Segmentation**
Zhaohu Xing, Tian Ye, Yijun Yang, Guang Liu, Lei Zhu

M-AM-241 **Self-supervised 3D Skeleton Completion for Vascular Structures**
Jiaxiang Ren, Zhenghong Li, Wensheng Cheng, Zhilin Zou, Kicheon Park, Yingtian Pan, Haibin Ling

M-AM-243 **ShapeMamba-EM: Fine-Tuning Foundation Model with Local Shape Descriptors and Mamba Blocks for 3D EM Image Segmentation**
Ruohua Shi, Qiufan Pang, Lei Ma, Lingyu Duan, Tiejun Huang, Tingting Jiang

M-AM-245 **SimTxtSeg: Weakly-Supervised Medical Image Segmentation with Simple Text Cues**
Yuxin Xie, Tao Zhou, Yi Zhou, Geng Chen

M-AM-247 **SiNGR: Brain Tumor Segmentation via Signed Normalized Geodesic Transform Regression**
Trung Dang, Huy Hoang Nguyen, Aleksei Tiulpin

M-AM-249 **SkinCON: Towards consensus for the uncertainty of skin cancer sub-typing through distribution regularized adaptive predictive sets (DRAPS)**
Zhihang Ren, Yunqi Li, Xinyu Li, Xinrong Xie, Erik P. Duhaime, Kathy Fang, Tapabrata Chakraborty, Yunhui Guo, Stella X. Yu, David Whitney

M-AM-251 **Spatial Diffusion for Cell Layout Generation**
Chen Li, Xiaoling Hu, Shahira Abousamra, Meilong Xu, Chao Chen

M-AM-253 **Stable Diffusion Segmentation for Biomedical Images with Single-step Reverse Process**
Tianyu Lin, Zhiguang Chen, Zhonghao Yan, Weijiang Yu, Fudan Zheng

M-AM-255 **StereoDiffusion: Temporally Consistent Stereo Depth Estimation with Diffusion Models**
Haozheng Xu, Chi Xu, Stamatia Giannarou

M-AM-257 **Super-Field MRI Synthesis for Infant Brains Enhanced by Dual Channel Latent Diffusion**
Austin Tapp, Can Zhao, Holger R. Roth, Jeffrey Tanedo, Syed Muhammad Anwar, Niall J. Bourke, Joseph Hajnal, Victoria Nankabirwa, Sean Deoni, Natasha Lepore, Marius George Linguraru

M-AM-259 **Tail-Enhanced Representation Learning for Surgical Triplet Recognition**
Shuangchun Gui, Zhenkun Wang

POSTER PRESENTATIONS

M-AM-261 **The Centerline-Cross Entropy Loss for Vessel-Like Structure Segmentation: Better Topology Consistency Without Sacrificing Accuracy**
Cesar Acebes, Abdel Hakim Moustafa, Oscar Camara, Adrian Galdran

M-AM-263 **The MRI Scanner as a Diagnostic: Image-less Active Sampling**
Yuning Du, Rohan Dharmakumar, Sotirios A. Tsaftaris

M-AM-265 **Towards Precise Pose Estimation in Robotic Surgery: Introducing Occlusion-Aware Loss**
Jihun Park, Jiuk Hong, Jihun Yoon, Bokyung Park, Min-Kook Choi, Heechul Jung

M-AM-267 **TSBP: Improving Object Detection in Histology Images via Test-time Self-guided Bounding-box Propagation**
Tingting Yang, Liang Xiao, Yizhe Zhang

M-AM-269 **Universal Topology Refinement for Medical Image Segmentation with Polynomial Feature Synthesis**
Liu Li, Hanchun Wang, Matthew Baugh, Qiang Ma, Weitong Zhang, Cheng Ouyang, Daniel Rueckert, Bernhard Kainz

M-AM-271 **Unsupervised Training of Neural Cellular Automata on Edge Devices**
John Kalkhof, Amin Ranem, Anirban Mukhopadhyay

M-AM-273 **Variational Field Constraint Learning for Degree of Coronary Artery Ischemia Assessment**
Qi Zhang, Xiujian Liu, Heye Zhang, Chenchu Xu, Guang Yang, Yixuan Yuan, Tao Tan, Zhifan Gao

M-AM-275 **Visual-Textual Matching Attention for Lesion Segmentation in Chest Images**
Phuoc-Nguyen Bui, Duc-Tai Le, Hyunseung Choo

M-AM-277 **VolumeNeRF: CT Volume Reconstruction from a Single Projection View**
Jiachen Liu, Xiangzhi Bai

M-AM-279 **Weakly Supervised Tooth Instance Segmentation on 3D Dental Models with Multi-Label Learning**
Haoyu Wang, Kehan Li, Jihua Zhu, Fan Wang, Chunfeng Lian, Jianhua Ma

M-AM-281 **Weak-supervised Attention Fusion Network for Carotid Artery Vessel Wall Segmentation**
Haijun Lei, Guanjiie Tong, Huaqiang Su, Baiying Lei

M-AM-283 **When 3D Partial Points Meets SAM: Tooth Point Cloud Segmentation with Sparse Labels**
Yifan Liu, Wuyang Li, Cheng Wang, Hui Chen, Yixuan Yuan

POSTER PRESENTATIONS

Poster Session 2: Machine Learning: Learning Strategies and Clinical applications: Neuroimaging and Ultrasound

Monday, October 7, 2024, 15:00 to 16:30

M-PM-002 **3D Vessel Graph Generation Using Denoising Diffusion**
Chinmay Prabhakar, Suprosanna Shit, Fabio Musio, Kaiyuan Yang, Tamaz Amiranashvili, Johannes C. Paetzold, Hongwei Bran Li, Bjoern Menze

M-PM-004 **A Clinical-oriented Lightweight Network for High-resolution Medical Image Enhancement**
Yaqi Wang, Leqi Chen, Qingshan Hou, Peng Cao, Jinzhu Yang, Xiaoli Liu, Osmar R. Zaiane

M-PM-006 **A Hybrid CNN-Transformer Feature Pyramid Network for Granular Abdominal Aortic Calcification Detection from DXA Images**
Zaid Ilyas, Afsah Saleem, David Suter, John T. Schousboe, William D. Leslie, Joshua R. Lewis, Syed Zulqarnain Gilani

M-PM-008 **A Wasserstein Recipe for Replicable Machine Learning on Functional Neuroimages**
Jiaqi Ding, Tingting Dan, Ziquan Wei, Paul Laurienti, Guorong Wu

M-PM-010 **Across-subject ensemble-learning alleviates the need for large samples for fMRI decoding**
Himanshu Aggarwal, Liza Al-Shikhley, Bertrand Thirion

M-PM-012 **Active Label Refinement for Robust Training of Imbalanced Medical Image Classification Tasks in the Presence of High Label Noise**
Bidur Khanal, Tianhong Dai, Binod Bhattarai, Cristian Linte

M-PM-014 **Adaptive Subtype and Stage Inference for Alzheimer's Disease**
Xinkai Wang, Yonggang Shi

M-PM-016 **Affinity Learning Based Brain Function Representation for Disease Diagnosis**
Mengjun Liu, Zhiyun Song, Dongdong Chen, Xin Wang, Zixu Zhuang, Manman Fei, Lichi Zhang, Qian Wang

M-PM-018 **An MR-Compatible Virtual Reality System for Assessing Neuronal Plasticity of Sensorimotor Neurons and Mirror Neurons**
Xiaocheng Wang, D. B. Mekbib, Tian Zhou, Junming Zhu, Li Zhang, Ruidong Cheng, Jianmin Zhang, Xiangming Ye, Dongrong Xu

M-PM-020 **Anatomy-Aware Gating Network for Explainable Alzheimer's Disease Diagnosis**
Hongchao Jiang, Chunyan Miao

POSTER PRESENTATIONS

M-PM-022 **ASA: Learning Anatomical Consistency, Sub-volume Spatial Relationships and Fine-grained Appearance for CT Images**
Jiaxuan Pang, DongAo Ma, Ziyu Zhou, Michael B. Gotway, Jianming Liang

M-PM-024 **Assessing Risk of Stealing Proprietary Models for Medical Imaging Tasks**
Ankita Raj, Harsh Swaika, Deepankar Varma, Chetan Arora

M-PM-026 **Beyond Adapting SAM: Towards End-to-End Ultrasound Image Segmentation via Auto Prompting**
Xian Lin, Yangyang Xiang, Li Yu, Zengqiang Yan

M-PM-028 **BIMCV-R: A Landmark Dataset for 3D CT Text-Image Retrieval**
Yinda Chen, Che Liu, Xiaoyu Liu, Rossella Arcucci, Zhiwei Xiong

M-PM-030 **Binary Noise for Binary Tasks: Masked Bernoulli Diffusion for Unsupervised Anomaly Detection**
Julia Wolleb, Florentin Bieder, Paul Friedrich, Peter Zhang, Alicia Durrer, Philippe C. Cattin

M-PM-032 **Biophysics Informed Pathological Regularisation for Brain Tumour Segmentation**
Lipei Zhang, Yanqi Cheng, Lihao Liu, Carola-Bibiane Schönlieb, Angelica I Aviles-Rivero

M-PM-034 **Cardiac Copilot: Automatic Probe Guidance for Echocardiography with World Model**
Haojun Jiang, Zhenguo Sun, Ning Jia, Meng Li, Yu Sun, Shaqi Luo, Shiji Song, Gao Huang

M-PM-036 **CAR-MFL: Cross-Modal Augmentation by Retrieval for Multimodal Federated Learning with Missing Modalities**
Pranav Poudel, Prashant Shrestha, Sanskar Amgain, Yash Raj Shrestha, Prashnna Gyawali, Binod Bhattarai

M-PM-038 **Center-to-Edge Denoising Diffusion Probabilistic Models with Cross-domain Attention for Undersampled MRI Reconstruction**
Jianfeng Zhao, Shuo Li

M-PM-040 **CoBooM: Codebook Guided Bootstrapping for Medical Image Representation Learning**
Azad Singh, Deepak Mishra

M-PM-042 **Consecutive-Contrastive Spherical U-net: Enhancing Reliability of Individualized Functional Brain Parcellation for Short-duration fMRI Scans**
Dan Hu, Kangfu Han, Jiale Cheng, Gang Li

M-PM-044 **Context-guided Continual Reinforcement Learning for Landmark Detection with Incomplete Data**
Kaiwen Wan, Bomin Wang, Fuping Wu, Haiyu Gong, Xiahai Zhuang

POSTER PRESENTATIONS

M-PM-046 **Continual Domain Incremental Learning for Privacy-aware Digital Pathology**
Pratibha Kumari, Daniel Reisenbüchler, Lucas Luttner, Nadine S. Schaadt, Friedrich Feuerhake, Dorit Merhof

M-PM-048 **CoReEcho: Continuous Representation Learning for 2D+time Echocardiography Analysis**
Fadillah Adamsyah Maani, Numan Saeed, Aleksandr Matsun, Mohammad Yaqub

M-PM-050 **COVID19 to Pneumonia: Multi Region Lung Severity Classification using CNN Transformer Position-Aware Feature Encoding Network**
Jong Bub Lee, Jung Soo Kim, Hyun Gyu Lee

M-PM-052 **CriDiff: Criss-cross Injection Diffusion Framework via Generative Pre-train for Prostate Segmentation**
Tingwei Liu, Miao Zhang, Leiye Liu, Jialong Zhong, Shuyao Wang, Yongri Piao, Huchuan Lu

M-PM-054 **Cross Prompting Consistency with Segment Anything Model for Semi-supervised Medical Image Segmentation**
Juzheng Miao, Cheng Chen, Keli Zhang, Jie Chuai, Quanzheng Li, Pheng-Ann Heng

M-PM-056 **Cross-Dimensional Medical Self-Supervised Representation Learning Based on a Pseudo-3D Transformation**
Fei Gao, Siwen Wang, Fandong Zhang, Hong-Yu Zhou, Yizhou Wang, Churan Wang, Gang Yu, Yizhou Yu

M-PM-058 **CT2Rep: Automated Radiology Report Generation for 3D Medical Imaging**
Ibrahim Ethem Hamamci, Sezgin Er, Bjoern Menze

M-PM-060 **D-CoRP: Differentiable Connectivity Refinement for Functional Brain Networks**
Haoyu Hu, Hongrun Zhang, Chao Li

M-PM-062 **Deep Spectral Methods for Unsupervised Ultrasound Image Interpretation**
Oleksandra Tmenova, Yordanka Velikova, Mahdi Saleh, Nassir Navab

M-PM-064 **Deformation-Aware Segmentation Network Robust to Motion Artifacts for Brain Tissue Segmentation using Disentanglement Learning**
Sunyoung Jung, Yoonseok Choi, Mohammed A. Al-masni, Minyoung Jung, Dong-Hyun Kim

M-PM-066 **Design as Desired: Utilizing Visual Question Answering for Multimodal Pre-training**
Tongkun Su, Jun Li, Xi Zhang, Haibo Jin, Hao Chen, Qiong Wang, Faqin Lv, Baoliang Zhao, Ying Hu

M-PM-068 **Diffusion as Sound Propagation: Physics-inspired Model for Ultrasound Image Generation**
Marina Domínguez, Yordanka Velikova, Nassir Navab, Mohammad Farid Azampour

POSTER PRESENTATIONS

M-PM-070 **Diffusion-based Domain Adaptation for Medical Image Segmentation using Stochastic Step Alignment**
Wen Ji, Albert C. S. Chung

M-PM-072 **Disease-informed Adaptation of Vision-Language Models**
Jiajin Zhang, Ge Wang, Mannudeep K. Kalra, Pingkun Yan

M-PM-074 **Disentangled Hybrid Transformer for Identification of Infants with Prenatal Drug Exposure**
Jiale Cheng, Zhengwang Wu, Xinrui Yuan, Li Wang, Weili Lin, Karen Grewen, Gang Li

M-PM-076 **Distributionally-Adaptive Variational Meta Learning for Brain Graph Classification**
Jing Du, Guangwei Dong, Congbo Ma, Shan Xue, Jia Wu, Jian Yang, Amin Beheshti, Quan Z. Sheng, Alexis Giral

M-PM-078 **Double-tier Attention based Multi-label Learning Network for Predicting Biomarkers from Whole Slide Images of Breast Cancer**
Mingkang Wang, Tong Wang, Fengyu Cong, Cheng Lu, Hongming Xu

M-PM-080 **EchoFM: A View-Independent Echocardiogram Model for the Detection of Pulmonary Hypertension**
Shreyas Fadnavis, Chaitanya Parmar, Nastaran Emaminejad, Alvaro Ulloa Cerna, Areez Malik, Mona Selej, Tommaso Mansi, Preston Dunnmon, Tarik Yardibi, Kristopher Standish, Pablo F. Damasceno

M-PM-082 **Enable the Right to be Forgotten with Federated Client Unlearning in Medical Imaging**
Zhipeng Deng, Luyang Luo, Hao Chen

M-PM-084 **Enhancing New Multiple Sclerosis Lesion Segmentation via Self-supervised Pre-training and Synthetic Lesion Integration**
Peyman Tahghighi, Yunyan Zhang, Roberto Souza, Amin Komeili

M-PM-086 **Exploiting Supervision Information in Weakly Paired Images for IHC Virtual Staining**
Yueheng Li, Xianchao Guan, Yifeng Wang, Yongbing Zhang

M-PM-088 **F2TNet: FMRI to T1w MRI Knowledge Transfer Network for Brain Multi-phenotype Prediction**
Zhibin He, Wuyang Li, Yu Jiang, Zhihao Peng, Pengyu Wang, Xiang Li, Tianming Liu, Junwei Han, Tuo Zhang, Yixuan Yuan

M-PM-090 **FD-SOS: Vision-Language Open-Set Detectors for Bone Fenestration and Dehiscence Detection from Intraoral Images**
Marawan Elbatel, Keyuan Liu, Yanqi Yang, Xiaomeng Li

POSTER PRESENTATIONS

M-PM-092 **Feature Extraction for Generative Medical Imaging Evaluation: New Evidence Against an Evolving Trend**
McKell Woodland, Austin Castelo, Mais Al Taie, Jessica Albuquerque Marques Silva, Mohamed Eltaher, Frank Mohn, Alexander Shieh, Suprateek Kundu, Joshua P. Yung, Ankit B. Patel, Kristy K. Brock

M-PM-094 **Few Slices Suffice: Multi-Faceted Consistency Learning with Active Cross-Annotation for Barely-supervised 3D Medical Image Segmentation**
Xinyao Wu, Zhe Xu, Raymond Kai-yu Tong

M-PM-096 **Few-Shot Domain Adaptive Object Detection for Microscopic Images**
Sumayya Inayat, Nimra Dilawar, Waqas Sultani, Mohsen Ali

M-PM-098 **Few-Shot Lymph Node Metastasis Classification Meets High Performance on Whole Slide Images via the Informative Non-Parametric Classifier**
Yi Li, Qixiang Zhang, Tianqi Xiang, Yiqun Lin, Qingling Zhang, Xiaomeng Li

M-PM-100 **Follow Sonographers' Visual Scan-path: Adjusting CNN Model for Diagnosing Gout from Musculoskeletal Ultrasound**
Xin Tang, Zhi Cao, Weijing Zhang, Di Zhao, Hongen Liao, Daoqiang Zhang, Fang Chen

M-PM-102 **Force Sensing Guided Artery-Vein Segmentation via Sequential Ultrasound Images**
Yimeng Geng, Gaofeng Meng, Mingcong Chen, Guanglin Cao, Mingyang Zhao, Jianbo Zhao, Hongbin Liu

M-PM-104 **fTSPL: Enhancing Brain Analysis with fMRI-Text Synergistic Prompt Learning**
Pengyu Wang, Huaqi Zhang, Zhibin He, Zhihao Peng, Yixuan Yuan

M-PM-106 **GBT: Geometric-oriented Brain Transformer for Autism Diagnosis**
Zhihao Peng, Zhibin He, Yu Jiang, Pengyu Wang, Yixuan Yuan

M-PM-108 **Generalizing to Unseen Domains in Diabetic Retinopathy with Disentangled Representations**
Peng Xia, Ming Hu, Feilong Tang, Wenxue Li, Wenhao Zheng, Lie Ju, Peibo Duan, Huaxiu Yao, Zongyuan Ge

M-PM-110 **Generating Progressive Images from Pathological Transitions via Diffusion Model**
Zeyu Liu, Tianyi Zhang, Yufang He, Guanglei Zhang

M-PM-112 **Goal-conditioned reinforcement learning for ultrasound navigation guidance**
Abdoul Aziz Amadou, Vivek Singh, Florin C. Ghesu, Young-Ho Kim, Laura Stanciulescu, Harshitha P. Sai, Puneet Sharma, Alistair Young, Ronak Rajani, Kawal Rhode

M-PM-114 **Gradient Guided Co-Retention Feature Pyramid Network for LDCT Image Denoising**
Li Zhou, Dayang Wang, Yongshun Xu, Shuo Han, Bahareh Morovati, Shuyi Fan, Hengyong Yu

POSTER PRESENTATIONS

M-PM-116 **Gyri vs. Sulci: Core-Periphery Organization in Functional Brain Networks**
Xiaowei Yu, Lu Zhang, Chao Cao, Tong Chen, Yanjun Lyu, Jing Zhang, Tianming Liu, Dajiang Zhu

M-PM-118 **HAMIL-QA: Hierarchical Approach to Multiple Instance Learning for Atrial LGE MRI Quality Assessment**
K M Arefeen Sultan, Md Hasibul Husain Hisham, Benjamin Orkild, Alan Morris, Eugene Kholmovski, Erik Bieging, Eugene Kwan, Ravi Ranjan, Ed DiBella, Shireen Elhabian

M-PM-120 **HATs: Hierarchical Adaptive Taxonomy Segmentation for Panoramic Pathology Image Analysis**
Ruining Deng, Quan Liu, Can Cui, Tianyuan Yao, Juming Xiong, Shunxing Bao, Hao Li, Mengmeng Yin, Yu Wang, Shilin Zhao, Yucheng Tang, Haichun Yang, Yuankai Huo

