



INFORMATION PROCESSING IN MEDICAL IMAGING

18-23 June 2023 • San Carlos de Bariloche, Argentina

MAIN PROGRAMME

Sunday June 18 th				
19:00	21:00	Reception Cocktail		
Monday June 19 th				
08:00	8:15	Opening Remarks		
08:15	9:00	Geometric Deep Learning	Modeling the Shape of the Brain Connectome via Deep Neural Networks	Haocheng Dai (University of Utah)*; Martin Bauer (Florida State University); P. Thomas Fletcher (University of Virginia); Sarang Joshi (University of Utah)
09:00	9:45	Geometric Deep Learning	Edge-based Graph Neural Networks for Cell-Graph Modeling and Prediction	Tai Hasegawa (KTH Royal Institute of Technology); Helena Arvidsson (Karolinska Institutet); Nikolce Tudzarovski (Karolinska Institutet); Karl Meinke (KTH Royal Institute of Technology); Rachael V Sugars (Karolinska Institutet); Aravind Ashok Nair (KTH Royal Institute of Technology)*
09:45	10:30	Coffee Break		
10:30	11:15	Geometric Deep Learning	TetCNN: Convolutional Neural Networks on Tetrahedral Meshes	Mohammad Farazi (Arizona State University)*; Zhangsihao Yang (Arizona State University); Wenhui Zhu (Arizona State University); Peijie Qiu (Washington University in St.Louis); Yalin Wang (Arizona State University)
11:15	12:00	Geometric Deep Learning	Heterogeneous Graph Convolutional Neural Network via Hodge-Laplacian for Brain Functional Data	Jinghan Huang (National University of Singapore); Moo Chung (University of Wisconsin at Madison); Anqi Qiu (National University of Singapore)*
12:00	14:00	Lunch		
14:00	14:45	Brain connectomics	mSPD-NN: A Geometrically Aware Neural Framework for Biomarker Discovery from Functional Connectomics Manifolds	Niharika S. D'Souza (IBM Research)*; Archana Venkataraman (Johns Hopkins University)
14:45	15:30	Brain connectomics	Species-Shared and -Specific "Brain" Functional Connectomes Revealed by Shared-Unique Variational Autoencoder	Li Yang (Northwestern Polytechnical University); Songyao Zhang (Northwestern Polytechnical University); Weihang Zhang (Northwestern Polytechnical University); Jingchao Zhou (UESTC); Tianyang Zhong (NWPU); Yaonai Wei (Northwestern Polytechnical University); Xi Jiang (UESTC); Tianming Liu (University of Georgia); Junwei Han (NWPU, China); Yixuan Yuan (Chinese University of Hong Kong); Tuo Zhang (Northwestern Polytechnical University)
15:30	16:15	Coffee Break		
16:15	17:00	Brain connectomics	HoloBrain: A Harmonic Holography for Self-organized Brain Function	Huan Liu (South China University of technology); Tingting Dan (The university of north carolina at chapel hill); Zhuobin Huang (South China University of Technology); Defu Yang (University of North Carolina at Chapel Hill); Won Hwa Kim (POSTECH); Minjeong Kim (University of North Carolina at Greensboro); Paul Laurienti (Wake Forest); Guorong Wu (University of North Carolina)*
17:00	17:45	Multimodal learning	Q2ATransformer: Improving Medical VQA via an Answer Querying Decoder	Yunyi Liu (University of Sydney)*; Zhanyu Wang (University of Sydney); Dong Xu (University of Hong Kong); Luping Zhou (University of Sydney)
17:45	18:45	Keynote	Diffusion Models for Inverse Problems in Medical Imaging	Jong Chul Ye, Korea Advanced Institute of Science & Technology



