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Fischer, Igor (Heinrich Heine University), Kamp, Marcel Alexander (Department of Neurosurgery, Heinrich Heine University, Duesseldo)

15:00-16:00 MoP1O-05.8

AP8: Cerebral Microhemorrhages and Their Effects Upon White Matter after Geriatric Traumatic Brain Injury...N/A

Fan, Di (University of Southern California), Chaudhari, Nikhil (University of Southern California), Calvillo, Maria (University of Southern California), Lee, Sean (University of Southern California), Chowdhury, Nahian F. (University of Southern California), Rostowsky, Kenneth A. (University of Southern California), Hu, Yu (University of Electronic Science and Technology of China), Cao, Lei (University of Southern California), Zhang, Fan (Harvard Medical School), O'Donnell, Lauren (BWH), Irimia, Andrei (University of Southern California)

15:00-16:00 MoP1O-05.9

AP9: Segmentation of Gliomas in Magnetic Resonance Images using Recurrent Neural Networks...N/A

Grivalsky, Stefan (Faculty of Informatics and Information Technologies, Slovak Univ), Tamajka, Martin (Faculty of Informatics and Information Technologies, Slovak Univ)

MoP1O-06: 15:00-16:00 Foyer

Cardiac, Chest and Abdominal Image Analysis I (Abstracts)
(Poster Session)

15:00-16:00 MoP1O-06.1

AP10: A Step Toward a Clinically Viable Abi Phase-Contrast Imaging: Double Emission Line Artifacts Correction...N/A

Caudevilla, Oriol (Illinois Institute of Technology), Zhou, Wei (Illinois Institute of Technology), Brankov, Jovan G (Illinois Institute of Technology)

15:00-16:00 MoP1O-06.2

AP11: Accuracy of Manual 3d/2d Registration in Congenital Cardiac Interventions...N/A

Ananth Narayan, Srinivas (Kings College London), Alhrishy, Mazen (Kings College London), Toth, Daniel (King's College London, UK), Mountney, Peter (Siemens), Rhode, Kawal (King's College London)

15:00-16:00 MoP1O-06.3

AP12: Measurement of Cardiac Pulsation Induced Chest Motion with a Video Camera for Prospective Triggering in Cine Cardiac MRI Scans...N/A

Sénégas, Julien (Philips Research), Stehning, Christian (Philips Healthcare), Daniel, Wirtz (Philips Research), Krueger, Sascha (Philips Research)

15:00-16:00 MoP1O-06.4

AP13: Automatic Liver Segmentation in Abdominal Ct Images with Combined 2.5d and 3d Deep Convolutional Neural Networks...N/A

Jung, Julip (Seoul Women's University), Hong, Helen (Seoul Women's University), Kim, Jin Sung (Yonsei University College of Medicine), Chun, Jaehee (Yonsei University College of Medicine), Kim, Hyun Ju (Gachon University Gil Medical Center), Jeong, Taesik (Yonsei Cancer Center), Seong, Jinsil (Yonsei University College of Medicine)

15:00-16:00 MoP1O-06.5

AP14: Texture Features Based Prediction Model to Discriminate Ground-Glass Nodule and Bronchoscopic Dye Marking...N/A

Chen, Bo-Wei (National Taiwan University), Chen, Li Wei (National Taiwan University), Huang, Wei-Chieh (Institute of Biomedical Engineering, National Taiwan University), Yang, Shun-Mao (National Taiwan University Hospital and National Taiwan Universi), Ko, Huan-Jang (Department of Surgery, National Taiwan University Hospital, Hsin), Ko, Huan-Jang (Department of Surgery, National Taiwan University Hospital, Hsin), Chen, Chung-Ming (Institute of Biomedical Engineering, National Taiwan University)

15:00-16:00 MoP1O-06.6

AP15: Automated Segmentation and Repairing of Lungs with Adaptive Region-Growing...N/A

Li, ZhiHuan (Chongqing University, Chongqing), Wang, Qiuli (Chongqing Univeristy), Zhang, Jiajia (Chongqing University), Zhang, Xiaohong (Chongqing University), Yang, Dan (Chongqing University)

15:00-16:00 MoP1O-06.7

AP16: Radiomics Feature Reproducibility between Respiratory Phases for Low-Dose CT Screening for Lung Cancer...N/A

Garau, Noemi (Istituto Europeo Di Oncologia), Rampinelli, Cristiano (Istituto Europeo Di Oncologia), Ortensio, Simone (Università Degli Studi Di Milano), Rossi, Duccio (Università Degli Studi Di Milano), Paganelli, Chiara (Politecnico Di Milano), Baroni, Guido (Politecnico Di Milano), Bellomi, Massimo (Istituto Europeo Di Oncologia), Summers, Paul (Istituto Europeo Di Oncologia)

15:00-16:00 MoP1O-06.8

AP17: Image-Wise Classification and Lesion-Wise Localization of Malignant Pulmonary Nodules on Chest Radiographs using Hybrid Transfer Learning-Based RetinaNet...N/A

Lee, Minho (Biomedical Research Institute & Department of Radiology Seoul Na), Hwang, Eui Jin (Seoul National University Hospital), Park, Chang Min (Seoul National University Hospital), Gwak, Jeonghwan (Seoul National University Hospital)

15:00-16:00 MoP1O-06.9

AP18: Simulated Nodule Augmentation (SNA): Generating Pulmonary Nodule Samples by Transplanting Nodules into Normal Parenchyma for Deep Learning-Based Benign/malignant Nodule Classification...N/A

Huang, Wei-Chieh (Institute of Biomedical Engineering, National Taiwan University), Chen, Li Wei (National Taiwan University), Wang, Hao-Jen (National Taiwan University), Yang, Shun-Mao (National Taiwan University Hospital and National Taiwan Universi), Lin, Mong-Wei (National Taiwan University Hospital and National Taiwan Universi), Chang, Joseph (National Taiwan University), Li, Chia-Chen (National Taiwan University), Chang, Yeun-Chung (Departments of Medical Imaging National Taiwan University Hospit), Chen, Chung-Ming (Institute of Biomedical Engineering, National Taiwan University), Chen, Leng-Jung (National Taiwan University), Chen, Yi-Chang (National Taiwan University Hospital and National Taiwan Universi), Chen, Jin-Shing (National Taiwan University Hospital and National Taiwan Universi)

15:00-16:00 MoP1O-06.10

AP19: Renal Parenchyma Segmentation using Coarse-To-Fine Framework Based on 2D and 3D Segmentation Networks in Abdominal CT Images...N/A

Kim, Hyeonjin (Seoul Women's University), Hong, Helen (Seoul Women's University), Chang, Kidon (Yonsei University Wonju College of Medicine), Rha, Koon Ho (University)

15:00-16:00 MoP1O-06.11

AP20: Liver Segmentation Algorithm Based on Repeated K-Means and 2D Gabor Wavelet Classifications from Abdominal MRI Images...N/A

Ekinci, Umut Baran (Manisa Celal Bayar University), Kose, Ece (Manisa Celal Bayar University), Kocyigit, Yucel (Celal Bayar University)

15:00-16:00 MoP1O-06.12

AP21: Enhancement and Segmentation Method for Degraded Stomach MRI using Unified Convolutional Neural Network...N/A

Gou, Shuiping (Xidian University)

Is Imaging Genetics the Frontier for Precision Medicine?
(Special Session)
Chair: Menegaz, Gloria (University of Verona)
Co-Chair: Giugno, Rosalba (University of Verona)
Organizer: Menegaz, Gloria (University of Verona)
Organizer: Giugno, Rosalba (University of Verona)

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Silva, Santiago (Université Côte d'Azur, Inria Sophia Antipolis, Epione Research), Gutman, Boris (Imaging Genetics Center, Inistitute for Neuroimaging and Informa), Romero, Eduardo (Universidad Nacional De Colombia), Thompson, Paul (University of Southern California), Altmann, Andre (University College London), Lorenzi, Marco (INRIA)

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Lorenzi, Marco (INRIA), Gutman, Boris (Imaging Genetics Center, Inistitute for Neuroimaging and Informatics, University of Southern California), Thompson, Paul (University of Southern California), Altmann, Andre (University College London)

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A Spatial Hypothesis Testing Approach to Imaging Genomics for Dementia Candidate Genes Discovery (I)...N/A

Richiardi, Jonas (Lausanne University Hospital and University of Lausanne), Altmann, Andre (University College London), Meuli, Reto (Department of Radiology, University Hospital Center (CHUV) and University of Lausanne), Kober, Tobias (Advanced Clinical Imaging Technology, Siemens Healthcare, AG, Lausanne, Switzerland), Seeley, William W. (University of California San Francisco), Greicius, Michael (Stanford University)

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Predicting Mci to Ad Conversion using Sulcal Morphometry (I)...N/A

Pizzagalli, Fabrizio (University of Southern California), Thomopoulos, Sophia I (University of Southern California), Auzias, Guillaume (Aix Marseille Univ, CNRS), Mangin, Jean-François (CEA I2BM NeuroSpin), Rivière, Denis (NeuroSpin, I2BM, CEA), Kochunov, Peter (3. Maryland Psychiatric Research Center, Department of Psychiatry, University of MD School of Medicine, Baltimore, MD, USA), Thompson, Paul (University of Southern California), Jahanshad, Neda (Imaging Genetics Center, University of Southern California)

17:30-17:42	MoS11.6

Leveraging Imaging and Genomic Data of the Cancer Genome Atlas (I)...N/A

Waldron, Levi (CUNY Graduate School of Public Health and Health Policy)

17:42-17:56	MoS11.7

Estimating Expression from Raw Merfish Data (I)...N/A

Köster, Johannes (Institute of Human Genetics, University of Duisburg-Essen), Hartmann, Till (Institute of Human Genetics, University of Duisburg-Essen)

Lung Disease Detection and Classification (Oral Session)
Chair: de Bruijne, Marleen (Erasmus MC - University Medical Center Rotterdam)
Co-Chair: van Ginneken, Bram (Radboud University Medical Center)

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Computational Methods in Microscopy (Oral Session)
Chair: Liebling, Michael (Idiap Research Institute and UC Santa Barbara)
Co-Chair: Blanc-Feraud, Laure (Université Nice Sophia Antipolis, Laboratoire I3S, CNRS, INRIA)

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Co-Chair: Sanroma, Gerard (DZNE)

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10:30-11:30   TuP2O-05.1

AP1: 3d Single Molecule Localization Microscopy: Key Outcomes of the Software Benchmarking...N/A

Sage, Daniel (Ecole Polytechnique Federale de Lausanne (EPFL)), Pham, Thanh-an (Ecole polytechnique fédérale de Lausanne (EPFL)), Unser, Michael (EPFL)

10:30-11:30   TuP2O-05.2

AP2: Cell Image Segmentation by Pix2pixs with Multiple Different Roles...N/A

Tsuda, Hiroki (Meijo University), Hotta, Kazuhiro (Meijo University), Imanishi, Ayako (Kyoto University), Matsuda, Michiyuki (Kyoto University), Terai, Kenta (Graduate School of Biostudies, Kyoto University)

10:30-11:30   TuP2O-05.3

AP3: Cell Image Segmentation by Pix2pix using Multiple Different Discriminators...N/A

Kato, Sota (Meijo University), Hotta, Kazuhiro (Meijo University), Imanishi, Ayako (Kyoto University), Terai, Kenta (Graduate School of Biostudies, Kyoto University), Matsuda, Michiyuki (Kyoto University)

10:30-11:30   TuP2O-05.4

AP4: Journal Paper: FiloGen – a Model-Based Generator of Synthetic 3-D Time-Lapse Sequences of Single Motile Cells with Growing and Branching Filopodia...N/A

Sorokin, Dmitry (Lomonosov Moscow State University), Peterlik, Igor (Inria), Ulman, Vladimir (Masaryk University), Svoboda, David (Masaryk University), Nečasová, Tereza

(Masaryk University), Morgaenko, Katsiarina (Centre for Biomedical Image Analysis, Masaryk University), Eiselleová, Lívia (Centre for Biomedical Image Analysis, Masaryk University), Tesařová, Lenka (Centre for Biomedical Image Analysis, Masaryk University), Maška, Martin (Masaryk University)

10:30-11:30	TuP2O-05.5

AP5: Superpixel Segmentation for Storing and Retrieving Image-Analysis Results in Big Data Digital Pathology...N/A

Lorsakul, Auranuch (Roche Tissue Diagnostics)

10:30-11:30	TuP2O-05.6

AP6: Segmentation of Prostate Glands Based on H&E or IHC Counterstain with Minimal Manual Annotation in Prostate Cancer...N/A

