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<i>Flotho, Philipp* (Systems Neuroscience and NeuroTechnology Unit); Romero Santiago, Alejandro E. (Saarland University); Schwerdtfeger, Karsten (Saarland University Hospital); Hülser, Matthias (Saarland University Hospital); Strauss, Daniel J. (Saarland University, Medical Faculty)</i>	
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A Fully Convolutional Neural Network based Structured Prediction Approach towards the Retinal Vessel Segmentation	248-251
<i>Singh, Sonam* (IIT Kharagpur); Dasgupta, Avijit (International Institute of Information Technology, Hyderabad)</i>	
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<i>Robic, Julie* (Clarins Laboratory, ESIEE Paris); Perret, Benjamin (ESIEE Paris); Nkengne, Alex (Clarins Laboratories); Couprie, Michel (ESIEE Paris); Talbot, Hugues (Paris-Est University)</i>	
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<i>Bozorgtabar, SeyedBehzad* (IBM Research Australia); Ge, Zongyuan (IBM); Chakravorty, Rajib (IBM Research Australia); Abedini, Mani (IBM Research); Demyanov, Sergey (IBM Research Australia); Garnavi, Rahil (IBM Research Australia)</i>	
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<i>Zheng, Shenhai (Chongqing University); Fang, Bin* (Chongqing University); Li, Laquan (Huazhong University of Science and Technology); Gao, Mingqi (Chongqing University); Zhang, Hongsuo (Chongqing University); Chen, Hengxin (Chongqing University); Wang, Yi (Chongqing University)</i>	
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<i>Tang, Hui* (IBM Research); Moradi, Mehdi (IBM Research); Prasanna, Prasanth (IBM Research - Almaden); Wang, Hongzhi (IBM Almaden Research Center); Syeda-Mahmood, Tanveer (IBM Almaden Research Center)</i>	
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<i>Cros, Olivier* (Linköping University); Gaihede, Michael (Aalborg Hospital, Dept. of Otorhinolaryngology and Head and); Eklund, Anders (Linköping University); Knutsson, Hans (Linköping University)</i>	
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<i>Chang, Enoch Jing-Han (University of Hong Kong); Guo, Yuexin (The University of Hong Kong); Lee, Wei-Ning* (The University of Hong Kong)</i>	

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Looney, Pdraig (University of Oxford); Stevenson, Gordon (UNSW School of Women's and Children's Health); Nicolaidis, Kypros H. (Harris Birthright Research Centre of Fetal Medicine, King's College); Plasencia, Walter (Fetal Medicine Unit, Hospiten Group. Tenerife. Canary Islands); Molloholli, Malid (Fetal Medicine Unit, The Women's Centre, John Radcliffe Hospital); Natsis, Stavros (Fetal Medicine Unit, The Women's Centre, John Radcliffe Hospital); Collins, Sally (Nuffield Dept. of Obstetrics and Gynaecology)*

11:30-12:30 WePosterFoyer-20.2
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Singhal, Nitin (GE Global Research Bangalore); Mukherjee, Suvadip (GE Global Research); Perrey, Christian (GE Healthcare)*

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Skin Machine Learning (Oral Session)
Chair: Delp, Edward (*Purdue University*)
Co-Chair: Roux, Christian (*Ecole des Mines de Saint-Etienne*)

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Skin Melanoma Segmentation using Recurrent and Convolutional Neural Networks 292-296
Attia, Mohamed (Alexandria University); Hossny, Mo (Deakin University); Nahavandi, Saeid (Deakin University); Yazdabadi, Anousha (Deakin University)*

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Menegola, Afonso (Univ. of Campinas); Fornaciali, Michel (Univ. of Campinas); Pires, Ramon (Univ. of Campinas); Vasques Bittencourt, Flávia (Federal Univ. of Minas Gerais); Avila, Sandra (Univ. of Campinas); Valle, Eduardo (School of Electrical and Computer Engineering, Univ. of Cam)*

15:15-15:30 WeS2T1.4
Hybrid Dermoscopy Image Classification Framework based on Deep Convolutional Neural Network and Fisher Vector 301-304
Yu, Zhen (SZU); Ni, Dong (National-Regional Key Technology Engineering Laboratory for Medicine); Chen, Siping (Shenzhen University); Qin, Jing (Dept. of Computer Science and Engineering, The Chinese Univ.); Li, Shengli (Dept. of Ultrasound, Affiliated Shenzhen Maternal and Child); Wang, Tianfu (Shenzhen University); Lei, Baiying (Shenzhen University)*

WeS2T3: 14:30-16:00 R219
MRI Segmentation (Oral Session)
Chair: Grisan, Enrico (*University of Padova*)
Co-Chair: Rajapakse, Jagath C. (*Nanyang Technological University*)

14:30-14:45 WeS2T3.1
Globally Optimal Breast Mass Segmentation from DCE-MRI using Deep Semantic Segmentation as Shape Prior 305-309
Maicas Suso, Gabriel (The University of Adelaide); Carneiro, Gustavo (University of Adelaide); Bradley, Andrew Peter (University of Queensland)*

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Dhungel, Neeraj (The University of Adelaide); Carneiro, Gustavo (University of Adelaide); Bradley, Andrew Peter (University of Queensland)*

15:00-15:15		WeS2T3.3
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<i>Ajani, Bhavya (Samsung R&D Institute); Krishnan, Karthik* (Samsung R&D Institute)</i>		
15:15-15:30		WeS2T3.4
General Surface Energy for Spinal Cord and Aorta Segmentation		319-322
<i>Gupta, Harshit* (Biomedical Imaging Group, Ecole Polytechnique Federale de Lausan); Schmitter, Daniel (EPFL); Uhlmann, Virginie (EPFL); Unser, Michael (EPFL)</i>		
15:30-15:45		WeS2T3.5
A New Method based on Template Registration and Deformable Models for Pelvic Bones Semi-Automatic Segmentation in Pediatric MRI		323-326
<i>Virzi, Alessio* (LTCl, CNRS, Telecom ParisTech, Universite Paris-Saclay, Paris, F); Marret, Jean-Baptiste (Dept. of Pediatric Radiology, Necker-Enfants Malades Hospital); Muller, Cécile O. (Dept. of Pediatric Radiology, Necker-Enfants Malades Hospital); Berteloot, Laureline (Dept. of Pediatric Radiology, Necker-Enfants Malades Hospital); Boddaert, Nathalie (Dept. of Pediatric Radiology, Necker-Enfants Malades Hospital); Sarnacki, Sabine (Dept. of Pediatric Radiology, Necker-Enfants Malades Hospital); Bloch, Isabelle (Télécom ParisTech - CNRS UMR 5141 LTCl)</i>		
WeS2T4: 14:30-16:00		R220
Microscopy and Histology Machine Learning (Oral Session)		
Chair: Obara, Boguslaw (<i>University of Durham</i>)		
Co-Chair: Arganda-Carreras, Ignacio (<i>IKERBASQUE: Basque Foundation for Science, Basque Country University</i>)		
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<i>Gonda, Felix* (Harvard University); Kaynig, Verena (Harvard University); Jones, Thouis R. (Harvard School of Engineering and Applied Sciences); Haehn, Daniel (Harvard University); Lichtman, Jeff (Harvard University); Parag, Toufiq (Harvard University); Pfister, Hanspeter (Harvard University)</i>		
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<i>Brattain, Laura* (MIT Lincoln Laboratory); Telfer, Brian (MIT Lincoln Laboratory); Samsi, Siddharth (University of Luxembourg); Ku, Taeyun (Massachusetts Institute of Technology); Choi, Heejin (Massachusetts Institute of Technology); Chung, Kwanghun (Massachusetts Institute of Technology)</i>		
15:00-15:15		WeS2T4.3
MIMO-Net: A Multi-Input Multi-Output Convolutional Neural Network for Cell Segmentation in Fluorescence Microscopy Images		337-340
<i>Raza, Shan E Ahmed* (University of Warwick); Cheung, Linda (University of Warwick); Epstein, David (University of Warwick); Pelengaris, Stella (University of Warwick); Khan, Michael (University of Warwick); Rajpoot, Nasir (University of Warwick)</i>		
15:15-15:30		WeS2T4.4
Deep Residual Hough Voting for Mitotic Cell Detection in Histopathology Images		341-344
<i>Wollmann, Thomas* (Univ. of Heidelberg, DKFZ Heidelberg); Rohr, Karl (Univ. of Heidelberg, DKFZ Heidelberg)</i>		
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<i>González Obando, Daniel Felipe (Institute Pasteur); Frajford, Astri (Oslo University Hospital, Tumor Immunology Group, Oslo); Øynebråten, Inger (Oslo University Hospital, Tumor Immunology Group, Oslo); Corthay, Alexandre (Oslo University Hospital, Tumor Immunology group, Oslo); Olivo-Marin, Jean-Christophe (Institute Pasteur); Meas-Yedid, Vannary* (Institute Pasteur)</i>		

WeS3T2: 16:30-18:00	R218
Brain Connectivity (Oral Session)	
Chair: Marks, William H. (<i>University of Cambridge</i>)	
Co-Chair: Syeda-Mahmood, Tanveer (<i>IBM Almaden Research Center</i>)	

16:30-16:45	WeS3T2.1
Heritability of Connectivity and Disconnectivity of the Brain in a Population-Based Study	349-353
<i>Langen, Carolyn Diana*</i> (<i>Erasmus Medical Center, Rotterdam</i>); <i>Roshchupkin, Gennady</i> (<i>Erasmus Medical Center, Rotterdam, NL</i>); <i>Adams, Hieab</i> (<i>Erasmus MC</i>); <i>de Groot, Marius</i> (<i>Erasmus MC, Rotterdam</i>); <i>Vos, Frans</i> (<i>TU Delft</i>); <i>Vernooij, Meike</i> (<i>Erasmus MC, Rotterdam</i>); <i>Ikram, M. Arfan</i> (<i>Erasmus Medical Center, Rotterdam, NL</i>); <i>Niessen, Wiro</i> (<i>Erasmus MC, University Medical Center Rotterdam</i>)	
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<i>Ktena, Sofia Ira*</i> (<i>Imperial College London</i>); <i>Arslan, Salim</i> (<i>Imperial College London</i>); <i>Parisot, Sarah</i> (<i>Imperial College London</i>); <i>Rueckert, Daniel</i> (<i>Imperial College London</i>)	
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<i>Bolton, Thomas*</i> (<i>EPFL</i>); <i>Van De Ville, Dimitri</i> (<i>EPFL & UniGE</i>)	
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Group Information Guided ICA Shows more Sensitivity to Group Differences than Dual-Regression	362-365
<i>Salman, Mustafa Saifuddin</i> (<i>Univ. of New Mexico/The Mind Research Network</i>); <i>Du, Yuhui*</i> (<i>The Mind Research Network</i>); <i>Damaraju, Eswar</i> (<i>The Mind Research Network & LBERI, Albuquerque, New Mexico, USA</i>); <i>Lin, Qiu-Hua</i> (<i>Dalian Univ. of Technology</i>); <i>Calhoun, Vince</i> (<i>The Mind Research Network/Univ. of New Mexico</i>)	
17:30-17:45	WeS3T2.5
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<i>Langen, Carolyn Diana*</i> (<i>Erasmus Medical Center, Rotterdam</i>); <i>Vernooij, Meike</i> (<i>Erasmus MC, Rotterdam</i>); <i>Cremers, Lotte</i> (<i>Erasmus Medical Center, Rotterdam</i>); <i>Huizinga, Wyke</i> (<i>Erasmus MC - University Medical Center Rotterdam</i>); <i>de Groot, Marius</i> (<i>Erasmus MC, Rotterdam</i>); <i>Ikram, M. Arfan</i> (<i>Erasmus Medical Center, Rotterdam, NL</i>); <i>White, Tonya</i> (<i>Erasmus Medical Center, Rotterdam</i>); <i>Niessen, Wiro</i> (<i>Erasmus MC, University Medical Center Rotterdam</i>)	

WeS3T3: 16:30-18:00	R219
CT Machine Learning (Oral Session)	
Chair: Moradi, Mehdi (<i>IBM Research</i>)	
Co-Chair: Sivaswamy, Jayanthi (<i>International Institute of Information Technology-Hyderabad</i>)	

16:30-16:45	WeS3T3.1
Light Random Regression Forests for Automatic Multi-Organ Localization in CT Images	371-374
<i>Samarakoon, Prasad Nirmalal*</i> (<i>Univ. Grenoble Alpes</i>); <i>Promayon, Emmanuel</i> (<i>Univ. Grenoble Alpes</i>); <i>Fouard, Céline</i> (<i>Université Joseph Fourier</i>)	
16:45-17:00	WeS3T3.2
Generative Method to Discover Emphysema Subtypes with Unsupervised Learning using Lung Macroscopic Patterns (LMPs): The MESA COPD Study	375-378
<i>Song, Jingkuan</i> (<i>Columbia University</i>); <i>Yang, Jie</i> (<i>Columbia University</i>); <i>Smith, Benjamin M.</i> (<i>Dept. of Medicine, College of Physicians and Surgeons, Colu</i>); <i>Balte, Pallavi</i> (<i>Columbia University Medical Center</i>); <i>Hoffman, Eric</i> (<i>University of Iowa</i>); <i>Barr, R. Graham</i> (<i>Columbia University Medical Center</i>); <i>Laine, Andrew</i> (<i>Columbia University</i>); <i>Angelini, Elsa*</i> (<i>Imperial NIHR BRC, Imperial College London</i>)	
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Lung Nodule Detection in CT using 3D Convolutional Neural Networks	379-383
<i>Huang, Xiaojie*</i> (<i>GE Global Research</i>); <i>Shan, Junjie</i> (<i>The University of North Carolina at Charlotte</i>); <i>Vaidya, Vivek</i> (<i>General Electric</i>)	