M-PM-122 **Hierarchical Graph Learning with Small-World Brain Connectomes for Cognitive Prediction**
Yu Jiang, Zhibin He, Zhihao Peng, Yixuan Yuan

M-PM-124 **Hierarchical multiple instance learning for COPD grading with relatively specific similarity**
Hao Zhang, Mingyue Zhao, Mingzhu Liu, Jiejun Luo, Yu Guan, Jin Zhang, Yi Xia, Di Zhang, Xiuxiu Zhou, Li Fan, Shiyuan Liu, S. Kevin Zhou

M-PM-126 **HUP-3D: A 3D multi-view synthetic dataset for assisted-egocentric hand-ultrasound-probe pose estimation**
Manuel Birlo, Razvan Caramalau, Philip J. "Eddie" Edwards, Brian Dromey, Matthew J. Clarkson, Danail Stoyanov

M-PM-128 **IHCSurv: Effective Immunohistochemistry Priors for Cancer Survival Analysis in Gigapixel Multi-stain Whole Slide Images**
Yejia Zhang, Hanqing Chao, Zhongwei Qiu, Wenbin Liu, Yixuan Shen, Nishchal Sapkota, Pengfei Gu, Danny Z. Chen, Le Lu, Ke Yan, Dakai Jin, Yun Bian, Hui Jiang

M-PM-130 **Image Distillation for Safe Data Sharing in Histopathology**
Zhe Li, Bernhard Kainz

M-PM-132 **Improving cross-domain brain tissue segmentation in fetal MRI with synthetic data**
Vladyslav Zalevskyi, Thomas Sanchez, Margaux Roulet, Jordina Aviles Verdera, Jana Hutter, Hamza Kebiri, Meritxell Bach Cuadra

M-PM-134 **Integrative Graph-Transformer Framework for Histopathology Whole Slide Image Representation and Classification**
Zhan Shi, Jingwei Zhang, Jun Kong, Fusheng Wang

M-PM-136 **Inter-Intra High-Order Brain Network for ASD Diagnosis via Functional MRIs**
Xiangmin Han, Rundong Xue, Shaoyi Du, Yue Gao

POSTER PRESENTATIONS

M-PM-138 **Intrapartum Ultrasound Image Segmentation of Pubic Symphysis and Fetal Head Using Dual Student-Teacher Framework with CNN-ViT Collaborative Learning**
Jianmei Jiang, Huijin Wang, Jieyun Bai, Shun Long, Shuangping Chen, Victor M. Campello, Karim Lekadir

M-PM-140 **LaB-GATr: geometric algebra transformers for large biomedical surface and volume meshes**
Julian Suk, Baris Imre, Jelmer M. Wolterink

M-PM-142 **Latent Spaces Enable Transformer-Based Dose Prediction in Complex Radiotherapy Plans**
Edward Wang, Ryan Au, Pencilla Lang, Sarah A. Mattonen

M-PM-144 **Learning from Partial Label Proportions for Whole Slide Image Segmentation**
Shinnosuke Matsuo, Daiki Suehiro, Seiichi Uchida, Hiroaki Ito, Kazuhiro Terada, Akihiko Yoshizawa, Ryoma Bise

M-PM-146 **Leveraging Image Captions for Selective Whole Slide Image Annotation**
Jingna Qiu, Marc Aubreville, Frauke Wilm, Mathias Öttl, Jonas Utz, Maja Schlereth, Katharina Breininger

M-PM-148 **LGRNet: Local-Global Reciprocal Network for Uterine Fibroid Segmentation in Ultrasound Videos**
Huihui Xu, Yijun Yang, Angelica I Aviles-Rivero, Guang Yang, Jing Qin, Lei Zhu

M-PM-150 **Lifelong Histopathology Whole Slide Image Retrieval via Distance Consistency Rehearsal**
Xinyu Zhu, Zhiguo Jiang, Kun Wu, Jun Shi, Yushan Zheng

M-PM-152 **Low-Shot Prompt Tuning for Multiple Instance Learning based Histology Classification**
Philip Chikontwe, Myeongkyun Kang, Miguel Luna, Siwoo Nam, Sang Hyun Park

M-PM-154 **MARVEL: MR Fingerprinting with Additional micRoVascular Estimates using bidirectional LSTMs**
Antoine Barrier, Thomas Coudert, Aurélien Delphin, Benjamin Lemasson, Thomas Christen

M-PM-156 **Masked Residual Diffusion Probabilistic Model with Regional Asymmetry Prior for Generating Perfusion Maps from Multi-phase CTA**
Yuxin Cai, Jianhai Zhang, Lei He, Aravind Ganesh, Wu Qiu

M-PM-158 **MBA-Net: SAM-driven Bidirectional Aggregation Network for Ovarian Tumor Segmentation**
Yifan Gao, Wei Xia, Wenkui Wang, Xin Gao

M-PM-160 **MedSynth: Leveraging Generative Model for Healthcare Data Sharing**
Renuga Kanagavelu, Madhav Walia, Yuan Wang, Huazhu Fu, Qingsong Wei, Yong Liu, Rick Siow Mong Goh

POSTER PRESENTATIONS

M-PM-162 **MEGFormer: enhancing speech decoding from brain activity through extended semantic representations**
Maria Boyko, Polina Druzhinina, Georgii Kormakov, Aleksandra Beliaeva, Maxim Sharaev

M-PM-164 **MH-pFLGB: Model Heterogeneous personalized Federated Learning via Global Bypass for Medical Image Analysis**
Luyuan Xie, Manqing Lin, ChenMing Xu, Tianyu Luan, Zhipeng Zeng, Wenjun Qian, Cong Li, Yuejian Fang, Qingni Shen, Zhonghai Wu

M-PM-166 **Mixed Integer Linear Programming for Discrete Sampling Scheme Design in Diffusion MRI**
Si-Miao Zhang, Jing Wang, Yi-Xuan Wang, Tao Liu, Haogang Zhu, Han Zhang, Jian Cheng

M-PM-168 **MMSummary: Multimodal Summary Generation for Fetal Ultrasound Video**
Xiaoqing Guo, Qianhui Men, J. Alison Noble

M-PM-170 **Multi-Dataset Multi-Task Learning for COVID-19 Prognosis**
Filippo Ruffini, Lorenzo Tronchin, Zhuoru Wu, Wenting Chen, Paolo Soda, Linlin Shen, Valerio Guarrasi

M-PM-172 **Open-Set Semi-Supervised Medical Image Classification with Learnable Prototypes and Outlier Filter**
Along He, Tao Li, Yitian Zhao, Junyong Zhao, Huazhu Fu

M-PM-174 **OSAL-ND: Open-set Active Learning for Nucleus Detection**
Jiao Tang, Yagao Yue, Peng Wan, Mingliang Wang, Daoqiang Zhang, Wei Shao

M-PM-176 **Overcoming Atlas Heterogeneity in Federated Learning for Cross-site Connectome-based Predictive Modeling**
Qinghao Liang, Brendan D. Adkinson, Rongtao Jiang, Dustin Scheinost

M-PM-178 **PAMIL: Prototype Attention-based Multiple Instance Learning for Whole Slide Image Classification**
Jiashuai Liu, Anyu Mao, Yi Niu, Xianli Zhang, Tieliang Gong, Chen Li, Zeyu Gao

M-PM-180 **Patient-Specific Real-Time Segmentation in Trackerless Brain Ultrasound**
Reuben Dorent, Erickson Torio, Nazim Haouchine, Colin Galvin, Sarah Frisken, Alexandra Golby, Tina Kapur, William Wells

M-PM-182 **pFLFE: Cross-silo Personalized Federated Learning via Feature Enhancement on Medical Image Segmentation**
Luyuan Xie, Manqing Lin, Siyuan Liu, ChenMing Xu, Tianyu Luan, Cong Li, Yuejian Fang, Qingni Shen, Zhonghai Wu

POSTER PRESENTATIONS

M-PM-184 **Progressive Knowledge Distillation for Automatic Perfusion Parameter Maps Generation from Low Temporal Resolution CT Perfusion Images**
Moo Hyun Son, Juyoung Bae, Elizabeth Tong, Hao Chen

M-PM-186 **Prompt Your Brain: Scaffold Prompt Tuning for Efficient Adaptation of fMRI Pre-trained Model**
Zijian Dong, Yilei Wu, Zijiao Chen, Yichi Zhang, Yueming Jin, Juan Helen Zhou

M-PM-188 **Real-world Visual Navigation for Cardiac Ultrasound View Planning**
Mingkun Bao, Yan Wang, Xinlong Wei, Bosen Jia, Xiaolin Fan, Dong Lu, Yifan Gu, Jian Cheng, Yingying Zhang, Chuanyu Wang, Haogang Zhu

M-PM-190 **Reciprocal Collaboration for Semi-supervised Medical Image Classification**
Qingjie Zeng, Zilin Lu, Yutong Xie, Mengkang Lu, Xinke Ma, Yong Xia

M-PM-192 **Reducing Annotation Burden: Exploiting Image Knowledge for Few-Shot Medical Video Object Segmentation via Spatiotemporal Consistency Relearning**
Zixuan Zheng, Yilei Shi, Chunlei Li, Jingliang Hu, Xiao Xiang Zhu, Lichao Mou

M-PM-194 **Representation Learning with a Transformer-Based Detection Model for Localized Chest X-Ray Disease and Progression Detection**
Mehrdad Eshraghi Dehaghani, Amirhossein Sabour, Amarachi B. Madu, Ismini Lourentzou, Mehdi Moradi

M-PM-196 **Representing Functional Connectivity with Structural Detour: A New Perspective to Decipher Structure-Function Coupling Mechanism**
Ziquan Wei, Tingting Dan, Jiaqi Ding, Paul Laurienti, Guorong Wu

M-PM-198 **RetMIL: Retentive Multiple Instance Learning for Histopathological Whole Slide Image Classification**
Hongbo Chu, Qiehe Sun, Jiawen Li, Yuxuan Chen, Lizhong Zhang, Tian Guan, Anjia Han, Yonghong He

M-PM-200 **Robustly Optimized Deep Feature Decoupling Network for Fatty Liver Diseases Detection**
Peng Huang, Shu Hu, Bo Peng, Jiashu Zhang, Xi Wu, Xin Wang

M-PM-202 **SBC-AL: Structure and Boundary Consistency-based Active Learning for Medical Image Segmentation**
Taimin Zhou, Jin Yang, Lingguo Cui, Nan Zhang, Senchun Chai

M-PM-204 **Self-Supervised Contrastive Graph Views for Learning Neuron-level Circuit Network**
Junchi Li, Guojia Wan, Minghui Liao, Fei Liao, Bo Du

M-PM-206 **Self-supervised Denoising and Bulk Motion Artifact Removal of 3D Optical Coherence Tomography Angiography of Awake Brain**
Zhenghong Li, Jiaxiang Ren, Zhilin Zou, Kalyan Garigapati, Congwu Du, Yingtian Pan, Haibin Ling

POSTER PRESENTATIONS

M-PM-208 **Self-Supervised k-Space Regularization for Motion-Resolved Abdominal MRI Using Neural Implicit k-Space Representations**
Veronika Spieker, Hannah Eichhorn, Jonathan K. Stelter, Wenqi Huang, Rickmer F. Braren, Daniel Rueckert, Francisco Sahli Costabal, Kerstin Hammernik, Claudia Prieto, Dimitrios C. Karampinos, Julia A. Schnabel

M-PM-210 **Self-supervised Learning with Adaptive Graph Structure and Function Representation For Cross-Dataset Brain Disorder Diagnosis**
Dongdong Chen, Linlin Yao, Mengjun Liu, Zhenrong Shen, Yuqi Hu, Zhiyun Song, Qian Wang, Lichi Zhang

M-PM-212 **Semi-Supervised Learning for Deep Causal Generative Models**
Yasin Ibrahim, Hermione Warr, Konstantinos Kamnitsas

M-PM-214 **SHAN: Shape Guided Network for Thyroid Nodule Ultrasound Cross-Domain Segmentation**
Ruixuan Zhang, Wenhuan Lu, Cuntai Guan, Jie Gao, Xi Wei, Xuewei Li

M-PM-216 **Shortcut Learning in Medical Image Segmentation**
Manxi Lin, Nina Weng, Kamil Mikolaj, Zahra Bashir, Morten B. S. Svendsen, Martin G. Tolsgaard, Anders N. Christensen, Aasa Feragen

M-PM-218 **SiFT:A Serial Framework with Textual Guidance for Federated Learning**
Xuyang Li, Weizhuo Zhang, Yue Yu, Wei-Shi Zheng, Tong Zhang, Ruixuan Wang

M-PM-220 **SlideGCD: Slide-based Graph Collaborative Training with Knowledge Distillation for Whole Slide Image Classification**
Tong Shu, Jun Shi, Dongdong Sun, Zhiguo Jiang, Yushan Zheng

M-PM-222 **SOM2LM: Self-Organized Multi-Modal Longitudinal Maps**
Jiahong Ouyang, Qingyu Zhao, Ehsan Adeli, Greg Zaharchuk, Kilian M. Pohl

M-PM-224 **Spatiotemporal Representation Learning for Short and Long Medical Image Time Series**
Chengzhi Shen, Martin J. Menten, Hrvoje Bogunović, Ursula Schmidt-Erfurth, Hendrik P.N. Scholl, Sobha Sivaprasad, Andrew Lotery, Daniel Rueckert, Paul Hager, Robbie Holland

M-PM-226 **STAN-LOC: Visual Query-based Video Clip Localization for Fetal Ultrasound Sweep Videos**
Divyanshu Mishra, Pramit Saha, He Zhao, Olga Patey, Aris T. Papageorghiou, J. Alison Noble

M-PM-228 **Striving for Simplicity: Simple Yet Effective Prior-Aware Pseudo-Labeling for Semi-Supervised Ultrasound Image Segmentation**
Yaxiong Chen, Yujie Wang, Zixuan Zheng, Jingliang Hu, Yilei Shi, Shengwu Xiong, Xiao Xiang Zhu, Lichao Mou

POSTER PRESENTATIONS

M-PM-230 **Subject-Adaptive Transfer Learning Using Resting State EEG Signals for Cross-Subject EEG Motor Imagery Classification**
Sion An, Myeongkyun Kang, Soopil Kim, Philip Chikontwe, Li Shen, Sang Hyun Park

M-PM-232 **Surface-based and Shape-informed U-fiber Atlasing for Robust Superficial White Matter Connectivity Analysis**
Yuan Li, Xinyu Nie, Jianwei Zhang, Yonggang Shi

M-PM-234 **Tackling Data Heterogeneity in Federated Learning via Loss Decomposition**
Shuang Zeng, Pengxin Guo, Shuai Wang, Jianbo Wang, Yuyin Zhou, Liangqiong Qu

M-PM-236 **TaGAT: Topology-Aware Graph Attention Network For Multi-modal Retinal Image Fusion**
Xin Tian, Nantheera Anantrasirichai, Lindsay Nicholson, Alin Achim

M-PM-238 **TAKT: Target-Aware Knowledge Transfer for Whole Slide Image Classification**
Conghao Xiong, Yi Lin, Hao Chen, Hao Zheng, Dong Wei, Yefeng Zheng, Joseph J. Y. Sung, Irwin King

M-PM-240 **TARDRL: Task-Aware Reconstruction for Dynamic Representation Learning of fMRI**
Yunxi Zhao, Dong Nie, Geng Chen, Xia Wu, Daoqiang Zhang, Xuyun Wen

M-PM-242 **TE-SSL: Time and Event-aware Self Supervised Learning for Alzheimer's Disease Progression Analysis**
Jacob Thrasher, Alina Devkota, Ahmad P. Tafti, Binod Bhattarai, Prashnna Gyawali, for the Alzheimer's Disease Neuroimaging Initiative

M-PM-244 **Topological Cycle Graph Attention Network for Brain Functional Connectivity**
Jinghan Huang, Nanguang Chen, Anqi Qiu

M-PM-246 **Towards Multi-modality Fusion and Prototype-based Feature Refinement for Clinically Significant Prostate Cancer Classification in Transrectal Ultrasound**
Hong Wu, Juan Fu, Hongsheng Ye, Yuming Zhong, Xuebin Zou, Jianhua Zhou, Yi Wang

M-PM-248 **Towards Rapid Mycetoma Species Diagnosis: A Deep Learning Approach for Stain-Invariant Classification on H&E Images from Senegal**
Kpêtchéhoué Merveille Santi ZINSOU, Cheikh Talibouya DIOP, Idy DIOP, Apostolia Tsirikoglou, Emmanuel Edwar SIDDIG, Doudou SOW, Maodo NDIAYE

M-PM-250 **Towards Real-time Intrahepatic Vessel Identification in Intraoperative Ultrasound-Guided Liver Surgery**
Karl-Philippe Beaudet, Alexandros Karargyris, Sidaty El Hadramy, Stéphane Cotin, Jean-Paul Mazellier, Nicolas Padoy, Juan Verde

M-PM-252 **Training ViT with Limited Data for Alzheimer's Disease Classification: an Empirical Study**
Kassymzhomart Kunanbayev, Vyacheslav Shen, Dae-Shik Kim

POSTER PRESENTATIONS

M-PM-254 **Training-Free Condition Video Diffusion Models for single frame Spatial-Semantic Echocardiogram Synthesis**
Van Phi Nguyen, Tri Nhan Luong Ha, Huy Hieu Pham, Quoc Long Tran

M-PM-256 **Trexplorer: Recurrent DETR for Topologically Correct Tree Centerline Tracking**
Roman Naeem, David Hagerman, Lennart Svensson, Fredrik Kahl

M-PM-258 **TrIND: Representing Anatomical Trees by Denoising Diffusion of Implicit Neural Fields**
Ashish Sinha, Ghassan Hamarneh

M-PM-260 **UinTSeg: Unified Infant Brain Tissue Segmentation with Anatomy Delineation**
Jiameng Liu, Feihong Liu, Kaicong Sun, Yuhang Sun, Jiawei Huang, Caiwen Jiang, Islem Rekik, Dinggang Shen

M-PM-262 **Ultrasound Image-to-Video Synthesis via Latent Dynamic Diffusion Models**
Tingxiu Chen, Yilei Shi, Zixuan Zheng, Bingcong Yan, Jingliang Hu, Xiao Xiang Zhu, Lichao Mou

M-PM-264 **Uncertainty-aware meta-weighted optimization framework for domain-generalized medical image segmentation**
Seok-Hwan Oh, Guil Jung, Sang-Yun Kim, Myeong-Gee Kim, Young-Min Kim, Hyeon-Jik Lee, Hyuk-Sool Kwon, Hyeon-Min Bae

M-PM-266 **Uncovering Cortical Pathways of Prion-like Pathology Spreading in Alzheimer's Disease by Neural Optimal Mass Transport**
Yanquan Huang, Tingting Dan, Won Hwa Kim, Guorong Wu

M-PM-268 **Understanding Brain Dynamics Through Neural Koopman Operator with Structure-Function Coupling**
Chiyuen Chow, Tingting Dan, Martin Styner, Guorong Wu

M-PM-270 **Universal Semi-Supervised Learning for Medical Image Classification**
Lie Ju, Yicheng Wu, Wei Feng, Zhen Yu, Lin Wang, Zhuoting Zhu, Zongyuan Ge

M-PM-272 **Unsupervised Latent Stain Adaptation for Computational Pathology**
Daniel Reisenbüchler, Lucas Luttner, Nadine S. Schaadt, Friedrich Feuerhake, Dorit Merhof

M-PM-274 **Unsupervised Ultrasound Image Quality Assessment with Score Consistency and Relativity Co-learning**
Juncheng Guo, Jianxin Lin, Guanghua Tan, Yuhuan Lu, Zhan Gao, Shengli Li, Kenli Li

M-PM-276 **URCDM: Ultra-Resolution Image Synthesis in Histopathology**
Sarah Cechnicka, James Ball, Matthew Baugh, Hadrien Reynaud, Naomi Simmonds, Andrew P.T. Smith, Catherine Horsfield, Candice Roufosse, Bernhard Kainz

POSTER PRESENTATIONS

M-PM-278 **Vertex Proportion Loss for Multi-Class Cell Detection from Label Proportions**
Carolina Pacheco, Florence Yellin, René Vidal, Benjamin Haeffele