Harder, Nathalie (Definiens AG), Kapil, Ansh (Definiens AG), Brieu, Nicolas (Definiens AG), Athelogou, Maria (Definiens AG), Hessel, Harald (Definiens AG), Buchner, Alexander (Urological Clinic of Munich University (LMU)), Stief, Christian (Urological Clinic of Munich University (LMU)), Kirchner, Thomas (Pathological Institute of Munich University (LMU)), Huss, Ralf (Definiens), Schmidt, Günter (Definiens AG)

10:30-11:30	TuP2O-05.7

AP7: Super Resolution in Quantitative Acoustic Microscopy using a U-Net Like Convolution Neural Network...N/A

Mamou, Jonathan (Riverside Research), Pellegrini, Thomas (Université De Toulouse III ; IRIT), Kouamé, Denis (Université De Toulouse III, IRIT UMR CNRS 5505), Basarab, Adrian (Université De Toulouse)

10:30-11:30	TuP2O-05.8

AP8: A Computational Framework for a Dynamic Protein Atlas of Human Cell Division...N/A

Hossain, M. Julius (European Molecular Biology Laboratory), Cai, Yin (European Molecular Biology Laboratory), Hériché, Jean-Karim (European Molecular Biology Laboratory), Politi, Antonio (European Molecular Biology Laboratory), Walther, Nike (European Molecular Biology Laboratory), Koch, Birgit (European Molecular Biology Laboratory), Kueblbeck, Moritz (European Molecular Biology Laboratory), Wachsmuth, Malte (European Molecular Biology Laboratory), Nijmeijer, Bianca (European Molecular Biology Laboratory), Ellenberg, Jan (European Molecular Biology Laboratory)

10:30-11:30	TuP2O-05.9

AP9: Automated Detection, Tracking and Characterization of Toxicologically Relevant Nanoscale Fibres in Scanning Electron Microscope Images...N/A

Schumann, John (BAuA - Federal Institute for Occupational Safety and Health, Ber), Kämpf, Kerstin (BAuA - Federal Institute for Occupational Safety and Health, Ber), Meyer-Plath, Asmus (BAuA - Federal Institute for Occupational Safety and Health, Ber), Plitzko, Sabine (BAuA - Federal Institute for Occupational Safety and Health, Ber)

TuP2O-06: 10:30-11:30	Foyer
Interventional Imaging (Abstracts) (Poster Session)	

10:30-11:30	TuP2O-06.1

AP10: An Efficient Image Registration Method for 3d Analysis of Implanted Knee Kinematics...N/A

Saadat, Shabnam (UNSW Canberra, Canberra, Australia), Pickering, Mark (The University of New South Wales), Perriman, Diana (Canberra Hospital), Scarvell, Jennie (The Canberra Hospital), Smith, Paul (The Canberra Hospital)

10:30-11:30	TuP2O-06.2

AP11: A Novel Approach to Fast 3D Model Clipping in Computer-Assisted Surgery...N/A

Xu, Liyu (Shanghai Jiaotong University)

10:30-11:30	TuP2O-06.3

AP12: Quantitative Analysis of Surgical Outcomes for Craniosynostosis Based on Three-Dimensional Shape Indices...N/A

Lee, Minjin (Seoul Women's University), Hong, Helen (Seoul Women's University), Shim, Kyu Won (Severance Children's Hospital)

10:30-11:30	TuP2O-06.4

AP13: Automatic High-Throughput Segmentation of Laryngoscopic Videos...N/A

Gómez, Pablo (Division of Phoniatrics and Pediatric Audiology), Schlegel, Patrick (Division of Phoniatrics and Pediatric Audiology, Department of O), Schützenberger, Anne (Division of Phoniatrics and Pediatric Audiology, Department of O), Doellinger, Michael (University Hospital Erlangen), Kist, Andreas M. (Division of Phoniatrics and Pediatric Audiology, Department of O)

10:30-11:30	TuP2O-06.5

AP14: Prospective Model for Adaptive Radiation Therapy through Reinforcement Learning with a Reward Based on Radiomics...N/A

Desbordes, Paul (Université Catholique De Louvain), Francois-Lavet, Vincent (McGill University), Macq, Benoit (Université Catholique De Louvain)

10:30-11:30	TuP2O-06.6

AP15: Integration of Instrument Tracking in Hololens for Surgical Applications...N/A

Teatini, Andrea (University of Oslo - Department of Informatics, the Intervention), Kumar, Rahul Prasanna (Oslo University Hospital), Pelanis, Egidijus (University of Oslo - Dep. Clinical Medicine; the Intervention Ce), Edwin, Bjørn (Oslo University Hospital, Department of Hepato-Pancreatic-Biliar), Elle, Ole Jacob (The Intervention Centre, Oslo University Hospital and Department)

TuP2O-07: 10:30-11:30	Foyer
Image Segmentation I (Abstracts) (Poster Session)	

10:30-11:30	TuP2O-07.1

AP16: Parotid Salivary Ductal System Segmentation and Modeling in Sialo-CBCT Scans: Method and Results...N/A

Shauly, Oren (The Hebrew University of Jerusalem), Joskowicz, Leo (The Hebrew University of Jerusalem), Istoyler, Ella (Hadassah School of Dental Medicine, the Hebrew of Unive), Nadler, Chen (Hadassah School of Dental Medicine, the Hebrew of Unive)

10:30-11:30	TuP2O-07.2

AP17: Fully Convolutional Network for Segmentation of Optic Disc in Retinal Fundus Images...N/A

Sadhukhan, Sandip (Jadavpur University), Ghorai, Goutam Kumar (Ghani Khan Choudhury Institute of Engineering and Technology), Maiti, Souvik (Bundelkhand University), Sinha, Debprasad (Vidyasagar College of Optometry & Vision Science), Sarkar, Gautam (Jadavpur University), Dhara, Ashis Kumar (National Institute of Technology Durgapur, India)

10:30-11:30	TuP2O-07.3

AP18: Segmentation of Pulmonary Nodules Based on Modified Framework using Hybrid Level-Set...N/A

Biswas, Mainak (Techno International New Town), Maji, Debasis (Haldia Institute of Technology), Dhara, Ashis Kumar (National Institute of Technology Durgapur, India), Sarkar, Gautam (Jadavpur University)

10:30-11:30	TuP2O-07.4

AP19: Liver Segmentation from a Pediatric Ct Volume Based on Joint Optimization with a Conditional Statistical Shape Model...N/A

Nakayama, Koyo (Tokyo University of Agriculture and Technology), Saito, Atsushi (Tokyo University of Agriculture and Technology), Linguraru, Marius George (Children's National Health System), Shimizu, Akinobu (Tokyo University of Agriculture and Technology)

10:30-11:30	TuP2O-07.5

AP20: Graph Cuts for Image Segmentation using the Stoer Wagner Algorithm...N/A

Khames, Imene (INSA Rouen Normandie), Wang, Yizhe (INSA Rouen Normandie), Knippel, Arnaud (INSA Rouen Normandie), Gout, Christian (INSA De Rouen, LMI EA 3226)

10:30-11:30	TuP2O-07.6

AP21: Dualtail-Net for Liver Segmentation on Abdominal Ct Images...N/A

Groza, Vladimir (Median Technologies), Brag, Johan (Median Technologies), Auffret, Michael (Median Technologies)

10:30-11:30	TuP2O-07.7

AP22: Segmentation of Bone Microvasculature in Breast Cancer Bone Metastasis...N/A

Xu, Hao (Univ Lyon, CNRS UMR 5220, Inserm U1206, INSA Lyon, Université Cl), Langer, Max (U. De Lyon, CNRS UMR 5220, Inserm U1044, INSA-Lyon, U. Lyon 1), Peyrin, Francoise (Université De Lyon, CNRS UMR 5220, INSERM U1206, INSA Lyon)

TuS21: 11:30-13:00	Venetian Ballroom C

PET Imaging in the Era of Multi-Modality and Big Data (Special Session)
Chair: Veronese, Mattia (Centre for Neuroimaging Sciences, IoPPN, King's College London)
Co-Chair: Rizzo, Gaia (Invicro, a Konica Minolta Company)
Organizer: Veronese, Mattia (Centre for Neuroimaging Sciences, IoPPN, King's College London)
Organizer: Rizzo, Gaia (Invicro, a Konica Minolta Company)

11:30-11:45	TuS21.1

Introduction: Basics of Pet Imaging (I)...N/A

Rizzo, Gaia (Invicro, A Konica Minolta Company)

11:45-12:00	TuS21.2

From Big Data to Personalised Medicine in AD with Ab and Tau PET (I)...N/A

Roger, Gunn (Imperial College London)

12:00-12:15	TuS21.3

DO WE NEED PET at ALL? APPLICATIONS in phMRI STUDIES (I)...N/A

Veronese, Mattia (Centre for Neuroimaging Sciences, IoPPN, King's College London), Dipasquale, Ottavia (Politecnico Di Milano, Milan, Italy), Selvaggi, Pierluigi (King's College London)

12:15-12:30	TuS21.4

PET/MRI in Clinical Practice (I)...N/A

Zanotti Fregonara, Paolo (Houston Methodist Research Institute)

TuS22: 11:30-13:00	Venetian Ballroom A

Cardiac Image Analysis (Oral Session)
Chair: Isgum, Ivana (University Medical Center Utrecht)
Co-Chair: Corsi, Cristiana (University of Bologna)

11:30-11:45	TuS22.1

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Fang, Lin (Zhejiang University), Liu, Huafeng (Zhejiang University)

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Medley, Daniela (Instituto Superior Técnico), Santiago, Carlos (IST-ID), Nascimento, Jacinto (Instituto Superior Técnico)

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Jafari, Mohammad Hossein (University of British Columbia), Girgis, Hany (Vancouver General Hospital), Abdi, Amir H. (University of British Columbia), Liao, Zhibin (University of British Columbia), Pesteie, Mehran (University of British Columbia), Rohling, Robert (University of British Columbia), Gin, Ken (Vancouver General Hospital), Tsang, Terasa (Vancouver General Hospital), Abolmaesumi, Purang (UBC)

12:30-12:45	TuS22.5

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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)

TuS23: 11:30-13:00	Venetian Ballroom B

Microscopy Image Analysis (Oral Session)
Chair: Munoz-Barrutia, Arrate (Universidad Carlos III De Madrid)
Co-Chair: Olivo-Marin, Jean-Christophe (Institut Pasteur)

11:30-11:45	TuS23.1

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Karam Eldaly, Ahmed (Heriot-Watt University), Altmann, Yoann (Heriot-Watt University), Akram, Ahsan R (University of Edinburgh), Perperidis, Antonios (Heriot Watt University), Dhaliwal, Kevin (University of Edinburgh), McLaughlin, Steve (Heriot Watt University, Edinburgh)

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12:00-12:15	TuS23.3

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Chatrian, Andrea (University of Oxford), Sirinukunwattana, Korsuk (Harvard Medical School), Verril, Clare (University of Oxford), Rittscher, Jens (University of Oxford)

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PP57: StainGAN: Stain Style Transfer for Digital Histological Images...953

Shaban, M Tarek (TU Munich), Baur, Christoph (TU Munich), Navab, Nassir (Technische Universität München), Albarqouni, Shadi (Technical University of Munich)

15:30-16:30   TuP3O-04.16

PP58: Transfer Learning from Nucleus Detection to Classification in Histopathology Images...957

Yousefi, Safoora (Emory University), Nie, Yao (Roche Tissue Diagnostics)

15:30-16:30   TuP3O-05.1

AP1: Automated 3D Coronary Sinus Reconstruction from Non-Simultaneous Angiographic Projections...N/A

Banerjee, Abhirup (University of Oxford), De Maria, Giovanni Luigi (University of Oxford), Channon, Keith M. (University of Oxford), Banning, Adrian P. (University of Oxford), Choudhury, Robin P. (University of Oxford), Grau, Vicente (University of Oxford)

15:30-16:30	TuP3O-05.2

AP2: Low Dose Tomography: Poisson-Gaussian Convolution-Based Reconstruction...N/A

Gopal, Preeti (Indian Institute of Technology Bombay), Chandran, Sharat (IIT Bombay), Svalbe, Imants (Monash University), Rajwade, Ajit (IIT Bombay)

15:30-16:30	TuP3O-05.3

AP3: Tomography in Longitudinal Studies: Detecting New Structures from Sparse Measurements...N/A

Gopal, Preeti (Indian Institute of Technology Bombay), Chandran, Sharat (IIT Bombay), Svalbe, Imants (Monash University), Rajwade, Ajit (IIT Bombay)

15:30-16:30	TuP3O-05.4

AP4: Compensation of Gradient Field Nonlinearity and Signal Drift in Diffusion Weighted MRI...N/A