17:15-17:30 WeS3T3.4
Deep-Learning Strategy for Pulmonary Artery-Vein Classification of Non-Contrast CT Images 384-387
*Nardelli, Pietro** (Brigham and Women's Hospital, Harvard Medical School); *Jimenez-Carretero, Daniel* (Universidad Politécnica de Madrid NIF); *Bermejo Pelaez, David* (Universidad Politecnica de Madrid); *Ledesma-Carbayo, Maria J.* (Universidad Politécnica de Madri); *Farbod Rahaghi, Nicola* (Brigham and Women's Hospital); *San Jose Estepar, Raul* (Brigham Women's Hospital and Harvard Medical School)

17:30-17:45 WeS3T3.5
Atherosclerotic Vascular Calcification Detection and Segmentation on Low Dose Computed Tomography Scans using Convolutional Neural Networks 388-391
Chellamuthu, Karthik (NIH); *Liu, Jiamin** (NIH); *Yao, Jianhua* (National Institutes of Health); *Bagheri, Mohammadhadi* (NIH); *Lu, Le* (NIH); *Sandfort, Veit* (NIH); *Summers, Ronald* (National Institutes of Health Clinical Center)

WeS3T4: 16:30-18:00 R220
Segmentation in Light Microscopy (Oral Session)
Chair: Seelamantula, Chandra Sekhar (*Indian Institute of Science, Bangalore*)
Co-Chair: Olivo-Marin, Jean-Christophe (*Institut Pasteur*)

16:30-16:45 WeS3T4.1
Segmentation of Cell Structures using Model-Based Set Covering with Iterative Reweighting 392-396
Markowsky, Peter (Univ. of Heidelberg, Image and Pattern Analysis Group); *Reith, Svenja** (Univ. of Heidelberg, DKFZ Heidelberg); *Zuber, Tabea Elsa* (Univ. of Heidelberg, Image and Pattern Analysis Group); *Koenig, Rainer* (Integrated Research and Treatment Center, Center for Sepsis Contr); *Rohr, Karl* (Univ. of Heidelberg, DKFZ Heidelberg); *Schnörr, Christoph* (Univ. of Heidelberg, Image and Pattern Analysis Group)

16:45-17:00 WeS3T4.2
NeuroSoL: Automated Classification of Neurons using the Sorted Laplacian of a Graph 397-400
Batabyal, Tamal (University of Virginia); *Acton, Scott** (University of Virginia)

17:00-17:15 WeS3T4.3
Crowd Sourcing Image Segmentation with lastaple 401-405
Schlesinger, Dmitrij (Dresden University of Technology); *Jug, Florian* (MPI-CBG); *Myers, Eugene* (Max Planck Institute of Molecular Cell Biology and Genetics); *Rother, Carsten* (Computer Vision Lab Dresden, Dresden University of Technology); *Kainmueller, Dagmar** (MPI-CBG)

17:15-17:30 WeS3T4.4
Combining Fully Convolutional Networks and Graph-Based Approach for Automated Segmentation of Cervical Cell Nuclei 406-409
*Zhang, Ling** (National Institutes of Health); *Sonka, Milan* (University of Iowa); *Lu, Le* (NIH); *Summers, Ronald* (National Institutes of Health Clinical Center); *Yao, Jianhua* (National Institutes of Health)

17:30-17:45 WeS3T4.5
Neurite Reconstruction from Time-Lapse Sequences using Co-Segmentation 410-414
Gulyanon, Sarun (Indiana University-Purdue University Indianapolis); *Sharifai, Nima* (University of Miami); *Kim, Michael D.* (University of Miami); *Chiba, Akira* (University of Miami); *Tsechpenakis, Gavriil** (Indiana University-Purdue University Indianapolis)

ThS1T2: 10:00-11:30 R218
Registration in Microscopy Imaging (Oral Session)
Chair: Rohr, Karl (*University of Heidelberg, DKFZ Heidelberg*)
Co-Chair: Arganda-Carreras, Ignacio (*IKERBASQUE: Basque Foundation for Science, Basque Country University*)

10:00-10:15 ThS1T2.1
Registration of Ultra-High Resolution 3D PLI Data of Human Brain Sections to their Corresponding High-Resolution Counterpart 415-419
Ali, Sharib (German Cancer Research Center, DKFZ, Heidelberg); Rohr, Karl (University of Heidelberg, DKFZ Heidelberg); Axer, Markus (Jülich Research Centre); Amunts, Katrin (Jülich Research Centre); Eils, Roland (University of Heidelberg, DKFZ Heidelberg); Wörz, Stefan (University of Heidelberg)*

10:15-10:30 ThS1T2.2
Optical Flow-Based Non-Rigid Registration of Cell Nuclei: Global Model with Adaptively Weighted Regularization 420-423
Gao, Qi (Heidelberg University); Rohr, Karl (University of Heidelberg, DKFZ Heidelberg)*

10:30-10:45 ThS1T2.3
Dynamic Registration for Gigapixel Serial Whole Slide Images 424-428
Rossetti, Blair (Emory Univ.); Wang, Fusheng (Stony Brook Univ.); Zhang, Pengyue (Stony Brook Univ.); Teodoro, George (Univ. of Brasilia); Brat, Daniel (Emory Univ.); Kong, Jun (Emory Univ.)*

10:45-11:00 ThS1T2.4
Group-Wise 3D Registration based Templates to Study the Evolution of Ant Worker Neuroanatomy 429-432
Arganda-Carreras, Ignacio (IKERBASQUE: Basque Foundation for Science, Basque Country Univ.); Gordon, Darcy G. (Boston University); Arganda, Sara (Boston University); Beaudoin, Maxime (Ecole d'Ingenieurs et Centre de Recherche (ENSTA)); Traniello, James FA (Boston University)*

11:00-11:15 ThS1T2.5
Coherent Temporal Extrapolation of Labeled Images 433-436
Malandain, Gregoire (INRIA); Michelin, Gaël (INRIA Sophia Antipolis)*

ThS1T3: 10:00-11:30 R219
MRI Machine Learning I (Oral Session)
Chair: Angelini, Elsa (*Imperial NIHR BRC, Imperial College London*)
Co-Chair: Bourgeat, Pierrick (*CSIRO*)

10:00-10:15 ThS1T3.1
M-Net: A Convolutional Neural Network for Deep Brain Structure Segmentation 437-440
Mehta, Raghav (International Institute of Information Technology-Hyderabad); Sivaswamy, Jayanthi (International Institute of Information Technology-Hyderabad)*

10:15-10:30 ThS1T3.2
Simple Domain Adaptation for Cross-Dataset Analyses of Brain MRI Data 441-445
Hofer, Christoph David (University of Salzburg); Kwitt, Roland (University of Salzburg); Hoeller, Yvonne (Dept. of Neurology, Paracelsus Medical University); Trinkka, Eugen (Dept. of Neurology, Paracelsus Medical University); Uhl, Andreas (University of Salzburg)*

10:30-10:45 ThS1T3.3
Empowering Cortical Thickness Measures in Clinical Diagnosis of Alzheimer's Disease with Spherical Sparse Coding 446-450
Zhang, Jie (Arizona State University); Fan, Yonghui (Arizona State University); Li, Qingyang (Arizona State University); Thompson, Paul (University of Southern California); Ye, Jieping (University of Michigan); Wang, Yalin (Arizona State University)*

10:45-11:00 ThS1T3.4
Structural Connectome Validation using Pairwise Classification 451-455
Petrov, Dmitry (The Institute for Information Transmission Problems); Gutman, Boris (Imaging Genetics Center, Institute for Neuroimaging and Informa); Ivanov, Alexander (IITP); Faskowitz, Joshua (Univ. of Southern California); Jahanshad, Neda (Imaging Genetics Center, Univ. of Southern California); Belyaev, Mikhail (Institute for Information Transmission Problems RAS); Thompson, Paul (Univ. of Southern California)*

11:00-11:15 ThS1T3.5
Improving MRI-Based Diagnosis of Alzheimer's Disease via an Ensemble Privileged Information Learning Algorithm 456-459
Zheng, Xiao (Shanghai University); Shi, Jun (Shanghai University); Zhang, Qi (Shanghai University); Ying, Shihui (University of North Carolina at Chapel Hill); Li, Yan (Shenzhen University)*

ThS1T4: 10:00-11:30	R220
fMRI Analysis (Oral Session)	
Chair: Rajapakse, Jagath C. (Nanyang Technological University)	
Co-Chair: Rose, Stephen (The Australian e-Health Research Centre, CSIRO, Health and Biosecurity)	

10:00-10:15 ThS1T4.1
Graph Theoretical Approaches towards Understanding Differences in Frontoparietal and Default Mode Networks in Autism 460-463
Riedel, Brandalyn (USC); Jahanshad, Neda (Imaging Genetic Center, University of Southern California); Thompson, Paul (University of Southern California)*

10:15-10:30 ThS1T4.2
Changes in Resting State MRI Networks from a Single Season of Football Distinguishes Controls, Low, and High Head Impact Exposure 464-467
Krishnan, Gowtham (University of Texas Southwestern); Montillo, Albert (UT Southwestern); Wagner, Ben (University of Texas Southwestern); Famili, Afarin (University of Texas Southwestern); Davenport, Elizabeth (UT Southwestern); Maldjian, Joseph (UT South Western Medical Center); Jones, Derek (Wake Forest University); Kelley, Mireille (Wake Forest School of Medicine); Stitzel, Joel (Wake Forest School of Medicine); Christopher, Whitlow (Wake Forest School of Medicine); Jillian, Urban (Wake Forest School of Medicine)*

10:30-10:45 ThS1T4.3
Multisubject fMRI Data Analysis via Two Dimensional Multi-set Canonical Correlation Analysis 468-471
Desai, Nandakishor (University of Melbourne); Seghouane, Abd-krim (The University of Melbourne); Palaniswami, Marimuthu (The University of Melbourne)*

10:45-11:00 ThS1T4.4
Regularized Spatiotemporal Deconvolution of fMRI Data using Gray-Matter Constrained Total Variation 472-475
Farouj, Younes (EPFL); Karahanoglu, Fikret Isik (Martinos Center for Biomedical Imaging, Harvard Medical School); Van De Ville, Dimitri (EPFL & UniGE)*

11:00-11:15 ThS1T4.5
Parameter Selection for Optimized Non-Local Means Filtering of Task fMRI 476-480
Li, Jian (University of Southern California); Leahy, Richard (USC)*

ThPosterFoyer: 11:30-12:30	Foyer
Registration and Motion Compensation – Poster Session 2 (Poster Session)	

11:30-12:30 ThPosterFoyer.1
Voxel-Wise Correspondence of Cone-Beam Computed Tomography Images by Cascaded Randomized Forest 481-484
Pei, Yuru (Peking University); Yi, Yunai (Peking University); Chen, Gui (Peking University); Xu, Tianmin (Peking University); Zha, Hongbin (Peking University); Ma, Gengyu (uSens Inc.)*

11:30-12:30 ThPosterFoyer.2
A Novel Framework for Groupwise Registration of fMRI Images based on Common Functional Networks 485-489
Zhao, Yu (The Univ. of Georgia); Zhang, Shu (Univ. of Georgia); Chen, Hanbo (The Univ. of Georgia, Athens, GA, USA); Zhang, Wei (Univ. of Georgia); Lv, Jinglei (QIMR Berghofer Medical Research Institute); Jiang, Xi (Univ. of Georgia); Liu, Tianming (Univ. of Georgia); Shen, Dinggang (UNC-Chapel Hill)*

11:30-12:30 ThPosterFoyer.3
Hierarchical Multi-Scale Supervoxel Matching using Random Forests for Automatic Semi-Dense Abdominal Image Registration 490-493
Conze, Pierre-Henri (ICube, Université de Strasbourg, CNRS, FMTS); Tilquin, Florian (ICube, Université de Strasbourg, CNRS, FMTS); Noblet, Vincent (ICube, University of Strasbourg, CNRS); Rousseau, François (Telecom Bretagne); Heitz, Fabrice (ICube); Pessaux, Patrick (Institute Hospitalo-Universitaire de Strasbourg)*

11:30-12:30 ThPosterFoyer.4
Joint Calibration and Motion Estimation in Weight-Bearing Cone-Beam CT of the Knee Joint using Fiducial Markers 494-497
Syben, Christopher (Friedrich-Alexander-Universität Erlangen-Nürnberg); Bier, Bastian (Friedrich-Alexander University Erlangen-Nuremberg); Berger, Martin (Friedrich-Alexander-Universität Erlangen-Nürnberg); Aichert, André (Friedrich-Alexander-Universität Erlangen-Nürnberg); Fahrig, Rebecca (Stanford); Gold, Gary (Dept. of Radiology, School of Medicine, Stanford University); Levenston, Marc (Dept. of Radiology, School of Medicine, Stanford University); Maier, Andreas (Friedrich-Alexander-University Erlangen-Nuremberg)*

11:30-12:30 ThPosterFoyer.5
A Simple Respiratory Motion Analysis Method for Chest Tomosynthesis 498-501
Zhang, Hua (School of Biomedical Engineering, Southern Medical University); Tao, Xi (Southern Medical University); Qin, Genggeng (Dept. of Radiology, Nanfang Hospital, Southern Medical Univ.); Ma, Jianhua (School of Biomedical Engineering, Southern Medical University); Feng, Qianjin (Southern Medical University); Chen, Wufan (School of Biomedical Engineering, Southern Medical University)*