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Tuesday June 20 th				
08:30	9:15	Reconstruction	Neural Implicit k-Space for Binning-free Non-Cartesian Cardiac MR Imaging	Wenqi Huang (Technical University of Munich)*; Hongwei Li (Technical University of Munich); Jiazhen Pan (Technical University of Munich); Gastao Cruz (University of Michigan); Daniel Rueckert (Technical University of Munich); Kerstin Hammernik (Technical University of Munich)
09:15	10:00	Computer-Aided Diagnosis/Surgery	Live image-based neurosurgical guidance and roadmap generation using unsupervised embedding	Gary Sarwin (ETH Zurich)*; Alessandro Carretta (University of Bologna); Victor Staartjes (University Hospital Zurich); Matteo Zoli (University of Bologna); Diego Mazzatenta (University of Bologna); Luca Regli (University Hospital Zurich); Carlo Serra (University Hospital Zurich); Ender Konukoglu (ETH Zurich)
10:00	11:15	Coffee Break		
11:15	12:00	Registration	NeurEPDiff: Neural Operators to Predict Geodesics in Deformation Spaces	Nian Wu (East China Normal University)*; Miaomiao Zhang (University of Virginia)
12:00	12:45	Registration	Geometric Deep Learning for Unsupervised Registration of Diffusion Magnetic Resonance Images	Jose Bouza (University of Florida); Chun-Hao Yang (National Taiwan University)*; Baba Vemuri (University of Florida)
12:45	14:00	Lunch		
14:00	16:00	Poster Session	Biomarkers - Computer-Aided Diagnosis - Image Enhancement - Domain Adaptation - Reconstruction	
16:00	16:45	Registration	Non-rigid Medical Image Registration using Physics-informed Neural Networks	Zhe Min (University College London)*; Zachary M C Baum (University College London); Shaheer Ullah Saeed (University College London); Mark Emberton (University College London); Dean C Barratt (University College London); Zeike Taylor (University of Leeds); Yipeng Hu (University College London)
16:45	17:45	Keynote	Geometric Deep Learning: Grids, Graphs, Groups, Geodesics and Gauges	Petar Veličković, DeepMind
Wednesday June 21 st				
08:30	9:15	Segmentation	Med-NCA: Robust and Lightweight Segmentation with Neural Cellular Automata	John Orlando Kalkhof (TU Darmstadt)*; Camila Gonzalez (TU Darmstadt); Anirban Mukhopadhyay (TU Darmstadt)
09:15	10:00	Segmentation	Human-machine Interactive Tissue Prototype Learning for Label-efficient Histopathology Image Segmentation	Wentao Pan (Tsinghua University); Jiangpeng Yan (Tsinghua University)*; Hanbo Chen (Tencent AI Lab); Jiawei Yang (UCLA); Zhe Xu (The Chinese University of Hong Kong); Xiu Li (Tsinghua University); Jianhua Yao (Tencent AI Lab)
10:00	11:15	Coffee Break		
11:15	12:00	Groupwise Atlasing	Learning Probabilistic Piecewise Rigid Atlases of Model Organisms via Generative Deep Networks	Amin Nejatbakhsh (Columbia University)*; Neel Dey (New York University); Vivek Venkatachalam (Northeastern University); Eviatar Yemini (University of Massachusetts); Liam Paninski (Department of Statistics, Columbia University); Erdem Varol (Columbia University)
12:00	12:45	Groupwise Atlasing	BInGo: Bayesian Intrinsic Groupwise Registration via Explicit Hierarchical Disentanglement	Xin Wang (University of Washington); Xinzhe Luo (Fudan University); Xiahai Zhuang (Fudan University)*
12:45	18:00	Social Event (Afternoon)		