Hansen, Colin B. (Vanderbilt University), Nath, Vishwesh (Vanderbilt University), Schilling, Kurt G. (Vanderbilt University Institute of Imaging Science), Blaber, Justin A. (Vanderbilt University), Rogers, Baxter P. (Vanderbilt University Institute of Imaging Science), Landman, Bennett (Vanderbilt University)

15:30-16:30	TuP3O-05.5

AP5: Highly Reduced-Dose Region-Of-Interest Image Reconstruction in Repeat CT Scanning...N/A

Adelman, Zeev (The Hebrew University of Jerusalem), Joskowicz, Leo (The Hebrew University of Jerusalem)

15:30-16:30	TuP3O-05.6

AP6: A New, Large-Scale, Documented Database of Forensic Whole-Body Ct Images Available for Research...N/A

Edgar, Heather (University of New Mexico), Berry, Shamsi (University of Mississippi Medical Center)

15:30-16:30	TuP3O-05.7

AP7: Best Residual Networks for Low-Dose Computed Tomography...N/A

Kwan, David (Monta Vista High School), Kwan, Thomas (Google)

15:30-16:30	TuP3O-05.8

AP8: Customize Acl Recovery Insole via Reconstructed Plantar Pressure...N/A

Zhang, Yi (Peking University), Wang, Zhengfei (Peking University), Wang, Chris (Peking University), Xu, Guoxiong (Peking University), Huang, Hongshi (Peking University Third Hospital), Li, Wenxin (Peking University)

15:30-16:30	TuP3O-05.9

AP9: A Customizable Workflow Engine to Store, Process and Share Medical Images for Preclinical Imaging Centers...N/A

Zullino, Sara (University of Torino), Paglialonga, Alessandro (University of Torino), Dastrù, Walter (University of Torino), Viale, Alessandra (University of Torino), Aime, Silvio (University of Torino), Longo, Dario Livio (Italian National Research Council)

15:30-16:30	TuP3O-05.10

AP10: MRI Denoising via the Combination of Nonlocal Self-Similarity Prior and Gradient Sparsity Prior...N/A

Zhang, Yuhan (Chengdu University of Information Technology), Fu, Ying (Chengdu University of Information Technology), Yang, Zhipeng (Chengdu University of Information Technology), Hu, Jinrong (Chengdu University of Information Technology), Zou, Shurong (Chengdu University of Information Technology)

TuP3O-06: 15:30-16:30	Foyer

Cardiac, Chest and Abdominal Image Analysis II (Abstracts)
(Poster Session)

15:30-16:30	TuP3O-06.1

AP11: A Computer-Aided Diagnosis System Based on Deep Learning in Gastric Endoscopic Images...N/A

Kim, Kwang Gi (Gachon University), Park, Chang Min (Seoul National University Hospital), Jin, Kwang Nam (Seoul National Uiversity)

15:30-16:30	TuP3O-06.2

AP12: Detection of Colorectal Polyps from Ct Colonoscopy using Support Vector Machine...N/A

Pei, Yan (The University of Aizu), Utano, Kenichi (Fukushima Medical University), Kusanagi, Toshihiro (The University of Aizu), Zhu, Xin (The University of Aizu), Togashi, Kazu (The University of Aizu)

15:30-16:30	TuP3O-06.3

AP13: Construction and Evaluation of a Statistical Shape Model of Liver using Variational Autoencoder...N/A

Lu, Zhihui (Tokyo University of Agriculture and Technology), Saito, Atsushi (Tokyo University of Agriculture and Technology), Nawano, Shigeru (International University of Health and Welfare, Mita Hospital), Shimizu, Akinobu (Tokyo University of Agriculture and Technology)

15:30-16:30	TuP3O-06.4

AP14: A Preliminary Study on Cnn-Based Spectrum Estimation Method for X-Ray Imaging...N/A

Zhang, Wenkun (National Digital Switching System Engineering and Technological), Liang, Ningning (National Digital Switching System Engineering and Technological), Wang, Linyuan (National Digital Switching System Engineering and Technological), Cai, Ailong (National Digital Switching System Engineering & Technological R&), Li, Lei (National Digital Switching System Engineering & Technological R&), Yan, Bin (China National Digital Switching System Engineering and Technolo)

15:30-16:30	TuP3O-06.5

AP15: A Deep Learning Pipeline to Detect the Gist of the Abnormal in the Negative Prior Mammograms of Women Who Developed a Subsequent Breast Cancer...N/A

Gandomkar, Ziba (University of Sydney), Lewis, Sarah (University of Sydney), Ekpo, Ernest (University of Sydney), Tapia, Kriscia (University of Sydney), Brennan, Patrick (University of Sydney)

15:30-16:30	TuP3O-06.6

AP16: Anthropogenic Heart Model with a Congenital Defect for Phantom Based Ultrasound Imaging Training...N/A

Puntambekar, Varad (All India Institute of Medical Sciences, New Delhi), China, Debarghya (Indian Institute of Technology, Kharagpur), Sheet, Debdoot (Indian Institute of Technology Kharagpur)

15:30-16:30	TuP3O-06.7

AP17: Full Convolutional Networks Based Multiple Side-Output Fusion Architecture for the Segmentation of Rectal Tumors in Magnetic Resonance Images...N/A

Ran, Zhao (Suzhou Institute of Biomedical Engineering and Technology, Chine), Jian, Junming (SIBET, Chinese Academy of Sciences), Wang, Mengmeng (Suzhou Institute of Biomedical Engineering and Technology, Chine), Xia, Wei (Suzhou Institute of Biomedical Engineering and Technology, Chine), Zhang, Rui (Suzhou Institute of Biomedical Engineering and Technology), Gao, Xin (Suzhou Institute of Biomedical Engineering and Technology, Chine)

15:30-16:30	TuP3O-06.8

AP18: Comparison of Semi-Automatic and Deep Learning Based Automatic Methods for Liver Segmentation in Living Liver Transplant Donors...N/A

Kavur, Ali Emre (Dokuz Eylul University, Natural and Applied Sciences), Dicle, Oguz (Faculty of Medicine, Department of Radiology), Selver, M. Alper (Dokuz Eylul University)

15:30-16:30	TuP3O-06.9

AP19: Liver Segmentation Based on Repeated K-Means and Distance Transform from MRI Images...N/A

Kose, Ece (Manisa Celal Bayar University), Ekinci, Umut Baran (Manisa Celal Bayar University), Kocyigit, Yucel (Celal Bayar University)

15:30-16:30	TuP3O-07.1

AP20: Hepatic Tumor Diagnosis by Analysing Dense Transport Fields in Contrast-Enhanced Ultrasound...N/A

Denis de Senneville, Baudouin (CNRS/University of Bordeaux 1), Frulio, Nora (Department of Diagnostic and Interventional Imaging, Hopital Sai), Laumonier, Hervé (Department of Diagnostic and Interventional Imaging, Hopital Sai), Salut, Cécile (Department of Diagnostic and Interventional Imaging, Hopital Sai), Lafitte, Luc (Mathematical Institute of Bordeaux, UMR 5251 CNRS/University Of), Trillaud, Hervé (Department of Diagnostic and Interventional Imaging, Hopital Sai)

15:30-16:30	TuP3O-07.2

AP21: Deep Learning for Universal Beamformer for Ultrasound Imaging...N/A

Khan, Shujaat (Korea Advanced Institute of Science and Technology (KAIST)), Huh, Jaeyoung (Korea Advanced Institute of Science and Technology (KAIST)), Ye, Jong Chul (Korea Advanced Inst of Science & Tech)

15:30-16:30	TuP3O-07.3

AP22: Thyroid Nodules Classification using Nonnegative Matrix Factorization-Based Radiomics Feature Learning...N/A

Li, YuLian (Chengdu University of Information Technology), Yang, Guang (Chengdu University of Information Technology), Fu, Ying (Chengdu University of Information Technology), Yue, Wenwen (Shanghai Tenth People's Hospital), Wu, Xi (Chengdu University of Information Technology), Zhou, Jiliu (Chengdu University of Information Technology)

TuS31: 17:00-18:30   Venetian Ballroom C
Geometry-Based Methods in Biomedical Image Analysis: Junior Researchers (Special Session)
Chair: Vemuri, Baba (University of Florida)
Co-Chair: Singh, Vikas (University of Wisconsin-Madison)
Organizer: Singh, Vikas (University of Wisconsin-Madison)
Organizer: Vemuri, Baba (University of Florida)

17:00-17:15	TuS31.1

Quantifying Spatial Uncertainty in the Space of Curves: Streamline Tractography (I)...N/A

Petersen, Emil (Department of Computer Science, University of Copenhagen), Suadicani, Victor (Department of Computer Science, University of Copenhagen), Mallasto, Anton (Department of Computer Science, University of Copenhagen), Dela Haije, Tom (Department of Computer Science, University of Copenhagen), Feragen, Aasa (University of Copenhagen)

17:15-17:30	TuS31.2

A Topological Approach for Cardiac Image Segmentation (I)...N/A

Chen, Chao (Stony Brook University)

17:30-17:45	TuS31.3

Rate-Invariant Analysis of Covariance Trajectories (I)...N/A

Zhengwu, Zhang (University of Rochester)

17:45-18:00	TuS31.4

An Automated Segmentation Technique for Diffusion Mr Scans (I)...N/A

Chakraborty, Rudrasis (University of California, Berkeley), Vemuri, Baba (University of Florida)

17:00-17:15	TuS32.1

Spatio-Temporal Partitioning and Description of Full-Length Routine Fetal Anomaly Ultrasound Scans...987

Sharma, Harshita (University of Oxford), Droste, Richard (University of Oxford), Chatelain, Pierre (University of Oxford), Drukker, Lior (Nuffield Department of Women's and Reproductive Health, Universi), Papageorghiou, Aris (Nuffield Department of Obstetrics and Gynaecology, John Ra), Noble, J Alison (University of Oxford)

17:15-17:30	TuS32.2

Simultaneous Super-Resolution and Segmentation using a Generative Adversarial Network: Application to Neonatal Brain MRI...991

Pham, Chi-Hieu (Télécom Bretagne), Tor-Díez, Carlos (IMT Atlantique), Meunier, Hélène (Service De Médecine Néonatale Et Réanimation Pédiatrique, CHU De), Bednarek, Nathalie (Service De Médecine Néonatale Et Réanimation Pédiatrique, CHU De), Fablet, Ronan (Télécom Bretagne), Passat, Nicolas (Reims University), Rousseau, François (Telecom Bretagne)

17:30-17:45	TuS32.3

Construction of 4d Neonatal Cortical Surface Atlases using Wasserstein Distance...995

Chen, Zengsi (China Jiliang University), Wu, Zhengwang (UNC-Chapel Hill), Sun, Liang (Nanjing University of Aeronautics and Astronautics), Wang, Fan (UNC-CHAPEL HILL), Wang, Li (UNC-CHAPEL HILL), Zhao, Fenqiang (Zhejiang University), Lin, Weili (UNC-CHAPEL HILL), Gilmore, John H. (UNC-CHAPEL HILL), Shen, Dinggang (UNC-Chapel Hill), Li, Gang (University of North Carolina at Chapel Hill)

17:45-18:0	TuS32.4

Frnet: Flattened Residual Network for Infant MRI Skull Stripping...999

Zhang, Qian (University of North Carolina at Chapel Hill), Wang, Li (UNC-CHAPEL HILL), Zong, Xiaopeng (University of North Carolina at Chapel Hill), Lin, Weili (UNC-CHAPEL HILL), Li, Gang (University of North Carolina at Chapel Hill), Shen, Dinggang (UNC-Chapel Hill)

18:00-18:15	TuS32.5

Implicit Modeling with Uncertainty Estimation for Intravoxel Incoherent Motion Imaging...1003

Zhang, Lin (ETH Zurich), Vishnevsky, Valery (ETH Zurich), Jakab, Andras (University Children's Hospital Zurich), Goksel, Orcun (ETH Zurich)

17:00-17:15	TuS33.1

Microscopy Cell Segmentation via Convolutional LSTM Networks...1008

Arbelle, Assaf (Ben Gurion University), Riklin Raviv, Tammy (Ben-Gurion University)

17:15-17:30	TuS33.2

Deforming Tessellations for the Segmentation of Cell Aggregates...1013

Badoual, Anaïs (Ecole Polytechnique Fédérale De Lausanne), Galan, Aymeric (Ecole Polytechnique Fédérale De Lausanne), Sage, Daniel (Swiss Federal Institute of Technology Lausanne (EPFL)), Unser, Michael (EPFL)

17:30-17:45	TuS33.3

Segmentation and Quantification of Cellular Load in Pulmonary Endomicroscopic Images using Convolutional Neural Networks...1018