ThPosterFoyer-02: 11:30-12:30 Brain MRI – Poster Session 2 (Poster Session)	Foyer
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11:30-12:30 ThPosterFoyer-02.1
Data-Driven Cluster Selection for Subcortical Shape and Cortical Thickness Predicts Recovery from Depressive Symptoms 502-506
Wade, Benjamin (University of California, Los Angeles); Sui, Jing (Institute of Automation, Chinese Academy of Science); Njau, Stephanie (UCLA); Leaver, Amber (University of California, Los Angeles); Vasavada, Megha (Ahmanson-Lovelace Brain Mapping Center, Dept. of Neurology); Gutman, Boris (Imaging Genetics Center, Institute for Neuroimaging and Informa); Thompson, Paul (University of Southern California); Espinoza, Randall (University of California, Los Angeles); Woods, Roger (University of California, Los Angeles); Abbott, Christopher (Dept. of Psychiatry, University of New Mexico); Narr, Katherine (University of California, Los Angeles); Joshi, Shantanu (Ahmanson-Lovelace Brain Mapping Center, Dept. of Neurology)*

11:30-12:30 ThPosterFoyer-02.2
High-Order Boltzmann Machine-Based Unsupervised Feature Learning for Multi-Atlas Segmentation 507-510
Sun, Liang (Nanjing University of Aeronautics and Astronautics); Shao, Wei (Nanjing University of Aeronautics and Astronautics); Zhang, Daoqiang (Nanjing University of Aeronautics and Astronautics)*

11:30-12:30 ThPosterFoyer-02.3
Detecting Functional Modules of the Brain using Eigen Value Decomposition of Laplacian 511-514
Sui, Xiuchao (Nanyang Technological University); Li, Shaohua (Nanyang Technological University); Rajapakse, Jagath C (Nanyang Technological University)*

11:30-12:30 ThPosterFoyer-02.4
Fitting Networks Models for Functional Brain Connectivity 515-519
Rajapakse, Jagath C (Nanyang Technological University); Gupta, Sukrit (Nanyag Technological University); Sui, Xiuchao (Nanyang Technological University)*

11:30-12:30 ThPosterFoyer-02.5
Enhancing Diffusion MRI Measures by Integrating Grey and White Matter Morphometry with Hyperbolic Wasserstein Distance 520-524
Zhang, Wen (School of Computing, Informatics, and Decision Systems Engineering); Shi, Jie (School of Computing, Informatics, and Decision Systems Engineering); Yu, Jun (Arizona State Univ.); Zhan, Liang (Univ. of Wisconsin-Stout); Thompson, Paul (Univ. of Southern California); Wang, Yalin (Arizona State Univ.)*

11:30-12:30 ThPosterFoyer-02.6
Brain Geometry Persistent Homology Marker for Parkinson's Disease 525-528
Garg, Amanmeet (Simon Fraser University); Lu, Donghuan (Simon Fraser University);
Popuri, Karteek (University of Alberta); Beg, Mirza Faisal (Simon Fraser University)*

11:30-12:30 ThPosterFoyer-02.7
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Learning Machine: Resting-State fMRI Study** 529-532
*Qureshi, Muhammad Naveed Iqbal (Gwangju Institute of Science and Technology, Gwangju); Jo, Hang Joon
(Hanyang University); Lee, Boreom* (Gwangju Institute of Science and Technology (GIST))*

11:30-12:30 ThPosterFoyer-02.8
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Li, Xiao (Northwestern Polytechnical University); Zhang, Tuo (Northwestern Polytechnical University, Xi'an,
China); Hu, Xintao (Northwestern Polytechnical University, Xi'an, China); Du, Lei (Northwestern Polytechnical
University); Guo, Lei (Northwestern Polytechnical University); Liu, Tianming (University of Georgia);
Zhang, Shu (University of Georgia); Dong, Qinglin (University of Georgia)*

ThPosterFoyer-03: 11:30-12:30 Foyer
Reconstruction – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-03.1
An Optical Flow-Based Approach for the Interpolation of Minimally Divergent Velocimetry Data 538-542
Kanberoglu, Berkay (Arizona State University); Nair, Priya (Arizona State University);
Frakes, David (Arizona State University)*

11:30-12:30 ThPosterFoyer-03.2
Image Reconstruction in Computed Tomography using Variance-Reduced Stochastic Gradient Descent 543-547
Karimi, Davood (UBC); Ward, Rabab (University of British Columbia)*

11:30-12:30 ThPosterFoyer-03.3
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Electrical Impedance Tomography to the Head** 548-551
Ouypornkochagorn, Tawechai (Srinakharinwirot University)*

ThPosterFoyer-04: 11:30-12:30 Foyer
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11:30-12:30 ThPosterFoyer-04.1
Domain Specific Convolutional Neural Nets for Detection of Architectural Distortion in Mammograms 552-556
Ben-Ari, Rami (IBM-Research); Akselrod-Ballin, Ayelet (Weizmann Institute);
Karlinsky, Leonid (IBM-Research); Hashoul, Sharbell (IBM)*

ThPosterFoyer-05: 11:30-12:30 Foyer
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11:30-12:30 ThPosterFoyer-05.1
Automatic Detection of Aortic Dissection in Contrast-Enhanced CT 557-560
Dehghan, Ehsan (IBM Research); Wang, Hongzhi (IBM Almaden Research Center);
Syeda-Mahmood, Tanveer (IBM Almaden Research Center)*

11:30-12:30 ThPosterFoyer-05.2
Semi-Automatic Skin Lesion Segmentation via Fully Convolutional Networks 561-564
Bi, Lei (University of Sydney); Kim, Jinman (University of Sydney); Ahn, Euijoon (University of Sydney);
Feng, Dagan (The University of Sydney); Fulham, Michael (Royal Prince Alfred Hospital)*

11:30-12:30 ThPosterFoyer-05.3
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Tareef, Afaf (University of Sydney); Song, Yang (University of Sydney); Feng, Dagan (The University of
Sydney); Chen, Mei (University of Albany State University of New York); Cai, Weidong (University of Sydney)*

11:30-12:30 ThPosterFoyer-05.4
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Yu, Dongdong (Key Laboratory of Molecular Imaging, Institute of Automation, Ch); Mu, Zhou (Stanford University); Yang, Feng (Beijing Jiaotong University); Dong, Di (Chinese Academy of Sciences); Gevaert, Olivier (The Stanford Center for Biomedical Informatics Research); Liu, Zaiyi (Dept. of Radiology, Guangdong General Hospital, Guangdong); Shi, Jingyun (Dept. of Radiology, Shanghai Pulmonary Hospital, Tongji Univ.); Tian, Jie (Chinese Academy of Sciences)*

11:30-12:30 ThPosterFoyer-05.5
Towards Cartilage Diagnosis in X-Ray Phase-Contrast Interferometry 573-577
Bopp, Johannes (Friedrich-Alexander University Erlangen-Nuremberg); Bartl, Peter (Siemens Healthcare GmbH); Ritschl, Ludwig (Siemens Healthcare GmbH); Radicke, Marcus (Siemens Healthcare GmbH); Maier, Andreas (Friedrich-Alexander-University Erlangen-Nuremberg); Anton, Gisela (Friedrich-Alexander-University Erlangen-Nuremberg); Riess, Christian (Friedrich-Alexander University Erlangen-Nuremberg)*

ThPosterFoyer-06: 11:30-12:30 Foyer
CT Machine Learning Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-06.1
Self Supervised Deep Representation Learning for Fine-Grained Body Part Recognition 578-582
Zhang, Pengyue (Stony Brook University); Wang, Fusheng (Stony Brook University); Zheng, Yefeng (Siemens Healthcare Technology Center)*

11:30-12:30 ThPosterFoyer-06.2
Detection and Segmentation of Small Renal Masses in Contrast-Enhanced CT Images using Texture and Context Feature Classification 583-586
Lee, Han Sang (KAIST); Hong, Helen (Seoul Women's University); Kim, Junmo (KAIST)*

ThPosterFoyer-07: 11:30-12:30 Foyer
EEG and MEG – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-07.1
Automatic Identification of Successful Memory Encoding in Stereo-EEG of Refractory, Mesial Temporal Lobe Epilepsy 587-590
Famili, Afarin (University of Texas Southwestern); Krishnan, Gowtham (University of Texas Southwestern); Davenport, Elizabeth (UT Southwestern); Germi, James (University of Texas Southwestern); Wagner, Ben (University of Texas Southwestern); Lega, Bradley (University of Texas Southwestern Medical Center); Montillo, Albert (UT Southwestern)*

ThPosterFoyer-08: 11:30-12:30 Foyer
Histopathology Machine Learning – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-08.1
Comparison of Different Methods for Tissue Segmentation in Histopathological Whole-Slide Images 591-595
Bandi, Peter (Radboud University Medical Center); van de Loo, Rob (Radboud University Medical Center); Intezar, Milad (Radboud University Medical Center); Geijs, Daan (Radboud University Medical Center); Ciompi, Francesco (Radboud University Medical Center); van Ginneken, Bram (Radboud University Medical Center); van der Laak, Jeroen A.W.M. (Radboud University Medical Center); Litjens, Geert (Radboud University Nijmegen Medical Center)*

11:30-12:30 ThPosterFoyer-08.2
Disease Grading of Heterogeneous Tissue using Convolutional Autoencoder 596-599
Zerhouni, Erwan Barry Tarik (IBM Research-Zurich); Prisacari, Bogdan (IBM Research-Zurich); Zhong, Qing (University Hospital Zurich); Wild, Peter (University Hospital Zurich); Gabrani, Maria (IBM Research-Zurich)*

11:30-12:30 ThPosterFoyer-08.3
Adapting Fisher Vectors for Histopathology Image Classification 600-603
Song, Yang (University of Sydney); Zou, Ju Jia (Western Sydney University); Chang, Hang (Lawrence Berkeley National Laboratory); Cai, Weidong (University of Sydney)*

ThPosterFoyer-09: 11:30-12:30 Foyer
Interventional Imaging – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-09.1
Evaluation of a Multi-View Autostereoscopic Real-Time 3D Ultrasound System for Minimally Invasive Cardiac Surgery Guidance 604-607
Kozłowski, Pawel (University of Oslo); Urheim, Stig (Dept. of Cardiology and Institute for Surgical Research, Os); Samset, Eigil (GE Vingmed Ultrasound)*

11:30-12:30 ThPosterFoyer-09.2
Automatic Identification of Side Branch and Main Vascular Measurements in Intravascular Optical Coherence Tomography Images 608-611
Cao, Yihui (Xi'an Institute of Optics and Precision Mechanics, Chinese Acade); Jin, Qinhua (Chinese PLA General Hospital); Chen, Yundai (Chinese PLA General Hospital); Yin, Qinye (Xi'an Jiaotong University); Qin, Xianjing (Fourth Military Medical University); Li, Jianan (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy); Zhu, Rui (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy); Zhao, Wei (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy)*

ThPosterFoyer-11: 11:30-12:30 Foyer
Miscellaneous Machine Learning – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-11.1
Aneurysm Detection in 3D Cerebral Angiograms based on Intra-Vascular Distance Mapping and Convolutional Neural Networks 612-615
Jerman, Tim (University of Ljubljana); Pernus, Franjo (University of Ljubljana); Likar, Bostjan (University of Ljubljana); Spiclin, Ziga (University of Ljubljana)*

11:30-12:30 ThPosterFoyer-11.2
Disentangling Inter-Subject Variations: Automatic Localization of Ventricular Tachycardia Origin from 12-Lead Electrocardiograms 616-619
Chen, Shuhang (Zhejiang University); Gyawali, Prashna (Rochester Institute of Technology); Liu, Huafeng (Zhejiang University); Horacek, B. Milan (Dalhousie University); Sapp, John (Dalhousie University); Wang, Linwei (Rochester Institute of Technology)*

11:30-12:30 ThPosterFoyer-11.3
Deep Learning based Multi-Label Classification for Surgical Tool Presence Detection in Laparoscopic Videos 620-623
Wang, Sheng (The University of Texas at Arlington); Raju, Ashwin (University of Texas, Arlington); Huang, Junzhou (University of Texas at Arlington)*

11:30-12:30 ThPosterFoyer-11.4
Automatic Carotid Ultrasound Segmentation using Deep Convolutional Neural Networks and Phase Congruency Maps 624-628
Azzopardi, Carl (University of Malta); Hicks, Yulia A. (University of Cardiff); Camilleri, Kenneth Patrick (University of Malta)*

11:30-12:30 ThPosterFoyer-11.5
Blood Vessel Characterization using Virtual 3D Models and Convolutional Neural Networks in Fluorescence Microscopy 629-632
Chowdhury, Aritra (Rensselaer Polytechnic Institute); Dylvov, Dmitry V. (GE Global Research); Meyer, Dan (GE Global Research); Li, Qing (GE Global Research); Santamaria, Alberto (GE Global Research); Marino, Michael (General Electric)*

11:30-12:30 ThPosterFoyer-11.6
Convolutional Neural Network Pruning to Accelerate Membrane Segmentation in Electron Microscopy 633-637
Roels, Joris (Ghent University); De Vylder, Jonas (Ghent University); Aelterman, Jan (Ghent University); Saeyns, Yvan (VIB - Ghent University); Philips, Wilfried (Gent University)*