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Thursday June 22 nd				
09:00	9:45	Computer-Aided Diagnosis/Surgery	Don't PANIC: Prototypical Additive Neural Network for Interpretable Classification of Alzheimer's Disease	Tom Nuno Wolf (Technical University of Munich)*; Sebastian Pölsterl (LMU); Christian Wachinger (Technical University of Munich)
09:45	10:30	Computer-Aided Diagnosis/Surgery	Diffusion Model based Semi-supervised Learning on Brain Hemorrhage Images for Efficient Midline Shift Quantification	Shizhan Gong (The Chinese University of Hong Kong)*; Cheng Chen (The Chinese University of Hong Kong); Yuqi Gong (The Chinese University of Hong Kong); Nga Yan Chan (The Chinese University of Hong Kong); Wenao Ma (The Chinese University of Hong Kong); Calvin Mak (Queen Elizabeth Hospital); Jill Abrigo (The Chinese University of Hong Kong); Qi Dou (The Chinese University of Hong Kong)
10:30	10:45	Coffee Break		
10:45	12:45	Poster Session	Multimodality learning - Registration - Image Synthesis - Optimisation	
12:45	14:00	Lunch		
14:00	15:00	Keynote	Reliable AI in Medical Imaging: Successes, Challenges, & Limitations	Gitta Kutyniok (Ludwig-Maximilians-Universität München)
15:30	19:00	Social Event	Sport	
Friday June 23 rd				
08:30	9:15	Harmonization / Federated Learning	Harmonizing Flows: Unsupervised MR harmonization based on normalizing flows.	Farzad Beizaei (ETS, Canada)*; Christian Desrosiers (ETS, Canada); Gregory Lodygensky (CHU Sainte-Justine); Jose Dolz (ETS, Canada)
09:15	10:00	Harmonization / Federated Learning	Vicinal Feature Statistics Augmentation for Federated 3D Medical Volume Segmentation	Yongsong Huang (Tohoku University); Wanqing Xie (AHMU); Mingzhen Li (Washington University in St. Louis); Mingmei Cheng (AHMU); Jinzhou Wu (Harvard); Weixiao Wang (HKUST); Jane You (HK PolyU); Xiaofeng Liu (Harvard Medical School and MGH)*
10:00	10:15	Coffee Break		
10:15	11:00	Segmentation	DTU-Net: Learning Topological Similarity for Curvilinear Structure Segmentation	Manxi Lin (Technical University of Denmark); Kilian Zepf (Technical University of Denmark, DTU Compute); Anders N Christensen (Technical University of Denmark); Zahra Bashir (Slagelse Hospital); Morten Bo Søndergaard Svendsen (Region Hovedstaden); Martin G Tolsgaard (CAMES RH); Aasa Feragen (Technical University of Denmark)*
11:00	11:45	Segmentation	Mixup-Privacy: A simple yet effective approach for privacy-preserving segmentation	Bach Kim (ETS, Canada)*; Jose Dolz (ETS, Canada); Pierre-Marc Jodoin (Universite de Sherbrooke); Christian Desrosiers (ETS, Canada)
11:45	12:30	Closing Remarks		



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POSTERS

Tuesday June 20th

Thematic Session	Title	
Biomarkers	Resolving quantitative MRI model degeneracy with machine learning via training data distribution design	Michele Guerreri (University College London)*; Sean Epstein (University College London); Hojjat Azadbakht (AINOSTICS Ltd.); Hui Zhang (University College London)
Biomarkers	Subtype and stage inference with timescales	Alexandra Young (Department of Neuroimaging, Institute of Psychiatry, Psychology and Neuroscience, King's College London); Leon M Aksman (USC)*; Daniel Alexander (University College London); Peter A Wijeratne (University College London)