Bonheur, Savinien (TU Graz / Ludwig Boltzmann Institute), Karam Eldaly, Ahmed (Heriot-Watt University), Westerfeld, Jody (Community Health Network, Community South Hospital), Wilson, David (Community Health Network, Community South Hospital), Dhaliwal, Kevin (University of Edinburgh), McLaughlin, Steve (Heriot Watt University, Edinburgh), Perperidis, Antonios (Heriot Watt University)

17:45-18:00	TuS33.4

SpotNet – Learned Iterations for Cell Detection in Image-Based Immunoassays...1023

del Aguila Pla, Pol (KTH Royal Institute of Technology), Saxena, Vidit (Department of Information Science and Engineering, School of Ele), Jaldén, Joakim (ACCESS Linnaeus Centre, KTH Royal Institute of Technology)

18:00-18:15	TuS33.5

Context-Refined Neural Cell Instance Segmentation...1028

Yi, Jingru (Rutgers University), Wu, Pengxiang (Rutgers University), Huang, Qiaoying (Rutgers University), Qu, Hui (Rutgers University), Hoeppner, Daniel (Astellas Research Institute of America), Metaxas, Dimitris (Rutgers University)

TuS34: 17:00-18:30   Venetian Ballroom DE
Longitudinal Brain Analysis (Oral Session)
Chair: Li, Gang (University of North Carolina at Chapel Hill)
Co-Chair: Salvado, Olivier (CSIRO)

17:00-17:15	TuS34.1

Learning Disease Progression Models with Longitudinal Data and Missing Values...1033

Couronne, Raphael Philippe Titouan (Inria, Aramis Project-Team, ICM, Inserm U 1127, CNRS UMR 7225, S), Vidailhet, Marie (ICM), Corvol, Jean-Christophe (Department of Neurology ICM UPMC/INSERM UMR 1127 CNRS UMR 7225), Lehericy, Stéphane (ICM-Cenir), Durrleman, Stanley (INRIA/ICM, Pitie Salpetriere Hospital)

17:15-17:30	TuS34.2

Unbiased Longitudinal Brain Atlas Creation using Robust Linear Registration and Log-Euclidean Framework for Diffeomorphisms...1038

Legouhy, Antoine (CNRS), Commowick, Olivier (INRIA), Rousseau, François (Telecom Bretagne), Barillot, Christian (Irisa (umr Cnrs 6074), Inria, Inserm)

17:30-17:45	TuS34.3

Generative Aging of Brain MRI for Early Prediction of MCI-AD Conversion...1042

Wegmayr, Viktor (ETH Zurich), Hörold, Maurice (ETH Zurich), Buhmann, Joachim (ETH Zurich)

17:45-18:00	TuS34.4

Attention-Based 3D Convolutional Network for Alzheimer's Disease Diagnosis and Biomarkers Exploration...1047

Jin, Dan (University of Chinese Academy of Sciences, Institute of Automati), Xu, Jian (State Key Laboratory of Management and Control for Complex Syste), Zhao, Kun (Shandong Normal University), Hu, Fangzhou (Harbin University of Science and Technology), Yang, Zhengyi (Institute of Automation, Chinese Academy of Sciences), Liu, Bing (Institute of Automation, Chinese Academy of Sciences), Jiang, Tianzi (Institute of Automation), Liu, Yong (Chinese Academy of Sciences)

18:00-18:15	TuS34.5

A Preliminary Volumetric MRI Study of Amygdala and Hippocampal Subfields in Autism During Infancy...1052

Li, Guannan (Nanjing University of Science and Technology, Nanjing 210094, C), Chen, Meng-Hsiang (Department of Diagnostic Radiology, Kaohsiung Chang Gung Memoria), Li, Gang (University of North Carolina at Chapel Hill), Wu, Di (Department of Biostatistics, University of North Carolina at Cha), Sun, Quansen (Nanjing University of Science and Technology), Shen, Dinggang (UNC-Chapel Hill), Wang, Li (UNC-CHAPEL HILL)

WeP4O-01: 10:30-11:30   Foyer
Breast Image Analysis (Poster Session)

10:30-11:30   WeP4O-01.1

PP1: Model Agnostic Saliency for Weakly Supervised Lesion Detection from Breast DCE-MRI...1057

Maicas Suso, Gabriel (The University of Adelaide), Snaauw, Gerard (University of Adelaide), Bradley, Andrew Peter (Queensland University of Technology), Reid, Ian (University of Adelaide), Carneiro, Gustavo (University of Adelaide)

10:30-11:30   WeP4O-01.2

PP2: Limiting Level of False-Positive Detections in Classification of Microcalcification Clusters in Mammograms...1061

Sainz de Cea, Maria V. (Illinois Institute of Technology), Nishikawa, Robert (Department of Radiology, the University of Chicago), Yang, Yongyi (Illinois Institute of Technology)

10:30-11:30   WeP4O-01.3

PP3: A Mixture of Views Network with Applications to the Classification of Breast Microcalcifications...1065

Shachor, Yaniv (Bar Ilan Univeristy), Greenspan, Hayit K. (Tel Aviv University), Goldberger, Jacob (Bar-Ilan University)

10:30-11:30   WeP4O-01.4

PP4: Analysis of CEDBT and CESM Performance using a Realistic X-Ray Simulation Platform...1070

Sanchez de la Rosa, Ruben (TELECOM PARISTECH), Carton, Ann-Katherine (GE HEALTHCARE), Milioni de Carvalho, Pablo (GE Healthcare), Bloch, Isabelle (Télécom ParisTech - CNRS UMR 5141 LTCI), Muller, Serge (GE Healthcare)

10:30-11:30   WeP4O-01.5

PP5: Registration of Breast MRI and 3D Scan Data Based on Surface Matching...1074

Bessa, Sílvia (Inesc Tec, Fcup), Carvalho, Pedro Henrique (INESC TEC), Oliveira, Hélder P. (INESC TEC, Faculdade De Ciências, Universidade Do Porto)

10:30-11:30   WeP4O-01.6

PP6: AttentionNet: Learning Where to Focus via Attention Mechanism for Anatomical Segmentation of Whole Breast Ultrasound Images...1078

Li, Hang (School of Biomedical Engineering), Cheng, Jie-Zhi (Shenzhen University), Chou, Yi-Hong (Division of Ultrasound and Breast Imaging, Department of Radiolo), Qin, Jing (Center for Smart Health, School of Nursing, the Hong Kong Polyte), Huang, Shan (Shenzhen University), Lei, Baiying (Shenzhen University)

10:30-11:30   WeP4O-01.7

PP7: Deep Keypoint Detection for the Aesthetic Evaluation of Breast Cancer Surgery Outcomes...1082

dos Santos Silva, Wilson José (Inesc Tec / Feup), Meca Castro, Eduardo (INESC TEC), Cardoso, Maria João (Porto Faculty of Medicine), Fitzal, Florian (Department of Surgery, Medical University, Vienna), Cardoso, Jaime S. (INESC TEC and University of Porto)

10:30-11:30   WeP4O-01.8

PP8: Breast Density Quantification using Weakly Annotated Dataset...1087

Tardy, Mickael (LS2N, Ecole Centrale De Nantes, Hera-MI SAS), Scheffer, Bruno (Hera-MI SAS, Institut De Cancerologie De l'Ouest, Nantes), Mateus, Diana (Centrale Nantes)

10:30-11:30   WeP4O-01.9

PP9: Multi-Level Batch Normalization in Deep Networks for Invasive Ductal Carcinoma Cell Discrimination in Histopathology Images...1092

Perdigon Romero, Francisco (Federal University of Amazonas), Tang, An (Radiology, Hopital Saint-Luc, Universite De Montreal), Kadoury, Samuel (Polytechnique Montreal)

WeP4O-02: 10:30-11:30   Foyer
Image Synthesis (Poster Session)

10:30-11:30   WeP4O-02.1

PP10: Unpaired MR to CT Synthesis with Explicit Structural Constrained Adversarial Learning...1096

Ge, Yunhao (Shanghai Jiao Tong University), Wei, Dongming (Shanghai Jiaotong University), Xue, Zhong (United Imaging Intelligence Inc), Wang, Qian (Shanghai Jiao Tong University), Zhou, Xiang (Siemens), Zhan, Yiqiang (Siemens Healthcare), Liao, Shu (United Imaging Intelligence)

10:30-11:30   WeP4O-02.2

PP11: Improving Skin Lesion Segmentation via Stacked Adversarial Learning...1100

Bi, Lei (University of Sydney), Feng, Dagan (The University of Sydney), Fulham, Michael (Royal Prince Alfred Hospital), Kim, Jinman (University of Sydney)

10:30-11:30   WeP4O-02.3

PP12: Refacing: Reconstructing Anonymized Facial Features using GANs...1104

Abramian, David (Linköping University), Eklund, Anders (Linköping University)

10:30-11:30   WeP4O-02.4

PP13: Pseudo-Ct Generation for MRI-Only Radiotherapy: Comparative Study between a Generative Adversarial Network, a U-Net Network, a Patch-Based, and an Atlas Based Methods...1109

Largent, Axel (Univ Rennes, CLCC Eugène Marquis, INSERM, LTSI - UMR 1099), Nunes, Jean Claude (Université De Rennes), Saint-Jalmes, Hervé (Université De Rennes 1, LTSI, U1099 INSERM), Baxter, John (Univ Rennes, CLCC Eugène Marquis, INSERM, LTSI - UMR 1099), Greer, Peter (School of Mathematical and Physical Sciences, University of Newc), Dowling, Jason (CSRIO), Acosta, Oscar (Univ. of Rennes 1), De Crevoisier, Renaud (INSERM, U1099, Rennes, F-35000, France - Université De Rennes 1,)

10:30-11:30   WeP4O-02.5

PP14: Radiomic Synthesis using Deep Convolutional Neural Networks...1114

Parekh, Vishwa (Johns Hopkins University), Jacobs, Michael A. (The Johns Hopkins Univeristy School of Medicine)

10:30-11:30   WeP4O-02.6

PP15: Multi-Focus Ultrasound Imaging using Generative Adversarial Networks...1118

Goudarzi, Sobhan (Concordia University), Asif, Amir (Concordia University), Rivaz, Hassan (Concordia University)

WeP4O-03: 10:30-11:30   Foyer
Image Based Surgery and Treatment (Poster Session)

10:30-11:30   WeP4O-03.1

PP16: Improving Catheter Segmentation & Localization in 3D Cardiac Ultrasound using Direction-Fused FCN...1122

Yang, Hongxu (Technische Universiteit Eindhoven), Shan, Caifeng (Philips Research), Kolen, Alex (Philips Research), de With, Peter (Eindhoven University of Technology)

10:30-11:30   WeP4O-03.2

PP17: Deep Learning Biopsy Marking of Early Neoplasia in Barrett's Esophagus by Combining WLE and BLI Modalities...1127

van der Putten, Joost (Eindhoven University of Technology), Wildeboer, Rogier (Eindhoven University of Technology), de Groof, Jeroen (Amsterdam University Medical Center), van Sloun, Ruud (Eindhoven University of Technology), Struyvenberg, Maarten (Amsterdam University Medical Center), van der Sommen, Fons (Eindhoven University of Technology), Zinger, Svitlana (Eindhoven University of Technology), Curvers, Wouter (Amsterdam University Medical Center), Schoon, Erik (Catharina Hospital), Bergman, Jaqcues (Amsterdam University Medical Center), de With, Peter (Eindhoven University of Technology)

10:30-11:30	WeP4O-03.3

PP18: Fast Registration for Liver Motion Compensation in Ultrasound-Guided Navigation...1132

Wei, Wei (University of Magdeburg, Germany), Xu, Haishan (Sir Run Run Shaw Hospital, School of Medicine, Zhejiang Universi), Alpers, Julian (University of Magdeburg, Germany), Zhang, Tianbao (University of Magdeburg, Germany), Rak, Marko (University of Magdeburg), Wang, Lei (University of Magdeburg, Germany), Hansen, Christian (Otto-Von-Guericke-University)

10:30-11:30	WeP4O-03.4

PP19: Simulation of a Modified Multielement Random Phased Array for Image Guidance and Therapy...1137

Zubair, Muhammad (Imperial College London), Dickinson, Robert (Imperial College London)

10:30-11:30	WeP4O-03.5

PP20: A Deep-Learning-Based Method for the Localization of Cochlear Implant Electrodes in Ct Images...1141

Chi, Yujie (Tsinghua University), Wang, Jianing (Vanderbilt University), Zhao, Yiyuan (Siemens Healthineers), Noble, Jack (Vanderbilt University), Dawant, Benoit (Vanderbilt University)