ThPosterFoyer-12: 11:30-12:30 Foyer
MRI Machine Learning – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-12.1
Radiogenomic Classification of the 1p/19q Status in Presumed Low-Grade Gliomas 638-641
*van der Voort, Sebastian Robert** (Erasmus MC, University Medical Center Rotterdam); *Gahrman, Renske* (Erasmus MC, University Medical Center Rotterdam); *van den Bent, Martin J.* (Erasmus MC Cancer Institute University Medical Centre, Rotterdam); *Vincent, Arnaud J.P.E.* (Erasmus MC, University Medical Center Rotterdam); *Niessen, Wiro* (Erasmus MC, University Medical Center Rotterdam); *Smits, Marion* (Erasmus MC, University Medical Center Rotterdam); *Klein, Stefan* (Erasmus MC)

11:30-12:30 ThPosterFoyer-12.2
Biopsy-Guided Learning with Deep Convolutional Neural Networks for Prostate Cancer Detection on Multiparametric MRI 642-645
*Tsehay, Yohannes** (National Institutes of Health); *Lay, Nathan* (NIH); *Wang, Xiaosong* (NIH); *Turkbey, Baris* (Molecular Imaging Program, NCI, NIH); *Kwak, Jin Tae* (Sejong University); *Choyke, Peter* (National Institutes of Health); *Pinto, Peter* (National Institutes of Health); *Wood, Bradford* (NIH); *Summers, Ronald* (National Institutes of Health Clinical Center)

ThPosterFoyer-13: 11:30-12:30 Foyer
Optical Image Analysis – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-13.1
Colocalization Analysis and Particle Tracking in Multi-Channel Fluorescence Microscopy Images 646-649
*Qiang, Yu** (Univ. of Heidelberg, BIOQUANT, IPMB, and DKFZ Heidelberg); *Lee, Ji Young* (Univ. of Heidelberg); *Bartenschlager, Ralf* (Univ. of Heidelberg); *Rohr, Karl* (Univ. of Heidelberg, DKFZ Heidelberg)

11:30-12:30 ThPosterFoyer-13.2
Blood Cell Detection and Counting in Holographic Lens-Free Imaging by Convolutional Sparse Dictionary Learning and Coding 650-653
*Yellin, Florence** (Johns Hopkins University); *Haefele, Benjamin David* (Johns Hopkins University); *Vidal, Rene* (Johns Hopkins University)

ThPosterFoyer-14: 11:30-12:30 Foyer
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11:30-12:30 ThPosterFoyer-14.1
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*Bhamre, Tejal** (Graduate Student, Program in Applied and Computational Mathematics); *Zhao, Zhizhen* (New York University); *Singer, Amit* (Princeton University)

11:30-12:30 ThPosterFoyer-14.2
A Novel Approach to Finger Vein Authentication 659-662
*Tagkalakis, Fotios** (University of Patras); *Vlachakis, Dimitrios* (University of Patras); *Megalooikonomou, Vasileios* (University of Patras); *Skodras, Athanassios* (University of Patras)

ThPosterFoyer-15: 11:30-12:30 Foyer
Ultrasound Machine Learning – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-15.1
Cascaded Fully Convolutional Networks for Automatic Prenatal Ultrasound Image Segmentation 663-666
Wu, Lingyun (Shenzhen Univ.); *Xin, Yang* (The Chinese Univ. of Hong Kong); *Li, Shengli* (Dept. of Ultrasound, Affiliated Shenzhen Maternal and Child); *Wang, Tianfu* (Shenzhen Univ.); *Heng, Pheng Ann* (The Chinese Univ. of Hong Kong); *Ni, Dong** (National-Regional Key Technology Engineering Laboratory for Medicine)

11:30-12:30 ThPosterFoyer-15.2
Automatic Labeling of Continuous Wave Doppler Images based on Combined Image and Sentence Networks 667-670
*Moradi, Mehdi** (IBM Research); *Guo, Yufan* (IBM Research); *Gur, Yaniv* (IBM Almaden Research Center); *Syeda-Mahmood, Tanveer* (IBM Almaden Research Center)

11:30-12:30 ThPosterFoyer-15.3
Automated Characterization of the Fetal Heart in Ultrasound Images using Fully Convolutional Neural Networks 671-674
Sundaresan, Vaanathi (University of Oxford); Bridge, Christopher (University of Oxford); Ioannou, Christos (Fetal Medicine Unit, John Radcliffe Hospital, Oxford); Noble, J Alison (University of Oxford)*

ThPosterFoyer-16: 11:30-12:30 Foyer
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11:30-12:30 ThPosterFoyer-16.1
Apparent Backscatter of Cancellous Bone from Fundamental and Second Harmonics using an Ultrasound Imaging System 675-679
Zheng, Yang (The University of Sydney); Long, Xian (The University of Sydney); Jin, Craig (The University of Sydney); Nanan, Ralph (The University of Sydney); McEwan, Alistair (The University of Sydney)*

ThPosterFoyer-17: 11:30-12:30 Foyer
Restoration Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-17.1
Image-Domain Non-Uniformity Correction for Cone-Beam CT 680-683
Wang, Tonghe (Georgia Institute of Technology); Zhu, Lei (Georgia Institute of Technology)*

11:30-12:30 ThPosterFoyer-17.2
Transcranial Enhanced Ultrasound Imaging of Induced Substantia Nigra in Brain using Adaptive Third Order Volterra Filter: In-Vivo Results 684-687
Cunningham, James (Penn State University); Lee, Justice (Penn State University); Subramanian, Thyagarajan (Penn State University); Almekkawy, Mohamed (Penn State University)*

ThPosterFoyer-18: 11:30-12:30 Foyer
Retinal Machine Learning – Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-18.1
Detection of Neovascularization in Retinal Images using Semi-Supervised Learning 688-691
Appan K, Pujitha (IIIT-Hyderabad); Gamalapati S, Jahnvi (IIIT-Hyderabad); Sivaswamy, Jayanthi (International Institute of Information Technology-Hyderabad)*

11:30-12:30 ThPosterFoyer-18.2
Recurrent Neural Network based Retinal Nerve Fiber Layer Defect Detection in Early Glaucoma 692-695
Panda, Rashmi (IIT Bhubaneswar); Puhan, Niladri (IIT Bhubaneswar); Rao, Aparna (LVPEI Bhubaneswar); Padhy, Debananda (LVPEI Bhubaneswar); Panda, Ganapati (IIT Bhubaneswar)*

ThPosterFoyer-19: 11:30-12:30 Foyer
MRI Poster Session 2 (Poster Session)

11:30-12:30 ThPosterFoyer-19.1
A Synthesis-Based Approach to Compressive Multi-Contrast Magnetic Resonance Imaging 696-699
Gungor, Alper (Aselsan); Kopanoglu, Emre (Yale University); Cukur, Tolga (Bilkent University); Guven, H. Emre (Aselsan Research Center)*

11:30-12:30 ThPosterFoyer-19.2
Efficient Computation of Regularized Field Map Estimates in 3D 700-703
Ongie, Greg (University of Michigan); Shi, Junyan (University of Michigan); Fessler, Jeff (Univ. Michigan)*

11:30-12:30 ThPosterFoyer-20.1
Nuclei Segmentation of Fluorescence Microscopy Images using Convolutional Neural Networks 704-708
Fu, Chichen (Purdue University); Ho, David (Purdue University); Han, Shuo (Purdue University); Salama, Paul (Indiana University-Purdue University); Dunn, Kenneth (Indiana University); Delp, Edward (Purdue University)*

11:30-12:30 ThPosterFoyer-20.2
Segmentation of Fluorescence Microscopy Images using Three Dimensional Active Contours with Inhomogeneity Correction 709-713
Lee, Soonam (Purdue University); Salama, Paul (Indiana University-Purdue University); Dunn, Kenneth (Indiana University); Delp, Edward (Purdue University)*

11:30-12:30 ThPosterFoyer-20.3
Biologically Grounded Synthetic Cerebrovasculature Models for Validation of Segmentation Algorithms 714-717
Nowak, Michael (Texas A&M University); Han, Donghyeop (Samsung Electronics); Choe, Yoonsuck (Texas A&M University)*

11:30-12:30 ThPosterFoyer-20.4
Automated Level Set Segmentation of Histopathologic Cells with Sparse Shape Prior Support and Dynamic Occlusion Constraint 718-722
Zhang, Pengyue (Stony Brook Univ.); Wang, Fusheng (Stony Brook Univ.); Teodoro, George (Univ. of Brasilia); Liang, Yanhui (Stony Brook Univ.); Brat, Daniel (Emory Univ.); Kong, Jun (Emory Univ.)*

ThS2T2: 14:30-16:00 R218
Light Imaging Restoration (Oral Session)
Chair: Acton, Scott (*University of Virginia*)
Co-Chair: Olivo-Marin, Jean-Christophe (*Institut Pasteur*)

14:30-14:45 ThS2T2.1
PURE-LET Deconvolution of 3D Fluorescence Microscopy Images 723-727
Li, Jizhou (The Chinese University of Hong Kong); Luisier, Florian (Roche Diagnostics); Blu, Thierry (The Chinese University of Hong Kong)*

14:45-15:00 ThS2T2.2
Variance Stabilization in Poisson Image Deblurring 728-731
Azzari, Lucio (Tampere University of Technology); Foi, Alessandro (Tampere University of Technology)*

15:00-15:15 ThS2T2.3
Joint Desmoking, Specularity Removal, and Denoising of Laparoscopy Images via Graphical Models and Bayesian Inference 732-736
Baid, Ayush (Indian Institute of Technology (IIT) Bombay); Kotwal, Alankar Shashikant (Indian Institute of Technology Bombay); Bhalodia, Riddhish (Indian Institute of Technology Bombay); Merchant, Shabbir (IIT Bombay); Awate, Suyash P (Indian Institute of Technology (IIT), Bombay)*

15:15-15:30 ThS2T2.4
Solving the Inclination Sign Ambiguity in Three Dimensional Polarized Light Imaging with a PDE-Based Method 737-740
Alimi, Abib Olushola Yessouffou (INRIA Sophia Antipolis-Méditerranée); Pizzolato, Marco (Athena Project-Team, Inria Sophia Antipolis - Mediterranee); Fick, Rutger H.J. (INRIA); Deriche, Rachid (INRIA Sophia Antipolis-Méditerranée)*

15:30-15:45 ThS2T2.5
Removal of the Twin Image Artifact in Holographic Lens-Free Imaging by Sparse Dictionary Learning and Coding 741-744
Haeffele, Benjamin David (Johns Hopkins University); Roth, Sophie (IMEC); Zhou, Lin (IMEC); Vidal, Rene (Johns Hopkins University)*

ThS2T3: 14:30-16:00	R219
MRI Machine Learning II (Oral Session)	
Chair: Valle, Eduardo (<i>School of Electrical and Computer Engineering, University of Campinas</i>)	
Co-Chair: Niessen, Wiro (<i>Erasmus MC, University Medical Center Rotterdam</i>)	

14:30-14:45 ThS2T3.1
Classification of MRI Data using Deep Learning and Gaussian Process-Based Model Selection 745-748
Bertrand, Hadrien (LTCI, Télécom ParisTech); Perrot, Matthieu (Neurospin, I2BM, CEA); Ardon, Roberto (Medisys, Philips Research); Bloch, Isabelle (Télécom ParisTech - CNRS UMR 5141 LTCI)*

14:45-15:00 ThS2T3.2
Deep Learning with Orthogonal Volumetric HED Segmentation and 3D Surface Reconstruction Model of Prostate MRI 749-753
Cheng, Ruida (National Institutes of Health); Lay, Nathan (NIH); Mertan, Francesca (NIH); Turkbey, Baris (Molecular Imaging Program, NCI, NIH); Roth, Holger (Information & Communications); Lu, Le (NIH); Gandler, William (National Institutes of Health); McCreedy, Evan Stuart (National Institutes of Health); Pohida, Thomas (National Institutes of Health); Choyke, Peter (National Institutes of Health); McAuliffe, Matthew J. (National Institutes of Health); Summers, Ronald (National Institutes of Health Clinical Center)*

15:00-15:15 ThS2T3.3
An Easy-to-Use Image Labeling Platform for Automatic Magnetic Resonance Image Quality Assessment 754-757
Küstner, Thomas (University of Stuttgart, Germany); Wolf, Philip (University of Stuttgart); Schwartz, Martin (University of Tübingen); Liebgott, Annika (University of Tübingen); Schick, Fritz (Dept. of Diagnostic and Interventional Radiology, University); Gatidis, Sergios (University of Tübingen); Yang, Bin (Institute of Signal Processing and System Theory)*

15:15-15:30 ThS2T3.4
A Generalized MRI-Based Cad System for Functional Assessment of Renal Transplant 758-761
Khalifa, Fahmi (University of Louisville); Shehata, Mohamed (BioImaging Laboratory, Bioengineering Dept., University of); Soliman, Ahmed (University of Louisville); Abou El-Ghar, Mohamed (Radiology Dept., Urology and Nephrology Center, University); El-Diasty, Tarek (Radiology Dept., Urology and Nephrology Center, Mansoura); Dwyer, Amy (School of Medicine Kidney Transplantation - Kidney Disease Center); El-Melegy, Moumen (University of Louisville); Gimel'farb, Georgy (University of Auckland); Keynton, Robert (Bioengineering Dept., University of Louisville); El-baz, Ayman (University of Louisville)*

15:30-15:45 ThS2T3.5
Prostate Segmentation in MR Images using Ensemble Deep Convolutional Neural Networks 762-765
Jia, Haozhe (Northwestern Polytechnical University); Xia, Yong (Northwestern Polytechnical University); Cai, Weidong (University of Sydney); Fulham, Michael (Royal Prince Alfred Hospital); Feng, Dagan (The University of Sydney)*