Computer-Aided Diagnosis/ Surgery	Transient Hemodynamics Prediction Using an Efficient Octree-Based Deep Learning Model	Noah Maul (FAU Erlangen-Nürnberg)*; Katharina Zinn (FAU Erlangen-Nürnberg); Fabian Wagner (Pattern Recognition Lab, FAU Erlangen-Nürnberg); Mareike Thies (FAU Erlangen-Nuremberg); Maximilian A Rohleder (FAU Erlangen-Nuremberg); Laura Pfaff (FAU Erlangen-Nürnberg); Markus Kowarschik (Siemens Healthcare GmbH); Annette Birkhold (Siemens Healthcare GmbH); Andreas K Maier (Pattern Recognition Lab, FAU Erlangen-Nuremberg)
Computer-Aided Diagnosis/ Surgery	Meta-information-aware Dual-path Transformer for Differential Diagnosis of Multi-type Pancreatic Lesions in Multi-phase CT	Bo Zhou (Yale University)*; Yingda Xia (Alibaba Group); Jiawen Yao (DAMO Academy, Alibaba Group); Le Lu (Alibaba DAMO Academy); Jingren Zhou (Alibaba Group); Chi Liu (Yale University); James S Duncan (Yale University); Ling Zhang (Alibaba USA Inc.)
Computer-Aided Diagnosis/ Surgery	sEBM: scaling Event Based Models to predict disease progression via implicit biomarker selection and clustering	Raghav Tandon (Georgia Institute of Technology)*; Anna Kirkpatrick (Georgia Institute of Technology); Cassie S Mitchell (Georgia Institute of Technology)
Computer-Aided Diagnosis/ Surgery	Weakly Semi-Supervised Detection in Lung Ultrasound Videos	Jiahong Ouyang (Stanford University); Li Chen (Philips Research North America)*; Gray Li (Philips Research North America); Naveen Balaraju (Philips Research North America); Shubham Patil (Philips Research North America); Courosh Mehanian (University of Oregon); Sourabh Kulhare (Global Health Laboratories); Rachel Millin (Global Health Laboratories); Kenton Gregory (Oregon Health Sciences University); Cynthia Gregory (Oregon Health Sciences University); Meihua Zhu (Oregon Health Sciences University); David O. Kessler (Columbia University Medical Center); Laurie Malia (Columbia University Medical Center); Almaz Dessie (Columbia University Medical Center); Joni Rabiner (Columbia University Medical Center); Di Coneybeare (Columbia University Medical Center); Bo Shopsis (New York University); Andrew Hersh (Brooke Army Medical Center); Cristian Madar (Tripler Army Medical Center); Jeffrey Shupp (MedStar Washington Hospital Center); Laura S. Johnson (MedStar Washington Hospital Center); Jacob Avila (University of Kentucky); Kristin Dwyer (Warren Alpert Medical School of Brown University); Peter Weimersheimer (University of Vermont Lerner College of Medicine); Balasundar Raju (Philips Research North America); Jochen Kruecker (Philips Research North America); Alvin Chen (Philips Research North America)
Computer-Aided Diagnosis/ Surgery	Filtered trajectory recovery: a continuous extension to event-based model for Alzheimer's disease progression modeling	Jiangchuan Du (Fudan University); Yuan Zhou (Fudan University)*
Computer-Aided Diagnosis/ Surgery	Multi-task Multi-instance Learning for Jointly Diagnosis and Prognosis of Early-stage Breast Invasive Carcinoma from Whole-slide Pathological Images.	Jian xin Liu (Nanjing University of Aeronautics and Astronautics)*; Rongjun Ge (Nanjing University of Aeronautics and Astronautics); Peng Wan (Nanjing University of Aeronautics and Astronautics, China); Qi Zhu (Nanjing University of Aeronautics and Astronautics); Daoqiang Zhang (Nanjing University of Aeronautics and Astronautics, China); Wei Shao (Nanjing University of Aeronautics and Astronautics)
Computer-Aided Diagnosis/ Surgery	On Fairness of Medical Image Classification with Multiple Sensitive Attributes via Learning Orthogonal Representations	Wenlong Deng (The University of British Columbia); Yuan Zhong (The Chinese University of Hong Kong); Dou Qi (The Chinese University of Hong Kong); Xiaoxiao Li (University of British Columbia)*