M-PM-280 **Weakly Supervised Learning of Cortical Surface Reconstruction from Segmentations**
Qiang Ma, Liu Li, Emma C. Robinson, Bernhard Kainz, Daniel Rueckert

M-PM-282 **When Diffusion MRI Meets Diffusion Model: A Novel Deep Generative Model for Diffusion MRI Generation**
Xi Zhu, Wei Zhang, Yijie Li, Lauren J. O'Donnell, Fan Zhang

M-PM-284 **WSSADN: A Weakly Supervised Spherical Age-Disentanglement Network for Detecting Developmental Disorders with Structural MRI**
Pengcheng Xue, Dong Nie, Meijiao Zhu, Ming Yang, Han Zhang, Daoqiang Zhang, Xuyun Wen

M-PM-286 **Zoom Pattern Signatures for Fetal Ultrasound Structures**
Mohammad Alsharid, Robail Yasrab, Lior Drukker, Aris T. Papageorghiou, J. Alison Noble

POSTER PRESENTATIONS

Poster Session 3: Transparency, Fairness and Uncertainty 1, Image Formation and Reconstruction 1, and Computer Aided Diagnosis 1
Tuesday, October 8, 2024, 10:30 to 11:30

T-AM-001 **3D Spine Shape Estimation from Single 2D DXA**
Emmanuelle Bourigault, Amir Jamaludin, Andrew Zisserman

T-AM-003 **A Domain Adaption Approach for EEG-based Automated Seizure Classification with Temporal-Spatial-Spectral Attention**
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Qingxin Deng, Xunyu Yang, Minghan Huang, Landu Jiang, Dian Zhang

T-AM-257 **TeethDreamer: 3D Teeth Reconstruction from Five Intra-oral Photographs**
Chenfan Xu, Zhentao Liu, Yuan Liu, Yulong Dou, Jiamin Wu, Jiepeng Wang, Minjiao Wang, Dinggang Shen, Zhiming Cui

T-AM-259 **ThyGraph: A Graph-Based Approach for Thyroid Nodule Diagnosis from Ultrasound Studies**
Ashwath Radhachandran, Alekhya Vittalam, Vedrana Ivezic, Vivek Sant, Shreeram Athreya, Chace Moleta, Maitraya Patel, Rinat Masamed, Corey Arnold, William Speier

T-AM-261 **TinyU-Net: Lighter yet Better U-Net with Cascaded Multi-Receptive Fields**
Junren Chen, Rui Chen, Wei Wang, Junlong Cheng, Lei Zhang, Liangyin Chen

T-AM-263 **Topological GCN for Improving Detection of Hip Landmarks from B-Mode Ultrasound Images**
Tianxiang Huang, Jing Shi, Ge Jin, Juncheng Li, Jun Wang, Jun Du, Jun Shi

T-AM-265 **Towards a text-based quantitative and explainable histopathology image analysis**
Anh Tien Nguyen, Trinh Thi Le Vuong, Jin Tae Kwak

T-AM-267 **Towards Explainable Automated Neuroanatomy**
Kui Qian, Litao Qiao, Beth Friedman, Edward O'Donnell, David Kleinfeld, Yoav Freund

T-AM-269 **Towards Graph Neural Networks with Domain-Generalizable Explainability for fMRI-Based Brain Disorder Diagnosis**
Xinmei Qiu, Fan Wang, Yongheng Sun, Chunfeng Lian, Jianhua Ma

T-AM-271 **Towards Learning Contrast Kinetics with Multi-Condition Latent Diffusion Models**
Richard Osuala, Daniel M. Lang, Preeti Verma, Smriti Joshi, Apostolia Tsirikoglou, Grzegorz Skorupko, Kaisar Kushibar, Lidia Garrucho, Walter H. L. Pinaya, Oliver Diaz, Julia A. Schnabel, Karim Lekadir

T-AM-273 **Towards tDCS Digital Twins using Deep Learning-based Direct Estimation of Personalized Electrical Field Maps from T1-Weighted MRI**
Skylar E. Stolte, Aprinda Indahlastari, Alejandro Albizu, Adam J. Woods, Ruogu Fang

T-AM-275 **Unsupervised Domain Adaptation using Soft-Labeled Contrastive Learning with Reversed Monte Carlo Method for Cardiac Image Segmentation**
Mingxuan Gu, Mareike Thies, Siyuan Mei, Fabian Wagner, Mingcheng Fan, Yipeng Sun, Zhaoya Pan, Sulaiman Vesal, Ronak Kosti, Dennis Possart, Jonas Utz, Andreas Maier

POSTER PRESENTATIONS

T-AM-277 **UnWave-Net: Unrolled Wavelet Network for Compton Tomography Image Reconstruction**
Ishak Ayad, Cécilia Tarpau, Javier Cebeiro, Maï K. Nguyen

T-AM-279 **VDPF: Enhancing DVT Staging Performance Using a Global-Local Feature Fusion Network**
Xiaotong Xie, Yufeng Ye, Tingting Yang, Bin Huang, Bingsheng Huang, Yi Huang

T-AM-281 **Vestibular schwannoma growth prediction from longitudinal MRI by time-conditioned neural fields**
Yunjie Chen, Jelmer M. Wolterink, Olaf M. Neve, Stephan R. Romeijn, Berit M. Verbist, Erik F. Hensen, Qian Tao, Marius Staring

T-AM-283 **VLSM-Adapter: Finetuning Vision-Language Segmentation Efficiently with Lightweight Blocks**
Manish Dhakal, Rabin Adhikari, Safal Thapaliya, Bishesh Khanal

T-AM-285 **Volume-optimal persistence homological scaffolds of hemodynamic networks covary with MEG theta-alpha aperiodic dynamics**
Nghi Nguyen, Tao Hou, Enrico Amico, Jingyi Zheng, Huajun Huang, Alan D. Kaplan, Giovanni Petri, Joaqúın Goñi, Ralph Kaufmann, Yize Zhao, Duy Duong-Tran, Li Shen

T-AM-287 **WIA-LD2ND: Wavelet-based Image Alignment for Self-supervised Low-Dose CT Denoising**
Haoyu Zhao, Yuliang Gu, Zhou Zhao, Bo Du, Yongchao Xu, Rui Yu

Poster Session 4: Image Segmentation 2, Surgical Data Science, Computer Assisted Intervention and Surgery 1, and Foundation Models and Multimodal Data

Tuesday, October 8, 2024, 15:00 to 16:30

T-PM-002 **3DGPS: A 3D Differentiable-Gaussian-based Planning Strategy for Liver Tumor Cryoablation**
Ce Wang, Xiaoyu Huang, Yaqing Kong, Qian Li, You Hao, Xiang Zhou

T-PM-004 **3D-SAutoMed: Automatic Segment Anything Model for 3D Medical Image Segmentation from Local-Global Perspective**
Junjie Liang, Peng Cao, Wenju Yang, Jinzhu Yang, Osmar R. Zaiane

T-PM-006 **A Bayesian Approach to Weakly-supervised Laparoscopic Image Segmentation**
Zhou Zheng, Yuichiro Hayashi, Masahiro Oda, Takayuki Kitasaka, Kensaku Mori

T-PM-008 **A Refer-and-Ground Multimodal Large Language Model for Biomedicine**
Xiaoshuang Huang, Haifeng Huang, Lingdong Shen, Yehui Yang, Fangxin Shang, Junwei Liu, Jia Liu

T-PM-010 **A task-conditional mixture-of-experts model for missing modality segmentation**
Philip Novosad, Richard A.D. Carano, Anitha Priya Krishnan

POSTER PRESENTATIONS

T-PM-012 **ABP: Asymmetric Bilateral Prompting for Text-guided Medical Image Segmentation**
Xinyi Zeng, Pinxian Zeng, Jiaqi Cui, Aibing Li, Bo Liu, Chengdi Wang, Yan Wang

T-PM-014 **Advancing Text-Driven Chest X-Ray Generation with Policy-Based Reinforcement Learning**
Woojung Han, Chanyoung Kim, Dayun Ju, Yumin Shim, Seong Jae Hwang

T-PM-016 **Advancing UWF-SLO Vessel Segmentation with Source-Free Active Domain Adaptation and a Novel Multi-Center Dataset**
Hongqiu Wang, Xiangde Luo, Wu Chen, Qingqing Tang, Mei Xin, Qiong Wang, Lei Zhu

T-PM-018 **Adversarial Diffusion Model for Domain-Adaptive Depth Estimation in Bronchoscopic Navigation**
Yiguang Yang, Guochen Ning, Changhao Zhong, Hongen Liao

T-PM-020 **An approach to building foundation models for brain image analysis**
Davood Karimi

T-PM-022 **An Uncertainty-guided Tiered Self-training Framework for Active Source-free Domain Adaptation in Prostate Segmentation**
Zihao Luo, Xiangde Luo, Zijun Gao, Guotai Wang

T-PM-024 **ASPS: Augmented Segment Anything Model for Polyp Segmentation**
Huiqian Li, Dingwen Zhang, Jieru Yao, Longfei Han, Zhongyu Li, Junwei Han

T-PM-026 **Black-Box Adaptation for Medical Image Segmentation**
Jay N. Paranjape, Shameema Sikder, S. Swaroop Vedula, Vishal M. Patel

T-PM-028 **BrainSCK: Brain Structure and Cognition Alignment via Knowledge Injection and Reactivation for Diagnosing Brain Disorders**
Lilong Wang, Mianxin Liu, Shaoting Zhang, Xiaosong Wang

T-PM-030 **CausalCLIPSeg: Unlocking CLIP's Potential in Referring Medical Image Segmentation with Causal Intervention**
Yaxiong Chen, Minghong Wei, Zixuan Zheng, Jingliang Hu, Yilei Shi, Shengwu Xiong, Xiao Xiang Zhu, Lichao Mou

T-PM-032 **Centerline Boundary Dice Loss for Vascular Segmentation**
Pengcheng Shi, Jiesi Hu, Yanwu Yang, Zilve Gao, Wei Liu, Ting Ma

T-PM-034 **CLEFT: Language-Image Contrastive Learning with Efficient Large Language Model and Prompt Fine-Tuning**
Yuexi Du, Brian Chang, Nicha C. Dvornek

POSTER PRESENTATIONS

T-PM-036 **Comprehensive Generative Replay for Task-Incremental Segmentation with Concurrent Appearance and Semantic Forgetting**
Wei Li, Jingyang Zhang, Pheng-Ann Heng, Lixu Gu

T-PM-038 **CP-CLIP: Core-Periphery Feature Alignment CLIP for Zero-Shot Medical Image Analysis**
Xiaowei Yu, Zihao Wu, Lu Zhang, Jing Zhang, Yanjun Lyu, Dajiang Zhu

T-PM-040 **Cross-modal Diffusion Modelling for Super-resolved Spatial Transcriptomics**
Xiaofei Wang, Xingxu Huang, Stephen Price, Chao Li

T-PM-042 **CryoSAM: Training-free CryoET Tomogram Segmentation with Foundation Models**
Yizhou Zhao, Hengwei Bian, Michael Mu, Mostofa R. Uddin, Zhenyang Li, Xiang Li, Tianyang Wang, Min Xu

T-PM-044 **Cryotrack: Planning and Navigation for Computer Assisted Cryoablation**
Henry J. Krumb, Jonas Mehtali, Juan Verde, Anirban Mukhopadhyay, Caroline Essert

T-PM-046 **CT-based brain ventricle segmentation via diffusion Schrodinger Bridge without target domain ground truths**
Reihaneh Teimouri, Marta Kersten-Oertel, Yiming Xiao

T-PM-048 **Curriculum Prompting Foundation Models for Medical Image Segmentation**
Xiuqi Zheng, Yuhang Zhang, Haoran Zhang, Hongrui Liang, Xueqi Bao, Zhuqing Jiang, Qicheng Lao

T-PM-050 **Cut to the Mix: Simple Data Augmentation Outperforms Elaborate Ones in Limited Organ Segmentation Datasets**
Chang Liu, Fuxin Fan, Annette Schwarz, Andreas Maier

T-PM-052 **DB-SAM: Delving into High Quality Universal Medical Image Segmentation**
Chao Qin, Jiale Cao, Huazhu Fu, Fahad Shahbaz Khan, Rao Muhammad Anwer

T-PM-054 **Deform3DGS: Flexible Deformation for Fast Surgical Scene Reconstruction with Gaussian Splatting**
Shuojue Yang, Qian Li, Daiyun Shen, Bingchen Gong, Qi Dou, Yueming Jin

T-PM-056 **Depth-Aware Endoscopic Video Inpainting**
Francis Xiatian Zhang, Shuang Chen, Xianghua Xie, Hubert P. H. Shum

T-PM-058 **Depth-Driven Geometric Prompt Learning for Laparoscopic Liver Landmark Detection**
Jialun Pei, Ruize Cui, Yaoqian Li, Weixin Si, Jing Qin, Pheng-Ann Heng

POSTER PRESENTATIONS

T-PM-060 **DeSAM: Decoupled Segment Anything Model for Generalizable Medical Image Segmentation**
Yifan Gao, Wei Xia, Dingdu Hu, Wenkui Wang, Xin Gao

T-PM-062 **DES-SAM: Distillation-Enhanced Semantic SAM for Cervical Nuclear Segmentation with Box Annotation**
Lina Huang, Yixiong Liang, Jianfeng Liu

T-PM-064 **DinoBloom: A Foundation Model for Generalizable Cell Embeddings in Hematology**
Valentin Koch, Sophia J. Wagner, Salome Kazeminia, Ece Sancar, Matthias Hehr, Julia A. Schnabel, Tingying Peng, Carsten Marr

T-PM-066 **DnFPlane For Efficient and High-Quality 4D Reconstruction of Deformable Tissues**
Ran Bu, Chenwei Xu, Jiwei Shan, Hao Li, Guangming Wang, Yanzi Miao, Hesheng Wang

T-PM-068 **DPMNet: Dual-Path MLP-based Network for Aneurysm Image Segmentation**
Shudong Wang, Xue Zhao, Yulin Zhang, Yawu Zhao, Zhiyuan Zhao, Hengtao Ding, Tianxing Chen, Sibo Qiao

T-PM-070 **DSNet: A Spatio-Temporal Consistency Network for Cerebrovascular Segmentation in Digital Subtraction Angiography Sequences**
Qihang Xie, Dan Zhang, Lei Mou, Shanshan Wang, Yitian Zhao, Mengguo Guo, Jiong Zhang

T-PM-072 **Dynamic Pseudo Label Optimization in Point-Supervised Nuclei Segmentation**
Ziyue Wang, Ye Zhang, Yifeng Wang, Linghan Cai, Yongbing Zhang

T-PM-074 **Endo-4DGS: Endoscopic Monocular Scene Reconstruction with 4D Gaussian Splatting**
Yiming Huang, Beilei Cui, Long Bai, Ziqi Guo, Mengya Xu, Mobarakol Islam, Hongliang Ren

T-PM-076 **EndoDAC: Efficient Adapting Foundation Model for Self-Supervised Depth Estimation from Any Endoscopic Camera**
Beilei Cui, Mobarakol Islam, Long Bai, An Wang, Hongliang Ren

T-PM-078 **EndoGSLAM: Real-Time Dense Reconstruction and Tracking in Endoscopic Surgeries using Gaussian Splatting**
Kailing Wang, Chen Yang, Yuehao Wang, Sikuang Li, Yan Wang, Qi Dou, Xiaokang Yang, Wei Shen

T-PM-080 **Endora: Video Generation Models as Endoscopy Simulators**
Chenxin Li, Hengyu Liu, Yifan Liu, Brandon Y. Feng, Wuyang Li, Xinyu Liu, Zhen Chen, Jing Shao, Yixuan Yuan

T-PM-082 **Enhanced Scale-aware Depth Estimation for Monocular Endoscopic Scenes with Geometric Modeling**
Ruofeng Wei, Bin Li, Kai Chen, Yiyao Ma, Yunhui Liu, Qi Dou

POSTER PRESENTATIONS

T-PM-084 **Enhancing Whole Slide Image Classification with Discriminative and Contrastive Learning**
Peixian Liang, Hao Zheng, Hongming Li, Yuxin Gong, Spyridon Bakas, Yong Fan

T-PM-086 **Exploiting Latent Classes for Medical Image Segmentation from Partially Labeled Datasets**
Xiangyu Zhao, Xi Ouyang, Lichi Zhang, Zhong Xue, Dinggang Shen

T-PM-088 **FastSAM3D: An Efficient Segment Anything Model for 3D Volumetric Medical Images**
Yiqing Shen, Jingxing Li, Xinyuan Shao, Blanca Inigo Romillo, Ankush Jindal, David Dreizin, Mathias Unberath

T-PM-090 **Feature-prompting GBMSeg: One-Shot Reference Guided Training-Free Prompt Engineering for Glomerular Basement Membrane Segmentation**
Xueyu Liu, Guangze Shi, Rui Wang, Yexin Lai, Jianan Zhang, Lele Sun, Quan Yang, Yongfei Wu, Ming Li, Weixia Han, Wen Zheng

T-PM-092 **Federated Multi-Centric Image Segmentation with Uneven Label Distribution**
Francesco Galati, Rosa Cortese, Ferran Prados, Marco Lorenzi, Maria A. Zuluaga

T-PM-094 **FedFMS: Exploring Federated Foundation Models for Medical Image Segmentation**
Yuxi Liu, Guibo Luo, Yuesheng Zhu

T-PM-096 **Few-shot Adaptation of Medical Vision-Language Models**
Fereshteh Shakeri, Yunshi Huang, Julio Silva-Rodŕıguez, Houda Bahig, An Tang, Jose Dolz, Ismail Ben Ayed

T-PM-098 **FRCNet: Frequency and Region Consistency for Semi-supervised Medical Image Segmentation**
Along He, Tao Li, Yanlin Wu, Ke Zou, Huazhu Fu

T-PM-100 **Fuzzy Attention-based Border Rendering Network for Lung Organ Segmentation**
Sheng Zhang, Yang Nan, Yingying Fang, Shiyi Wang, Xiaodan Xing, Zhifan Gao, Guang Yang

T-PM-102 **Generating Anatomically Accurate Heart Structures via Neural Implicit Fields**
Jiancheng Yang, Ekaterina Sedykh, Jason Ken Adhinarta, Hieu Le, Pascal Fua

T-PM-104 **Hallucinated Style Distillation for Single Domain Generalization in Medical Image Segmentation**
Jingjun Yi, Qi Bi, Hao Zheng, Haolan Zhan, Wei Ji, Yawen Huang, Shaoxin Li, Yuexiang Li, Yefeng Zheng, Feiyue Huang

T-PM-106 **Harnessing Temporal Information for Precise Frame-Level Predictions in Endoscopy Videos**
Pooya Mobadersany, Chaitanya Parmar, Pablo F. Damasceno, Shreyas Fadnavis, Krishna Chaitanya, Shilong Li, Evan Schwab, Jaclyn Xiao, Lindsey Surace, Tommaso Mansi, Gabriela Oana Cula, Louis R. Ghanem, Kristopher Standish

POSTER PRESENTATIONS

T-PM-108 **HecVL: Hierarchical Video-Language Pretraining for Zero-shot Surgical Phase Recognition**
Kun Yuan, Vinkle Srivastav, Nassir Navab, Nicolas Padoy

T-PM-110 **HiA: Towards Chinese Multimodal LLMs for Comparative High-Resolution Joint Diagnosis**
Xinpeng Ding, Yongqiang Chu, Renjie Pi, Hualiang Wang, Xiaomeng Li

T-PM-112 **Hierarchical Text-to-Vision Self Supervised Alignment for Improved Histopathology Representation Learning**
Hasindri Watawana, Kanchana Ranasinghe, Tariq Mahmood, Muzammal Naseer, Salman Khan, Fahad Shahbaz Khan

T-PM-114 **HRDecoder: High-Resolution Decoder Network for Fundus Image Lesion Segmentation**
Ziyuan Ding, Yixiong Liang, Shichao Kan, Qing Liu