ThS2T4: 14:30-16:00	R220
MRI Diffusion (Oral Session)	
Chair: Du, Yiping (<i>Shanghai Jiao Tong University</i>)	
Co-Chair: Ying, Leslie (<i>The State University of New York at Buffalo</i>)	

14:30-14:45 ThS2T4.1
Assessing the Feasibility of Estimating Axon Diameter using Diffusion Models and Machine Learning 766-769
Fick, Rutger H.J. (INRIA); Sepasian, Neda (Technical University of Eindhoven); Pizzolato, Marco (Athena Project-Team, Inria Sophia Antipolis - Mediterranée); Ianus, Andrada (Centre for Medical Image Computing, Dept. of Computer Scien); Deriche, Rachid (INRIA Sophia Antipolis-Méditerranée)*

14:45-15:00 ThS2T4.2
An Optimal Dimensionality Multi-Shell Sampling Scheme with Accurate and Efficient Transforms for Diffusion MRI 770-773
Bates, Alice (Australian National University); Khalid, Zubair (Australian National University); McEwen, Jason (University College London); Kennedy, Rodney Andrew (The Australian National University)*

15:00-15:15	ThS2T4.3
Automated Connectivity-Based Groupwise Cortical Atlas Generation: Application to Data of Neurosurgical Patients with Brain Tumors for Cortical Parcellation Prediction	774-777
<i>Zhang, Fan* (Harvard Medical School); Kahaliardabili, Pegah (Harvard Medical School); Suter, Yannick (Harvard Medical School); Norton, Isaiah (Brigham and Women's Hospital, Harvard Medical School); Laura, Rigolo (Brigham and Women's Hospital); Savadjiev, Peter (Harvard Medical School); Song, Yang (Univ. of Sydney); Rathi, Yogesh (Harvard Medical School); Cai, Weidong (Univ. of Sydney); Wells, William (Harvard Medical School); Golby, Alex (Brigham and Women's Hospital, Harvard Medical School); O'Donnell, Lauren (BWH)</i>	
15:15-15:30	ThS2T4.4
Gaussian Process Regression can Turn Non-Uniform and Undersampled Diffusion MRI Data into Diffusion Spectrum Imaging	778-782
<i>Sjölund, Jens* (Linköping University); Eklund, Anders (Linköping University); Özarlan, Evren (Linköping University); Knutsson, Hans (Linköping University)</i>	
15:30-15:45	ThS2T4.5
Longitudinal Analysis of Diffusion-Weighted MRI with a Ball-and-Sticks Model	783-786
<i>Arkesteijn, Georgius* (Delft University of Technology); Poot, Dirk H.J. (Erasmus University Medical Center; Delft University of Technology); Niestijl, Milan (TU Delft); Vernooij, Meike (Erasmus MC, Rotterdam); Niessen, Wiro (Erasmus MC, University Medical Center Rotterdam); van Vliet, Lucas (TU Delft); Vos, Frans (TU Delft)</i>	
ThS3T1: 16:30-18:00	R217
Brain Segmentation and Modeling (Oral Session)	
Chair: Talbot, Hugues (<i>Paris-Est University</i>)	
Co-Chair: Fripp, Jurgen (<i>CSIRO</i>)	
16:30-16:45	ThS3T1.1
Hierarchical Spectral Clustering of MRI for Global-to-Local Shape Analysis: Applied to Brain Variations in Alzheimer's Disease	787-791
<i>Gors, Dorothy* (KU Leuven, ESAT/PSI – UZ Leuven, MIRC); Suetens, Paul (Katholieke Universiteit Leuven); Vandenbergh, Rik (Laboratory for cognitive neurology, KU Leuven); Claes, Peter (KU Leuven)</i>	
16:45-17:00	ThS3T1.2
Cortical Thickness Variability in Multiple Sclerosis: The Role of Lesion Segmentation and Filling	792-795
<i>Palombit, Alessandro (Univ. di Padova); Castellaro, Marco (Univ. of Padova); Calabrese, Massimiliano (Univ. di Verona); Romualdi, Chiara (Univ. of Padova); Pizzini, Francesca (Univ. of Verona); Montemezzi, Stefania (Verona Univ. Hospital); Grisan, Enrico* (Univ. of Padova); Bertoldo, Alessandra (Univ. of Padova)</i>	
17:00-17:15	ThS3T1.3
Comparison between Two White Matter Segmentation Strategies: An Investigation into White Matter Segmentation Consistency	796-799
<i>Zhang, Fan* (Harvard Medical School); Norton, Isaiah (Brigham and Women's Hospital, Harvard Medical School); Cai, Weidong (University of Sydney); Song, Yang (University of Sydney); Wells, William (Harvard Medical School); O'Donnell, Lauren (BWH)</i>	
17:15-17:30	ThS3T1.4
A Deformable Model for the Reconstruction of the Neonatal Cortex	800-803
<i>Schuh, Andreas* (Imperial College London); Makropoulos, Antonios (Imperial College London); Wright, Robert (Imperial College London); Robinson, Emma Claire (Oxford University); Tusor, Nora (King's College London); Steinweg, Johannes (King's College London); Hughes, Emer (King's College London); Cordero-Grande, Lucilio (King's College London); Price, Anthony N. (King's College London); Hutter, Jana (Pattern Recognition Lab, Friedrich-Alexander-Universitaet Erlang); Hajnal, Joseph V. (King's College London); Rueckert, Daniel (Imperial College London)</i>	
17:30-17:45	ThS3T1.5
Automatic Segmentation of Fetal Brain using Diffusion-Weighted Imaging Cues	804-807
<i>Shishegar, Rosita* (The University of Melbourne, NICTA Victoria Research Laboratory); Joshi, Anand (University of Southern California); Tolcos, Mary (The Ritchie Centre, MIMR-PHI Institute of Medical Research); Walker, David W. (Monash Institute of Medical Research, The Ritchie Centre, Monash); Johnston, Leigh A. (University of Melbourne)</i>	

ThS3T2: 16:30-18:00	R218
Modeling and Simulation in Microscopy (Oral Session)	
Chair: Meijering, Erik (<i>Erasmus University Medical Center</i>)	
Co-Chair: Munoz-Barrutia, Arrate (<i>Universidad Carlos III de Madrid</i>)	

16:30-16:45 ThS3T2.1
Tracking Microtubule Ends is more than Point Tracking 808-812
Samuylov, Denis Konstantinovich (ETH Zürich); Szekely, Gabor (ETH Zurich); Paul, Grégory (ETH Zürich)*

16:45-17:00 ThS3T2.2
Spatial Interaction Analysis with Graph based Mathematical Morphology for Histopathology 813-817
Ben Cheikh, Bassem (LIB, Sorbonne University, Paris); Elie, Nicolas (Normandie Univ, UNICAEN, SFR 4206 ICORE, CMABio3, 14000 Caen); Plancoulaine, Benoit (Normandie Univ, UNICAEN, SFR 4206 ICORE, CMABio3, 14000 Caen); Bor-Angelier, Catherine (Unicancer, Rhône Alpes Auvergne, Centre Jean Perrin, Service de P); Racoceanu, Daniel (Pontifical Catholic University of Peru)*

17:00-17:15 ThS3T2.3
In Silico Model to Simulate the Radiation Response at Various Fractionation from Histopathological Prostate Tumors 818-821
Aubert, Vivien (Univ. de Rennes 1, LTSI, Rennes); Acosta, Oscar (Univ. of Rennes 1); Rioux-Leclercq, Nathalie (Dept. of Pathological Anatomy and Cytology, CHU Pontchaillou); Mathieu, Romain (Dept. of Urology, CHU Pontchaillou, Rennes, F-35000, France); Commandeur, Frédéric (Univ. de Rennes 1, LTSI, Rennes, F-35000, France / INSERM); De Crevoisier, Renaud (INSERM, U1099, Rennes, F-35000, France – Univ. de Rennes 1)*

17:15-17:30 ThS3T2.4
Model-Based Generation of Synthetic 3D Time-Lapse Sequences of Motile Cells with Growing Filopodia 822-826
Sorokin, Dmitry (Centre for Biomedical Image Analysis, Faculty of Informatics, Ma); Peterlik, Igor (INRIA); Ulman, Vladimir (Masaryk Univ.); Svoboda, David (Masaryk Univ.); Maška, Martin (Masaryk Univ.)*

17:30-17:45 ThS3T2.5
Enhancement of 250-Mhz Quantitative Acoustic-Microscopy Data using a Single-Image Super-Resolution Method 827-830
Basarab, Adrian (Université de Toulouse); Rohrbach, Daniel (Lizzi Center for Biomedical Engineering, Riverside Research, New); Zhao, Ningning (Univ. of Toulouse); Tourneret, Jean-Yves (Univ. of Toulouse); Kouamé, Denis (Université de Toulouse, IRIT UMR CNRS 5505); Mamou, Jonathan (Riverside Research)*

ThS3T3: 16:30-18:00	R219
MRI Machine Learning III (Oral Session)	
Chair: Xia, Yong (<i>Northwestern Polytechnical University</i>)	
Co-Chair: Warfield, Simon K. (<i>Harvard Medical School</i>)	

16:30-16:45 ThS3T3.1
Automated Left Ventricle Segmentation in 2-D LGE-MRI 831-834
Kurzendorfer, Tanja (Friedrich-Alexander University Erlangen-Nuremberg); Brost, Alexander (Siemens Healthcare GmbH); Forman, Christoph (Pattern Recognition Lab, Friedrich-Alexander-Universitaet Erlang); Maier, Andreas (Friedrich-Alexander-University Erlangen-Nuremberg)*

16:45-17:00 ThS3T3.2
Residual and Plain Convolutional Neural Networks for 3D Brain MRI Classification 835-838
Korolev, Sergey (Skolkovo Institute of Science and Technology); Safiullin, Amir (Institute for Information Transmission Problems); Belyaev, Mikhail (Institute for Information Transmission Problems RAS); Dodonova, Yulia (Institute for Information Transmission Problems)*

17:00-17:15 ThS3T3.3
SurvivalNet: Predicting Patient Survival from Diffusion Weighted Magnetic Resonance Images using Cascaded Fully Convolutional and 3D Convolutional Neural Networks 839-843
Christ, Patrick (TUM); Ettliger, Florian (Technical University Munich); Kaissis, Georgios (TUM); Schlecht, Sebastian (TUM); Ahmaddy, Freba (TUM); Grün, Felix (TUM); Valentinič, Alexander (TUM); Ahmadi, Seyed-Ahmad (TU Munich); Braren, Rickmer (TUM); Menze, Bjoern (TU Munich)*

17:15-17:30 ThS3T3.4
A Fully Automatic Deep Learning Method for Atrial Scarring Segmentation from Late Gadolinium-Enhanced MRI Images 844-848
*Yang, Guang** (Imperial College London); *Zhuang, Xiahai* (Fudan University); *Khan, Habib* (Imperial College London); *Haldar, Shouvik* (Imperial College London); *Nyktari, Eva* (Royal Brompton Hospital); *Ye, Xujiang* (Medicsight PLC); *Slabaugh, Greg* (City University London); *Wong, Tom* (Imperial College London); *Mohiaddin, Raad* (Royal Brompton Hospital); *Keegan, Jennifer* (Royal Brompton Hospital, London); *Firmin, David* (Imperial College London)

17:30-17:45 ThS3T3.5
Age Estimation from Brain MRI Images using Deep Learning 849-852
*Huang, Tzu-Wei** (National Tsing-Hua University); *Chen, Hwann-Tzong* (National Tsing-Hua University); *Fujimoto, Ryuichi* (Tohoku University); *Ito, Koichi* (Tohoku University); *Wu, Kai* (South China University of Technology); *Sato, Kazunori* (Tohoku University); *Taki, Yasuyuki* (Tohoku University); *Fukuda, Hiroshi* (Tohoku Pharmaceutical University); *Aoki, Takafumi* (Tohoku University)

ThS3T4: 16:30-18:00	R220
Registration in Medical Imaging (Oral Session)	
Chair: Malandain, Gregoire (INRIA)	
Co-Chair: Puhan, Niladri (IIT Bhubaneswar)	

16:30-16:45 ThS3T4.1
Preconditioned Intensity-Based Prostate Registration using Statistical Deformation Models 853-857
*Zetting, Oliver** (Computer Aided Medical Procedures, Technische Universitaet Muenc); *Rackerseder, Julia* (Computer Aided Medical Procedures, Technische Universitaet Muenc); *Lentes, Beatrice* (Computer Aided Medical Procedures, Technische Universitaet Muenc); *Maurer, Tobias* (Klinikum Rechts der Isar, Technische Universitaet Muenchen); *Westenfelder, Kay* (Klinikum Rechts der Isar, Technische Universitaet Muenchen); *Eiber, Matthias* (Klinikum Rechts der Isar, Technische Universitaet Muenchen); *Frisch, Benjamin* (Technische Universitaet Muenchen); *Navab, Nassir* (Technische Universität München)

16:45-17:00 ThS3T4.2
Fast Predictive Multimodal Image Registration 858-862
*Yang, Xiao** (University of North Carolina, Chapel Hill); *Kwitt, Roland* (University of Salzburg); *Styner, Martin* (UNC at Chapel Hill); *Niethammer, Marc* (University of North Carolina at Chapel Hill)