10:30-11:30	WeP4O-03.6

PP21: Surgical Illuminant Design for Enhancement of Organ Microstructure...1146

Kurabuchi, Yoko (Chiba University), Nakano, Kazuya (Chiba University), Ohnishi, Takashi (Chiba University), Nakaguchi, Toshiya (Chiba University), Haneishi, Hideaki (Chiba University)

10:30-11:30	WeP4O-03.7

PP22: Prone to Supine Surface Based Registration Workflow for Breast Tumor Localization in Surgical Planning...1150

Alfano, Felicia (Universidad Politecnica De Madrid), Ortuño, Juan Enrique (CIBER-BBN, Universidad Politécnica De Madrid), Herrero Conde, Mercedes (Unidad De Mama, Hospital De Madrid Sanchinarro, Madrid, España), Bueno Zamora, Oscar (Instituto De Investigación Sanitaria Gregorio Marañón), Lizarraga, Santiago (Instituto De Investigación Sanitaria Gregorio Marañón), Santos, Andres (Universidad Politecnica Madrid), Pascau, Javier (Hospital General Universitario Gregorio Marañón), Ledesma-Carbayo, Maria J. (Universidad Politécnica De Madrid)

WeP4O-04: 10:30-11:30   Foyer
Musculoskeletal Image Analysis (Poster Session)

10:30-11:30	WeP4O-04.1

PP23: Automatic Detection of the Nasal Cavities and Paranasal Sinuses using Deep Neural Networks...1154

Oyarzun Laura, Cristina (Fraunhofer IGD), Hofmann, Patrick (Fraunhofer IGD), Drechsler, Klaus (Aachen University of Applied Sciences), Wesarg, Stefan (Fraunhofer IGD)

10:30-11:30	WeP4O-04.2

PP24: Residual Attention Based Network for Hand Bone Age Assessment...1158

Wu, Eric (Cornell University), Kong, Bin (University of North Carolina at Charlotte), Wang, Xin (CuraCloud Corporation), Bai, Junjie (University of Iowa), Lu, Yi (CuraCloud Corporation), Gao, Feng (CuraCloud Corporation), Zhang, Shaoting (UNC Charlotte), Cao, Kunlin (GE Global Research), Song, Qi (General Electric), Lyu, Siwei (University at Albany, State University of New York), Yin, Youbing (CuraCloud Corporation)

10:30-11:30	WeP4O-04.3

PP25: A Fully Automatic 3D Reconstruction of Scoliotic Spine from Biplanar Radiographs in a Suspension Framework...1162

Bakhous, Christine (Ecole De Technologie Supérieure), Vazquez, Carlos (École De Technologie Supérieure), Cresson, Thierry (Ecole De Technologie Superieure), Parent, Stefan (University of Montreal), de Guise, Jacques A. (École De Technologie Supérieure)

10:30-11:30	WeP4O-04.4

PP26: Deep Learning with Anatomical Priors: Imitating Enhanced Autoencoders in Latent Space for Improved Pelvic Bone Segmentation in MRI...1166

Pham, Duc Duy (University of Duisburg-Essen), Dovletov, Gurbandurdy (University of Duisburg-Essen), Warwas, Sebastian (University Hospital Essen, University of Duisburg-Essen), Landgraeber, Stefan (University Hospital Essen, University of Duisburg-Essen), Jäger, Marcus (University Hospital Essen, University of Duisburg-Essen), Pauli, Josef (Duisburg-Essen, Intelligente Systeme)

10:30-11:30	WeP4O-04.5

PP27: Human Knee Phantom for Spectral CT: Validation of a Material Decomposition Algorithm...1170

Bussod, Suzanne (Univ. Lyon, INSA-Lyon, Université Claude Bernard Lyon 1, UJM Sai), Perez Juste Abascal, Juan Felipe (Univ. Lyon, INSA-Lyon, Université Claude Bernard Lyon 1, UJM-Sai), Ducros, Nicolas (INSA Lyon, CREATIS), Olivier, Cécile (CREATIS), Si-Mohamed, Salim (Univ. Lyon, INSA-Lyon, Universit{\'e} Claude Bernard Lyon 1, UJM), Douek, Philippe (CREATIS-LRMN, Hospices Civils De Lyon), Chappard, Christine (Inserm), Peyrin, Francoise (Université De Lyon, CNRS UMR 5220, INSERM U1206, INSA Lyon)

10:30-11:30	WeP4O-04.6

PP28: Detection and Identification of Lower-Limb Bones in Biplanar X-Ray Images with Arbitrary Field of View and Various Patient Orientations...1174

Olory Agomma, Roseline (École De Technologie Supérieure, Laboratoire De Recherche En Ima), Vazquez, Carlos (École De Technologie Supérieure), Cresson, Thierry (Ecole De Technologie Superieure), de Guise, Jacques A. (École De Technologie Supérieure)

10:30-11:30	WeP4O-04.7

PP29: End-To-End Vertebra Localization and Level Detection in Weakly Labelled 3d Spinal Mr using Cascaded Neural Networks...1178

van Sonsbeek, Tom (University of British Columbia), Danaei, Pardiss (University of British Columbia), Behnami, Delaram (University of British Columbia), Jafari, Mohammad Hossein (University of British Columbia), Asgharzadeh, Parisa (UBC), Rohling, Robert (University of British Columbia), Abolmaesumi, Purang (UBC)

10:30-11:30	WeP4O-04.8

PP30: Automatic Radiographic Quantification of Joint Space Narrowing Progression in Rheumatoid Arthritis using Poc...1183

Ou, Yafei (Hokkaido University), Ambalathankandy, Prasoon (Hokkaido University), Shimada, Takeshi (Hokkaido University), Kamishima, Tamotsu (Hokkaido University), Ikebe, Masayuki (Hokkaido University)

10:30-11:30	WeP4O-04.9

PP31: Masseter Muscle Segmentation from Cone-Beam CT Images using Generative Adversarial Network...1188

Zhang, Yungeng (Peking University), Pei, Yuru (Peking University), Qin, Haifang (Peking University), Guo, Yuke (Luoyang Institute of Science and Technology), Ma, Gengyu (USens Inc), Xu, Tianmin (Peking University), Zha, Hongbin (Peking University)

WeP4O-05: 10:30-11:30   Foyer
Lung Image Analysis - Poster (Poster Session)

10:30-11:30	WeP4O-05.1

PP32: Region Proposal Networks with Contextual Selective Attention for Real-Time Organ Detection...1193

Mansoor, Awais (Children's National Health System), Porras, Antonio R. (Children's National Medical Center), Linguraru, Marius George (Children's National Health System)

10:30-11:30	WeP4O-05.2

PP33: Image-Based Survival Prediction for Lung Cancer Patients using CNNs...1197

Haarburger, Christoph (RWTH Aachen University), Weitz, Philippe (RWTH Aachen University), Oliver, Rippel (RWTH Aachen University), Merhof, Dorit (RWTH Aachen University)

| 10:30-11:30 | WeP4O-05.3 |

PP34: Learning to Segment the Lung Volume from Ct Scans Based on Semi-Automatic Ground-Truth...1202

Sousa, Patrick (INESC TEC), Galdran, Adrian (INESC TEC Porto), Costa, Pedro (INESC TEC), Campilho, Aurélio (Universidade Do Porto, Instituto De Engenharia Biomédica)

| 10:30-11:30 | WeP4O-05.4 |

PP35: Pulmonary Lobe Segmentation using a Sequence of Convolutional Neural Networks for Marginal Learning...1207

Gerard, Sarah (The University of Iowa), Reinhardt, Joseph M. (The University of Iowa)

| 10:30-11:30 | WeP4O-05.5 |

PP36: Enhanced Generative Model for Unsupervised Discovery of Spatially-Informed Macroscopic Emphysema: The Mesa Copd Study...1212

Gan, Yu (The University of Alabama), Yang, Jie (Columbia University), Smith, Benjamin M. (Department of Medicine, College of Physicians and Surgeons, Colu), Balte, Pallavi (Columbia University Medical Center), Hoffman, Eric (University of Iowa), Hendon, Christine (Columbia University), Barr, R. Graham (Columbia University Medical Center), Laine, Andrew (Columbia University), Angelini, Elsa (Imperial NIHR BRC, Imperial College London)

| 10:30-11:30 | WeP4O-05.6 |

PP37: Data Augmentation for Chest Pathologies Classification...1216

Sirazitdinov, Ilyas (Innopolis University), Kholiavchenko, Maksym (Innopolis University), Kuleev, Ramil (Innopolis University), Ibragimov, Bulat (Stanford University)

| 10:30-11:30 | WeP4O-05.7 |

PP38: Multiple Instance Learning for Malignant vs. Benign Classification of Lung Nodules in Thoracic Screening Ct Data...1220

Safta, Wiem (University of Louisville), Farhangi, Mehdi (University of Louisville), Veasey, Ben (University of Louisville), Amini, Amir (University of Louisville), Frigui, Hichem (University of Louisville)

| 10:30-11:30 | WeP4O-05.8 |

PP39: Automatic Pulmonary Lobe Segmentation using Deep Learning...1225

Tang, Hao (University of California, Irvine), Zhang, Chupeng (University of California, Irvine), Xie, Xiaohui (University of California, Irvine)

| 10:30-11:30 | WeP4O-05.9 |

PP40: Regression of the Navier-Stokes Equation Solutions for Pulmonary Airway Flow using Neural Networks...1229

de los Ojos Araúzo, Diego (Universidad Politécnica De Madrid), Nardelli, Pietro (Brigham and Women's Hospital, Harvard Medical School), San Jose Estepar, Raul (Brigham Women's Hospital and Harvard Medical School)

| **WeP4O-06:** 10:30-11:30 | Foyer |

Pattern Recognition and Classification - Poster (Poster Session)

| 10:30-11:30 | WeP4O-06.1 |

PP41: Intelligent Glaucoma Diagnosis via Active Learning and Adversarial Data Augmentation...1234

Wang, Zhanyu (Tsinghua University), Wang, Zhe (Sensetime Group Limited), Qu, Guoxiang (Guangdong Key Lab of Computer Vision & Virtual Reality, Shenzhen), Li, Fei (Zhongshan Ophthalmic Center, State Key Laboratory of Ophthalmolo), Yuan, Ye (C-MER Dennis Lam Eye Hospital, Shenzhen, China), Lam, Dennis SC (C-MER Dennis Lam Eye Hospital, Shenzhen, China), Zhang, Xiulan (Zhongshan Ophthalmic Center, State Key Laboratory of Ophthalmolo), Qiao, Yu (Guangdong Key Lab of Computer Vision & Virtual Reality, Shenzhen)

| 10:30-11:30 | WeP4O-06.2 |

PP42: Lesion Classification of Wireless Capsule Endoscopy Images...1238

Yang, Wenming (Tsinghua University), Cao, Yaxing (Tsinghua University), Zhao, Qian (Tsinghua University), Ren, Yong

(Tsinghua University), Liao, Qingmin (Tsinghua University)

| 10:30-11:30 | WeP4O-06.3 |

PP43: End-To-End Discriminative Deep Network for Liver Lesion Classification...1243

Perdigon Romero, Francisco (Federal University of Amazonas), Diler, André (Polytechnique Montreal), Bisson-Gregoire, Gabriel (Polytechnique Montreal), Turcotte, Simon (Centre Hospitalier Université De Montreal), Lapointe, Real (Centre Hospitalier Université De Montreal), Vandenbroucke-Menu, Franck (Centre Hospitalier Université De Montreal), Tang, An (Radiology, Hopital Saint-Luc, Universite De Montreal), Kadoury, Samuel (Polytechnique Montreal)

| 10:30-11:30 | WeP4O-06.4 |

PP44: Dual Adversarial Autoencoder for Dermoscopic Image Generative Modeling...1247

Yang, Hao-Yu (Yale University), Staib, Lawrence H. (Yale University)

| 10:30-11:30 | WeP4O-06.5 |

PP45: Surrogate Supervision for Medical Image Analysis: Effective Deep Learning from Limited Quantities of Labeled Data...1251

Tajbakhsh, Nima (ASU), Hu, Yufei (VoxelCloud Inc), Cao, Junli (Voxelcloud Inc), Yan, Xingjian (Voxelcloud Inc), Xiao, Yi (Department of Radiology, Changzheng Hospital, Second Military M), Lu, Yong (Radiology of Department, Ruijin Hospital, Shanghai Jiaotong Univ), Liang, Jianming (Arizona State University), Terzopoulos, Demetri (University of California, Los Angeles), Ding, Xiaowei (VOXELCLOUD INC)

| 10:30-11:30 | WeP4O-06.6 |

PP46: A Dual Stream Network for Tumor Detection in Hyperspectral Images...1256

Weijtmans, Pim Jan Christiaan (Eindhoven University of Technology, Philips Research Eindhoven), Shan, Caifeng (Philips Research), Tan, Tao (Eindhoven University of Technology), Brouwer de Koning, Susan G (Netherlands Cancer Institute), Ruers, T.J.M. (Netherlands Cancer Institute)

| 10:30-11:30 | WeP4O-06.7 |

PP47: Recurrent Attention Mechanism Networks for Enhanced Classification of Biomedical Images...1260