T-PM-116 **HyperSpace: Hypernetworks for spacing-adaptive image segmentation**
Samuel Joutard, Maximilian Pietsch, Raphael Prevost

T-PM-118 **I2Net: Exploiting Misaligned Contexts Orthogonally with Implicit-Parameterized Implicit Functions for Medical Image Segmentation**
Jiahao Yu, Fan Duan, Li Chen

T-PM-120 **Insight: A Multi-Modal Diagnostic Pipeline using LLMs for Ocular Surface Disease Diagnosis**
Chun-Hsiao Yeh, Jiayun Wang, Andrew D. Graham, Andrea J. Liu, Bo Tan, Yubei Chen, Yi Ma, Meng C. Lin

T-PM-122 **IOSSAM: Label Efficient Multi-View Prompt-Driven Tooth Segmentation**
Xinrui Huang, Dongming He, Zhenming Li, Xiaofan Zhang, Xudong Wang

T-PM-124 **IPLC: Iterative Pseudo Label Correction Guided by SAM for Source-Free Domain Adaptation in Medical Image Segmentation**
Guoning Zhang, Xiaoran Qi, Bo Yan, Guotai Wang

T-PM-126 **IterMask2: Iterative Unsupervised Anomaly Segmentation via Spatial and Frequency Masking for Brain Lesions in MRI**
Ziyun Liang, Xiaoqing Guo, J. Alison Noble, Konstantinos Kamnitsas

T-PM-128 **Jumpstarting Surgical Computer Vision**
Deepak Alapatt, Aditya Murali, Vinkle Srivastav, AI4SafeChole Consortium, Pietro Mascagni, Nicolas Padoy

POSTER PRESENTATIONS

T-PM-130 **Knowledge-grounded Adaptation Strategy for Vision-language Models: Building a Unique Case-set for Screening Mammograms for Residents Training**
Aisha Urooj Khan, John Garrett, Tyler Bradshaw, Lonie Salkowski, Jiwoong Jeong, Amara Tariq, Imon Banerjee

T-PM-132 **Label merge-and-split: A graph-colouring approach for memory-efficient brain parcellation**
Aaron Kujawa, Reuben Dorent, Sebastien Ourselin, Tom Vercauteren

T-PM-134 **LB-UNet: A Lightweight Boundary-assisted UNet for Skin Lesion Segmentation**
Jiahao Xu, Lyuyang Tong

T-PM-136 **Learnable Skeleton-Based Medical Landmark Estimation with Graph Sparsity and Fiedler Regularizations**
Yao Wang, Jiahao Chen, Wenjian Huang, Pei Dong, Zhen Qian

T-PM-138 **Let Me DeCode You: Decoder Conditioning with Tabular Data**
Tomasz Szczepański, Michal K. Grzeszczyk, Szymon Płotka, Arleta Adamowicz, Piotr Fudalej, Przemyslaw Korzeniowski, Tomasz Trzciński, Arkadiusz Sitek

T-PM-140 **LGA: A Language Guide Adapter for Advancing the SAM Model's Capabilities in Medical Image Segmentation**
Jihong Hu, Yinhao Li, Hao Sun, Yu Song, Chujie Zhang, Lanfen Lin, Yen-Wei Chen

T-PM-142 **LIDIA: Precise Liver Tumor Diagnosis on Multi-Phase Contrast-Enhanced CT via Iterative Fusion and Asymmetric Contrastive Learning**
Wei Huang, Wei Liu, Xiaoming Zhang, Xiaoli Yin, Xu Han, Chunli Li, Yuan Gao, Yu Shi, Le Lu, Ling Zhang, Lei Zhang, Ke Yan

T-PM-144 **LKM-UNet: Large Kernel Vision Mamba UNet for Medical Image Segmentation**
Jinhong Wang, Jintai Chen, Danny Chen, Jian Wu

T-PM-146 **LLM-guided Multi-modal Multiple Instance Learning for 5-year Overall Survival Prediction of Lung Cancer**
Kyungwon Kim, Yongmoon Lee, Doohyun Park, Taejoon Eo, Daemyung Youn, Hyesang Lee, Dosik Hwang

T-PM-148 **LM-UNet: Whole-body PET-CT Lesion Segmentation with Dual-Modality-based Annotations Driven by Latent Mamba U-Net**
Anglin Liu, Dengqiang Jia, Kaicong Sun, Runqi Meng, Meixin Zhao, Yongluo Jiang, Zhijian Dong, Yaozong Gao, Dinggang Shen

T-PM-150 **LUCIDA: Low-dose Universal-tissue CT Image Domain Adaptation For Medical Segmentation**
Yixin Chen, Xiangxi Meng, Yan Wang, Shuang Zeng, Xi Liu, Zhaoheng Xie

POSTER PRESENTATIONS

T-PM-152 **M4oE: A Foundation Model for Medical Multimodal Image Segmentation with Mixture of Experts**
Yufeng Jiang, Yiqing Shen

T-PM-154 **MAdapter: A Better Interaction between Image and Language for Medical Image Segmentation**
Xu Zhang, Bo Ni, Yang Yang, Lefei Zhang

T-PM-156 **Mask-Enhanced Segment Anything Model for Tumor Lesion Semantic Segmentation**
Hairong Shi, Songhao Han, Shaofei Huang, Yue Liao, Guanbin Li, Xiangxing Kong, Hua Zhu, Xiaomu Wang, Si Liu

T-PM-158 **Masks and Manuscripts: Advancing Medical Pre-training with End-to-End Masking and Narrative Structuring**
Shreyank N Gowda, David A. Clifton

T-PM-160 **MEDBind: Unifying Language and Multimodal Medical Data Embeddings**
Yuan Gao, Sangwook Kim, David E Austin, Chris McIntosh

T-PM-162 **Medical Image Synthesis via Fine-Grained Image-Text Alignment and Anatomy-Pathology Prompting**
Wenting Chen, Pengyu Wang, Hui Ren, Lichao Sun, Quanzheng Li, Yixuan Yuan, Xiang Li

T-PM-164 **Missing as Masking: Arbitrary Cross-modal Feature Reconstruction for Incomplete Multimodal Brain Tumor Segmentation**
Zhilin Zeng, Zelin Peng, Xiaokang Yang, Wei Shen

T-PM-166 **MoRA: LoRA Guided Multi-Modal Disease Diagnosis with Missing Modality**
Zhiyi Shi, Junsik Kim, Wanhua Li, Yicong Li, Hanspeter Pfister

T-PM-168 **Multi-Frequency and Smoke Attention-aware Learning based Diffusion Model for Removing Surgical Smoke**
Hao Li, Xiangyu Zhai, Jie Xue, Changming Gu, Baolong Tian, Tingxuan Hong, Bin Jin, Dengwang Li, Pu Huang

T-PM-170 **Multimodal Cross-Task Interaction for Survival Analysis in Whole Slide Pathological Images**
Songhan Jiang, Zhengyu Gan, Linghan Cai, Yifeng Wang, Yongbing Zhang

T-PM-172 **Multi-sequence learning for multiple sclerosis lesion segmentation in spinal cord MRI**
Ricky Walsh, Malo Gaubert, Cédric Meurée, Burhan Rashid Hussein, Anne Kerbrat, Romain Casey, Benoit Combès, Francesca Galassi

T-PM-174 **MuST: Multi-Scale Transformers for Surgical Phase Recognition**
Alejandra Pérez, Santiago Rodríguez, Nicolás Ayobi, Nicolás Aparicio, Eugénie Dessevres, Pablo Arbeláez

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T-PM-176 **NeuroConText: Contrastive Text-to-Brain Mapping for Neuroscientific Literature**
Raphaël Meudec, Fateme Ghayem, Jérôme Dockès, Demian Wassermann, Bertrand Thirion

T-PM-178 **NeuroLink: Bridging Weak Signals in Neuronal Imaging with Morphology Learning**
Haiyang Yan, Hao Zhai, Jinyue Guo, Linlin Li, Hua Han

T-PM-180 **Online 3D reconstruction and dense tracking in endoscopic videos**
Michel Hayoz, Christopher Hahne, Thomas Kurmann, Max Allan, Guido Beldi, Daniel Candinas, Pablo Márquez-Neila, Raphael Sznitman

T-PM-182 **Optimizing Efficiency and Effectiveness in Sequential Prompt Strategy for SAM using Reinforcement Learning**
Yifei Huang, Chuyun Shen, Wenhao Li, Xiangfeng Wang, Bo Jin, Haibin Cai

T-PM-184 **PathM3: A Multimodal Multi-Task Multiple Instance Learning Framework for Whole Slide Image Classification and Captioning**
Qifeng Zhou, Wenliang Zhong, Yuzhi Guo, Michael Xiao, Hehuan Ma, Junzhou Huang

T-PM-186 **PathMamba: Weakly Supervised State Space Model for Multi-class Segmentation of Pathology Images**
Jiansong Fan, Tianxu Lv, Yicheng Di, Lihua Li, Xiang Pan

T-PM-188 **PEMMA: Parameter-Efficient Multi-Modal Adaptation for Medical Image Segmentation**
Nada Saadi, Numan Saeed, Mohammad Yaqub, Karthik Nandakumar

T-PM-190 **PEPSI: Pathology-Enhanced Pulse-Sequence-Invariant Representations for Brain MRI**
Peirong Liu, Oula Puonti, Annabel Sorby-Adams, W. Taylor Kimberly, Juan E. Iglesias

T-PM-192 **PG-MLIF: Multimodal Low-rank Interaction Fusion Framework Integrating Pathological Images and Genomic Data for Cancer Prognosis Prediction**
Xipeng Pan, Yajun An, Rushi Lan, Zhenbing Liu, Zaiyi Liu, Cheng Lu, Huihua Yang

T-PM-194 **Physics informed neural networks for estimation of tissue properties from multi-echo configuration state MRI**
Samuel I. Adams-Tew, Henrik Odéen, Dennis L. Parker, Cheng-Chieh Cheng, Bruno Madore, Allison Payne, Sarang Joshi

T-PM-196 **Prompt-based Segmentation Model of Anatomical Structures and Lesions in CT Images**
Xi Ouyang, Dongdong Gu, Xuejian Li, Wenqi Zhou, Qianqian Chen, Yiqiang Zhan, Xiang Zhou, Feng Shi, Zhong Xue, Dinggang Shen

POSTER PRESENTATIONS

T-PM-198 **Prompting Segment Anything Model with Domain-Adaptive Prototype for Generalizable Medical Image Segmentation**
Zhikai Wei, Wenhui Dong, Peilin Zhou, Yuliang Gu, Zhou Zhao, Yongchao Xu

T-PM-200 **Prompting Whole Slide Image Based Genetic Biomarker Prediction**
Ling Zhang, Boxiang Yun, Xingran Xie, Qingli Li, Xinxing Li, Yan Wang

T-PM-202 **ProstNFound: Integrating Foundation Models with Ultrasound Domain Knowledge and Clinical Context for Robust Prostate Cancer Detection**
Paul F. R. Wilson, Minh Nguyen Nhat To, Amoon Jamzad, Mahdi Gilany, Mohamed Harmanani, Tarek Elghareb, Fahimeh Fooladgar, Brian Wodlinger, Purang Abolmaesumi, Parvin Mousavi

T-PM-204 **Reprogramming Distillation for Medical Foundation Models**
Yuhang Zhou, Siyuan Du, Haolin Li, Jiangchao Yao, Ya Zhang, Yanfeng Wang

T-PM-206 **RET-CLIP: A Retinal Image Foundation Model Pre-trained with Clinical Diagnostic Reports**
Jiawei Du, Jia Guo, Weihang Zhang, Shengzhu Yang, Hanruo Liu, Huiqi Li, Ningli Wang

T-PM-208 **Rethinking Abdominal Organ Segmentation (RAOS) in the clinical scenario: A robustness evaluation benchmark with challenging cases**
Xiangde Luo, Zihan Li, Shaoting Zhang, Wenjun Liao, Guotai Wang

T-PM-210 **Rethinking Histology Slide Digitization Workflows for Low-Resource Settings**
Talat Zehra, Joseph Marino, Wendy Wang, Grigoriy Frantsuzov, Saad Nadeem

T-PM-212 **Revisiting Self-Attention in Medical Transformers via Dependency Sparsification**
Xian Lin, Zhehao Wang, Zengqiang Yan, Li Yu

T-PM-214 **Robust Semi-supervised Multimodal Medical Image Segmentation via Cross Modality Collaboration**
Xiaogen Zhou, Yiyou Sun, Min Deng, Winnie Chiu Wing Chu, Qi Dou

T-PM-216 **SAM-Med3D-MoE: Towards a Non-Forgetting Segment Anything Model via Mixture of Experts for 3D Medical Image Segmentation**
Guoan Wang, Jin Ye, Junlong Cheng, Tianbin Li, Zhaolin Chen, Jianfei Cai, Junjun He, Bohan Zhuang

T-PM-218 **SDCL: Students Discrepancy-Informed Correction Learning for Semi-supervised Medical Image Segmentation**
Bentao Song, Qingfeng Wang

T-PM-220 **SDFPlane: Explicit Neural Surface Reconstruction of Deformable Tissues**
Hao Li, Jiwei Shan, Hesheng Wang

POSTER PRESENTATIONS

T-PM-222 **See, Predict, Plan: Diffusion for Procedure Planning in Robotic Surgical Videos**
Ziyuan Zhao, Fen Fang, Xulei Yang, Qianli Xu, Cuntai Guan, S. Kevin Zhou

T-PM-224 **SegNeuron: 3D Neuron Instance Segmentation in Any EM Volume with a Generalist Model**
Yanchao Zhang, Jinyue Guo, Hao Zhai, Jing Liu, Hua Han

T-PM-226 **Self-Paced Sample Selection for Barely-Supervised Medical Image Segmentation**
Junming Su, Zhiqiang Shen, Peng Cao, Jinzhu Yang, Osmar R. Zaiane

T-PM-228 **SelfReg-UNet: Self-Regularized UNet for Medical Image Segmentation**
Wenhui Zhu, Xiwen Chen, Peijie Qiu, Mohammad Farazi, Aristeidis Sotiras, Abolfazl Razi, Yalin Wang

T-PM-230 **Semi-supervised Tubular Structure Segmentation with Cross Geometry and Hausdorff Distance Consistency**
Ruiyun Zhu, Masahiro Oda, Yuichiro Hayashi, Takayuki Kitasaka, Kensaku Mori

T-PM-232 **Simulation-Based Segmentation of Blood Vessels in Cerebral 3D OCTA Images**
Bastian Wittmann, Lukas Glandorf, Johannes C. Paetzold, Tamaz Amiranashvili, Thomas Wälchli, Daniel Razansky, Bjoern Menze

T-PM-234 **Simultaneous Monocular Endoscopic Dense Depth and Odometry Estimation Using Local-Global Integration Networks**
Wenkang Fan, Wenjing Jiang, Hao Fang, Hong Shi, Jianhua Chen, Xiongbiao Luo

T-PM-236 **SIX-Net: Spatial-context Information miX-up for Electrode Landmark Detection**
Xinyi Wang, Zikang Xu, Heqin Zhu, Qingsong Yao, Yiyong Sun, S. Kevin Zhou

T-PM-238 **Spatial Context Awareness in Surgery through Sound Source Localization**
Matthias Seibold, Ali Bahari Malayeri, Philipp Fürnstahl

T-PM-240 **Spatial Transcriptomics Analysis of Zero-shot Gene Expression Prediction**
Yan Yang, Md Zakir Hossain, Xuesong Li, Shafin Rahman, Eric Stone

T-PM-242 **Spatio-temporal neural distance fields for conditional generative modeling of the heart**
Kristine Sørensen, Paula Diez, Jan Margeta, Yasmin El Youssef, Michael Pham, Jonas Jalili Pedersen, Tobias Kühl, Ole de Backer, Klaus Kofoed, Oscar Camara, Rasmus Paulsen

T-PM-244 **S-SAM: SVD-based Fine-Tuning of Segment Anything Model for Medical Image Segmentation**
Jay N. Paranjape, Shameema Sikder, S. Swaroop Vedula, Vishal M. Patel

POSTER PRESENTATIONS

T-PM-246 **Structural Entities Extraction and Patient Indications Incorporation for Chest X-ray Report Generation**
Kang Liu, Zhuoqi Ma, Xiaolu Kang, Zhusi Zhong, Zhicheng Jiao, Grayson Baird, Harrison Bai, Qiguang Miao

T-PM-248 **Structure-preserving Image Translation for Depth Estimation in Colonoscopy**
Shuxian Wang, Akshay Paruchuri, Zhaoxi Zhang, Sarah McGill, Roni Sengupta

T-PM-250 **Superpixel-Guided Segment Anything Model for Liver Tumor Segmentation with Couinaud Segment Prompt**
Fei Lyu, Jingwen Xu, Ye Zhu, Grace Lai-Hung Wong, Pong C. Yuen

T-PM-252 **Surgformer: Surgical Transformer with Hierarchical Temporal Attention for Surgical Phase Recognition**
Shu Yang, Luyang Luo, Qiong Wang, Hao Chen

T-PM-254 **Swin SMT: Global Sequential Modeling for Enhancing 3D Medical Image Segmentation**
Szymon Płotka, Maciej Chrabaszcz, Przemyslaw Biecek

T-PM-256 **Swin-UMamba: Mamba-based UNet with ImageNet-based pretraining**
Jiarun Liu, Hao Yang, Hong-Yu Zhou, Yan Xi, Lequan Yu, Cheng Li, Yong Liang, Guangming Shi, Yizhou Yu, Shaoting Zhang, Hairong Zheng, Shanshan Wang

T-PM-258 **Symmetry Awareness Encoded Deep Learning Framework for Brain Imaging Analysis**
Yang Ma, Dongang Wang, Peilin Liu, Lynette Masters, Michael Barnett, Weidong Cai, Chenyu Wang

T-PM-260 **Textmatch: Using Text Prompts to Improve Semi-supervised Medical Image Segmentation**
Aibing Li, Xinyi Zeng, Pinxian Zeng, Sixian Ding, Peng Wang, Chengdi Wang, Yan Wang

T-PM-262 **TextPolyp: Point-supervised Polyp Segmentation with Text Cues**
Yiming Zhao, Yi Zhou, Yizhe Zhang, Ye Wu, Tao Zhou

T-PM-264 **Topologically faithful multi-class segmentation in medical images**
Alexander H. Berger, Laurin Lux, Nico Stucki, Vincent Bürgin, Suprosanna Shit, Anna Banaszak, Daniel Rueckert, Ulrich Bauer, Johannes C. Paetzold

T-PM-266 **TP-DRSeg: Improving Diabetic Retinopathy Lesion Segmentation with Explicit Text-Prompts Assisted SAM**
Wenxue Li, Xinyu Xiong, Peng Xia, Lie Ju, Zongyuan Ge

T-PM-268 **Transferring Relative Monocular Depth to Surgical Vision with Temporal Consistency**
Charlie Budd, Tom Vercauteren

POSTER PRESENTATIONS

T-PM-270 **Tri-modal Confluence with Temporal Dynamics for Scene Graph Generation in Operating Rooms**
Diandian Guo, Manxi Lin, Jialun Pei, He Tang, Yueming Jin, Pheng-Ann Heng

T-PM-272 **Tri-Plane Mamba: Efficiently Adapting Segment Anything Model for 3D Medical Images**
Hualiang Wang, Yiqun Lin, Xinpeng Ding, Xiaomeng Li

T-PM-274 **Unified Prompt-Visual Interactive Segmentation of Clinical Target Volume in CT for Nasopharyngeal Carcinoma with Prior Anatomical Information**
Hee Guan Khor, Xin Yang, Yihua Sun, Jie Wang, Sijuan Huang, Shaobin Wang, Bai Lu, Longfei Ma, Hongen Liao

T-PM-276 **UrFound: Towards Universal Retinal Foundation Models via Knowledge-Guided Masked Modeling**
Kai Yu, Yang Zhou, Yang Bai, Zhi Da Soh, Xinxing Xu, Rick Siow Mong Goh, Ching-Yu Cheng, Yong Liu

T-PM-278 **VCLIPSeg: Voxel-wise CLIP-Enhanced model for Semi-Supervised Medical Image Segmentation**
Lei Li, Sheng Lian, Zhiming Luo, Beizhan Wang, Shaozi Li