17:00-17:15 ThS3T4.3
Inter-Subject fMRI Registration based on Functional Networks 863-867
*Chen, Hanbo** (The Univ. of Georgia, Athens, GA, USA); *Li, Yujie* (Univ. of Georgia); *Zhao, Yu* (The Univ. of Georgia); *Lv, Jinglei* (QIMR Berghofer Medical Research Institute); *Liu, Tianming* (Univ. of Georgia)

17:15-17:30 ThS3T4.4
Adaptive Gradient Descent Optimization of Initial Momenta for Geodesic Shooting in Diffeomorphisms 868-872
*Fleishman, Greg** (UC, Los Angeles; Dept. of Bioengineering); *Thompson, Paul* (University of Southern California)

17:30-17:45 ThS3T4.5
The Impact of Matching Functional on Atrophy Measurement from Geodesic Shooting in Diffeomorphisms 873-877
*Fleishman, Greg** (UC, Los Angeles; Dept. of Bioengineering); *Thompson, Paul* (Univ. of Southern California)

FrS1T1: 10:00-11:30	R217
CAD in Medical Imaging (Oral Session)	
Chair: Kim, Namkug (<i>Asan Medical Center</i>)	
Co-Chair: Acosta, Oscar (<i>University of Rennes 1</i>)	

10:00-10:15	FrS1T1.1
Unbiased Analysis of Mouse Social Behaviour using Unsupervised Machine Learning	878-881
<i>Bauer, Oscar (Institute Pasteur); le Sourd, Anne-Marie (Institute Pasteur); Nardi, Giacomo (Institute Pasteur); Bourgeron, Thomas (Institute Pasteur); Olivo-Marin, Jean-Christophe (Institute Pasteur); Ey, Elodie (Institute Pasteur); de Chaumont, Fabrice* (Institute Pasteur)</i>	
10:15-10:30	FrS1T1.2
Vessel Keypoint Detector for Junction Classification	882-885
<i>Srinidhi, Chetan L* (National Institute of Technology, Karnataka, Surathkal, India); Rath, Priyadarshi (IIIT Hyderabad); Sivaswamy, Jayanthi (International Institute of Information Technology-Hyderabad)</i>	
10:30-10:45	FrS1T1.3
Proliferative Diabetic Retinopathy Characterization based on the Spatial Organization of Vascular Junctions in Fundus Images	886-890
<i>Christodoulidis, Argyrios* (Polytechnique Montreal); Hurtut, Thomas (Université Paris Descartes); Cheriet, Farida (Ecole Polytechnique of Montreal)</i>	
10:45-11:00	FrS1T1.4
Ensemble Prediction of Longitudinal Scores of Alzheimer's Disease based on L2, 1-Norm Regularized Correntropy with Spatial-Temporal Constraint	891-894
<i>Hou, Wen (Shenzhen University); Lei, Baiying (Shenzhen University); Zou, Wenbin* (Shenzhen University); Li, Xia (Shenzhen University); Zhang, Cishen (Swinburne University of Technology)</i>	
11:00-11:15	FrS1T1.5
Adrenal Lesions Detection on Low-Contrast CT Images using Fully Convolutional Networks with Multi-Scale Integration	895-898
<i>Bi, Lei* (University of Sydney); Kim, Jinman (University of Sydney); Su, Tingwei (Ruijin Hospital, Shanghai Jiao Tong University); Fulham, Michael (Royal Prince Alfred Hospital); Feng, Dagan (The University of Sydney); Ning, Guang (Ruijin Hospital, Shanghai Jiao Tong University)</i>	

FrS1T2: 10:00-11:30	R218
Ultrasound (Oral Session)	
Chair: Almekkawy, Mohamed (<i>Penn State University</i>)	
Co-Chair: Ebbini, Emad (<i>University of Minnesota</i>)	

10:00-10:15	FrS1T2.1
From Macro to Nano: Linking Quantitative Ceus Perfusion Parameters to CD4+ T Cells Subtypes in Spondyloarthritis	899-902
<i>Grisan, Enrico* (University of Padova); Rizzo, Gaia (Dept. of Information Engineering, University of Padova); Tonietto, Matteo (University of Padova); Coran, Alessandro (Veneto Institute of Oncology); Raffener, Bernd (Bolzano Hospital); Scanu, Anna (University of Padova); Martini, Veronica (University of Padova); Stramare, Roberto (University of Padova); Fiocco, Ugo (University of Padova)</i>	
10:15-10:30	FrS1T2.2
Comparison of Two Novel-Strategies to Obtain Sub-Pitch Resolution in Ultrasound Elastography	903-906
<i>Selladurai, Sathiyamoorthy (IIT Madras); Thittai, Arun Kumar* (IIT MADRAS)</i>	
10:30-10:45	FrS1T2.3
Sparse Emission Pattern in Spectral Blood Doppler	907-910
<i>Cohen, Regev* (Technion); Eldar, Yonina (The Technion, Israel Institute of Technology)</i>	
10:45-11:00	FrS1T2.4
Impact of Beamforming Strategies and Regularisation on Ultrasound Displacement Estimation using RF-Based Image Registration	911-915
<i>Heyde, Brecht* (KU Leuven); Bottenus, N. (Duke Univ.); Trahey, G. (Duke Univ.); D'hooge, J. (KU Leuven)</i>	

11:00-11:15 FrS1T2.5
Three-Dimensional Image Guidance for Transcranial Focused Ultrasound Therapy 916-919
Ebbini, Emad (University of Minnesota); Liu, Dalong (University of Minnesota)*

FrS1T3: 10:00-11:30 R219
Histopathology Machine Learning (Oral Session)
Chair: Mukherjee, Dipti Prasad (*Indian Statistical Institute, Kolkata*)
Co-Chair: Racoceanu, Daniel (*Pontifical Catholic University of Peru*)

10:00-10:15 FrS1T3.1
Parcellation of Visual Cortex on High-Resolution Histological Brain Sections using Convolutional Neural Networks 920-923
Spitzer, Hannah (Jülich Research Centre); Amunts, Katrin (Jülich Research Centre); Harmeling, Stefan (Heinrich-Heine-Universität Düsseldorf); Dickscheid, Timo (Jülich Research Centre)*

10:15-10:30 FrS1T3.2
Wide Residual Networks for Mitosis Detection 924-928
Zerhouni, Erwan Barry Tarik (IBM Research-Zurich); Lanyi, David (IBM Research Zurich); Viana, Matheus (IBM Research Brazil); Gabrani, Maria (IBM Research-Zurich)*

10:30-10:45 FrS1T3.3
Deep Learning-Based Assessment of Tumor-Associated Stroma for Diagnosing Breast Cancer in Histopathology Images 929-932
Ehteshami Bejnordi, Babak (Radboud University Medical Center); Lin, Jimmy (The Harker School); Glass, Ben (Beth Israel Deaconess Medical Center, Harvard Medical School); Mullooly, Maeve (National Cancer Institute, NIH); Gierach, Gretchen (National Cancer Institute, NIH); Sherman, Mark (Mayo Clinic); Karssemeijer, Nico (Radboud University Medical Centre Nijmegen); van der Laak, Jeroen A.W.M. (Radboud University Medical Center); Beck, Andrew (Beth Israel Deaconess Medical Center)*

10:45-11:00 FrS1T3.4
Nuclei Segmentation in Histopathology Images using Deep Neural Networks 933-936
Naylor, Peter (Institute Curie, Mines ParisTech); Walter, Thomas (Institute Curie, Mines ParisTech); Reyat, Fabien (Institute Curie); Laé, Marick (Institute Curie)*

11:00-11:15 FrS1T3.5
Learning Size Adaptive Local Maxima Selection for Robust Nuclei Detection in Histopathology Images 937-941
Brieu, Nicolas (Definiens AG); Schmidt, Günter (Definiens AG)*

FrPosterFoyer-02: 11:30-12:30 Foyer
Brain MRI – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-02.1
Cerebral Vascular Enhancement using a Weighted 3D Symmetry Filter 942-946
Luo, Lingling (Beijing Institute of Technology); Zhao, Yitian (Beijing Institute of Technology); Yang, Jian (Beijing Institute of Technology); Zheng, Yalin (University of Liverpool); Ai, Danni (Beijing Institute of Technology); Wang, Yongtian (Beijing Institute of Technology)*

11:30-12:30 FrPosterFoyer-02.2
Exploring Human Brain Activation via Nested Sparse Coding and Functional Operators 947-951
Zhang, Shu (University of Georgia); LI, Xiang (University of Georgia); Guo, Lei (Northwestern Polytechnical University); Liu, Tianming (University of Georgia)*

11:30-12:30 FrPosterFoyer-02.3
Group-Wise Sparse Representation of Resting-State fMRI Data for Better Understanding of Schizophrenia 952-956
Yuan, Lin (National University of Defense Technology); Liu, Tianming (University of Georgia); Hu, Dewen (National University of Defense Technology)*

11:30-12:30 FrPosterFoyer-02.4
fMRI Data Classification based on Hybrid Temporal and Spatial Sparse Representation 957-960
Liu, Huan (Northwestern Polytechnical University); Zhang, Mianzhi (Northwestern Polytechnical University); Hu, Xintao (Northwestern Polytechnical University, Xi'an, China); Ren, Yudan (Northwestern Polytechnical University); Zhang, Shu (University of Georgia); Han, Junwei (Northwestern Polytechnical University); Guo, Lei (Northwestern Polytechnical University); Liu, Tianming (University of Georgia)*

11:30-12:30 FrPosterFoyer-02.5
A Comparison of Network Definitions for Detecting Sex Differences in Brain Connectivity using Support Vector Machines 961-965
Hafzalla, George (University of Southern California); Ragothaman, Anjanibhargavi (University of Southern California); Faskowitz, Joshua (University of Southern California); Jahanshad, Neda (Imaging Genetics Center, University of Southern California); McMahon, Katie (Center for Advanced Imaging, Univ. of Queensland, Brisbane, Aust); de Zubicaray, Greig (School of Psychology, University of Queensland, Brisbane, Austr); Wright, Margaret (School of Psychology, University of Queensland, Brisbane, Austr); Braskie, Meredith (University of Southern California); Prasad, Gautam (USC); Thompson, Paul (University of Southern California)*

11:30-12:30 FrPosterFoyer-02.6
Analysis of ADC Model Robustness in Diffusion-Weighted MRI 966-969
Syeda, Warda Taqdees (The University of Melbourne); Ng, Amanda Ching Lih (University of Melbourne); Wright, David K (Florey Institute of Neuroscience and Mental Health); Tolcos, Mary (The Ritchie Centre, MIMR-PHI Institute of Medical Research); Johnston, Leigh A. (University of Melbourne)*

11:30-12:30 FrPosterFoyer-02.7
Case-Control Discrimination through Effective Brain Connectivity 970-973
Crimi, Alessandro (IIT); Dodero, Luca (Pattern Analysis and Computer Vision (PAVIS), Istituto Italiano); Murino, Vittorio (Istituto Italiano di Tecnologia); Sona, Diego (Istituto Italiano di Tecnologia (IIT))*

11:30-12:30 FrPosterFoyer-02.8
Decoding Dynamic Auditory Attention during Naturalistic Experience 974-977
Wang, Liting (School of Automation, Northwestern Polytechnical University); Hu, Xintao (Northwestern Polytechnical University, Xi'an, China); Wang, Meng (Northwestern Polytechnical University); Lv, Jinglei (QIMR Berghofer Medical Research Institute); Han, Junwei (Northwestern Polytechnical University); Zhao, Shijie (Northwestern Polytechnical University); Dong, Qinglin (University of Georgia); Guo, Lei (Northwestern Polytechnical University); Liu, Tianming (University of Georgia)*

FrPosterFoyer-03: 11:30-12:30 Foyer
Breast Machine Learning Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-03.1
Estimating the Level of False Positives in Detection of Microcalcifications in Mammogram Images 978-981
Sainz de Cea, Maria V. (Illinois Institute of Technology); Yang, Yongyi (Illinois Institute of Technology)*

FrPosterFoyer-04: 11:30-12:30 Foyer
Computer Assisted Detection and Diagnosis Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-04.1
Toward Automatic Diagnosis of Hip Dysplasia from 2D Ultrasound 982-985
Rakkunedeth Hareendranathan, Abhilash (Univ. of Alberta); Zonoobi, Dornoosh (Univ. of Alberta); Mabee, Myles Garnet (Univ. of Alberta); Cobzas, Dana (Univ. of Alberta); Punithakumar, Kumaradevan (Univ. of Alberta); Noga, Michelle (Univ. of Alberta); Jaremko, Jacob (Univ. of Alberta)*

11:30-12:30 FrPosterFoyer-04.2
Exploiting Local and Generic Features for Accurate Skin Lesions Classification using Clinical and Dermoscopy Imaging 986-990
Ge, Zongyuan (IBM); Demyanov, Sergey (IBM Research Australia); Bozorgtabar, SeyedBehzad (IBM Research Australia); Abedini, Mani (IBM Research); Chakravorty, Rajib (IBM Research Australia); Garnavi, Rahil (IBM Research Australia)*

11:30-12:30 FrPosterFoyer-04.3
Sub-Cortical Shape Morphology and Voxel-Based Features for Alzheimer's Disease Classification 991-994
Tripathi, Shashank (Polytechnique Montreal); Nozadi, Seyed Hossein (Polytechnique Montreal); Shakeri, Mahsa (Polytechnique Montreal); Kadoury, Samuel (Polytechnique Montreal)*