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Computer-Aided Diagnosis/ Surgery	MetaViT: Metabolism-Aware Vision Transformer for Differential Diagnosis of Parkinsonism with 18F-FDG PET	Lin Zhao (University of Georgia); Hexin Dong (Peking University); Ping Wu (Huashan Hospital, Fudan University); Jiaying Lu (Huashan Hospital, Fudan University); Le Lu (Alibaba DAMO Academy); Jingren Zhou (Alibaba Group); Tianming Liu (University of Georgia); Li Zhang (Peking University); Ling Zhang (Alibaba USA Inc.); Yuxing Tang (Alibaba USA Inc.*); Chuantao Zuo (Huashan Hospital, Fudan University)
Computer-Aided Diagnosis/ Surgery	Pixel-level explanation of multiple instance learning models in biomedical single cell images	Ario Sadafi (Helmholtz Zentrum München); Oleksandra Adonkina (Helmholtz Zentrum München)*; Ashkan Khakzar (University of Oxford); Peter Lienemann (Helmholtz Zentrum München); Rudolf Matthias Hehr (Helmholtz Association); Daniel Rueckert (Technical University of Munich); Nassir Navab (Technical University of Munich); Carsten Marr (Helmholtz Zentrum München)
Image enhancement	OTRE: Where Optimal Transport Guided Unpaired Image-to-Image Translation Meets Regularization by Enhancing	Wenhui Zhu (Arizona State University)*; Peijie Qiu (Washington University in St.Louis); Oana M Dumitrascu (Department of Neurology, Mayo Clinic); Jacob Sobczak (Department of Neurology, Mayo Clinic); Mohammad Farazi (Arizona State University); Zhangsihao Yang (Arizona State University); Keshav Nandakumar (Arizona State University); Yalin Wang (Arizona State University)
Image enhancement	An Unsupervised Framework for Joint MRI Super Resolution and Gibbs Artifact Removal	Yikang Liu (United Imaging Intelligence)*; Eric Z. Chen (United Imaging Intelligence America); Xiao Chen (United Imaging Intelligence America); Terrence Chen (United Imaging Intelligence); Shanhui Sun (United Imaging Intelligence America)
Image enhancement	Super-Resolution Reconstruction of Fetal Brain MRI with Prior Anatomical Knowledge	Shijie Huang (ShanghaiTech University)*; Geng Chen (Northwestern Polytechnical University); Kaicong Sun (ShanghaiTech University); Zhiming Cui (HKU); Xukun Zhang (Fudan University); Peng Xue (ShanghaiTech University); Xuan Zhang (Nanjing University); He Zhang (Department of Radiology, Obstetrics and Gynecology Hospital, Fudan University); Dinggang Shen (ShanghaiTech University)
Domain Adaptation	Unsupervised Adaptation of Polyp Segmentation Models via Coarse-to-Fine Self-Supervision	Jiexiang Wang (Bytedance); Chaoqi Chen (The University of Hong Kong)*
Domain Adaptation	Source-free Domain Adaptation for Medical Image Segmentation via Selectively Updated Mean Teacher	Ziqi Wen (Beijing Institute of Technology); Xinru Zhang (Beijing Institute of Technology); Chuyang Ye (Beijing Institute of Technology)*
Domain Adaptation	UPL-TTA: Uncertainty-aware Pseudo Label Guided Fully Test Time Adaptation for Fetal Brain Segmentation	Jianghao Wu (University of Electronic Science and Technology of China); Ran Gu (University of Electronic Science and Technology of China); Tao Lu (Sichuan Provincial People's Hospital); Shaoting Zhang (Shanghai AI Lab); Guotai Wang (University of Electronic Science and Technology of China)*
Reconstruction	Fast-MC-PET: A Novel Deep Learning-aid Motion Correction and Reconstruction Framework for Accelerated PET	Bo Zhou (Yale University)*; Yu-Jung Tsai (Yale University); Jiazhen Zhang (Yale University); Xueqi Guo (Yale University); Huidong Xie (Yale University); Xiongchao Chen (Yale University); Tianshun Miao (Yale University); Yihuan Lu (Yale University); James S Duncan (Yale University); Chi Liu (Yale University)
Reconstruction	Deep Physics-informed Super-resolution of Cardiac 4D-flow MRI	Fergus Shone (CISTIB, University of Leeds)*; Nishant Ravikumar (University of Leeds); Toni Lassila (University of Leeds); Michael MacRaild (University of Leeds); Yongxing Wang (University of Leeds); Zeike Taylor (University of Leeds); Peter Jimack (University of Leeds); Erica Dall'Armellina (University of Leeds); Alejandro F Frangi (University of Leeds);
Reconstruction	MeshDeform: Surface Reconstruction of Subcortical Structures via Human Brain MRI	Junjie Zhao (The University of North Carolina at Chapel Hill)*; Siyuan Liu (Dalian Maritime University); Sahar Ahmad (The University of North Carolina at Chapel Hill); Pew-Thian Yap (UNC Chapel Hill)



