

ISBI 2024 | Technical Program Overview

The time zone is Eastern European Time, UTC+3:00

Monday, 27 May 2024

08.00-19.30	Registration (Skalkotas Auditorium foyer)						
14.00-18.00	Art meets Biomedical Imaging (Skalkotas Auditorium foyer)						
	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.3	MC3.4
09.00-10.30	Industry session (Skalkotas auditorium)	Challenge 4 Diminished reality for emerging applications in medicine through inpainting (DREAMING)	Tutorial 2 Brain connectome analysis with graph neural networks Part I	Tutorial 3 Computational pathology tutorial: clinical insights and methodological advances Part I	Tutorial 7 Federated learning in healthcare Part I	Workshop 1 Through the lens of equality: a workshop on gender-informed research	Workshop 4 Machine learning for neurodegenerative disorders
10.30-11.00	Coffee break (Music Library & Skalkotas Auditorium foyer)						
11.00-12.30	Industry session (Skalkotas auditorium)	Challenge 2 Cell tracking challenge 2024 (CTC)	Tutorial 2 Brain connectome analysis with graph neural networks Part II	Tutorial 3 Computational pathology tutorial: clinical insights and methodological advances Part II	Tutorial 7 Federated learning in healthcare Part II	Workshop 2 PROC-AI: integrating imaging data and AI models for supporting precision care through prostate cancer's continuum	Workshop 3 Cross-society innovation for translational applications of medical AI
12.30-14.00	Lunch (on your own) Networking lunch (Skalkotas Auditorium foyer)						
14.00-15.30	<p>Opening remarks</p> <p>Plenary talk Getting serious about AI in healthcare: retrospective and prospective validation Anant Madabhushi, Robert W Woodruff Professor of Biomedical Engineering, Emory University</p> <p>Musical performance (Banqueting Hall)</p>						

	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.3	MC3.4
15.30-16.30	Pharma session (Skalkotas auditorium)	Oral session Structural and functional brain connectivity	Oral session Signal and image reconstruction	Oral session Model-driven classification and segmentation	Oral session Validation and explainability	Special session 5 Interpretable imaging genetics: towards the molecular mechanisms underlying brain structure and function	Special session 1 Simplicial complex data for biomedical images
16.30-17.00	Coffee break (Music Library & Skalkotas Auditorium foyers)						
17.00-18.00	Industry session (Skalkotas auditorium)	Oral session Novel ML and DL methods for image segmentation	Oral session Dual modality deep learning	Oral session MRI in Alzheimer's disease	Oral session Deep learning methods and decision support (I)	Oral session Machine learning and data mining	Special session 2 Imaging molecules within the cell by 3D electron microscopy
18.00-19.15	<p style="text-align: center;">Panel</p> Translating AI research into clinical practice (Banqueting Hall)						
20.00-22.00	Welcome reception						

Tuesday, 28 May 2024

08.00-17.30	Registration (Skalkotas Auditorium foyer)						
10.00-17.30	Art meets Biomedical Imaging (Skalkotas Auditorium foyer)						
07.30-08.30	Breakfast with leaders (Allegro Hall)						
	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.4	
08.30-10.00	Oral session Dynamic MRI	Oral session Image reconstruction	Oral session Deep learning methods and decision support (II)	Oral session Foundation models	Oral session Image synthesis	Oral session Surgery guidance and planning	
10.00-11.30	<p style="text-align: center;">Poster session 1</p> Coffee served (Banqueting Hall foyer)						

11.30-12.30	<p align="center">Plenary talk Artificial Intelligence: Where we are, where we are going Joseph Sifakis, Emeritus Research Director at Verimag (Banqueting Hall)</p>					
12.30-14.00	<p align="center">Lunch (on your own) Lunch with leaders (Allegro all)</p>					
	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.4
14.00-15.30	Oral session Biological structural and cellular segmentation	Oral session Deep learning approaches for image segmentation	Oral session Machine learning and image uncertainty	Tutorial 4 DIMEDIA: diffusion models in medical imaging and analysis	Challenge 5 Justified referral in AI glaucoma screening (JUSTRAIGS)	Special session 6 Applied medical imaging AI research: clinical and translational perspectives
14.30-17.30	<p align="center">Academic Software Demo Session 1 MorphoNet 2.0: how can you correct a 3D segmented dataset in just a few clicks? fMRISroke: a pre-processing pipeline for fMRI data from stroke patients SPyRiT: a Python package for deep single-pixel image reconstruction (Skalkotas Auditorium foyer)</p>					
15.30-16.00	<p align="center">Coffee break (Music Library & Skalkotas Auditorium foyers)</p>					
16.00-17.30	Oral session Brain connectivity	Oral session Image segmentation	Oral session Emerging methods for trustworthy AI (I)	Tutorial 4 DIMEDIA: diffusion models in medical imaging and analysis	Challenge 5 Justified referral in AI glaucoma screening (JUSTRAIGS)	Oral session Machine learning and image quality
18.30-23.30	<p align="center">Students and Young Professionals event</p>					