T-PM-280 **VertFound: Synergizing Semantic and Spatial Understanding for Fine-grained Vertebrae Classification via Foundation Models**
Jinzhou Tang, Yinhao Wu, Zequan Yao, Mingjie Li, Yuan Hong, Dongdong Yu, Zhifan Gao, Bin Chen, Shen Zhao

T-PM-282 **Weakly-supervised Medical Image Segmentation with Gaze Annotations**
Yuan Zhong, Chenhui Tang, Yumeng Yang, Ruoxi Qi, Kang Zhou, Yuqi Gong, Pheng Ann Heng, Janet H. Hsiao, Qi Dou

T-PM-284 **Whole Heart 3D+T Representation Learning Through Sparse 2D Cardiac MR Images**
Yundi Zhang, Chen Chen, Suprosanna Shit, Sophie Starck, Daniel Rueckert, Jiazhen Pan

POSTER PRESENTATIONS

Poster Session 5: Image Registration, Computer Aided Diagnosis 2, and Transparency, Fairness and Uncertainty 2

Wednesday, October 9, 2024, 10:30 to 11:30

W-AM-001 **A Clinical-oriented Multi-level Contrastive Learning Method for Disease Diagnosis in Low-quality Medical Images**
Qingshan Hou, Shuai Cheng, Peng Cao, Jinzhu Yang, Xiaoli Liu, Yih Chung Tham, Osmar R. Zaiane

W-AM-003 **A Foundation Model for Brain Lesion Segmentation with Mixture of Modality Experts**
Xinru Zhang, Ni Ou, Berke Doga Basaran, Marco Visentin, Mengyun Qiao, Renyang Gu, Cheng Ouyang, Yaou Liu, Paul M. Matthews, Chuyang Ye, Wenjia Bai

W-AM-005 **A framework for assessing joint human-AI systems based on uncertainty estimation**
Emir Konuk, Robert Welch, Filip Christiansen, Elisabeth Epstein, Kevin Smith

W-AM-007 **A Large-scale Multi Domain Leukemia Dataset for the White Blood Cells Detection with Morphological Attributes for Explainability**
Abdul Rehman, Talha Meraj, Aiman Mahmood Minhas, Ayisha Imran, Mohsen Ali, Waqas Sultani

W-AM-009 **A Multi-Information Dual-Layer Cross-Attention Model for Esophageal Fistula Prognosis**
Jianqiao Zhang, Hao Xiong, Qiangguo Jin, Tian Feng, Jiquan Ma, Ping Xuan, Peng Cheng, Zhiyuan Ning, Zhiyu Ning, Changyang Li, Linlin Wang, Hui Cui

W-AM-011 **A Unified Model for Longitudinal Multi-Modal Multi-View Prediction with Missingness**
Boqi Chen, Junier Oliva, Marc Niethammer

W-AM-013 **Adaptive Curriculum Query Strategy for Active Learning in Medical Image Classification**
Siteng Ma, Honghui Du, Kathleen M. Curran, Aonghus Lawlor, Ruihai Dong

W-AM-015 **Advancing Brain Imaging Analysis Step-by-step via Progressive Self-paced Learning**
Yanwu Yang, Hairui Chen, Jiesi Hu, Xutao Guo, Ting Ma

W-AM-017 **Aligning and Restoring Imperfect ssEM images for Continuity Reconstruction**
Yanan Lv, Haoze Jia, Xi Chen, Haiyang Yan, Hua Han

W-AM-019 **An Organism Starts with a Single Pix-Cell: A Neural Cellular Diffusion for High-Resolution Image Synthesis**
Marawan Elbatel, Konstantinos Kamnitsas, Xiaomeng Li

W-AM-021 **Anatomic-constrained Medical Image Synthesis via Physiological Density Sampling**
Yuetan Chu, Changchun Yang, Gongning Luo, Zhaowen Qiu, Xin Gao

POSTER PRESENTATIONS

W-AM-023 **Are We Ready for Out-of-Distribution Detection in Digital Pathology?**
Ji-Hun Oh, Kianoush Falahkheirkhah, Rohit Bhargava

W-AM-025 **Attention-Enhanced Fusion of Structural and Functional MRI for Analyzing HIV-Associated Asymptomatic Neurocognitive Impairment**
Yuqi Fang, Wei Wang, Qianqian Wang, Hong-Jun Li, Mingxia Liu

W-AM-027 **BiasPruner: Debiased Continual Learning for Medical Image Classification**
Nourhan Bayasi, Jamil Fayyad, Alceu Bissoto, Ghassan Hamarneh, Rafeef Garbi

W-AM-029 **Biomechanics-informed Non-rigid Medical Image Registration and its Inverse Material Property Estimation with Linear and Nonlinear Elasticity**
Zhe Min, Zachary M. C. Baum, Shaheer U. Saeed, Mark Emberton, Dean C. Barratt, Zeike A. Taylor, Yipeng Hu

W-AM-031 **BrainWaveNet: Wavelet-based Transformer for Autism Spectrum Disorder Diagnosis**
Ah-Yeong Jeong, Da-Woon Heo, Eunsong Kang, Heung-Il Suk

W-AM-033 **CardioSpectrum: Comprehensive Myocardium Motion Analysis with 3D Deep Learning and Geometric Insights**
Shahar Zuler, Shai Tejman-Yarden, Dan Raviv

W-AM-035 **CausCLIP: Causality-Adapting Visual Scoring of Visual Language Models for Few-Shot Learning in Portable Echocardiography Quality Assessment**
Yiran Li, Xiaoxiao Cui, Yankun Cao, Yuezhong Zhang, Huihui Wang, Lizhen Cui, Zhi Liu, Shuo Li

W-AM-037 **Cephalometric Landmark Detection across Ages with Prototypical Network**
Han Wu, Chong Wang, Lanzhuju Mei, Tong Yang, Min Zhu, Dinggang Shen, Zhiming Cui

W-AM-039 **CheXtriev: Anatomy-Centered Representation for Case-Based Retrieval of Chest Radiographs**
Naren Akash R J, Arihanth Tadanki, Jayanthi Sivaswamy

W-AM-041 **CINA: Conditional Implicit Neural Atlas for Spatio-Temporal Representation of Fetal Brains**
Maik Dannecker, Vanessa Kyriakopoulou, Lucilio Cordero-Grande, Anthony N. Price, Joseph V. Hajnal, Daniel Rueckert

W-AM-043 **Class-Balancing Deep Active Learning with Auto-Feature Mixing and Minority Push-Pull Sampling**
Hongxin Lin, Chu Zhang, Mingyu Wang, Bin Huang, Jingjing Shao, Jinxiang Zhang, Zhenhua Gao, Xianfen Diao, Bingsheng Huang

POSTER PRESENTATIONS

W-AM-045 **Clinical-grade Multi-Organ Pathology Report Generation for Multi-scale Whole Slide Images via a Semantically Guided Medical Text Foundation Model**
Jing Wei Tan, SeungKyu Kim, Eunsu Kim, Sung Hak Lee, Sangjeong Ahn, Won-Ki Jeong

W-AM-047 **Continually Tuning a Large Language Model for Multi-domain Radiology Report Generation**
Yihua Sun, Hee Guan Khor, Yuanzheng Wang, Zhuhao Wang, Hongliang Zhao, Yu Zhang, Longfei Ma, Zhuozhao Zheng, Hongen Liao

W-AM-049 **Controllable and Efficient Multi-Class Pathology Nuclei Data Augmentation using Text-Conditioned Diffusion Models**
Hyun-Jic Oh, Won-Ki Jeong

W-AM-051 **Correlation-adaptive Multi-view CEUS Fusion for Liver Cancer Diagnosis**
Peng Wan, Shukang Zhang, Wei Shao, Junyong Zhao, Yinkai Yang, Wentao Kong, Haiyan Xue, Daoqiang Zhang

W-AM-053 **Cross-Slice Attention and Evidential Critical Loss for Uncertainty-Aware Prostate Cancer Detection**
Alex Ling Yu Hung, Haoxin Zheng, Kai Zhao, Kaifeng Pang, Demetri Terzopoulos, Kyunghyun Sung

W-AM-055 **Data-Driven Tissue- and Subject-Specific Elastic Regularization for Medical Image Registration**
Anna Reithmeir, Lina Felsner, Rickmer Braren, Julia A. Schnabel, Veronika A. Zimmer

W-AM-057 **Decoding the visual attention of pathologists to reveal their level of expertise**
Souradeep Chakraborty, Rajarsi Gupta, Oksana Yaskiv, Constantin Friedman, Natallia Sheuka, Dana Perez, Paul Friedman, Gregory Zelinsky, Joel Saltz, Dimitris Samaras

W-AM-059 **Deep-learning-based groupwise registration for motion correction of cardiac T1 mapping**
Yi Zhang, Yidong Zhao, Lu Huang, Liming Xia, Qian Tao

W-AM-061 **DermaVQA: A Multilingual Visual Question Answering Dataset for Dermatology**
Wen-wai Yim, Yujuan Fu, Zhaoyi Sun, Asma Ben Abacha, Meliha Yetisgen, Fei Xia

W-AM-063 **Detecting noisy labels with repeated cross-validations**
Jianan Chen, Vishwesh Ramanathan, Tony Xu, Anne L. Martel

W-AM-065 **DiffExplainer: Unveiling Black Box Models Via Counterfactual Generation**
Yingying Fang, Shuang Wu, Zihao Jin, Shiyi Wang, Caiwen Xu, Simon Walsh, Guang Yang

W-AM-067 **DiffuseReg: Denoising Diffusion Model for Obtaining Deformation Fields in Unsupervised Deformable Image Registration**
Yongtai Zhuo, Yiqing Shen

POSTER PRESENTATIONS

W-AM-069 **Diffusion Models with Implicit Guidance for Medical Anomaly Detection**
Cosmin I. Bercea, Benedikt Wiestler, Daniel Rueckert, Julia A. Schnabel

W-AM-071 **DINO-Reg: General Purpose Image Encoder for Training-free Multi-modal Deformable Medical Image Registration**
Xinrui Song, Xuanang Xu, Pingkun Yan

W-AM-073 **Disentangled Attention Graph Neural Network for Alzheimer's Disease Diagnosis**
Gurur Gamgam, Alkan Kabakcioglu, Demet Yüksel Dal, Burak Acar

W-AM-075 **Domain Adaptation for Unsupervised Cancer Detection: An application for skin Whole Slides Images from an interhospital dataset**
Natalia P. García-de-la-Puente, Miguel López-Pérez, Laëtitia Launet, Valery Naranjo

W-AM-077 **DRIM: Learning Disentangled Representations from Incomplete Multimodal Healthcare Data**
Lucas Robinet, Ahmad Berjaoui, Ziad Kheil, Elizabeth Cohen-Jonathan Moyal

W-AM-079 **DSCENet: Dynamic Screening and Clinical-Enhanced Multimodal Fusion for MPNs Subtype Classification**
Yuan Zhang, Yaolei Qi, Xiaoming Qi, Yongyue Wei, Guanyu Yang

W-AM-081 **EchoNarrator: Generating natural text explanations for ejection fraction predictions**
Sarina Thomas, Qing Cao, Anna Novikova, Daria Kulikova, Guy Ben-Yosef

W-AM-083 **EchoTracker: Advancing Myocardial Point Tracking in Echocardiography**
Md Abulkalam Azad, Artem Chernyshov, John Nyberg, Ingrid Tveten, Lasse Lovstakken, Håvard Dalen, Bjørnar Grenne, Andreas Østvik

W-AM-085 **Eddeep: Fast eddy-current distortion correction for diffusion MRI with deep learning**
Antoine Legouhy, Ross Callaghan, Whitney Stee, Philippe Peigneux, Hojjat Azadbakht, Hui Zhang

W-AM-087 **Efficient and Gender-adaptive Graph Vision Mamba for Pediatric Bone Age Assessment**
Lingyu Zhou, Zhang Yi, Kai Zhou, Xiuyuan Xu

W-AM-089 **Embryo Graphs: Predicting Human Embryo Viability from 3D Morphology**
Chloe He, Neringa Karpavičiūtė, Rishabh Hariharan, Céline Jacques, Jérôme Chambost, Jonas Malmsten, Nikica Zaninovic, Koen Wouters, Thomas Fréour, Cristina Hickman, Francisco Vasconcelos

W-AM-091 **Enhancing Gene Expression Prediction from Histology Images with Spatial Transcriptomics Completion**
Gabriel Mejia, Daniela Ruiz, Paula Cárdenas, Leonardo Manrique, Daniela Vega, Pablo Arbeláez

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W-AM-093 **Ensemble of Prior-guided Expert Graph Models for Survival Prediction in Digital Pathology**
Vishwesh Ramanathan, Pushpak Pati, Matthew McNeil, Anne L. Martel

W-AM-095 **Estimation and Analysis of Slice Propagation Uncertainty in 3D Anatomy Segmentation**
Rachaell Nihalaani, Tushar Kataria, Jadie Adams, Shireen Y. Elhabian

W-AM-097 **FALFormer: Feature-aware Landmarks self-attention for Whole-slide Image Classification**
Doanh C. Bui, Trinh Thi Le Vuong, Jin Tae Kwak

W-AM-099 **Feature Selection Gates with Gradient Routing for Endoscopic Image Computing**
Giorgio Roffo, Carlo Biffi, Pietro Salvagnini, Andrea Cherubini

W-AM-101 **FedEvi: Improving Federated Medical Image Segmentation via Evidential Weight Aggregation**
Jiayi Chen, Benteng Ma, Hengfei Cui, Yong Xia

W-AM-103 **Fine-grained Prompt Tuning: A Parameter and Memory Efficient Transfer Learning Method for High-resolution Medical Image Classification**
Yijin Huang, Pujin Cheng, Roger Tam, Xiaoying Tang

W-AM-105 **Follow the Radiologist: Clinically Relevant Multi-View Cues for Breast Cancer Detection from Mammograms**
Kshitiz Jain, Krithika Rangarajan, Chetan Arora

W-AM-107 **Forecasting Disease Progression with Parallel Hyperplanes in Longitudinal Retinal OCT**
Arunava Chakravarty, Taha Emre, Dmitrii Lachinov, Antoine Rivail, Hendrik Scholl, Lars Fritsche, Sobha Sivaprasad, Daniel Rueckert, Andrew Lotery, Ursula Schmidt-Erfurth, Hrvoje Bogunovic

W-AM-109 **GCAN: Generative Counterfactual Attention-guided Network for Explainable Cognitive Decline Diagnostics based on fMRI Functional Connectivity**
Xiongri Shen, Zhenxi Song, Zhiguo Zhang

W-AM-111 **Geometric Transformation Uncertainty for Improving 3D Fetal Brain Pose Prediction from Freehand 2D Ultrasound Videos**
Jayroop Ramesh, Nicola Dinsdale, Pak-Hei Yeung, Ana I.L. Namburete

W-AM-113 **GMM-CoRegNet: A Multimodal Groupwise Registration Framework Based on Gaussian Mixture Model**
Zhenyu Li, Fan Yu, Jie Lu, Zhen Qian

W-AM-115 **Groupwise Deformable Registration of Diffusion Tensor Cardiovascular Magnetic Resonance: Disentangling Diffusion Contrast, Respiratory and Cardiac Motions**
Fanwen Wang, Yihao Luo, Ke Wen, Jiahao Huang, Pedro F. Ferreira, Yaqing Luo, Yinzhe Wu, Camila Munoz, Dudley J. Pennell, Andrew D. Scott, Sonia Nielles-Vallespin, Guang Yang

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W-AM-117 **Heteroscedastic Uncertainty Estimation Framework for Unsupervised Registration**
Xiaoran Zhang, Daniel H. Pak, Shawn S. Ahn, Xiaoxiao Li, Chenyu You, Lawrence H. Staib, Albert J. Sinusas, Alex Wong, James S. Duncan

W-AM-119 **Hierarchical Symmetric Normalization Registration using Deformation-Inverse Network**
Qingrui Sha, Kaicong Sun, Mingze Xu, Yonghao Li, Zhong Xue, Xiaohuan Cao, Dinggang Shen

W-AM-121 **HistGen: Histopathology Report Generation via Local-Global Feature Encoding and Cross-modal Context Interaction**
Zhengrui Guo, Jiabo Ma, Yingxue Xu, Yihui Wang, Liansheng Wang, Hao Chen

W-AM-123 **HoG-Net: Hierarchical Multi-Organ Graph Network for Head and Neck Cancer Recurrence Prediction from CT Images**
Joseph Bae, Saarthak Kapse, Lei Zhou, Kartik Mani, Prateek Prasanna

W-AM-125 **HuLP: Human-in-the-Loop for Prognosis**
Muhammad Ridzuan, Mai A. Shaaban, Numan Saeed, Ikboljon Sobirov, Mohammad Yaqub

W-AM-127 **IarCAC: Instance-aware Representation for Coronary Artery Calcification Segmentation in Cardiac CT angiography**
Weili Jiang, Yiming Li, Zhang Yi, Jianyong Wang, Mao Chen

W-AM-129 **IMG-GCN: Interpretable Modularity-Guided Structure-Function Interactions Learning for Brain Cognition and Disorder Analysis**
Jing Xia, Yi Hao Chan, Deepank Girish, Jagath C. Rajapakse

W-AM-131 **IM-MoCo: Self-supervised MRI Motion Correction using Motion-Guided Implicit Neural Representations**
Ziad Al-Haj Hemidi, Christian Weihsbach, Mattias P. Heinrich

W-AM-133 **Improved Classification Learning from Highly Imbalanced Multi-Label Datasets of Inflamed Joints in [99mTc]Maraciclatide Imaging of Arthritic Patients by Natural Image and Diffusion Model Augmentation**
Robert Cobb, Gary J.R. Cook, Andrew J. Reader

W-AM-135 **Improved Esophageal Varices Assessment from Non-Contrast CT Scans**
Chunli Li, Xiaoming Zhang, Yuan Gao, Xiaoli Yin, Le Lu, Ling Zhang, Ke Yan, Yu Shi

W-AM-137 **Improving Neoadjuvant Therapy Response Prediction by Integrating Longitudinal Mammogram Generation with Cross-Modal Radiological Reports: A Vision-Language Alignment-guided Model**
Yuan Gao, Hong-Yu Zhou, Xin Wang, Tianyu Zhang, Luyi Han, Chunyao Lu, Xinglong Liang, Jonas Teuwen, Regina Beets-Tan, Tao Tan, Ritse Mann

POSTER PRESENTATIONS

W-AM-139 **Incorporating Clinical Guidelines through Adapting Multi-modal Large Language Model for Prostate Cancer PI-RADS Scoring**
Tiantian Zhang, Manxi Lin, Hongda Guo, Xiaofan Zhang, Ka Fung Peter Chiu, Aasa Feragen, Qi Dou

W-AM-141 **Interpretable Representation Learning of Cardiac MRI via Attribute Regularization**
Maxime Di Folco, Cosmin I. Bercea, Emily Chan, Julia A. Schnabel

W-AM-143 **Interpretable-by-design Deep Survival Analysis for Disease Progression Modeling**
Julius Gervelmeyer, Sarah Müller, Kerol Djoumessi, David Merle, Simon J. Clark, Lisa Koch, Philipp Berens

W-AM-145 **Iterative Online Image Synthesis via Diffusion Model for Imbalanced Classification**
Shuhan Li, Yi Lin, Hao Chen, Kwang-Ting Cheng

W-AM-147 **KARGEN: Knowledge-enhanced Automated Radiology Report Generation Using Large Language Models**
Yingshu Li, Zhanyu Wang, Yunyi Liu, Lei Wang, Lingqiao Liu, Luping Zhou

W-AM-149 **Large-Scale 3D Infant Face Model**
Till N. Schnabel, Yoriko Lill, Benito K. Benitez, Prasad Nalabothu, Philipp Metzler, Andreas A. Mueller, Markus Gross, Baran Gözcü, Barbara Solenthaler