Shaikh, Mazhar (Indian Insitute of Technology Madras), Kollerathu, Varghese Alex (Department of Engineering Design, Indian Institute of Technology), Krishnamurthi, Ganapathy (Indian Institute of Technology Madras)

| 10:30-11:30 | WeP4O-06.8 |

PP48: Adhd Classification within and Cross Cohort using an Ensembled Feature Selection Framework...1265

Yao, Dongren (Institute of Automation, Chinese Academy of Sciences), Sun, Hailun (University of Chinese Academy of Sciences), Guo, Xiaojie (Peking University), Calhoun, Vince (The Mind Research Network/University of New Mexico), Sun, Li (Peking University), Sui, Jing (Institute of Automation, Chinese Academy of Science)

| 10:30-11:30 | WeP4O-06.9 |

PP49: Exploiting Visual and Report-Based Information for Chest X-Ray Analysis by Jointly Learning Visual Classifiers and Topic Models...1270

Daniels, Zachary (Rutgers University), Metaxas, Dimitris (Rutgers University)

| 10:30-11:30 | WeP4O-06.10 |

PP50: Producing Radiologist Quality Reports for Interpretable Deep Learning...1275

Gale, William (University of Adelaide), Oakden-Rayner, Luke (University of Adelaide), Carneiro, Gustavo (University of Adelaide), Palmer, Lyle (University of Adelaide), Bradley, Andrew Peter (Queensland University of Technology)

| 10:30-11:30 | WeP4O-06.11 |

PP51: Robust Learning at Noisy Labeled Medical Images: Applied to Skin LEsion Classification...1280

Xue, Cheng (Chinese University of Hong Kong), Dou, Qi (The Chinese University of Hong Kong), Shi, Xueying (CUHK), Chen, Hao (The Chinese University of Hong Kong), Heng,

Pheng Ann (The Chinese University of Hong Kong)

| 10:30-11:30 | WeP4O-06.12 |

PP52: Saliency-Driven System with Deep Learning for Cell Image Classification...1284

Ferreira, Daniel (Federal University of Ceara), Ramalho, Geraldo (Federal Institute of Ceara), Medeiros, Fátima N.S. (Federal University of Ceara), Bianchi, Andrea G. Campos (Federal University of Ouro Preto), Carneiro, Claudia (Federal University of Ouro Preto), Ushizima, Daniela (Lawrence Berkeley National Laboratory)

| **WeP4O-07:** 10:30-11:30 | Foyer |

Cancer Imaging and Analysis (Poster Session)

| 10:30-11:30 | WeP4O-07.1 |

PP53: Towards an Interpretable Radiomics Model for Classifying Renal Cell Carcinomas Subtypes: A Radiogenomics Assessment...1288

Li, Zhi-Cheng (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Wu, Guang-yu (Renji Hospital, Shanghai Jiao Tong University), Zhang, Jinheng (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Wang, Zhongqiu (The Affiliated Hospital of Nanjing University of Chinese Medicin), Liu, Guiqin (Renji Hospital, Shanghai Jiao Tong University), Liang, Dong (Shenzhen Institutes of Advanced Technology)

| 10:30-11:30 | WeP4O-07.2 |

PP54: Radiomic-Based Framework for Early Diagnosis of Lung Cancer...1293

Shaffie, Ahmed (University of Louisville), Soliman, Ahmed (University of Louisville), Abu Khalifeh, Hadil (Abu Dhabi University), Ghazal, Mohammed (Abu Dhabi University), Taher, Fatma (Electrical and Computer Engineering Department, Khalifa Universi), Elmaghraby, Adel (University of Louisville), Keynton, Robert (Bioengineering Department, University of Louisville), El-baz, Ayman (University of Louisville)

| 10:30-11:30 | WeP4O-07.3 |

PP55: Deep Metamemory - a Generic Framework for Stabilized One-Shot Confidence Estimation in Deep Neural Networks and Its Application on Colorectal Cancer Liver Metastases Growth Prediction...1298

Katzmann, Alexander (Siemens Healthcare GmbH), Mühlberg, Alexander (Siemens Healthcare GmbH), Suehling, Michael (Siemens AG), Noerenberg, Dominik (University Hospital Großhadern, Ludwig-Maximilians-University Mu), Gross, Horst-Michael (University of Technology Ilmenau)

| 10:30-11:30 | WeP4O-07.4 |

PP56: Collaborative Clustering of Subjects and Radiomic Features for Predicting Clinical Outcomes of Rectal Cancer Patients...1303

Liu, Hangfan (University of Pennsylvania), Li, Hongming (University of Pennsylvania), Boimel, Pamela (University of Pennsylvania), Janopaul-Naylor, James (University of Pennsylvania), Zhong, Haoyu (University of Pennsylvania), Xiao, Ying (University of Pennsylvania), Ben-Josef, Edgar (University of Pennsylvania), Fan, Yong (University of Pennsylvania)

| 10:30-11:30 | WeP4O-07.5 |

PP57: Tumor Burden Assessment in Lymphoma Patients: Hierarchical Analysis of Whole Body CT...1307

Bolluyt, Elijah (Stevens Institute of Technology), Comaniciu, Alexandra (The Lawrenceville School), Georgescu, Bogdan (Siemens Medical Solutions)

| 10:30-11:30 | WeP4O-07.6 |

PP58: Novel Radiomic Features Based on Graph Theory for Pet Image Analysis...1311

Zhou, Zhiling (Massachusetts General Hospital and Harvard Medical School), Guo, Ning (Massachusetts General Hospital/Harvard Medical School), Cui, Jianan (Department of Radiology, Massachusetts General Hospital and Harv), Meng, Xiaxia (Department of Radiology, Massachusetts General Hospital and Harv), Hu, Yiwei (Yale University), Bao, Han (Massachusetts General Hospital), Li, Xiang (Harvard Medical School, Massachusetts General Hospital), Li, Quanzheng (Harvard Medical School, Massachusetts General Hospital)

| 10:30-11:30 | WeP4O-07.7 |

PP59: CT-NNBI: Method to Impute Gene Expression Data using Dct Based Sparsity and Nuclear Norm Constraint with Split Bregman Iteration...1315

Gehlot, Shiv (Indraprastha Institute of Information Technology (IIIT-Delhi)), Farswan, Akanksha (Indraprastha Institute of Information Technology, New Delhi), Gupta, Anubha (IIIT Delhi), Gupta, Ritu (AIIMS Delhi)

| 10:30-11:30 | WeP4O-07.8 |

PP60: Classification of Prostate Cancer: High Grade versus Low Grade using a Radiomics Approach...1319

Castillo, Jose Manuel (Erasmus Medical Center), Starmans, Martijn (Erasmus Medical Center), Niessen, Wiro (Erasmus MC, University Medical Center Rotterdam), Schoots, Ivo (Erasmus Medical Center), Klein, Stefan (Erasmus MC), Veenland, Jifke F. (Erasmus MC - University Medical Center Rotterdam)

| **WeP4O-08:** 10:30-11:30 | Foyer |

Reconstruction and Image Quality II (Abstracts) (Poster Session)

| 10:30-11:30 | WeP4O-08.1 |

AP1: Journal Paper: Deep Learning Based Reconstruction Method for Sparse-View CT...N/A

Zhang, Zhicheng (Virginia Polytechnic Institute and State University), Dong, Xu (Virginia Polytechnic Institute and State University), Vekhande, Swapnil (Virginia Tech), Cao, Guohua (Virginia Polytechnic Institute and State University)

| 10:30-11:30 | WeP4O-08.2 |

AP2: Target-Based Cbct Reconstruction from Optimized Projections Obtained Over Arbitrary Orientation for C-Arm...N/A

Hatamikia, Sepideh (Austrian Center for Medical Innovation and Technology, Wiener Neu), Biguri, Ander (Institute of Sound and Vibration Research, University of Southam), Furtado, Hugo (University Clinic for Radiotherapy and Radiation Biology, Medica), Kronreif, Gernot (Austrian Center for Medical Innovation and Technology, Wiener Neu), Kettenbach, Joachim (Department of Diagnostic and Interventional Radiology and Nuclea), Birkfellner, Wolfgang (Center for Medical Physics and Biomedical Engineering, Medical U)

| 10:30-11:30 | WeP4O-08.3 |

AP3: Accelerated Spiral Chemical Shift Imaging for Proton Density and T2* Fat-Water Quantification...N/A

Karkouri, Jabrane (Université de Lyon, INSA Lyon, Université Claude Bernard Lyon 1, UJM-Saint Etienne CNRS, Inserm, CREATIS UMR 5220, U1206, F69621), Millioz, Fabien (Université de Lyon, INSA Lyon, Université Claude Bernard Lyon 1, UJM-Saint Etienne CNRS, Inserm, CREATIS UMR 5220, U1206, F69621), Troalen, Thomas (Siemens Healthineers), Prost, Remy (CREATIS-LRMN), Viallon, Magalie (Université de Lyon, CREATIS ; CNRS UMR5220 ; Inserm U1044 ; INSA-Lyon ; Université Lyon 1, France), Ratiney, Helene (Université de Lyon, INSA Lyon, Université Claude Bernard Lyon 1, UJM-Saint Etienne CNRS, Inserm, CREATIS UMR 5220, U1206, F69621)

| 10:30-11:30 | WeP4O-08.4 |

AP4: Camera-Based In-Bore Actigraphy and Visual Feedback for Motion Artifact Reduction in MRI...N/A

Krueger, Sascha (Philips Research), Mazurkewitz, Peter (Philips Research), Stehning, Christian (Philips Healthcare), Sénégas, Julien (Philips Research)

| 10:30-11:30 | WeP4O-08.5 |

AP5: Generalising Deep Learning MRI Reconstruction across Different Domains...N/A

Ouyang, Cheng (Imperial College London), Schlemper, Jo (Imperial College London), Biffi, Carlo (Imperial College London), Seegoolam, Gavin (Imperial College London), Caballero, Jose (Imperial College London), Price, Anthony N. (King's College London), Hajnal, Joseph V. (King's College London), Rueckert, Daniel (Imperial College London)

| 10:30-11:30 | WeP4O-08.6 |

AP6: An Iterative Delay-And-Sum-Based Reconstruction Algorithm for Breast Microwave Radar Imaging...N/A

Reimer, Tyson (University of Manitoba), Solis-Nepote, Mario (Research Institute in Oncology and Hematology, Winnipeg, MB.), Pistorius, Stephen (University of Manitoba)

| 10:30-11:30 | WeP4O-08.7 |

AP7: Advancing Analysis Techniques for Plantar Pressure Videos via the CAD WALK Open-Access Database...N/A

Booth, Brian G. (University of Antwerp), Keijsers, Noel (Sint Maartenskliniek), Huysmans, Toon (University of Antwerp), Sijbers, Jan (University of Antwerp)

| 10:30-11:30 | WeP4O-08.8 |

AP8: Generation of Quasi-Linear-Array Ultrasound Images using Cycle Generative Adversarial Networks...N/A

Sun, Xiaofei (The University of Hong Kong), Lee, Wei-Ning (The University of Hong Kong)

| 10:30-11:30 | WeP4O-08.9 |

AP9: Segmentation of Brachial Plexus in Ultrasound Images Based on Modified U-Net...N/A

Mnacko, Tomas (Faculty of Informatics and Information Technologies, Slovak Tech), Tamajka, Martin (Faculty of Informatics and Information Technologies, Slovak Univ)

WeP4O-10: 10:30-11:30   Foyer
Bioimaging II (Abstracts) (Poster Session)

| 10:30-11:30 | WeP4O-10.1 |

AP10: Semi-Supervised Deep Learning for Super-Resolution Microscopy...N/A

Kim, Jeongsol (Korea Advanced Institute of Science and Technology), Lim, Sungjun (Texas A&M University), Ye, Jong Chul (Korea Advanced Inst of Science & Tech)

| 10:30-11:30 | WeP4O-10.2 |

AP11: Data Augmentation using Image Analogies for Adipocyte Image Segmentation...N/A

Akazawa, Hideki (Osaka University), Watanabe, Seiryo (Osaka University), Shigeta, Hironori (Osaka University), Mashita, Tomohiro (Osaka University), Goto, Tsuyoshi (Kyoto University), Kawada, Teruo (Kyoto University), Seno, Shigeto (Osaka University), Matsuda, Hideo (Osaka University)

| 10:30-11:30 | WeP4O-10.3 |

AP12: Neuronal Structure Segmentation in Serial Electron Microscopy Images using Semi-Supervised Learning Framework...N/A