11:30-12:30 FrPosterFoyer-04.4
A Novel CAD System for Autism Diagnosis using Structural and Functional MRI 995-998
Dekhil, Omar (Bioengineering Dept., University of Louisville); Ismail, Marwa (University of Louisville); Shalaby, Ahmed (University of Louisville); Switala, Andrew E. (University of Louisville); Elmaghraby, Adel (University of Louisville); Keynton, Robert (Bioengineering Dept., University of Louisville); Gimel'farb, Georgy (University of Auckland); Barnes, Gregory (University of Louisville); El-baz, Ayman (University of Louisville)*

11:30-12:30 FrPosterFoyer-04.5
Statistics on the Space of Trajectories for Longitudinal Data Analysis 999-1002
Chakraborty, Rudrasis (University of Florida); Banerjee, Monami (University of Florida); Vemuri, Baba (University of Florida)*

FrPosterFoyer-05: 11:30-12:30 Foyer
CT Machine Learning Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-05.1
Segmentation of Organs at Risk in Thoracic CT Images using a SharpMask Architecture and Conditional Random Fields 1003-1006
Trullo, Roger (University of Rouen); Petitjean, Caroline (Université de Rouen); Ruan, Su (Université de Rouen); Dubray, Bernard (Centre Henri Becquerel); Nie, Dong (UNC); Shen, Dinggang (UNC-Chapel Hill)*

11:30-12:30 FrPosterFoyer-05.2
TumorNet: Lung Nodule Characterization using Multi-View Convolutional Neural Network with Gaussian Process 1007-1010
Hussein, Sarfaraz (University of Central Florida); Gillies, Robert (Dept's of Diagnostic Radiology and Imaging Research, H. Lee); Cao, Kunlin (GE Global Research); Song, Qi (General Electric); Bagci, Ulas (University of Central Florida)*

FrPosterFoyer-06: 11:30-12:30 Foyer
EEG and MEG – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-06.1
Event-Related Potentials Source Separation based on a Weak Exclusion Principle 1011-1014
Ma, Lan (The Chinese University of Hong Kong); Blu, Thierry (The Chinese University of Hong Kong); Wang, William S-Y (The Chinese University of Hong Kong)*

FrPosterFoyer-07: 11:30-12:30 Foyer
Histopathology Machine Learning – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-07.1
A Watershed and Feature based Approach for Automated Detection of Lymphocytes on Lung Cancer Images N/A
Corredor, Germán (Universidad Nacional de Colombia); Wang, Xiangxue (Case Western Reserve University); Lu, Cheng (Case Western Reserve University); Romero, Eduardo (Universidad Nacional de Colombia); Madabhushi, Anant (Case Western Reserve University)*

11:30-12:30 FrPosterFoyer-07.2
HEp-2 Cell Classification based on a Deep Autoencoding-Classification Convolutional Neural Network 1019-1023
Liu, Jingxin (The University of Nottingham Ningbo China); Xu, Bolei (The University of Nottingham Ningbo China); Shen, Linlin (Shenzhen University); Garibaldi, Jon (The University of Nottingham); Qiu, Guoping (University of Nottingham)*

11:30-12:30 FrPosterFoyer-07.3
Classifying Histopathology Whole-Slides using Fusion of Decisions from Deep Convolutional Network on a Collection of Random Multi-Views at Multi-Magnification 1024-1027
Das, Kausik (IIT Kharagpur); Karri, Sri Phani Krishna (Indian Institute of Technology Kharagpur); Guha Roy, Abhijit (Indian Institution of Technology, Kharagpur); Chatterjee, Jyotirmoy (Indian Institute of Technology Kharagpur); Sheet, Debdoot (Indian Institute of Technology Kharagpur)*

11:30-12:30 FrPosterFoyer-07.4
Automated Prostate Glandular and Nuclei Detection using Hyper-Spectral Imaging 1028-1031
Zarei, Nilgoon (University of British Columbia, BC Research Cancer Centre); Bakhtiari, Amir (Simon Fraser University); Gallagher, Paul (BC Cancer Research Centre); Keyes, Mira (BC Cancer Agency); MacAulay, Calum (BC Cancer Agency)*

FrPosterFoyer-08: 11:30-12:30 Foyer
Interventional Imaging – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-08.1
3D Reconstruction of Vascular Structures using Graph-Based Voxel Coloring 1032-1035
Martin, Rémi (Ecole de Technologie Superieure); Vachon, Etienne (Ecole de Technologie Superieure); Miró, Joaquim (Dept. of Pediatrics, CHU Sainte-Justine); Duong, Luc (Ecole de technologie superieure)*

11:30-12:30 FrPosterFoyer-08.2
A Kernel-Based Framework for Intra-Fractional Respiratory Motion Estimation in Radiation Therapy 1036-1039
Geimer, Tobias (Friedrich-Alexander-University Erlangen-Nuremberg); Unberath, Mathias (Friedrich-Alexander-Universität Erlangen-Nürnberg); Birlutiu, Adriana (Computer Science Dept., "1 December 1918" University of A); Taubmann, Oliver (Friedrich-Alexander-University Erlangen-Nuremberg); Wölfelschneider, Jens (Dept. of Radiation Oncology, Universitätsklinikum Erlangen,); Bert, Christoph (University Hospital Erlangen, Radiation Oncology); Maier, Andreas (Friedrich-Alexander-University Erlangen-Nuremberg)*

FrPosterFoyer-10: 11:30-12:30 Foyer
Miscellaneous Machine Learning – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-10.1
Hybrid Deep Autoencoder with Curvature Gaussian for Detection of Various Types of Cells in Bone Marrow Trephine Biopsy Images 1040-1043
Song, Tzu-Hsi (University of Warwick); Sanchez, Victor (University of Warwick); Eldaly, Hesham (Cambridge University Hospitals); Rajpoot, Nasir (University of Warwick)*

11:30-12:30 FrPosterFoyer-10.2
Exploring Texture Transfer Learning for Colonic Polyp Classification via Convolutional Neural Networks 1044-1048
Ribeiro, Eduardo (Salzburg University); Häfner, Michael (St. Elisabeth Hospital); Wimmer, Georg (University of Salzburg); Tamaki, Toru (Hiroshima University); Yoshida, Shigeto (Hiroshima General Hospital of West Japan Railway Company); Tanaka, Shinji (Hiroshima University Hospital); Tischendorf, J.J.W. (RWTH Aachen University Hospital, Medical Dept. III); Uhl, Andreas (University of Salzburg)*

11:30-12:30 FrPosterFoyer-10.3
Coronary Luminal and Wall Mask Prediction using Convolutional Neural Network 1049-1052
Hong, Youngtaek (Brain Korea 21 PLUS Project for Medical Science, Yonsei University); Yoonmi, Hong (Yonsei University); Yeonggul, Jang (Brain Korea 21 PLUS Project for Medical Science, Yonsei University); Se keun, Kim (Yonsei University); Han, Dongjin (Severance Hospital); Ha, Seongmin (Integrative Cardiovascular Imaging Research Center, Yonsei University); Jeon, Byunghwan (Brain Korea 21 PLUS Project for Medical Science, Yonsei University); Jung, Sunghye (Brain Korea 21 PLUS Project for Medical Science, Yonsei University); Shim, Hackjoon (Cardiovascular Research Institute, Yonsei University College of); Chang, Hyuk-Jae (Dept. of Internal Medicine, Severance Cardiovascular Hospital)*

11:30-12:30 FrPosterFoyer-10.4
Modality Classification of Medical Images with Distributed Representations based on Cellular Automata Reservoir Computing 1053-1056
Kleyko, Denis (Luleå University of Technology); Khan, Sumeer (Universiti Teknologi Petronas); Osipov, Evgeny (Luleå University of Technology); Yong, Suet-Peng (Universiti Teknologi Petronas)*

11:30-12:30 FrPosterFoyer-10.5
A Convolutional Neural Network Approach for Abnormality Detection in Wireless Capsule Endoscopy 1057-1060
Sekuboyina, Anjany Kumar (Technical University of Munich); Devarakonda, Surya Teja (Indian Institute of Technology Hyderabad); Seelamantula, Chandra Sekhar (Indian Institute of Science, Bangalore)*

11:30-12:30 FrPosterFoyer-10.6
Echocardiogram Localization using Barycentric Interpolation 1061-1065
Shan, Junjie (The University of North Carolina at Charlotte); Despot, Jamie (Carolinas Medical Center); Huynh, Toan (Carolinas Medical Center); Souvenir, Richard (Temple University)*

FrPosterFoyer-11: 11:30-12:30 Foyer
MRI Machine Learning – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-11.1
Texture Analysis for Infarcted Myocardium Detection on Delayed Enhancement MRI 1066-1069
Larroza, Andrés (Universitat de València); López-Lereu, María P. (ERESA); Monmeneu, José V. (ERESA); Bodí, Vicente (Universitat de València); Moratal, David (Universitat Politècnica de València)*

11:30-12:30 FrPosterFoyer-11.2
Automated Cartilage Segmentation from 3D MR Images of Hip Joint using an Ensemble of Neural Networks 1070-1073
Xia, Ying (CSIRO); Manjón, José A. (ITACA, Universitat Politècnica de València); Engstrom, Craig (Univ. of Queensland); Crozier, Stuart (The Univ. of Queensland); Salvado, Olivier (CSIRO); Fripp, Jurgen (CSIRO)*

FrPosterFoyer-12: 11:30-12:30 Foyer
Nuclear Imaging – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-12.1
Correction of Partial Volume Effect in 99mTc-TRODAT-1 BRAIN SPECT Images using an Edge-Preserving Weighted Regularization 1074-1077
Yin, Tang-Kai (National University of Kaohsiung); Chiu, Nan-Tsing (National Cheng Kung University)*

FrPosterFoyer-13: 11:30-12:30 Foyer
Retinal Machine Learning – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-13.1
A Novel Hybrid Approach for Severity Assessment of Diabetic Retinopathy in Colour Fundus Images .. 1078-1082
Roy, Pallab (IBM Research Australia); Tennakoon, Ruwan (IBM Research); Maetschke, Stefan (IBM Research); Cao, Khoa (IBM Research); Sedai, Suman (IBM Research Australia); Mahapatra, Dwarikanath (IBM Research Melbourne); Garnavi, Rahil (IBM Research Australia)*

11:30-12:30 FrPosterFoyer-13.2
Multi-Stage Segmentation of the Fovea in Retinal Fundus Images using Fully Convolutional Neural Networks 1083-1086
Sedai, Suman (IBM Research Australia); Tennakoon, Ruwan (IBM Research); Roy, Pallab (IBM Research Australia); Cao, Khoa (IBM Research); Garnavi, Rahil (IBM Research Australia)*

FrPosterFoyer-14: 11:30-12:30 Foyer
Optical Image Analysis – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-14.1
Joint Multi-Object and Clutter Rate Estimation with the Single-Cluster PHD Filter 1087-1091
Schlagen, Isabel (Heriot-Watt University); Bharti, Vibhav (Heriot-Watt University); Delande, Emmanuel (Heriot-Watt University); Clark, Daniel (Heriot Watt University)*

11:30-12:30 FrPosterFoyer-14.2
Combining Global Tracking with Statistical Classification to Analyze Endocytosis Dynamics using TIRF Microscopy 1092-1095
Nardi, Giacomo (Institute Pasteur); Lagache, T. (Institute Pasteur, CNRS URA 2582); Bertot, L. (Institute Pasteur); Grassart, A. (Institute Pasteur); Sauvonnnet, N. (Institute Pasteur); Olivo-Marin, J.-C. (Institute Pasteur)*

FrPosterFoyer-15: 11:30-12:30 Foyer
Pattern Recognition and Classification – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-15.1
Feature Selection and Thyroid Nodule Classification using Transfer Learning 1096-1099
Liu, Tianjiao (Tsinghua Univ.); Xie, Shuaining (Tsinghua Univ.); Zhang, Yukang (National Cancer Center/Cancer Hospital of Chinese Academy of Medicine); Yu, Jing (Beijing Univ. of Technology); Niu, Lijuan (National Cancer Center/Cancer Hospital of Chinese Academy of Medicine); Sun, Weidong (Tsinghua Univ.)*

11:30-12:30 FrPosterFoyer-15.2
A Non-Invasive Approach for Estimation of Hemoglobin Analyzing Blood Flow in Palm 1100-1103
Santra, Bikash (Indian Statistical Institute); Mukherjee, Dipti Prasad (Indian Statistical Institute, Kolkata); Chakrabarti, Dipankar (Indian Statistical Institute, Kolkata)*

FrPosterFoyer-16: 11:30-12:30 Foyer
Reconstruction – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-16.1
ISA - An Inverse Surface-Based Approach for Cortical fMRI Data Projection 1104-1107
Thiébaud Lonjaret, Lucie (LSIS - INT); Bakhous, Christine (INRIA, MISTIS, Grenoble Univ., LJK, Grenoble, France); Boutelier, Timothe (Olea Medical); Takerkart, Sylvain (CNRS, France); Coulon, Olivier (Aix-Marseille Univ.)*

11:30-12:30 FrPosterFoyer-16.2
Design of a Low Cost Ultrasound System using Diverging Beams and Synthetic Aperture Approach: Preliminary Study 1108-1111
B, Lokesh (IIT MADRAS); Thittai, Arun Kumar (IIT MADRAS)*

11:30-12:30 FrPosterFoyer-16.3
Towards Quantification of Kidney Stones using X-Ray Dark-Field Tomography 1112-1115
Hu, Shiyang (Friedrich-Alexander-University Erlangen-Nuremberg); Yang, Fei (Swiss Federal Laboratories for Materials Science and Technology); Griffa, Michele (Swiss Federal Laboratories for Materials Science and Technology); Kaufmann, Rolf (Swiss Federal Laboratories for Materials Science and Technology); Anton, Gisela (Friedrich-Alexander-University Erlangen-Nuremberg); Maier, Andreas (Friedrich-Alexander-University Erlangen-Nuremberg); Riess, Christian (Friedrich-Alexander University Erlangen-Nuremberg)*