W-AM-151 **LaTiM: Longitudinal representation learning in continuous-time models to predict disease progression**
Rachid Zeghlache, Pierre-Henri Conze, Mostafa El Habib Daho, Yihao Li, Hugo Le Boité, Ramin Tadayoni, Pascale Massin, Béatrice Cochener, Alireza Rezaei, Ikram Brahim, Gwenolé Quellec, Mathieu Lamard

W-AM-153 **Learning a Clinically-Relevant Concept Bottleneck for Lesion Detection in Breast Ultrasound**
Arianna Bunnell, Yannik Glaser, Dustin Valdez, Thomas Wolfgruber, Aleen Altamirano, Carol Zamora González, Brenda Y. Hernandez, Peter Sadowski, John A. Shepherd

W-AM-155 **Learning Temporally Equivariance for Degenerative Disease Progression in OCT by Predicting Future Representations**
Taha Emre, Arunava Chakravarty, Dmitrii Lachinov, Antoine Rivail, Ursula Schmidt-Erfurth, Hrvoje Bogunović

W-AM-157 **Leveraging Coarse-to-Fine Grained Representations in Contrastive Learning for Differential Medical Visual Question Answering**
Xiao Liang, Yin Wang, Di Wang, Zhicheng Jiao, Haodi Zhong, Mengyu Yang, Quan Wang

W-AM-159 **Location embedding based pairwise distance learning for fine-grained diagnosis of urinary stones**
Qiangguo Jin, Jiapeng Huang, Changming Sun, Hui Cui, Ping Xuan, Ran Su, Leyi Wei, Yu-Jie Wu, Chia-An Wu, Henry B.L. Duh, Yueh-Hsun Lu

POSTER PRESENTATIONS

W-AM-161 **Longitudinal Mammogram Risk Prediction**
Batuhan K. Karaman, Katerina Dodelzon, Gozde B. Akar, Mert R. Sabuncu

W-AM-163 **Longitudinally Consistent Individualized Prediction of Infant Cortical Morphological Development**
Xinrui Yuan, Jiale Cheng, Dan Hu, Zhengwang Wu, Li Wang, Weili Lin, Gang Li

W-AM-165 **M2Fusion: Multi-time Multimodal Fusion for Prediction of Pathological Complete Response in Breast Cancer**
Song Zhang, Siyao Du, Caixia Sun, Bao Li, Lizhi Shao, Lina Zhang, Kun Wang, Zhenyu Liu, Jie Tian

W-AM-167 **MambaMIL: Enhancing Long Sequence Modeling with Sequence Reordering in Computational Pathology**
Shu Yang, Yihui Wang, Hao Chen

W-AM-169 **Mammo-CLIP: A Vision Language Foundation Model to Enhance Data Efficiency and Robustness in Mammography**
Shantanu Ghosh, Clare B. Poynton, Shyam Visweswaran, Kayhan Batmanghelich

W-AM-171 **Mask-Free Neuron Concept Annotation for Interpreting Neural Networks in Medical Domain**
Hyeon Bae Kim, Yong Hyun Ahn, Seong Tae Kim

W-AM-173 **MedCLIP-SAM: Bridging Text and Image Towards Universal Medical Image Segmentation**
Taha Koleilat, Hojat Asgariandehkordi, Hassan Rivaz, Yiming Xiao

W-AM-175 **MediCLIP: Adapting CLIP for Few-shot Medical Image Anomaly Detection**
Ximiao Zhang, Min Xu, Dehui Qiu, Ruixin Yan, Ning Lang, Xiuzhuang Zhou

W-AM-177 **MMBCD: Multimodal Breast Cancer Detection from Mammograms with Clinical History**
Kshitiz Jain, Aditya Bansal, Krithika Rangarajan, Chetan Arora

W-AM-179 **MoME: Mixture of Multimodal Experts for Cancer Survival Prediction**
Conghao Xiong, Hao Chen, Hao Zheng, Dong Wei, Yefeng Zheng, Joseph J. Y. Sung, Irwin King

W-AM-181 **MPMNet: Modal Prior Mutual-support Network for Age-related Macular Degeneration Classification**
Yuanyuan Li, Huaying Hao, Dan Zhang, Huazhu Fu, Mengting Liu, Caifeng Shan, Yitian Zhao, Jiong Zhang

POSTER PRESENTATIONS

W-AM-183 **Multi-modal Data Binding for Survival Analysis Modeling with Incomplete Data and Annotations**
Linhao Qu, Dan Huang, Shaoting Zhang, Xiaosong Wang

W-AM-185 **Multi-Modal Data Fusion with Missing Data Handling for Mild Cognitive Impairment Progression Prediction**
Shuting Liu, Baochang Zhang, Veronika A. Zimmer, Daniel Rueckert

W-AM-187 **Multi-Modal Graph Neural Network with Transformer-Guided Adaptive Diffusion for Preclinical Alzheimer Classification**
Jaeyoon Sim, Minjae Lee, Guorong Wu, Won Hwa Kim

W-AM-189 **Multimodal Learning for Embryo Viability Prediction in Clinical IVF**
Junsik Kim, Zhiyi Shi, Davin Jeong, Johannes Knittel, Helen Y. Yang, Yonghyun Song, Wanhua Li, Yicong Li, Dalit Ben-Yosef, Daniel Needleman, Hanspeter Pfister

W-AM-191 **Multivariate Cooperative Game for Image-Report Pairs: Hierarchical Semantic Alignment for Medical Report Generation**
Zhihong Zhu, Xuxin Cheng, Yunyan Zhang, Zhaorun Chen, Qingqing Long, Hongxiang Li, Zhiqi Huang, Xian Wu, Yefeng Zheng

W-AM-193 **NODER: Image Sequence Regression Based on Neural Ordinary Differential Equations**
Hao Bai, Yi Hong

W-AM-195 **Noise Removed Inconsistency Activation Map for Unsupervised Registration of Brain Tumor MRI between Pre-operative and Follow-up Phases**
Chongwei Wu, Xiaoyu Zeng, Hao Wang, Xu Zhang, Wei Fang, Qiang Li, Zhiwei Wang

W-AM-197 **Novelty Detection Based Discriminative Multiple Instance Feature Mining to Classify NSCLC PD-L1 Status on HE-Stained Histopathological Images**
Rui Xu, Dan Yu, Xuan Yang, Xinchen Ye, Zhihui Wang, Yi Wang, Hongkai Wang, Haojie Li, Dingpin Huang, Fangyi Xu, Yi Gan, Yuan Tu, Hongjie Hu

W-AM-199 **On predicting 3D bone locations inside the human body**
Abdelmouttaleb Dakri, Vaibhav Arora, Léo Challier, Marilyn Keller, Michael J. Black, Sergi Pujades

W-AM-201 **One registration is worth two segmentations**
Shiqi Huang, Tingfa Xu, Ziyi Shen, Shaheer Ullah Saeed, Wen Yan, Dean Barratt, Yipeng Hu

W-AM-203 **Online learning in motion modeling for intra-interventional image sequences**
Niklas Gunnarsson, Jens Sjölund, Peter Kimstrand, Thomas B. Schön

POSTER PRESENTATIONS

W-AM-205 **On-the-Fly Guidance Training for Medical Image Registration**
Yuelin Xin, Yicheng Chen, Shengxiang Ji, Kun Han, Xiaohui Xie

W-AM-207 **ORCGT: Ollivier-Ricci Curvature-based Graph Model for Lung STAS Prediction**
Min Cen, Zheng Wang, Zhenfeng Zhuang, Hong Zhang, Dan Su, Zhen Bao, Weiwei Wei, Baptiste Magnier, Lequan Yu, Liansheng Wang

W-AM-209 **Poisson Ordinal Network for Gleason Group Estimation Using Bi-Parametric MRI**
Yinsong Xu, Yipei Wang, Ziyi Shen, Iani J.M.B. Gayo, Natasha Thorley, Shonit Punwani, Aidong Men, Dean Barratt, Qingchao Chen, Yipeng Hu

W-AM-211 **Pose-GuideNet: Automatic Scanning Guidance for Fetal Head Ultrasound from Pose Estimation**
Qianhui Men, Xiaoqing Guo, Aris T. Papageorghiou, J. Alison Noble

W-AM-213 **Position-Guided Prompt Learning for Anomaly Detection in Chest X-Rays**
Zhichao Sun, Yuliang Gu, Yepeng Liu, Zerui Zhang, Zhou Zhao, Yongchao Xu

W-AM-215 **Probabilistic Temporal Prediction of Continuous Disease Trajectories and Treatment Effects Using Neural SDEs**
Joshua Durso-Finley, Berardino Barile, Jean-Pierre Falet, Douglas L. Arnold, Nick Pawlowski, Tal Arbel

W-AM-217 **PULPo: Probabilistic Unsupervised Laplacian Pyramid Registration**
Leonard Siegert, Paul Fischer, Mattias P. Heinrich, Christian F. Baumgartner

W-AM-219 **Quality-Aware Fuzzy Min-Max Neural Networks for Dynamic Brain Network Analysis**
Tao Hou, Jiashuang Huang, Shu Jiang, Weiping Ding

W-AM-221 **Refining Intraocular Lens Power Calculation: A Multi-modal Framework Using Cross-layer Attention and Effective Channel Attention**
Qian Zhou, Hua Zou, Zhongyuan Wang, Haifeng Jiang, Yong Wang

W-AM-223 **Region-Specific Retrieval Augmentation for Longitudinal Visual Question Answering: A Mix-and-Match Paradigm**
Ka-Wai Yung, Jayaram Sivaraj, Danail Stoyanov, Stavros Loukogeorgakis, Evangelos B. Mazomenos

W-AM-225 **SaSaMIM: Synthetic Anatomical Semantics-Aware Masked Image Modeling for Colon Tumor Segmentation in Non-contrast Abdominal Computed Tomography**
Pengyu Dai, Yafei Ou, Yuqiao Yang, Dichao Liu, Masahiro Hashimoto, Masahiro Jinzaki, Mototaka Miyake, Kenji Suzuki

POSTER PRESENTATIONS

W-AM-227 **Seeing the Invisible: On Aortic Valve Reconstruction in Non-Contrast CT**
Mariusz Bujny, Katarzyna Jesionek, Jakub Nalepa, Tomasz Bartczak, Karol Miszalski-Jamka, Marcin Kostur

W-AM-229 **Semi-Supervised Contrastive VAE for Disentanglement of Digital Pathology Images**
Mahmudul Hasan, Xiaoling Hu, Shahira Abousamra, Prateek Prasanna, Joel Saltz, Chao Chen

W-AM-231 **Semi-supervised Lymph Node Metastasis Classification with Pathology-guided Label Sharpening and Two-streamed Multi-scale Fusion**
Haoshen Li, Yirui Wang, Jie Zhu, Dazhou Guo, Qinji Yu, Ke Yan, Le Lu, Xianghua Ye, Li Zhang, Qifeng Wang, Dakai Jin

W-AM-233 **Semi-supervised Segmentation through Rival Networks Collaboration with Saliency Map in Diabetic Retinopathy**
Eunjin Kim, Gitaek Kwon, Jaeyoung Kim, Hyunjin Park

W-AM-235 **Slice-Consistent Lymph Nodes Detection Transformer in CT Scans via Cross-slice Query Contrastive Learning**
Qinji Yu, Yirui Wang, Ke Yan, Le Lu, Na Shen, Xianghua Ye, Xiaowei Ding, Dakai Jin

W-AM-237 **Sparse Bayesian Networks: Efficient Uncertainty Quantification in Medical Image Analysis**
Zeinab Abboud, Herve Lombaert, Samuel Kadoury

W-AM-239 **Sparsity- and Hybridity-Inspired Visual Parameter-Efficient Fine-Tuning for Medical Diagnosis**
Mingyuan Liu, Lu Xu, Shengnan Liu, Jicong Zhang

W-AM-241 **Spatial-aware Attention Generative Adversarial Network for Semi-supervised Anomaly Detection in Medical Image**
Zerui Zhang, Zhichao Sun, Zelong Liu, Zhou Zhao, Rui Yu, Bo Du, Yongchao Xu

W-AM-243 **Spatio-temporal Contrast Network for Data-efficient Learning of Coronary Artery Disease in Coronary CT Angiography**
Xinghua Ma, Mingye Zou, Xinyan Fang, Yang Liu, Gongning Luo, Wei Wang, Kuanquan Wang, Zhaowen Qiu, Xin Gao, Shuo Li

W-AM-245 **Spot the Difference: Difference Visual Question Answering with Residual Alignment**
Zilin Lu, Yutong Xie, Qingjie Zeng, Mengkang Lu, Qi Wu, Yong Xia

W-AM-247 **Stealing Knowledge from Pre-trained Language Models for Federated Classifier Debiasing**
Meilu Zhu, Qiushi Yang, Zhifan Gao, Jun Liu, Yixuan Yuan

POSTER PRESENTATIONS

W-AM-249 **Subgroup-Specific Risk-Controlled Dose Estimation in Radiotherapy**
Paul Fischer, Hannah Willms, Moritz Schneider, Daniela Thorwarth, Michael Muehlebach, Christian F. Baumgartner

W-AM-251 **Symptom Disentanglement in Chest X-ray Images for Fine-Grained Progression Learning**
Ye Zhu, Jingwen Xu, Fei Lyu, Pong C. Yuen

W-AM-253 **TabMixer: Noninvasive Estimation of the Mean Pulmonary Artery Pressure via Imaging and Tabular Data Mixing**
Michal K. Grzeszczyk, Przemysław Korzeniowski, Samer Alabed, Andrew J. Swift, Tomasz Trzciński, Arkadiusz Sitek

W-AM-255 **Temporal Neighboring Multi-Modal Transformer with Missingness-Aware Prompt for Hepatocellular Carcinoma Prediction**
Jingwen Xu, Ye Zhu, Fei Lyu, Grace Lai-Hung Wong, Pong C. Yuen

W-AM-257 **Textual Inversion and Self-supervised Refinement for Radiology Report Generation**
Yuanjiang Luo, Hongxiang Li, Xuan Wu, Meng Cao, Xiaoshuang Huang, Zhihong Zhu, Peixi Liao, Hu Chen, Yi Zhang

W-AM-259 **This actually looks like that: Proto-BagNets for local and global interpretability-by-design**
Kerol Djoumessi, Bubacarr Bah, Laura Kuhlewein, Philipp Berens, Lisa Koch

W-AM-261 **TLRN: Temporal Latent Residual Networks For Large Deformation Image Registration**
Nian Wu, Jiarui Xing, Miaomiao Zhang

W-AM-263 **Toward Universal Medical Image Registration via Sharpness-Aware Meta-Continual Learning**
Bomin Wang, Xinzhe Luo, Xiahai Zhuang

W-AM-265 **Towards a Benchmark for Colorectal Cancer Segmentation in Endorectal Ultrasound Videos: Dataset and Model Development**
Yuncheng Jiang, Yiwen Hu, Zixun Zhang, Jun Wei, Chun-Mei Feng, Xuemei Tang, Xiang Wan, Yong Liu, Shuguang Cui, Zhen Li

W-AM-267 **Towards a Deeper insight into Face Detection in Neonatal wards**
Yisheng Zhao, Huaiyu Zhu, Qi Shu, Ruohong Huan, Shuohui Chen, Yun Pan

W-AM-269 **Towards Integrating Epistemic Uncertainty Estimation into the Radiotherapy Workflow**
Marvin Tom Teichmann, Manasi Datar, Lisa Kratzke, Fernando Vega, Florin C. Ghesu

W-AM-271 **Uncertainty-aware Diffusion-based Adversarial Attack for Realistic Colonoscopy Image Synthesis**
Minjae Jeong, Hyuna Cho, Sungyoon Jung, Won Hwa Kim

POSTER PRESENTATIONS

W-AM-273 **Uncertainty-Aware Multi-View Learning for Prostate Cancer Grading with DWI**
Zhicheng Dong, Xiaodong Yue, Yufei Chen, Xujing Zhou, Jiye Liang

W-AM-275 **Unified Multi-Modal Learning for Any Modality Combinations in Alzheimer's Disease Diagnosis**
Yidan Feng, Bingchen Gao, Sen Deng, Anqi Qiu, Jing Qin

W-AM-277 **uniGradICON: A Foundation Model for Medical Image Registration**
Lin Tian, Hastings Greer, Roland Kwitt, François-Xavier Vialard, Raúl San José Estépar, Sylvain Bouix, Richard Rushmore, Marc Niethammer

W-AM-279 **Vessel-aware aneurysm detection using multi-scale deformable 3D attention**
Alberto M. Ceballos-Arroyo, Hieu T. Nguyen, Fangrui Zhu, Shrikanth M. Yadav, Jisoo Kim, Lei Qin, Geoffrey Young, Huaizu Jiang

W-AM-281 **WiNet: Wavelet-based Incremental Learning for Efficient Medical Image Registration**
Xinxing Cheng, Xi Jia, Wenqi Lu, Qiufu Li, Linlin Shen, Alexander Krull, Jinming Duan

W-AM-283 **XCoOp: Explainable Prompt Learning for Computer-Aided Diagnosis via Concept-guided Context Optimization**
Yequan Bie, Luyang Luo, Zhixuan Chen, Hao Chen

W-AM-285 **XTranPrune: eXplainability-aware Transformer Pruning for Bias Mitigation in Dermatological Disease Classification**
Ali Ghadiri, Maurice Pagnucco, Yang Song

POSTER PRESENTATIONS

Poster Session 6: Computer Assisted Interventions and Surgery 2, Image Formation and Reconstruction 2, and Clinical Translation
Wednesday, October 9, 2024, 15:00 to 16:30

W-PM-002 **3DDX: Bone Surface Reconstruction from a Single Standard-Geometry Radiograph via Dual-Face Depth Estimation**
Yi Gu, Yoshito Otake, Keisuke Uemura, Masaki Takao, Mazen Soufi, Seiji Okada, Nobuhiko Sugano, Hugues Talbot, Yoshinobu Sato

W-PM-004 **3DGR-CAR: Coronary artery reconstruction from ultra-sparse 2D X-ray views with a 3D Gaussians representation**
Xueming Fu, Yingtai Li, Fenghe Tang, Jun Li, Mingyue Zhao, Gao-Jun Teng, S. Kevin Zhou

W-PM-006 **3DPX: Progressive 2D-to-3D Oral Image Reconstruction with Hybrid MLP-CNN Networks**
Xiaoshuang Li, Mingyuan Meng, Zimo Huang, Lei Bi, Eduardo Delamare, Dagan Feng, Bin Sheng, Jinman Kim

W-PM-008 **A Deep Learning Approach for Placing Magnetic Resonance Spectroscopy Voxels in Brain Tumors**
Sangyoon Lee, Francesca Branzoli, Thanh Nguyen, Ovidiu Andronesi, Alexander Lin, Roberto Liserre, Gerd Melkus, Clark Chen, Małgorzata Marjańska, Patrick J. Bolan

W-PM-010 **A Graph-Embedded Latent Space Learning and Clustering Framework for Incomplete Multimodal Multiclass Alzheimer's Disease Diagnosis**
Zaixin Ou, Caiwen Jiang, Yuxiao Liu, Yuanwang Zhang, Zhiming Cui, Dinggang Shen

W-PM-012 **A New Non-Invasive AI-Based Diagnostic System for Automated Diagnosis of Acute Renal Rejection in Kidney Transplantation: Analysis of ADC Maps Extracted from Matched 3D Iso-Regions of the Transplanted Kidney**
Ibrahim Abdelhalim, Mohamed Abou El-Ghar, Amy Dwyer, Rosemary Ouseph, Sohail Contractor, Ayman El-Baz

W-PM-014 **A Novel Tracking Framework for Devices in X-ray Leveraging Supplementary Cue-Driven Self-Supervised Features**
Saahil Islam, Venkatesh N. Murthy, Dominik Neumann, Serkan Cimen, Puneet Sharma, Andreas Maier, Dorin Comaniciu, Florin C. Ghesu

W-PM-016 **A Patient-Specific Framework for Autonomous Spinal Fixation via a Steerable Drilling Robot**
Susheela Sharma, Sarah Go, Zeynep Yakay, Yash Kulkarni, Siddhartha Kapuria, Jordan P. Amadio, Reza Rajebi, Mohsen Khadem, Nassir Navab, Farshid Alambeigi