Takaya, Eichi (Keio University), Takeichi, Yusuke (Kobe University), Ozaki, Mamiko (Kobe University), Kurihara, Satoshi (Keio University)

| 10:30-11:30 | WeP4O-10.4 |

AP13: Deep-Shift Phase Contrast Cell Detection and Tracking...N/A

Debeir, Olivier (Université Libre De Bruxelles), Almasri, Feras (Université Libre De Bruxelles), Decaestecker, Christine (Université Libre De Bruxelles)

WeP4O-11: 10:30-11:30   Foyer
Optical Image Analysis (Abstracts) (Poster Session)

| 10:30-11:30 | WeP4O-11.1 |

AP14: The Design of an Ingredient-Based Food Calorie Estimation System...N/A

Turmchokkasam, Sirichai (Bangkok University), Chamnongthai, Kosin (King Mongkuts University of Technology Thonburi)

| 10:30-11:30 | WeP4O-11.2 |

AP15: Video-Based Discomfort Monitoring for Premature Infants in Nicu...N/A

Sun, Yue (Eindhoven University of Technology), Kommers, Deedee (Maxima Medical Center, Veldhoven; Eindhoven University of Techno), Wang, Wenjin (Philips Research), Joshi, Rohan (Philips Research), Shan, Caifeng (Philips Research), Tan, Tao (Eindhoven University of Technology), Aarts, Ronald M. (Philips), van Pul, Carola (Maxima Medical Center), Andriessen, Peter (Maxima Medical Center), de With, Peter (Eindhoven University of Technology)

| 10:30-11:30 | WeP4O-11.3 |

AP16: Polar Transformer Network for Glaucoma Screening...N/A

Rosario, Sean (Petuum, Inc), Dong, Nanqing (Petuum Inc), Wang, Zeya (Petuum, Inc), Liu, Zewei (Petuum, Inc), Xing, Eric (Petuum, Inc)

| 10:30-11:30 | WeP4O-11.4 |

AP17: Ensemble of Convolutional Neural Networks for Glaucoma Detection from Color Fundus Images using Transfer Learning...N/A

Gómez Valverde, Juan José (Universidad Politécnica De Madrid), Anton, Alfonso (Universitat Internacional De Catalunya), Santos, Andres (Universidad Politecnica Madrid), Ledesma-Carbayo, Maria J. (Universidad Politécnica De Madrid)

| 10:30-11:30 | WeP4O-11.5 |

AP18: Longitudinal Registration of Infrared Thermal Image Based on 3d Scanning Surface for Skin and Soft Tissue Infection...N/A

Shen, I-Ting (National Taiwan University), Pan, Sung-Ching (National Taiwan University Hospital), Wang, Hong-Siang (National Taiwan University), Chen, Chung-Ming (National Taiwan University)

| 10:30-11:30 | WeP4O-11.6 |

AP19: Retinal Lesions Segmentation using CNNs and Adversarial Training...N/A

Gullon, Natalia (Universitat Politecnica De Catalunya), Vilaplana, Veronica (Universitat Politecnica De Catalunya)

| 10:30-11:30 | WeP4O-11.7 |

AP20: Quantitative Imaging Enables At-Home Assessment of Infants' Flat Head Syndrome from Head Photographs...N/A

Aalamifar, Fereshteh (PediaMetrix), Hezaveh, Seyed Hossein (PediaMetrix), Keating, Robert (Children's National Health System), Linguraru, Marius George (Children's National Health System)

| 10:30-11:30 | WeP4O-11.9 |

AP21: An Evaluation of Segmentation and Classification Strategies on Melanomas...N/A

Velez Nunez, Paulina (University of Seville), Serrano, Carmen (Universidad De Sevillla), Acha, Begoña (Universidad De Sevilla)

WeS41: 11:30-13:00   Venetian Ballroom A
Pediatric Brain Imaging (Special Session)
Chair: Coulon, Olivier (Aix-Marseille University)
Co-Chair: Rajagopalan, Vidya (UCSF)
Organizer: Coulon, Olivier (Aix-Marseille University)
Organizer: Auzias, Guillaume (Aix Marseille Univ, CNRS)
Organizer: Rajagopalan, Vidya (UCSF)

| 11:30-11:45 | WeS41.1 |

Unraveling the Preterm Infants Brain Structure and Function (I)...N/A

Hüppi, Petra (Geneva University Hospitals)

| 11:45-12:00 | WeS41.2 |

Automated Neonatal Diffusion MRI Data Processing to Study White Matter Development (I)...N/A

Bastiani, Matteo (University of Nottingham)

12:00-12:15	WeS41.3

Imaging the Early Development of the Brain Cortex in Infants (I)...N/A

Dubois, Jessica (INSERM-CEA I2BM Neurospin), Lefevre, Julien (Institut De Neurosciences De La Timone), Leroy, François (INSERM-CEA I2BM Neurospin), Germanaud, David (APHP, Hôpital Robert Debré), Lebenberg, Jessica (CEA I2BM Neurospin), Poupon, Cyril (CEA I2BM NeuroSpin), Dehaene-Lambertz, Ghislaine (CEA I2BM Neurospin), Hertz-Pannier, Lucie (Neurospin, CEA), Benders, Manon J N L (University Medical Center Utrecht), Hüppi, Petra (Geneva University Hospitals), Mangin, Jean-François (CEA I2BM NeuroSpin)

12:15-12:30	WeS41.4

Modelling Structural and Functional Brain Development in Utero (I)...N/A

Langs, Georg (Medical University Vienna), Schwartz, Ernst (Medical University Vienna), Licandro, Roxane (Medical University of Vienna), Taymourtash, Athena (Medical University of Vienna), Sobotka, Daniel (Medical University of Vienna), Kasprian, Gregor (Medical University of Vienna), Jakab, Andras (University Children's Hospital Zurich), Prayer, Daniela (Medical University of Vienna)

WeS42: 11:30-13:00   Venetian Ballroom B
Lung Image Analysis (Oral Session)
Chair: Angelini, Elsa (Imperial NIHR BRC, Imperial College London)
Co-Chair: Reinhardt, Joseph M. (The University of Iowa)

11:30-11:45	WeS42.1

Class-Aware Adversarial Lung Nodule Synthesis in CT Images...1348

Yang, Jie (Columbia University), Liu, Siqi (Siemens Healthineers), Grbic, Sasa (TU Munich/ Siemens Corporate Research), Setio, Arnaud Arindra Adiyoso (Siemens Healthineers), Xu, Zhoubing (Vanderbilt University), Gibson, Eli (University College London), Chabin, Guillaume (Siemens Healthineers), Georgescu, Bogdan (Siemens Corporation, Corporate Technology), Laine, Andrew F. (Columbia University), Comaniciu, Dorin (Siemens Corporate Research)

11:45-12:00	WeS42.2

Automated Segmentation of Pulmonary Lobes using Coordination-Guided Deep Neural Networks...1353

Wang, Wenjia (Peking University), Chen, Junxuan (Alibaba Group), Zhao, Jie (Peking University), Chi, Ying (Alibaba Group), Xie, Xuansong (Alibaba Cloud), Zhang, Li (Peking University), Hua, Xian-Sheng (Alibaba Group)

12:00-12:15	WeS42.3

Abnormal Chest X-Ray Identification with Generative Adversarial One-Class Classifier...1358

Tang, Yuxing (National Institutes of Health), Tang, Youbao (National Institutes of Health), Han, Mei (Ping an Technology, US Research Labs), Xiao, Jing (Ping an Technology Co., Ltd.,), Summers, Ronald (National Institutes of Health Clinical Center)

12:15-12:30	WeS42.4

When Does Bone Suppression and Lung Field Segmentation Improve Chest X-Ray Disease Classification?...1362

Baltruschat, Ivo Matteo (University Medical Center Hamburg-Eppendorf), Steinmeister, Leonhard (University Medical Center Hamburg-Eppendorf), Ittrich, Harald (University Medical Center Hamburg-Eppendorf), Adam, Gerhard (University Medical Center Hamburg-Eppendorf), Nickisch, Hannes (Philips Research, Hamburg, Germany), Saalbach, Axel (Philips GmbH, Innovative Technologies), von Berg, Jens (Philips Research Hamburg), Grass, Michael (Philips Research, Hamburg), Knopp, Tobias (University Medical Center Hamburg-Eppendorf)

12:30-12:45	WeS42.5

Biphasic Model of Lung Deformations for Video-Assisted Thoracoscopic Surgery (VATS)...1367

Alvarez, Pablo (Université De Rennes 1, Laboratoire Traitement Du Signal Et De L), Narasimhan, Saramati (Vanderbilt University), Rouzé, Simon (Univ. Rennes 1, CHU, LTSI - UMR 1099), Dillenseger, Jean-Louis (Université De Rennes 1), Payan, Yohan (Laboratoire TIMC-IMAG), Miga, Michael (Vanderbilt University), Chabanas, Matthieu (Univ. Grenoble Alpes, Grenoble Institute of Technology)

WeS43: 11:30-13:00   Venetian Ballroom C
Microscopy Reconstruction and Image Quality (Oral Session)
Chair: Walter, Thomas (Institut Curie, Mines ParisTech)
Co-Chair: Sheet, Debdoot (Indian Institute of Technology Kharagpur)

11:30-11:45	WeS43.1

Robust Super-Resolution Gan, with Manifold-Based and Perception Loss...1372

Upadhyay, Uddeshya (Indian Institute of Technology (IIT) Bombay), Awate, Suyash P (Indian Institute of Technology (IIT), Bombay)

11:45-12:00	WeS43.2

New Methods for L_2-L_0 Minimization and Their Applications to 2D Single-Molecule Localization Microscopy...1377

Bechensteen, Arne (Université Côte d'Azur, INRIA, Laboratoire I3S UMR 7271), Blanc-Feraud, Laure (Université Nice Sophia Antipolis, Laboratoire I3S, CNRS, INRIA), Aubert, Gilles (Laboratoire J.A Dieudonne, UMR 6621 CNRS/UNSA,)

12:00-12:15	WeS43.3

Multi-Spectral Widefield Microscopy of the Beating Heart through Post-Acquisition Synchronization and Unmixing...1382

Jaques, Christian (Idiap Research Institute), Bapst-Wicht, Linda (Institut De Recherche En Ophtalmologie), Schorderet, Daniel Francis (Institut De Recherche En Ophtalmologie), Liebling, Michael (Idiap Research Institute and UC Santa Barbara)

12:15-12:30	WeS43.4

A Deep Learning Approach to Identify mRNA Localization Patterns...1386

Dubois, Rémi (Mines ParisTech, PSL Research University, CBIO - Centre for Comp), Imbert, Arthur (Mines ParisTech), Samacoits, Aubin ((Pierre Et Marie Curie University, Pasteur Institute)), Peter, Marion (Institut De Génétique Moléculaire De Montpellier, University Of), Bertrand, Edouard (Igmm - Cnrs Umr5535), Mueller, Florian (Institut Pasteur), Walter, Thomas (Institut Curie, Mines ParisTech)

12:30-12:45	WeS43.5

Learning a Deep Convolution Network with Turing Test Adversaries for Microscopy Image Super Resolution...1391

Tom, Francis (Indian Institute of Technology Kharagpur), Sharma, Himanshu (SigTuple Technologies Private Limited), Mundhra, Dheeraj (SigTuple Technologies Private Limited), Rai Dastidar, Tathagato (SigTuple Technologies Pvt Ltd), Sheet, Debdoot (Indian Institute of Technology Kharagpur)

WeS44: 11:30-13:00   Venetian Ballroom DE
Data Integration and Fusion (Oral Session)
Chair: Vercauteren, Tom (King's College London)
Co-Chair: Serrano, Carmen (Universidad De Sevillla)

11:30-11:45	WeS44.1

Off-The-Grid Model Based Deep Learning (O-MoDL)...1395

Pramanik, Aniket (University of Iowa), Aggarwal, Hemant Kumar (University of Iowa), Jacob, Mathews (University of Iowa)

11:45-12:00	WeS44.2

The Continuous Registration Challenge: Evaluation-As-A-Service for Medical Image Registration Algorithms...1399

Marstal, Kasper (Erasmus Medical Center), Berendsen, Floris F. (Leiden Univerisity Medical Center), Dekker, Niels (Leiden University Medical Center), Staring, Marius (LUMC), Klein, Stefan (Erasmus MC)

12:00-12:15	WeS44.3

Network Regularization in Imaging Genetics Improves Prediction Performances and Model Interpretability on Alzheimer's Disease...1403