FrPosterFoyer-17: 11:30-12:30 Foyer
Ultrasound Machine Learning – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-17.1
Handcrafted Features vs Convnets in 2D Echocardiographic Images 1116-1119
Raynaud, Caroline (Femme); Langet, H el ene (Philips Research); Amzulescu, Mihaela (Division of Cardiology, Cliniques Universitaires St. Luc, Brusse); Saloux, Eric (Dept. of Cardiology, Univ. Hospital of Caen); Bertrand, Hadrien (LTCL, T el ecom ParisTech); Allain, Pascal (Medisys, Philips Research); Piro, Paolo (Philips Research)*

11:30-12:30 FrPosterFoyer-17.2
Detection of Lumen and Media-Adventitia Borders in IVUS Images using Sparse Auto-Encoder Neural Network 1120-1124
Su, Shengran (Zhejiang Univ. of Techonology); Gao, Zhifan (Shenzhen Institutes of Advanced Technology, Chinese Academy of Science); Zhang, Heye (Hong Kong Univ. of Science & Tech.); Lin, Qiang (Zhejiang Univ. of Technology); Hau, William Kongto (The Univ. of Hong Kong); Li, Shuo (Univ. of Western Ontario)*

FrPosterFoyer-18: 11:30-12:30 Foyer
Segmentation – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-18.1
Multi-Angle TOF MR Brain Angiography of the Common Marmoset Brain 1125-1128
Mescam, Muriel (CNRS, CerCo); Brossard, Julie (CERCO UMR5549 CNRS-University of Toulouse); Vayssi ere, Nathalie (CERCO UMR5549 CNRS); Fonta, Caroline (CerCo)*

11:30-12:30 FrPosterFoyer-18.2
Quad-Edge Active Contours for Biomedical Image Segmentation 1129-1132
*González Obando, Daniel Felipe (Institute Pasteur); Rohfritsch, Lauriane (Institute Pasteur);
Faure, Manon (Institute Pasteur); Danglot, Lydia (INSERM); Meas-Yedid, Vannary (Institute Pasteur);
Olivo-Marin, Jean-Christophe (Institute Pasteur); Dufour, Alexandre* (Institute Pasteur)*

11:30-12:30 FrPosterFoyer-18.3
Vein Segmentation using Shape-Based Markov Random Fields 1133-1136
Ward, Phillip George Dayan (Monash University); Ferris, Nicholas J. (Monash University); Raniga, Parnesh
(CSIRO Health and Biosecurity); Ng, Amanda Ching Lih (University of Melbourne); Barnes, David G. (Monash
University); Dowe, David L. (Monash University); Egan, Gary (Monash University)*

11:30-12:30 FrPosterFoyer-18.4
Breast Cancer Histopathology Image Analysis Pipeline for Tumor Purity Estimation 1137-1140
Azimi, Vahid (Oregon Health and Science Univ.); Chang, Young Hwan (Oregon Health and Science Univ.);
Thibault, Guillaume (Oregon Health & Science Univ.); Smith, Jaclyn (Oregon Health and Science Univ.);
TsujiKawa, Takahiro (Oregon Health and Science Univ.); Kukull, Benjamin (Oregon Health and Science Univ.);
Jensen, Bradden (Oregon Health and Science Univ.); Corless, Christopher (Oregon Health and Science Univ.);
Margolin, Adam (Oregon Health and Science Univ.); Gray, Joe (Oregon Health & Science Univ.)*

11:30-12:30 FrPosterFoyer-18.5
Cortical and Vascular Probability Maps for Analysis of Human Brain in Computed Tomography Images 1141-1145
Peter, Roman (Erasmus MC); Emmer, Bart (Erasmus MC); van Es, Adriaan (Erasmus MC);
van Walsum, Theo (Erasmus MC)*

FrPosterFoyer-19: 11:30-12:30 Foyer
Registration and Motion Compensation – Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-19.1
Fast Reconstruction of Image Deformation Field using Radial Basis Function 1146-1150
Rucka, Lukas (Masaryk University); Peterlik, Igor (INRIA)*

11:30-12:30 FrPosterFoyer-19.2
Elastic Registration of High-Resolution 3D PLI Data of the Human Brain 1151-1155
Ali, Sharib (German Cancer Research Center, DKFZ, Heidelberg); Rohr, Karl (University of Heidelberg, DKFZ
Heidelberg); Axer, Markus (Jülich Research Centre); Gräbel, David (Jülich Research Centre); Schlömer, Philipp
(Jülich Research Centre); Amunts, Katrin (Jülich Research Centre); Eils, Roland (University of Heidelberg,
DKFZ Heidelberg); Wörz, Stefan (University of Heidelberg)*

11:30-12:30 FrPosterFoyer-19.3
**Groupwise Non-Rigid Registration on Multiparametric Abdominal DWI Acquisitions for Robust
ADC Estimation: Comparison with Pairwise Approaches and Different Multimodal Metrics** 1156-1159
Sanz-Estébanez, Santiago (Universidad de Valladolid); Peña-Nogales, Óscar (Universidad de Valladolid);
de Luis-García, Rodrigo (University of Valladolid); Aja-Fernandez, Santiago (Universidad de Valladolid);
Alberola-López, Carlos (Universidad de Valladolid)*

11:30-12:30 FrPosterFoyer-19.4
Frequency Divergence Image: A Novel Method for Action Recognition 1160-1164
Cruz, Alberto (California State University, Bakersfield); Street, Brian (California State University, Bakersfield)*

FrPosterFoyer-20: 11:30-12:30 Foyer
Restoration Poster Session 3 (Poster Session)

11:30-12:30 FrPosterFoyer-20.1
Contrast-Independent Curvilinear Structure Enhancement in 3D Biomedical Images 1165-1168
Sazak, Cigdem (Durham University); Obara, Boguslaw (University of Durham)*

11:30-12:30 FrPosterFoyer-20.2
An Efficient Estimation Algorithm for the Calibration of Low-Cost SS-OCT Systems 1169-1172
Zavareh, Amir (Texas A&M University); Barajas, Oscar (Texas A&M University);
Hoyos, Sebastian (Texas A&M University)*

FrS2T2: 14:00-15:30	R218
Nuclear Imaging (Oral Session)	
Chair: Ruan, Su (<i>Universite de Rouen</i>)	
Co-Chair: Fang, Yu-Hua (<i>National Cheng Kung University</i>)	

14:00-14:15 FrS2T2.1
PET-Only 18F-AV1451 Tau Quantification 1173-1176

Bourgeat, Pierrick (CSIRO); Villemagne, Victor L. (Dept. of Nuclear Medicine and Centre for PET, Austin Hospital); Doré, Vincent (Health & Biosecurity Flagship, CSIRO); Masters, Colin (The Mental Health Research Institute, the Univ. of Melbourne); Ames, David (National Ageing Research Institute); Rowe, Christopher C. (Dept. of Nuclear Medicine and Centre for PET, Austin Hospital); Salvado, Olivier (CSIRO); Fripp, Jurgen (CSIRO)*

14:15-14:30 FrS2T2.2
Tumor Delineation in FDG-PET Images using a New Evidential Clustering Algorithm with Spatial Regularization and Adaptive Distance Metric 1177-1180

Lian, Chunfeng (Sorbonne Universités, Université de Technologie de Compiègne); Ruan, Su (Universite de Rouen); Denoeux, Thierry (Université de Technologie de Compiègne); Li, Hua (Washington University School of Medicine); Vera, Pierre (Centre Henri Becquerel)*

14:30-14:45 FrS2T2.3
Enhancing Bayesian Pet Image Reconstruction using Neural Networks 1181-1184

Yang, Bao (Oakland University); Ying, Leslie (The State University of New York at Buffalo); Tang, Jing (Oakland University)*

14:45-15:00 FrS2T2.4
4D Reconstruction of Cardiac Spect using a Robust Spatialtemporal Prior 1185-1188

Song, Chao (Illinois Institute of Technology); Yang, Yongyi (Illinois Institute of Technology); Wernick, Miles (Illinois Institute of Technology); Pretorius, Hendrik (University of Massachusetts Medical School); King, Michael A (University of Massachusetts Medical School)*

15:00-15:15 FrS2T2.5
4D-PET Reconstruction of Dynamic Non-Small Cell Lung Cancer [18-F]-FMISO-PET Data using Adaptive Knot Cubic B-Splines 1189-1192

Ralli, George Philip (University of Oxford); McGowan, Daniel Robin (University of Oxford); Chappell, Michael (University of Oxford); Sharma, Ricky (University College London); Higgins, Geoffrey (University of Oxford); Fenwick, John (University of Liverpool)*

FrS2T3: 14:00-15:30	R219
CT Segmentation (Oral Session)	
Chair: Cheriet, Farida (<i>Ecole Polytechnique of Montreal</i>)	
Co-Chair: Warfield, Simon K. (<i>Harvard Medical School</i>)	

14:00-14:15 FrS2T3.1
Super-Resolution/segmentation of 3D Trabecular Bone Images with Total Variation and Nonconvex Cahn-Hilliard Functional 1193-1196

Li, Yufei (CREATIS, INSA de LYON); Sixou, Bruno (CNRS UMR 5220, Inserm U630, INSA de Lyon, Université de Lyon); Burghardt, Andrew (University of California, San Francisco); Peyrin, Françoise (CNRS UMR 5220, INSERM U1044, INSA Lyon, Université de Lyon)*

14:15-14:30 FrS2T3.2
Semi-Automatic Teeth Segmentation in Cone-Beam Computed Tomography by Graph-Cut with Statistical Shape Priors 1197-1200

Evain, Timothée (Télécom ParisTech, Université Paris-Saclay, Carestream Dental); Ripoche, Xavier (Carestream Dental); Atif, Jamal (ENST); Bloch, Isabelle (Télécom ParisTech - CNRS UMR 5141 LTCI)*

14:30-14:45 FrS2T3.3
Computational Boundary Definition by Geodesic Graph Model 1201-1204

Cui, Hui (The University of Sydney); Wang, Xiu Ying (The University of Sydney); Zhou, Jianlong (CSIRO); Gong, Guanzhong (Shandong Cancer Hospital and Institute); Yin, Yong (Shandong Tumor Hospital, China); Feng, Dagan (The University of Sydney)*

14:45-15:00 FrS2T3.4
Lung Nodule Segmentation using Deep Learned Prior based Graph Cut 1205-1208
Mukherjee, Suvadip (GE Global Research); Huang, Xiaojie (GE Global Research); Bhagalia, Roshni (General Electric)*

15:00-15:15 FrS2T3.5
Robust and Fully Automated Segmentation of Mandible from CT Scans 1209-1212
Torosdagli, Neslisah (University of Central Florida); Liberton, Denise K (National Institute of Dental and Craniofacial Research (NIDCR)); Verma, Payal (National Institute of Dental and Craniofacial Research (NIDCR).); Sincan, Murat (National Institute of Dental and Craniofacial Research (NIDCR).); Lee, Janice (National Institute of Dental and Craniofacial Research (NIDCR).); Pattanaik, Sumanta (School of Computer Science, University of Central Florida, Orlando); Bagci, Ulas (University of Central Florida)*

FrS2T4: 14:00-15:30	R220
Brain Machine Learning (Oral Session)	
Chair: Cai, Weidong (<i>University of Sydney</i>)	
Co-Chair: Fripp, Jurgen (<i>CSIRO</i>)	

14:00-14:15 FrS2T4.1
Identifying the Primary Site of Origin of MRI Brain Metastases from Lung and Breast Cancer Following a 2D Radiomics Approach 1213-1216
Ortiz-Ramón, Rafael (Universitat Politècnica de València); Larroza, Andrés (Universitat de València); Arana, Estanislao (Radiology Dept., Fundación Instituto Valenciano de Oncología); Moratal, David (Universitat Politècnica de València)*

14:15-14:30 FrS2T4.2
3-D Functional Brain Network Classification using Convolutional Neural Networks 1217-1221
Ren, Dehua (Tianjin University of Science and Technology); Zhao, Yu (The University of Georgia); Chen, Hanbo (The University of Georgia, Athens, GA, USA); Dong, Qinglin (University of Georgia); Lv, Jinglei (QIMR Berghofer Medical Research Institute); Liu, Tianming (University of Georgia)*

14:30-14:45 FrS2T4.3
Direct Aneurysm Volume Estimation by Multi-View Semi-Supervised Manifold Learning 1222-1225
Liansheng, Wang (Xiamen University)*

14:45-15:00 FrS2T4.4
Approximating Principal Genetic Components of Subcortical Shape 1226-1230
Gutman, Boris (Imaging Genetics Center, Institute for Neuroimaging and Informa); Pizzagalli, Fabrizio (University of Southern California); Jahanshad, Neda (Imaging Genetic Center, University of Southern California); Wright, Margaret (School of Psychology, University of Queensland, Brisbane, Austr.); Thompson, Paul (University of Southern California)*

15:00-15:15 FrS2T4.5
Joint Detection and Clinical Score Prediction in Parkinson's Disease via Multi-Modal Sparse Learning 1231-1234
Lei, Haijun (ShenZhen University); Zhang, Jian (ShenZhen University); Yang, Zhang (ShenZhen University); Lei, Baiying (Shenzhen University)*