W-PM-018 **Accelerated Multi-Contrast MRI Reconstruction via Frequency and Spatial Mutual Learning**
Qi Chen, Xiaohan Xing, Zhen Chen, Zhiwei Xiong

POSTER PRESENTATIONS

W-PM-020 **All-In-One Medical Image Restoration via Task-Adaptive Routing**
Zhiwen Yang, Haowei Chen, Ziniu Qian, Yang Yi, Hui Zhang, Dan Zhao, Bingzheng Wei, Yan Xu

W-PM-022 **An Evaluation of State-of-the-Art Projectors in the Presence of Noise and Nonlinearity in the Beer-Lambert Law**
Shiyu Xie, Kai Zhang, Alireza Entezari

W-PM-024 **Anatomically-Controllable Medical Image Generation with Segmentation-Guided Diffusion Models**
Nicholas Konz, Yuwen Chen, Haoyu Dong, Maciej A. Mazurowski

W-PM-026 **Anatomically-Guided Segmentation of Cerebral Microbleeds in T1-weighted and T2*-weighted MRI**
Junmo Kwon, Sang Won Seo, Hyunjin Park

W-PM-028 **Automated Spinal MRI Labelling from Reports Using a Large Language Model**
Robin Y. Park, Rhydian Windsor, Amir Jamaludin, Andrew Zisserman

W-PM-030 **Auxiliary Input in Training: Incorporating Catheter Features into Deep Learning Models for ECG-Free Dynamic Coronary Roadmapping**
Yikang Liu, Lin Zhao, Eric Z. Chen, Xiao Chen, Terrence Chen, Shanhui Sun

W-PM-032 **Baikal: Unpaired Denoising of Fluorescence Microscopy Images using Diffusion Models**
Shivesh Chaudhary, Sivaramakrishnan Sankarapandian, Matt Sooknah, Joy Pai, Caroline McCue, Zhenghao Chen, Jun Xu

W-PM-034 **Best of Both Modalities: Fusing CBCT and Intraoral Scan Data into a Single Tooth Image**
SaeHyun Kim, Yongjin Choi, Jincheol Na, In-Seok Song, You-Sun Lee, Bo-Yeon Hwang, Ho-Kyung Lim, Seung Jun Baek

W-PM-036 **Blind Proximal Diffusion Model for Joint Image and Sensitivity Estimation in Parallel MRI**
Xing Li, Yan Yang, Hairong Zheng, Zongben Xu

W-PM-038 **Brain Cortical Functional Gradients Predict Cortical Folding Patterns via Attention Mesh Convolution**
Li Yang, Zhibin He, Tianyang Zhong, Changhe Li, Dajiang Zhu, Junwei Han, Tianming Liu, Tuo Zhang

W-PM-040 **Brain-Shift: Unsupervised Pseudo-Healthy Brain Synthesis for Novel Biomarker Extraction in Chronic Subdural Hematoma**
Baris Imre, Elina Thibeau-Sutre, Jorieke Reimer, Kuan Kho, Jelmer M. Wolterink

W-PM-042 **Can Crowdsourced Annotations Improve AI-based Congestion Scoring For Bedside Lung Ultrasound?**
Ameneh Asgari-Targhi, Tamas Ungi, Mike Jin, Nicholas Harrison, Nicole Duggan, Erik Duhaime, Andrew Goldsmith, Tina Kapur

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W-PM-044 **Car-Dcros: A Dataset and Benchmark for Enhancing Cardiovascular Artery Segmentation through Disconnected Components Repair and Open Curve Snake**
Yuli Wang, Wen-Chi Hsu, Victoria Shi, Gigin Lin, Cheng Ting Lin, Xue Feng, Harrison Bai

W-PM-046 **Cardiac Physiology Knowledge-driven Diffusion Model for Contrast-free Synthesis Myocardial Infarction Enhancement**
Ronghui Qi, Xiaohu Li, Lei Xu, Jie Zhang, Yanping Zhang, Chenchu Xu

W-PM-048 **CAVM: Conditional Autoregressive Vision Model for Contrast-Enhanced Brain Tumor MRI Synthesis**
Lujun Gui, Chuyang Ye, Tianyi Yan

W-PM-050 **Coarse-Grained Mask Regularization for Microvascular Obstruction Identification from non-contrast Cardiac Magnetic Resonance**
Yige Yan, Jun Cheng, Xulei Yang, Zaiwang Gu, Shuang Leng, Ru San Tan, Liang Zhong, Jagath C. Rajapakse

W-PM-052 **Coarse-to-Fine Latent Diffusion Model for Glaucoma Forecast on Sequential Fundus Images**
Yuhan Zhang, Kun Huang, Xikai Yang, Xiao Ma, Jian Wu, Ningli Wang, Xi Wang, Pheng-Ann Heng

W-PM-054 **Conditional 4D Motion Diffusion Models with Masked Observations to Forecast Deformations**
Sylvain Thibeault, Liset Vazquez Romaguera, Samuel Kadoury

W-PM-056 **Convolutional Implicit Neural Representation of pathology whole-slide images**
DongEon Lee, Chunsu Park, SeonYeong Lee, SiYeoul Lee, MinWoo Kim

W-PM-058 **Cortical Surface Reconstruction from 2D MRI with Segmentation-Constrained Super-Resolution and Representation Learning**
Wenxuan Wu, Ruowen Qu, Dongzi Shi, Tong Xiong, Xiangmin Xu, Xiaofen Xing, Xin Zhang

W-PM-060 **Cross-conditioned Diffusion Model for Medical Image to Image Translation**
Zhaohu Xing, Sicheng Yang, Sixiang Chen, Tian Ye, Yijun Yang, Jing Qin, Lei Zhu

W-PM-062 **Cross-Phase Mutual Learning Framework for Pulmonary Embolism Identification on Non-Contrast CT Scans**
Bizhe Bai, Yan-Jie Zhou, Yujian Hu, Tony C. W. Mok, Yilang Xiang, Le Lu, Hongkun Zhang, Minfeng Xu

W-PM-064 **Customized Relationship Graph Neural Network for Brain Disorder Identification**
Zhengwang Xia, Huan Wang, Tao Zhou, Zhuqing Jiao, Jianfeng Lu

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W-PM-066 **Data Augmentation with Multi-armed Bandit on Image Deformations Improves Fluorescence Glioma Boundary Recognition**
Anqi Xiao, Keyi Han, Xiaojing Shi, Jie Tian, Zhenhua Hu

W-PM-068 **DCrownFormer: Morphology-aware Point-to-Mesh Generation Transformer for Dental Crown Prosthesis from 3D Scan Data of Antagonist and Preparation Teeth**
Su Yang, Jiyong Han, Sang-Heon Lim, Ji-Yong Yoo, SuJeong Kim, Dahyun Song, Sunjung Kim, Jun-Min Kim, Won-Jin Yi

W-PM-070 **Death by Retrospective Undersampling - Caveats and Solutions for Learning-Based MRI Reconstructions**
Junaid R. Rajput, Simon Weinmueller, Jonathan Endres, Peter Dawood, Florian Knoll, Andreas Maier, Moritz Zaiss

W-PM-072 **Deep intra-operative illumination calibration of hyperspectral cameras**
Alexander Baumann, Leonardo Ayala, Alexander Studier-Fischer, Jan Sellner, Berkin Özdemir, Karl-Friedrich Kowalewski, Slobodan Ilic, Silvia Seidlitz, Lena Maier-Hein

W-PM-074 **Deep Volume Reconstruction from Multi-focus Microscopic Images**
Caio Azevedo, Sanchayan Santra, Sudhakar Kumawat, Hajime Nagahara, Ken'ichi Morooka

W-PM-076 **Development of Effective Connectome from Infancy to Adolescence**
Guoshi Li, Kim-Han Thung, Hoyt Taylor, Zhengwang Wu, Gang Li, Li Wang, Weili Lin, Sahar Ahmad, Pew-Thian Yap

W-PM-078 **Differentiable Score-Based Likelihoods: Learning CT Motion Compensation From Clean Images**
Mareike Thies, Noah Maul, Siyuan Mei, Laura Pfaff, Nastassia Vysotskaya, Mingxuan Gu, Jonas Utz, Dennis Possart, Lukas Folle, Fabian Wagner, Andreas Maier

W-PM-080 **Diffusion-based Generative Image Outpainting for Recovery of FOV-Truncated CT Images**
Michelle Espranita Liman, Daniel Rueckert, Florian J. Fintelmann, Philip Müller

W-PM-082 **DiRecT: Diagnosis and Reconstruction Transformer for Mandibular Deformity Assessment**
Xuanang Xu, Jungwook Lee, Nathan Lampen, Daeseung Kim, Tianshu Kuang, Hannah H. Deng, Michael A. K. Liebschner, Jaime Gateno, Pingkun Yan

W-PM-084 **D-MASTER: Mask Annealed Transformer for Unsupervised Domain Adaptation in Breast Cancer Detection from Mammograms**
Tajamul Ashraf, Krithika Rangarajan, Mohit Gambhir, Richa Gauba, Chetan Arora

W-PM-086 **Dual-Modality Watershed Fusion Network for Thyroid Nodule Classification of Dual-View CEUS Video**
Rui Li, Jingliang Ruan, Yao Lu

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W-PM-088 **Dynamic Single-Pixel Imaging on an Extended Field of View without Warping the Patterns**
Thomas Maitre, Elie Bretin, Romain Phan, Nicolas Ducros, Michaël Sdika

W-PM-090 **EchoNet-Synthetic: Privacy-preserving Video Generation for Safe Medical Data Sharing**
Hadrien Reynaud, Qingjie Meng, Mischa Dombrowski, Arijit Ghosh, Thomas Day, Alberto Gomez, Paul Leeson, Bernhard Kainz

W-PM-092 **EndoFinder: Online Image Retrieval for Explainable Colorectal Polyp Diagnosis**
Ruijie Yang, Yan Zhu, Peiyao Fu, Yizhe Zhang, Zhihua Wang, Quanlin Li, Pinghong Zhou, Xian Yang, Shuo Wang

W-PM-094 **EndoSelf: Self-Supervised Monocular 3D Scene Reconstruction of Deformable Tissues with Neural Radiance Fields on Endoscopic Videos**
Wenda Li, Yuichiro Hayashi, Masahiro Oda, Takayuki Kitasaka, Kazunari Misawa, Kensaku Mori

W-PM-096 **EndoSparse: Real-Time Sparse View Synthesis of Endoscopic Scenes using Gaussian Splatting**
Chenxin Li, Brandon Y. Feng, Yifan Liu, Hengyu Liu, Cheng Wang, Weihao Yu, Yixuan Yuan

W-PM-098 **Enhanced-quickDWI: Achieving equivalent clinical quality by denoising heavily sub-sampled diffusion-weighted imaging data**
Konstantinos Zormpas-Petridis, Antonio Candito, Christina Messiou, Dow-Mu Koh, Matthew D. Blackledge

W-PM-100 **Enhancing Gait Video Analysis in Neurodegenerative Diseases by Knowledge Augmentation in Vision Language Model**
Diwei Wang, Kun Yuan, Candice Muller, Frédéric Blanc, Nicolas Padoy, Hyewon Seo

W-PM-102 **Enhancing Model Generalisability through Sampling Diverse and Balanced Retinal Images**
Tianfeng Zhou, Yukun Zhou

W-PM-104 **Enhancing Spatiotemporal Disease Progression Models via Latent Diffusion and Prior Knowledge**
Lemuel Puglisi, Daniel C. Alexander, Daniele Ravì

W-PM-106 **Epicardium Prompt-guided Real-time Cardiac Ultrasound Frame-to-volume Registration**
Long Lei, Jun Zhou, Jialun Pei, Baoliang Zhao, Yueming Jin, Yuen-Chun Jeremy Teoh, Jing Qin, Pheng-Ann Heng

W-PM-108 **Estimating Neural Orientation Distribution Fields on High Resolution Diffusion MRI Scans**
Mohammed Munzer Dwedari, William Consagra, Philip Müller, Özgün Turgut, Daniel Rueckert, Yogesh Rathi

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W-PM-110 **Evaluating the Quality of Brain MRI Generators**
Jiaqi Wu, Wei Peng, Binxu Li, Yu Zhang, Kilian M. Pohl

W-PM-112 **Explanation-driven Cyclic Learning for High-Quality Brain MRI Reconstruction from Unknown Degradation**
Ning Jiang, Zhengyong Huang, Yao Sui

W-PM-114 **FACMIC: Federated Adaptative CLIP Model for Medical Image Classification**
Yihang Wu, Christian Desrosiers, Ahmad Chaddad

W-PM-116 **Fetal MRI Reconstruction by Global Diffusion and Consistent Implicit Representation**
Junpeng Tan, Xin Zhang, Chunmei Qing, Chaoxiang Yang, He Zhang, Gang Li, Xiangmin Xu

W-PM-118 **Fine-grained Context and Multi-modal Alignment for Freehand 3D Ultrasound Reconstruction**
Zhongnuo Yan, Xin Yang, Mingyuan Luo, Jiongquan Chen, Rusi Chen, Lian Liu, Dong Ni

W-PM-120 **From Static to Dynamic Diagnostics: Boosting Medical Image Analysis via Motion-Informed Generative Videos**
Wuyang Li, Xinyu Liu, Qiushi Yang, Yixuan Yuan

W-PM-122 **Fundus2Video: Cross-Modal Angiography Video Generation from Static Fundus Photography with Clinical Knowledge Guidance**
Weiyi Zhang, Siyu Huang, Jiancheng Yang, Ruoyu Chen, Zongyuan Ge, Yingfeng Zheng, Danli Shi, Mingguang He

W-PM-124 **Gaze-DETR: Using Expert Gaze to Reduce False Positives in Vulvovaginal Candidiasis Screening**
Yan Kong, Sheng Wang, Jiangdong Cai, Zihao Zhao, Zhenrong Shen, Yonghao Li, Manman Fei, Qian Wang

W-PM-126 **Glioblastoma segmentation from early post-operative MRI: challenges and clinical impact**
Ragnhild Holden Helland, David Bouget, Roelant S. Eijgelaar, Philip C. De Witt Hamer, Frederik Barkhof, Ole Solheim, Ingerid Reinertsen

W-PM-128 **Hybrid-Structure-Oriented Transformer for Arm Musculoskeletal Ultrasound Segmentation**
Lingyu Chen, Yue Wang, Zhe Zhao, Hongen Liao, Daoqiang Zhang, Haojie Han, Fang Chen

W-PM-130 **IHRRB-DINO: Identifying High-Risk Regions of Breast Masses in Mammogram Images Using Data-Driven Instance Noise (DINO)**
Mahmoud SalahEldin Kasem, Abdelrahman Abdallah, Ibrahim Abdelhalim, Norah Saleh Alghamdi, Sohail Contractor, Ayman El-Baz

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W-PM-132 **Immune-guided AI for Reproducible Regions of Interest Selection in Multiplex Immunofluorescence Pathology Imaging**
Tanishq Gautam, Karina P. Gonzalez, Maria E. Salvatierra, Alejandra Serrano, Pingjun Chen, Xiaoxi Pan, Yasin Shokrollahi, Sara Ranjbar, Leticia Rodriguez, Patient Mosaic Team, Luisa Solis-Soto, Yinyin Yuan, Simon P. Castillo

W-PM-134 **Improving cone-beam CT Image Quality with Knowledge Distillation-Enhanced Diffusion Model in Imbalanced Data Settings**
Joonil Hwang, Sangjoon Park, NaHyeon Park, Seungryong Cho, Jin Sung Kim

W-PM-136 **Inject Backdoor in Measured Data to Jeopardize Full-Stack Medical Image Analysis System**
Ziyuan Yang, Yingyu Chen, Mengyu Sun, Yi Zhang

W-PM-138 **Joint EM Image Denoising and Segmentation with Instance-aware Interaction**
Zhicheng Wang, Jiacheng Li, Yinda Chen, Jiateng Shou, Shiyu Deng, Wei Huang, Zhiwei Xiong

W-PM-140 **Joint multi-task learning improves weakly-supervised biomarker prediction in computational pathology**
Omar S. M. El Nahhas, Georg Wölflein, Marta Ligero, Tim Lenz, Marko van Treeck, Firas Khader, Daniel Truhn, Jakob Nikolas Kather

W-PM-142 **Keypoint Matching for Instrument-Free 3D Registration in Video-based Surgical Navigation**
Tânia Baptista, Carolina Raposo, Miguel Marques, Michel Antunes, Joao P. Barreto

W-PM-144 **Knowledge-Guided Prompt Learning for Lifespan Brain MR Image Segmentation**
Lin Teng, Zihao Zhao, Jiawei Huang, Zehong Cao, Runqi Meng, Feng Shi, Dinggang Shen

W-PM-146 **Label-guided Teacher for Surgical Phase Recognition via Knowledge Distillation**
Jiale Guan, Xiaoyang Zou, Rong Tao, Guoyan Zheng

W-PM-148 **Learning 3D Gaussians for Extremely Sparse-View Cone-Beam CT Reconstruction**
Yiqun Lin, Hualiang Wang, Jixiang Chen, Xiaomeng Li

W-PM-150 **Learning to Segment Multiple Organs from Multimodal Partially Labeled Datasets**
Hong Liu, Dong Wei, Donghuan Lu, Jinghan Sun, Hao Zheng, Yefeng Zheng, Liansheng Wang

W-PM-152 **LIBR+: Improving Intraoperative Liver Registration by Learning the Residual of Biomechanics-Based Deformable Registration**
Dingrong Wang, Soheil Azadvar, Jon Heiselman, Xiajun Jiang, Michael Miga, Linwei Wang

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W-PM-154 **LighTDiff: Surgical Endoscopic Image Low-Light Enhancement with T-Diffusion**
Tong Chen, Qingcheng Lyu, Long Bai, Erjian Guo, Huxin Gao, Xiaoxiao Yang, Hongliang Ren, Luping Zhou

W-PM-156 **LiverUSRecon: Automatic 3D Reconstruction and Volumetry of the Liver with a Few Partial Ultrasound Scans**
Kaushalya Sivayogaraj, Sahan I. T. Guruge, Udari A. Liyanage, Jeevani J. Udupihille, Saroj Jayasinghe, Gerard M. X. Fernando, Ranga Rodrigo, Rukshani Liyanaarachchi

W-PM-158 **Lobar Lung Density Embeddings with a Transformer encoder (LobTe) to predict emphysema progression in COPD**
Ariel H. Curiale, Raúl San José Estépar

W-PM-160 **LSSNet: A Method for Colon Polyp Segmentation Based on Local Feature Supplementation and Shallow Feature Supplementation**
Wei Wang, Huiying Sun, Xin Wang

W-PM-162 **Material Decomposition in Photon-Counting CT: A Deep Learning Approach Driven by Detector Physics and ASIC Modeling**
Xiaopeng Yu, Qianyu Wu, Wenhui Qin, Tao Zhong, Mengqing Su, Jinglu Ma, Yikun Zhang, Xu Ji, Guotao Quan, Yang Chen, Yanfeng Du, Xiaochun Lai

W-PM-164 **Medical Image Segmentation via Single-Source Domain Generalization with Random Amplitude Spectrum Synthesis**
Qiang Qiao, Wenyu Wang, Meixia Qu, Kun Su, Bin Jiang, Qiang Guo

W-PM-166 **Memory-efficient High-resolution OCT Volume Synthesis with Cascaded Amortized Latent Diffusion Models**
Kun Huang, Xiao Ma, Yuhan Zhang, Na Su, Songtao Yuan, Yong Liu, Qiang Chen, Huazhu Fu

W-PM-168 **MeshBrush: Painting the Anatomical Mesh with Neural Stylization for Endoscopy**
John J. Han, Ayberk Acar, Nicholas Kavoussi, Jie Ying Wu

W-PM-170 **MiHATP:A Multi-Hybrid Attention Super-Resolution Network for Pathological Image Based on Transformation Pool Contrastive Learning**
Zhufeng Xu, Jiaxin Qin, Chenhao Li, Dechao Bu, Yi Zhao

W-PM-172 **Misaligned 3D Texture Optimization in MIS Utilizing Generative Framework**
Jieyu Zheng, Xiaojian Li, Hangjie Mo, Ling Li, Xiang Ma