Wednesday, 29 May 2024

08.00-17.30	Registration (Skalkotas Auditorium foyer)					
10.00-17.30	Art meets Biomedical Imaging (Skalkotas Auditorium foyer)					
	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.4
08.30-10.00	Oral session CT image segmentation	Special session 3 MRI beyond the norm: pioneering advances in engineering, image processing, and safety	Oral session Feature extraction and classification in histopathology images	Oral session Ultrasound imaging	Oral session Tumor detection and classification	Challenge 1 BRATS generalizability across tumors (BRATS-GOAT) Part I
10.00-11.00	Poster session 2 Coffee served (Banqueting Hall foyer)					
11.00-12.00	Plenary talk Personalized imaging and theragnostics Katherine Ferrara, Professor and Division Chief, Molecular Imaging Program at Stanford (Banqueting Hall)					
12.00-13.30	Lunch (on your own) Women in SPS/BMI lunch (Allegro Hall)					
13.30-14.30	Clinical focus session Imaging and AI opportunities in oncology integrated diagnostics (Banqueting Hall)			Clinical focus session Clinical translation of AI for neurodegenerative and neuropsychiatric disease (Skalkotas Auditorium)		
14.30-16.00	Poster session 3 Coffee served (Banqueting Hall foyer)					
14.30-17.30	Academic Software Demo Session 2 AtheroRisk: a carotid ultrasound video analysis system for stroke risk stratification Advancing the frontier of web-based neuroimaging Clinical virtual/augmented reality prototypes for cancer diagnosis, surgical intervention, and medical education (Skalkotas Auditorium foyer)					

	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.4
16.00-17.30	Oral session Cerebrovascular MRI and fMRI	Oral session Anatomical segmentation	Oral session Biological cell and bacteria tracking	Oral session Multimodality fusion (I)	Special session 4 Brain graph signal processing	Challenge 1 BRATS generalizability across tumors (BRATS-GOAT) Part II
18.00-20.00	Symbolic Marathon/Visit to the National Archaeological Museum					

Thursday, 30 May 2024

08.00-17.30	Registration (Skalkotas Auditorium foyer)					
10.00-17.30	Art meets Biomedical Imaging (Skalkotas Auditorium foyer)					
	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.4
08.30-09.30	Oral session Histopathological and electron microscopy imaging	Oral session MRI and brain diseases	Oral session Multimodality fusion	Oral session X-ray methods and applications	Oral session Deep learning and generative AI	Oral session Skin image analysis
09.30-11.00	Poster session 4 Coffee served (Banqueting Hall foyer)					
11.00-12.00	Plenary talk An alternative view of denoising diffusion models Francis Bach, Machine learning Group leader, Inria, Ecole Normale Supérieure (Banqueting Hall)					
12.00-13.00	Lunch (on your own)					
	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.4
13.00-14.30	Tutorial 5 Explainable artificial intelligence in biomedical imaging Part I	Tutorial 6 Fairness of AI in medical imaging (FAIMI) Part I	Challenge 3 Light my cells: bright field to fluorescence imaging challenge 2024 (LIGHTMYCELLS)	Challenge 6 Towards 3D atlas of human body	Tutorial 1 AI tools for computational neuroanatomy	Tutorial 8 National Cancer Institute Imaging Data Commons as a resource to support transparency, reproducibility, and scalability in imaging AI

14.30-15.00	Coffee break (Music Library & Skalkotas Auditorium foyers)					
	SKALKOTAS	MARINOS	LECTURE	MC2	MC3.2	MC3.4
15.00-16.30	Tutorial 5 Explainable artificial intelligence in biomedical imaging Part II	Tutorial 6 Fairness of AI in medical imaging (FAIMI) Part II	Oral session Biological tissue characterization	Oral session Brain neural networks	Oral session Optical, MRI and CT synthesis approaches	Oral session Vascular image analysis
					Tutorial 1 Demo session AI tools for computational neuroanatomy	Tutorial 8 Demo session National Cancer Institute Imaging Data Commons as a resource to support transparency, reproducibility, and scalability in imaging AI (Skalkotas Auditorium foyer)
16.30-17.30	Closing/Awards/ISBI2025 (Banqueting Hall)					