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Thursday June 22nd

Thematic Session	Title	
Image Synthesis	S2DGAN: Generating dual-energy CT from single-energy CT for real-time determination of intracerebral hemorrhage	Caiwen Jiang (ShanghaiTech University)*; Yongsheng Pan (ShanghaiTech University); Tianyu Wang (Department of Radiology, Affiliated Hangzhou First People's Hospital, Zhejiang University School of Medicine); Qing Chen (Department of Radiology, Zhejiang Hospital); Junwei Yang (University of Cambridge); Li Ding (Zhejiang University); Jiameng Liu (ShanghaiTech University); Zhongxiang Ding (Hangzhou First People's Hospital); Dinggang Shen (ShanghaiTech University)
Image Synthesis	SADM: Sequence-Aware Diffusion Model for Longitudinal Medical Image Generation	Jee Seok Yoon (Korea University); Chenghao Zhang (Columbia University); Heung-Il Suk (Korea University); Jia Guo (Columbia University); Xiaoxiao Li (University of British Columbia)*
Multimodal learning	Using Multiple Instance Learning to Build Multimodal Representations	Peiqi Wang (MIT)*; William M Wells (Harvard Medical School / Brigham and Women's Hospital); Seth Berkowitz (Beth Israel Deaconess Medical Center, Harvard Medical School); Steven Horng (BIDMC); Polina Golland (MIT)
Multimodal learning	X-TRA: Improving Chest X-ray Tasks with Cross-Modal Retrieval Augmentation	Tom J van Sonsbeek (University of Amsterdam)*; Marcel Worring (University of Amsterdam)
Optimization	Differentiable Gamma Index-based loss functions: accelerating Monte-Carlo radiotherapy dose simulation	Sonia Martinot (CentraleSupélec)*; Nikos Komodakis (University of Crete); Maria Vakalopoulou (CentraleSupélec); Norbert Bus (Therapanacea); Charlotte Robert (Institut Gustave Roussy, Villejuif, France); Eric Deutsch (Institut Gustave Roussy, Villejuif, France); Nikos Paragios (Therapanacea)
Optimization	Diversified stochastic orthonormal projective non-negative matrix factorization for big neuroimaging data	Abdalla A Bani (Washington University in St. Louis)*; Sung Min Ha (Washington University in St. Louis); Pan Xiao (Washington University in Saint Louis); Thomas Earnest (Washington University in St. Louis); John Lee (Washington University in St. Louis); Aristeidis Sotiras (Washington University in St. Louis)
Registration	POLAFFINI: Efficient feature-based polyaffine initialization for improved non-linear image registration	Antoine Legouhy (University College London)*; Ross Callaghan (AINOSTICS Ltd.); Hojjat Azadbakht (AINOSTICS Ltd.); Hui Zhang (University College London)
Registration	MetaMorph: Learning Metamorphic Image Transformation With Appearance Changes	Jian Wang (University of Virginia)*; Jiarui Xing (University of Virginia); Jason Druzgal (University of Virginia); Miaomiao Zhang (University of Virginia)
Segmentation	blob loss: instance imbalance aware loss functions for semantic segmentation	Florian Kofler (TUM)*; Suprosanna Shit (TUM); Ivan Ezhov (TUM); Lucas Fidon (Owkin); Izabela Horvath (TUM); Rami Al-Maskari (TUM); Hongwei Li (Technical University of Munich); Harsharan Singh Bhatia (HMGU); Timo Loehr (TUM); Marie Piraud (Helmholtz Zentrum Muenchen); Ali Erturk (Helmholtz Munich); Jan Kirschke (Abteilung für diagnostische und interventionelle Neuroradiologie, Klinikum rechts der Isar); Jan C. Peeken (Department of Radiation Oncology, Klinikum rechts der Isar, Technical University of Munich (TUM)); Tom Vercauteren (King's College London); Claus Zimmer (TUM Munich); Benedikt Wiestler (TUM); Bjoern Menze (TUM)
Segmentation	Bootstrapping Semi-supervised Medical Image Segmentation with Anatomical-aware Contrastive Distillation	Chenyu You (Yale University)*; Weicheng Dai (NYU); Yifei Min (Yale University); Lawrence H Staib (Yale University); James S Duncan (Yale University)