W-PM-174 **Misjudging the Machine: Gaze May Forecast Human-Machine Team Performance in Surgery**
Sue Min Cho, Russell H. Taylor, Mathias Unberath

POSTER PRESENTATIONS

W-PM-176 **MoCo-Diff: Adaptive Conditional Prior on Diffusion Network for MRI Motion Correction**
Feng Li, Zijian Zhou, Yu Fang, Jiangdong Cai, Qian Wang

W-PM-178 **Modeling and Understanding Uncertainty in Medical Image Classification**
Aobo Chen, Yangyi Li, Wei Qian, Kathryn Morse, Chenglin Miao, Mengdi Huai

W-PM-180 **mQSM: Multitask Learning-based Quantitative Susceptibility Mapping for Iron Analysis in Brain**
Junjie He, Bangkang Fu, Zhenliang Xiong, Yunsong Peng, Rongpin Wang

W-PM-182 **Noise Level Adaptive Diffusion Model for Robust Reconstruction of Accelerated MRI**
Shoujin Huang, Guanxiong Luo, Xi Wang, Ziran Chen, Yuwan Wang, Huaishui Yang, Pheng-Ann Heng, Lingyan Zhang, Mengye Lyu

W-PM-184 **Non-Adversarial Learning: Vector-Quantized Common Latent Space for Multi-Sequence MRI**
Luyi Han, Tao Tan, Tianyu Zhang, Xin Wang, Yuan Gao, Chunyao Lu, Xinglong Liang, Haoran Dou, Yunzhi Huang, Ritse Mann

W-PM-186 **Nonrigid Reconstruction of Freehand Ultrasound without a Tracker**
Qi Li, Ziyi Shen, Qianye Yang, Dean C. Barratt, Matthew J. Clarkson, Tom Vercauteren, Yipeng Hu

W-PM-188 **ORacle: Large Vision-Language Models for Knowledge-Guided Holistic OR Domain Modeling**
Ege Özsoy, Chantal Pellegrini, Matthias Keicher, Nassir Navab

W-PM-190 **PANS: Probabilistic Airway Navigation System for Real-time Robust Bronchoscope Localization**
Qingyao Tian, Zhen Chen, Huai Liao, Xinyan Huang, Bingyu Yang, Lujie Li, Hongbin Liu

W-PM-192 **Parameter Efficient Fine Tuning for Multi-scanner PET to PET Reconstruction**
Yumin Kim, Gayoon Choi, Seong Jae Hwang

W-PM-194 **PASTA: Pathology-Aware MRI to PET CroSs-modal TrAnslation with Diffusion Models**
Yitong Li, Igor Yakushev, Dennis M. Hedderich, Christian Wachinger

W-PM-196 **Pathological Semantics-Preserving Learning for H&E-to-IHC Virtual Staining**
Fuqiang Chen, Ranran Zhang, Boyun Zheng, Yiwen Sun, Jiahui He, Wenjian Qin

W-PM-198 **PathoTune: Adapting Visual Foundation Model to Pathological Specialists**
Jiaxuan Lu, Fang Yan, Xiaofan Zhang, Yue Gao, Shaoting Zhang

W-PM-200 **PhenDiff: Revealing Subtle Phenotypes with Diffusion Models in Real Images**
Anis Bourou, Thomas Boyer, Marzieh Gheisari, Kévin Daupin, Véronique Dubreuil, Aurélie De Thonel, Valérie Mezger, Auguste Genovesio

POSTER PRESENTATIONS

W-PM-202 **Phy-Diff: Physics-guided Hourglass Diffusion Model for Diffusion MRI Synthesis**
Juanhua Zhang, Ruodan Yan, Alessandro Perelli, Xi Chen, Chao Li

W-PM-204 **Physical-priors-guided Aortic Dissection Detection using Non-Contrast-Enhanced CT images**
Zhengyao Ding, Yujian Hu, Hongkun Zhang, Fei Wu, Shifeng Yang, Xiaolong Du, Yilang Xiang, Tian Li, Xuesen Chu, Zhengxing Huang

W-PM-206 **Physics-Informed Deep Learning for Motion-Corrected Reconstruction of Quantitative Brain MRI**
Hannah Eichhorn, Veronika Spieker, Kerstin Hammernik, Elisa Saks, Kilian Weiss, Christine Preibisch, Julia A. Schnabel

W-PM-208 **PitVQA: Image-grounded Text Embedding LLM for Visual Question Answering in Pituitary Surgery**
Runlong He, Mengya Xu, Adrito Das, Danyal Z. Khan, Sophia Bano, Hani J. Marcus, Danail Stoyanov, Matthew J. Clarkson, Mobarakol Islam

W-PM-210 **Prior Activation Map Guided Cervical OCT Image Classification**
Qingbin Wang, Wai Chon Wong, Mi Yin, Yutao Ma

W-PM-212 **PRISM: A Promptable and Robust Interactive Segmentation Model with Visual Prompts**
Hao Li, Han Liu, Dewei Hu, Jiacheng Wang, Ipek Oguz

W-PM-214 **PX2Tooth: Reconstructing the 3D Point Cloud Teeth from a Single Panoramic X-ray**
Wen Ma, Huikai Wu, Zikai Xiao, Yang Feng, Jian Wu, Zuozhu Liu

W-PM-216 **Quantitative Assessment of Thyroid Nodules through Ultrasound Imaging Analysis**
Young-Min Kim, Myeong-Gee Kim, Seok-Hwan Oh, Guil Jung, Hyeon-Jik Lee, Sang-Yun Kim, Hyuk-Sool Kwon, Sang-Il Choi, Hyeon-Min Bae

W-PM-218 **RDD-Net: Randomized Joint Data-Feature Augmentation and Deep-Shallow Feature Fusion Networks for Automated Diagnosis of Glaucoma**
Yilin Tang, Min Zhang, Jun Feng

W-PM-220 **Realistic Surgical Image Dataset Generation Based On 3D Gaussian Splatting**
Tianle Zeng, Gerardo Loza Galindo, Junlei Hu, Pietro Valdastri, Dominic Jones

W-PM-222 **Reference-free Axial Super-resolution of 3D Microscopy Images using Implicit Neural Representation with a 2D Diffusion Prior**
Kyungryun Lee, Won-Ki Jeong

W-PM-224 **Resolving Variable Respiratory Motion From Unsorted 4D Computed Tomography**
Yuliang Huang, Bjoern Eiben, Kris Thielemans, Jamie R. McClelland

POSTER PRESENTATIONS

W-PM-226 **Revisiting Deep Ensemble Uncertainty for Enhanced Medical Anomaly Detection**
Yi Gu, Yi Lin, Kwang-Ting Cheng, Hao Chen

W-PM-228 **RoCoSDF: Row-Column Scanned Neural Signed Distance Fields for Freehand 3D Ultrasound Imaging Shape Reconstruction**
Hongbo Chen, Yuchong Gao, Shuhang Zhang, Jiangjie Wu, Yuexin Ma, Rui Zheng

W-PM-230 **SALI: Short-term Alignment and Long-term Interaction Network for Colonoscopy Video Polyp Segmentation**
Qiang Hu, Zhenyu Yi, Ying Zhou, Fang Peng, Mei Liu, Qiang Li, Zhiwei Wang

W-PM-232 **Simulation Based Inference for PET iterative reconstruction**
Bastien Bergere, Thomas Dautremer, Claude Comtat

W-PM-234 **Simultaneous Tri-Modal Medical Image Fusion and Super-Resolution using Conditional Diffusion Model**
Yushen Xu, Xiaosong Li, Yuchan Jie, Haishu Tan

W-PM-236 **SinoSynth: A Physics-based Domain Randomization Approach for Generalizable CBCT Image Enhancement**
Yunkui Pang, Yilin Liu, Xu Chen, Pew-Thian Yap, Jun Lian

W-PM-238 **Slice-Consistent 3D Volumetric Brain CT-to-MRI Translation with 2D Brownian Bridge Diffusion Model**
Kyobin Choo, Youngjun Jun, Mijin Yun, Seong Jae Hwang

W-PM-240 **Spatial-Division Augmented Occupancy Field for Bone Shape Reconstruction from Biplanar X-Rays**
Jixiang Chen, Yiqun Lin, Haoran Sun, Xiaomeng Li

W-PM-242 **Spatiotemporal Graph Neural Network Modelling Perfusion MRI**
Ruodan Yan, Carola-Bibiane Schönlieb, Chao Li

W-PM-244 **SRE-CNN: A Spatiotemporal Rotation-Equivariant CNN for Cardiac Cine MR Imaging**
Yuliang Zhu, Jing Cheng, Zhuo-Xu Cui, Jianfeng Ren, Chengbo Wang, Dong Liang

W-PM-246 **Stochastic Anomaly Simulation for Maxilla Completion from Cone-Beam Computed Tomography**
Yixiao Guo, Yuru Pei, Si Chen, Zhi-bo Zhou, Tianmin Xu, Hongbin Zha

W-PM-248 **Structural Attention: Rethinking Transformer for Unpaired Medical Image Synthesis**
Vu Minh Hieu Phan, Yutong Xie, Bowen Zhang, Yuankai Qi, Zhibin Liao, Antonios Perperidis, Son Lam Phung, Johan W. Verjans, Minh-Son To

POSTER PRESENTATIONS

W-PM-250 **SurgicalGaussian: Deformable 3D Gaussians for High-Fidelity Surgical Scene Reconstruction**
Weixing Xie, Junfeng Yao, Xianpeng Cao, Qiqin Lin, Zerui Tang, Xiao Dong, Xiaohu Guo

W-PM-252 **Survival analysis of histopathological image based on a pretrained hypergraph model of spatial transcriptomics data**
Shangyan Cai, Weitian Huang, Weiting Yi, Bin Zhang, Yi Liao, Qiu Wang, Hongmin Cai, Luonan Chen, Weifeng Su

W-PM-254 **SynCellFactory: Generative Data Augmentation for Cell Tracking**
Moritz Sturm, Lorenzo Cerrone, Fred A. Hamprecht

W-PM-256 **Tagged-to-Cine MRI Sequence Synthesis via Light Spatial-Temporal Transformer**
Xiaofeng Liu, Fangxu Xing, Zhangxing Bian, Tomas Arias-Vergara, Paula Andrea Pérez-Toro, Andreas Maier, Maureen Stone, Jiachen Zhuo, Jerry L. Prince, Jonghye Woo

W-PM-258 **TeleOR: Real-time Telemedicine System for Full-Scene Operating Room**
Yixuan Wu, Kaiyuan Hu, Qian Shao, Jintai Chen, Danny Z. Chen, Jian Wu

W-PM-260 **Topological SLAM in colonoscopies leveraging deep features and topological priors**
Javier Morlana, Juan D. Tardós, José M. M. Montiel

W-PM-262 **Towards realistic needle insertion training simulator using partitioned model order reduction**
Félix Vanneste, Claire Martin, Olivier Goury, Hadrien Courtecuisse, Erik Pernod, Stephane Cotin, Christian Duriez

W-PM-264 **TractOracle: towards an anatomically-informed reward function for RL-based tractography**
Antoine Théberge, Maxime Descoteaux, Pierre-Marc Jodoin

W-PM-266 **Transforming Surgical Interventions with Embodied Intelligence for Ultrasound Robotics**
Huan Xu, Jinlin Wu, Guanglin Cao, Zhen Chen, Zhen Lei, Hongbin Liu

W-PM-268 **Trans-Window Panoramic Impasto for Online Tissue Deformation Recovery**
Jiahe Chen, Etsuko Kobayashi, Ichiro Sakuma, Naoki Tomii

W-PM-270 **Two Projections Suffice for Cerebral Vascular Reconstruction**
Alexandre Cafaro, Reuben Dorent, Nazim Haouchine, Vincent Lepetit, Nikos Paragios, William M. Wells III., Sarah Frisken

W-PM-272 **VideoCutMix: Temporal Segmentation of Surgical Videos in Scarce Data Scenarios**
Rohan Raju Dhanakshirur, Mrinal Tyagi, Britty Baby, Ashish Suri, Prem Kalra, Chetan Arora

POSTER PRESENTATIONS

W-PM-274 **Vision-Based Neurosurgical Guidance: Unsupervised Localization and Camera-Pose Prediction**
Gary Sarwin, Alessandro Carretta, Victor Staartjes, Matteo Zoli, Diego Mazzatenta, Luca Regli, Carlo Serra, Ender Konukoglu

W-PM-276 **Volumetric Conditional Score-based Residual Diffusion Model for PET/MR Denoising**
Siyeop Yoon, Matthew Tivnan, Rui Hu, Yuang Wang, Young-don Son, Dufan Wu, Xiang Li, Kyungsang Kim, Quanzheng Li

W-PM-278 **Voxel Scene Graph for Intracranial Hemorrhage**
Antoine P. Sanner, Nils F. Grauhan, Marc A. Brockmann, Ahmed E. Othman, Anirban Mukhopadhyay

W-PM-280 **WsiCaption: Multiple Instance Generation of Pathology Reports for Gigapixel Whole-Slide Images**
Pingyi Chen, Honglin Li, Chenglu Zhu, Sunyi Zheng, Zhongyi Shui, Lin Yang

W-PM-282 **XA-Sim2Real: Adaptive Representation Learning for Vessel Segmentation in X-ray Angiography**
Baochang Zhang, Zichen Zhang, Shuting Liu, Shahrooz Faghihroohi, Heribert Schunkert, Nassir Navab

W-PM-284 **Zero-shot Low-field MRI Enhancement via Denoising Diffusion Driven Neural Representation**
Xiyue Lin, Chenhe Du, Qing Wu, Xuanyu Tian, Jingyi Yu, Yuyao Zhang, Hongjiang Wei

CLINICCAI DETAILED PROGRAM

Time	Paper Title	Primary Contact Author Name
08:30-09:30	**Oral session 1: Neuroscience Chairs: Sandrine De Ribaupierre & Saad Slimani**	
08:30-08:42	Augmented Reality-guided External Ventricular Drain Placement: A Technical Note on a Clinically Fully Integrable System	Jesse van Doormaal
08:42-08:54	Introducing ClinIQ: A Non-Invasive Clinical Tool for Molecular Profiling of Brain Gliomas	Joseph Maldjian
08:54-09:06	Determining cerebral white matter integrity and volume of brain structures in patients with primary Sjögren's syndrome in DTI and FLAIR with AI tools.	Michał Sobański
09:06-09:18	Generating Computed Tomography Angiography from Time-of-Flight Magnetic Resonance Angiography Using Diffusion-Based Models	Dietmar Frey
09:06-09:18	AI-based Outcome Prediction in Ischemic Stroke: A Study on Robust External Validation Principles	Dietmar Frey
09:18-09:30	Deep Learning-Enabled Meningitis Screening In Young Infants Based on a Novel Non-Invasive Transfontanellar Device: Initial Performance Results	Sara Ajanovic Andelic
11:15-12:30	**Oral session 2: Radiology & Pathology Chairs: Joe Yeong & Saad Slimani**	
11:15-11:27	Preoperative Rotator Cuff Tear Prediction from Shoulder Radiographs using a Convolutional Block Attention Module-Integrated Neural Network	Ikbeom Jang
11:27-11:39	Fully Automated PACS-Integrated Volumetric Assessment of Abdominal Aortic Aneurysms	David Weiss
11:39-11:51	Artificial Intelligence for Prediction of Abdominal Aortic Aneurysm Status Using Multimodal Patient Data in the VASCULAID-RETRO-AAA Study	Lotte Rijken
11:51-12:03	Machine learning-based prediction of spinal cord ischemia after complex endovascular aneurysm repair using clinical and imaging-derived features	Kaj Kappe
12:03-12:15	H&E-based cell prediction multi-classification models to capture morphologically distinct subpopulations of CD8+ T cells	Muzammil Arif Din Abdul Jabbar
12:15-12:27	From Concept to Clinic: Improving Colorectal Cancer Diagnosis through Deep Learning-Driven Lymph Node Screening in Clinical Routine	Amjad Khan
14:30-15:30	**Oral session 3: Surgery Chairs: Abdourahmane Ndong & Idriss Ahmedou**	
14:30-14:42	Deep learning for intraoperative navigation in minimally invasive liver surgery: a multicenter external validation	Namkee Oh
14:42-14:54	Validation of instance segmentation of instruments during laparoscopic cholecystectomy using MedSAM	António S Soares
14:54-15:06	Advancing Laparoscopic Surgery: Addressing Adoption Challenges with User-Centric Augmented Reality Solutions	Pooja P Jain
15:06-15:18	Bridging innovation and practice: the journey of FAROS from technical design to in-vivo animal validation	Nicola A Cavalcanti
15:18-15:30	Deep Learning Artificial Intelligence Tool for Automated Radiographic Determination of Posterior Tibial Slope in Patients with Anterior Cruciate Ligament Injuries	Yining Lu
16:00-17:00	**Oral session 4: Dermatology, fetal Ultrasound, Opthalmology Chairs: Ik Jun Moon, Joël Lavanchy & Joe Yeong**	
16:00-16:12	Facial Wrinkle Segmentation with Weakly Supervised Pretraining and Supervised Finetuning with Multi-Annotator Labels	Ik Jun Moon
16:12-16:24	Preeclampsia screening by minimally trained operators on ultrasound using Artificial Intelligence, a paired diagnostic pilot study	Ikbeom Jang
16:24-16:36	A Randomized Controlled Trial of Artificial Intelligence to Assist in Screening Fetal Ultrasound Scans	Saad Slimani
16:36-16:48	EyeLiner: Longitudinal retinal fundus image registration through clinically guided keypoint detection	Thomas Day
16:48-17:00	Automated deep learning-based quantification of intermediate age-related macular degeneration features for the prediction of geographic atrophy and neovascularization	Stephen M McNamara
17:00 -17:50	CLINICCAI panel: How technology enables access to health-care in the global south	

CLINICCAI DETAILED PROGRAM

Paper ID	Paper Title	Primary Contact Author Name
9	Deep learning-based pelvimetry in pelvic MRI volumes for pre-operative risk assessment of total mesorectal excision	Simon Baltus
12	Supratotal Resection in Glioblastomas Guided by AI-Generated Recurrence Probability Maps: Interim Results from a Pilot Study	Santiago Cepeda
14	First in-human k-wire placement by using an automatic, markerless 3D augmented reality overlay as an additional tool for surgical navigation	Annabel Groenenberg
16	Domain-specific data augmentation improves robustness of deep learning systems in endoscopy	Martijn Jong
18	GastroNet-5M: A Dataset for Domain-Specific Pretraining of Deep Learning Applications in Gastrointestinal Endoscopy	Martijn Jong
23	Contribution of undergraduate medical students using DICOM images to build anatomical atlases in Mauritatnia	Sonia Pujol
28	Single cell AI-prediction of protein biomarker on novel whole slide unstained cytopathological smear images	Felicia Wee
29	Developing trustworthy artificial intelligence driven tools to predict vascular disease risk and progression: VASCUL-AID's project overview	Kak Khee Yeung
33	Reflecting clinical interests in image analysis validation	Minu Dietlinde Tizabi
34	Identification of Metastasis in Lymph Nodes from Breast, Colon and Gastric Tumor Resections using Artificial Intelligence	Sahil Saraf
39	Thrombus analysis for prediction of abdominal aortic aneurysm shrinkage after endovascular repair in a retrospective cohort study	Rianne E van Rijswijk
42	Non-invasive FFR derived from CTCA: A New Tool for Clinicians	Diego López-Otero
45	Fully automated congenital anomaly screening in first-trimester pregnancy using artificial intelligence: first findings and future prospects	Melek Rousian
50	Multitask deep learning for endoleak detection and localisation in X-ray digital subtraction angiography imaging during endovascular aneurysm repair procedures	Stefan Smorenburg
54	Automated Anatomy Recognition for Surgical Navigation during Robotic Esophagectomy – A Survey Study on the Clinical Relevance of Model Performance	Romy C van Jaarsveld
56	Advancing Multiscale Structural Mapping for Alzheimer's Disease using Local Gyrification Index	Ikbeom Jang

MICCAI 2024

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