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Segmentation	HALOS: Hallucination free Organ Segmentation after Organ Resection Surgery	Anne-Marie Rickmann (Ludwig Maximilians University Munich)*; Murong Xu (Technical University of Munich); Tom Nuno Wolf (Technical University of Munich); Oksana Kovalenko (Ludwig Maximilians University Munich); Christian Wachinger (Technical University of Munich)
Segmentation	Improved Segmentation of Deep Sulci in Cortical Gray Matter Using a Deep Learning Framework Incorporating Laplace's Equation	Sadhana Ravikumar (University of Pennsylvania)*; Ranjit Ittyerah (University of Pennsylvania); Sydney Lim (University of Pennsylvania); Sandhitsu R. Das (University of Pennsylvania); Laura Wisse (Lund University); John Robinson (University of Pennsylvania); Theresa Schuck (University of Pennsylvania); Murray Grossman (University of Pennsylvania); Edward Lee (University of Pennsylvania); M. Dylan Tisdall (University of Pennsylvania); Karthik Prabhakaran (University of Pennsylvania); John Detre (University of Pennsylvania); Gabor Mizsei (University of Pennsylvania); Long Xie (Siemens Healthineers); Pulkit Khandelwal (University of Pennsylvania); Winifred Trotman (University of Pennsylvania); David Irwin (University of Pennsylvania); Madigan Bedard (University of Pennsylvania); Emilio Artacho-Pérula (University of Castilla La Mancha); Maria Mercedes Iñiguez de Onzoño Martin (University of Castilla La Mancha); María del Mar Arroyo Jiménez (University of Castilla La Mancha); Monica Muñoz (University of Castilla La Mancha); Francisco Javier Molina Romero (University of Castilla La Mancha); Maria del Pilar Marcos Rabal (University of Castilla La Mancha); Sandra Cebada Sánchez (University of Castilla La Mancha); José Carlos Delgado González (University of Castilla La Mancha); Carlos de la Rosa Prieto (University of Castilla La Mancha); David Wolk (University of Pennsylvania); Ricardo Insausti (University of Castilla La Mancha); Paul Yushkevich (University of Pennsylvania)
Segmentation	Rethinking Boundary Detection in Deep Learning Models for Medical Image Segmentation	Yi Lin (The Hong Kong University of Science and Technology)*; Dong Zhang (The Hong Kong University of Science and Technology); Xiao Fang (The Hong Kong University of Science and Technology); Yufan Chen (HKUST); Kwang-Ting Cheng (Hong Kong University of Science and Technology); Hao Chen (The Hong Kong University of Science and Technology)
Segmentation	Better Generalization of White Matter Tract Segmentation to Arbitrary Datasets with Scaled Residual Bootstrap	Wan Liu (Beijing Institute of Technology); Chuyang Ye (Beijing Institute of Technology)*
Segmentation	Token Sparsification for Faster Medical Image Segmentation	Lei Zhou (Stony Brook University)*; Huidong Liu (Stony Brook University); Joseph Bae (Stony Brook University); Junjun He (SJTU); Dimitris Samaras (Stony Brook University); Prateek Prasanna (Stony Brook University)
Self supervised learning	Noise2Contrast: Multi-Contrast Fusion Enables Self-Supervised Tomographic Image Denoising	Fabian Wagner (Pattern Recognition Lab, FAU Erlangen-Nürnberg)*; Mareike Thies (FAU Erlangen-Nuremberg); Laura Pfaff (FAU Erlangen-Nürnberg); Noah Maul (FAU Erlangen-Nürnberg); Sabrina Pechmann (Fraunhofer Institute for Ceramic Technologies and Systems IKTS); Mingxuan Gu (Pattern Recognition Lab, FAU Erlangen-Nürnberg); Jonas Utz (FAU Erlangen-Nürnberg); Oliver Aust (Institute of clinical Immunology, University Hospital Erlangen); Daniela Weidner (Universitätsklinikum Erlangen); Georgiana Neag (Universitätsklinikum Erlangen); Stefan Uderhardt (Universitätsklinikum Erlangen); Jang-Hwan Choi (Ewha Womans University); Andreas K Maier (Pattern Recognition Lab, FAU Erlangen-Nuremberg)



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Self supervised learning	Precise Location Matching Improves Dense Contrastive Learning in Digital Pathology	Jingwei Zhang (Stony Brook University)*; Saarthak Kapse (Stony Brook University); Ke Ma (Snap Inc.); Prateek Prasanna (Stony Brook University); Maria Vakalopoulou (CentraleSupelec); Joel Saltz (Stony Brook University); Dimitris Samaras (Stony Brook University)
Surface Analysis and Segmentation	A Surface-normal Based Neural Framework for Colonoscopy Reconstruction	Shuxian Wang (The University of North Carolina at Chapel Hill); Yubo Zhang (The University of North Carolina at Chapel Hill)*; Sarah McGill (University of North Carolina at Chapel Hill); Julian Rosenman (University of North Carolina at Chapel Hill); Jan-Michael Frahm (UNC-Chapel Hill); Soumyadip Sengupta (University of North Carolina at Chapel Hill); Stephen Pizer (University of North Carolina)
Surface Analysis and Segmentation	Model-Informed Deep Learning for Surface Segmentation in Medical Imaging	Xiaodong Wu (University of Iowa)*; Leixin Zhou (University of Iowa); Fahim Ahmed Zaman (University of Iowa); Bensheng Qiu (University of Science and Technology of China); John Buatti (University of Iowa)
Surface Analysis and Segmentation	Hierarchical Geodesic Polynomial Model for Multilevel Analysis of Longitudinal Shape	Ye Han (Kitware); Jared Vicory (Kitware); Guido Gerig (NYU); Patricia Sabin (Children's Hospital of Philadelphia); Hannah Dewey (Children's Hospital of Philadelphia); Silvani Amin (Children's Hospital of Philadelphia); Ana Sulentic (Children's Hospital of Philadelphia); Christian Hertz (Children's Hospital of Philadelphia); Matthew Jolley (Children's Hospital of Philadelphia); Beatriz Paniagua (Kitware); James Fishbaugh (Kitware)*