Guigui, Nicolas (Neurospin, CEA - Université Paris Saclay), Philippe, Cathy (CEA, Universite Paris-Saclay), Gloaguen, Arnaud (CentraleSupélec - Neurospin, CEA - Université Paris-Saclay), Karkar, Slim (CEA - Universite Paris-Saclay), Guillemot, Vincent (Institut Pasteur), Löfstedt, Tommy (Department of Radiation Sciences, Umeå University, Umeå, Sweden), Frouin, Vincent (UNATI, Neurospin, CEA, Universite Paris-Saclay)

12:15-12:30	WeS44.4

A Multi-Stage Framework with Context Information Fusion Structure for Skin Lesion Segmentation...1407

Tang, Yujiao (Southern Medical University), Yang, Feng (Southern Medical University), Yuan, Shaofeng (Southern Medical University), Zhan, Chang'an (Southern Medical University)

12:30-12:45	WeS44.5

Semi-Supervised Learning with Structured Knowledge for Body Hair Detection in Photoacoustic Image...1411

Kikkawa, Ryo (Kyushu University), Sekiguchi, Hiroyuki (Kyoto University), Tsuge, Itaru (Kyoto University), Saito, Susumu (Kyoto University), Bise, Ryoma (Kyushu University)

WeS51: 14:30-16:00   Venetian Ballroom A
Global Health: Imaging in Developing Countries (Special Session)
Chair: Zuluaga, Maria (Universidad Nacional De Colombia)
Co-Chair: Khanal, Bishesh (King's College London)
Organizer: Zuluaga, Maria (Universidad Nacional De Colombia)
Organizer: Khanal, Bishesh (King's College London)

14:30-14:45	WeS51.1

Challenges in Diagnostic Radiology Services in Rural Areas: Can Medical Imaging Informatics and Machine Learning Provide Solutions ? (I)...N/A

Pant, Bhaskar (HAMS)

14:45-15:00	WeS51.2

Tele-Pathology: A Use Case in Colombia (I)...1417

Alvarez, Charlems (Universidad Nacional De Colombia), Corredor, Germán (Universidad Nacional De Colombia), Giraldo, Diana Lorena (Universidad Nacional De Colombia), Romero, Eduardo (Universidad Nacional De Colombia)

15:00-15:15	WeS51.3

Automatic Detection and Diagnosis of Sacroilitis in Ct Scans As Incidental Findings (I)...N/A

Shenkman, Yigal (The Hebrew University of Jerusalem), Qutteineh, Bilal (Hadassah Hebrew Univ. Medical Center, Jerusalem), Joskowicz, Leo (The Hebrew University of Jerusalem), Azraq, Yusef (Hadassah Hebrew Univ. Medical Center, Jerusalem), Szeskin, Adi (The Hebrew University of Jerusalem), Mayer, Arnaldo (Sheba Medical Center), Eshed, Iris (Sheba Medical Center)

15:15-15:30	WeS51.4

Exploring Roles of Deep Learning within Global Health Pregnancy Ultrasound (I)...N/A

Noble, J Alison (University of Oxford)

WeS52: 14:30-16:00   Venetian Ballroom B
Eye Image Analysis (Oral Session)
Chair: Burlina, Philippe (Johns Hopkins University)
Co-Chair: Sivaswamy, Jayanthi (International Institute of Information Technology-Hyderabad)

14:30-14:45	WeS52.1

Pixel Reconstruction for Speckle Reduction in 3D Optical Coherence Tomography of Retina...1424

Cheng, Jun (Institute of Biomedical Engineering, Chinese Academy of Sciences), Zhao, Yitian (Chinese Academy of Sciences), Hu, Yan (Chinese Academy of Sciences), Liu, Jiang (Ningbo Institute of Materials Technology and Engineering, CAS)

14:45-15:00	WeS52.2

Motion Compensation in Digital Holography for Retinal Imaging...1428

Rivet, Julie (ESPCI Paris), Tochon, Guillaume (LRDE), Meimon, Serge (ONERA), Pques, Michel (CIC 503, Centre Hospitalier National Des XX-XV), Géraud, Thierry (EPITA), Atlan, Michael (Institut Langevin)

15:00-15:15	WeS52.3

Learning to Segment Corneal Tissue Interfaces in OCT Images...1432

Mathai, Tejas Sudharshan (Carnegie Mellon University), Lathrop, Kira (University of Pittsburgh), Galeotti, John (Carnegie Mellon University)

15:15-15:30	WeS52.4

Topology-Preserving Shape-Based Regression of Retinal Layers in OCT Image Data using Convolutional Neural Networks...1437

Kepp, Timo (Universität Zu Lübeck), Ehrhardt, Jan (Universität Zu Lübeck), Heinrich, Mattias (University of Lübeck, Germany), Hüttmann, Gereon (Universität Zu Lübeck), Handels, Heinz (University of Lübeck)

15:30-15:45	WeS52.5

U2-Net: A Bayesian U-Net Model with Epistemic Uncertainty Feedback for Photoreceptor Layer Segmentation in Pathological OCT Scans...1441

Orlando, José Ignacio (Medical University of Vienna), Seeböck, Philipp (Medical University of Vienna), Bogunovic, Hrvoje (Department of Ophthalmology, Medical University of Vienna), Klimscha, Sophie (Department of Ophthalmology, Medical University of Vienna), Grechenig, Christoph (Department of Ophthalmology, Medical University of Vienna), Waldstein, Sebastian (Department of Ophthalmology, Medical University of Vienna), Gerendas, Bianca S. (Department of Ophthalmology, Medical University of Vienna), Schmidt-Erfurth, Ursula (Department of Ophthalmology, Medical University of Vienna)

WeS53: 14:30-16:00   Venetian Ballroom C
Xray/ CT Imaging and Reconstruction (Oral Session)
Chair: Fessler, Jeff (University of Michigan)
Co-Chair: Goksel, Orcun (ETH Zurich)

14:30-14:45	WeS53.1

Sparse-View CT Reconstruction via Convolutional Sparse Coding...1446

Bao, Peng (Sichuan University), Xia, Wenjun (Sichuan University), Yang, Kang (College of Computer Science, Sichuan University, China), Zhou, Jiliu (University), Zhang, Yi (Sichuan University)

14:45-15:00	WeS53.2

A New Approach for Microcalcification Enhancement in Digital Breast Tomosynthesis Reconstruction...1450

Sghaier, Maissa (CVN, CentraleSupélec, Inria, Univ. Paris Saclay, France), Chouzenoux, Emilie (Ligm - Cnrs), Palma, Giovanni (GE Healthcare, Buc, France), Pesquet, Jean-Christophe (CentraleSupélec, INRIA Saclay, University Paris Saclay), Muller, Serge (GE Healthcare)

15:00-15:15	WeS53.3

A Convolutional Framework for Forward and Back-Projection in Fan-Beam Geometry...1455

Zhang, Kai (University of Florida), Entezari, Alireza (University of Florida)

15:15-15:30	WeS53.4

Spectral CT Reconstruction via Self-Similarity in Image-Spectral Tensors...1459

Xia, Wenjun (Sichuan University), Wu, Weiwen (Chongqing University), Liu, Fenglin (Chongqing University), Yu, Hengyong (University of Massachusetts Lowell), Zhou, Jiliu (University), Wang, Ge (Rensselaer Polytechnic Institute), Zhang, Yi (Sichuan University)

15:30-15:45	WeS53.5

Joint Bi-Modal Image Reconstruction of DOT and XCT with an Extended Mumford-Shah Functional...1463

He, Di (Beijing Information Science & Technology University), Jiang, Ming (School of Mathematics School of Mathematics, Peking), Louis, Alfred K. (Institute of Applied Mathematics, Saarland University), Maass, Peter (Center for Industrial Mathematics, University of Bremen), Page, Thomas (Daimler Trucks)

WeS54: 14:30-16:00	Venetian Ballroom DE

Connectivity Analysis - DWI/DTI (Oral Session)
Chair: Dubois, Jessica (INSERM-CEA I2BM Neurospin)
Co-Chair: Guevara, Pamela (Universidad De Concepción)

14:30-14:45	WeS54.1

Asymmetric Fiber Trajectory Distribution Estimated using Streamline Differential Equation...1467

He, Jianzhong (Zhejiang University of Technology), Feng, Yuanjing (Zhejiang University of Technology), Li, Mao (Zhejiang University of Technology)

14:45-15:00	WeS54.2

Comparison of Different Tensor Encoding Combinations in Microstructural Parameter Estimation...1471

Afzali, Maryam (Cardiff University Brain Research Imaging Center), Tax, Chantal (Cardiff University Brain Research Imaging Center), Chatziantoniou, Cyrano (Cardiff University Brain Research Imaging Center), Jones, Derek (Cardiff University Brain Research Imaging Center)

15:00-15:15	WeS54.3

CoBundleMAP: Consistent 2D Parameterization of Fiber Bundles across Subjects and Hemispheres...1475

Khatami, Mohammad (University of Bonn), Wehler, Regina (University of Bonn), Schultz, Thomas (University of Bonn)

15:15-15:30	WeS54.4

Cortical Surface Parcellation Based on Graph Representation of Short Fiber Bundle Connections...1479

Silva, Felipe (Universidad De Concepción), Guevara, Miguel (University of Concepcion), Poupon, Cyril (CEA I2BM NeuroSpin), Mangin, Jean-François (CEA I2BM NeuroSpin), Hernández, Cecilia (Universidad De Concepción), Guevara, Pamela (Universidad De Concepción)

15:30-15:45	WeS54.5

Detecting State Changes in Community Structure of Functional Brain Networks using a Markov-Switching Stochastic Block Model...1483

Samdin, S. Balqis (King Abdullah University of Sciences and Technology), Ting, Chee-Ming (Universiti Teknologi Malaysia), Ombao, Hernando (King Abdullah University of Science and Technology)

WeS61: 16:30-18:00	Venetian Ballroom A

Shape Modeling and Analysis (Oral Session)
Chair: Gerig, Guido (NYU Tandon School of Engineering)
Co-Chair: Syeda-Mahmood, Tanveer (IBM Almaden Research Center)

16:30-16:45	WeS61.1

Acceleration Controlled Diffeomorphisms for Nonparametric Image Regression...1488

Fishbaugh, James (NYU Tandon School of Engineering), Gerig, Guido (NYU Tandon School of Engineering)

16:45-17:00	WeS61.2

GEMS - Geometric Median Shapes...1492

Cunha, Alexandre (California Institute of Technology)

17:00-17:15	WeS61.3

Sensitivity Analysis of an in Silico Model of Tumor Growth and Radiation Response...1497

Sosa Marrero, Carlos (Université De Rennes 1), Acosta, Oscar (Univ. of Rennes 1), Castro, Miguel (Université De Rennes 1), Hernández, Alfredo I (Univ. of Rennes 1 and INSERM U1099), Rioux-Leclercq, Nathalie (Department of Pathological Anatomy and Cytology, CHU Pontchaillo), Paris, François (Université De Nantes), De Crevoisier, Renaud (INSERM, U1099, Rennes, F-35000, France - Université De Rennes 1,)

17:15-17:30	WeS61.4

Hierarchical Representation for CT Prostate Segmentation...1501

Wang, Shuai (University of North Carolina at Chapel Hill), He, Kelei (State Key Laboratory for Novel Software Technology, Nanjing Univ), Nie, Dong (Unc), Zhou, Sihang (University of North Carolina at Chapel Hill), Gao, Yaozong (The University of North Carolina at Chapel Hill), Shen, Dinggang (UNC-Chapel Hill)

17:30-17:45	WeS61.5

Multi-Modal Fusion Learning for Cervical Dysplasia Diagnosis...1505

Chen, Tingting (Zhejiang University), Ma, Xinjun (Zhejiang University), Ying, Xingde (Zhejiang University), Wang, Wenzhe (Zhejiang University), Yuan, Chunnv (Zhejiang University), Lu, Weiguo (Zhejiang University), Chen, Danny Z. (University of Notre Dame), Wu, Jian (Zhejiang University)

WeS62: 16:30-18:00	Venetian Ballroom B

Segmentation and Tracking in Microscopy (Oral Session)
Chair: Kouamé, Denis (Université De Toulouse III, IRIT UMR CNRS 5505)
Co-Chair: Achim, Alin (University of Bristol)

16:30-16:45	WeS62.1

Segmentation and Modelling of Hela Nuclear Envelope...1510

Karabag, Cefa (School of Mathematics, Computer Science and Engineering, City, U), Jones, Martin L. (Electron Microscopy Science Technology Platform, the Francis Cri), Peddie, Christopher J. (Electron Microscopy Science Technology Platform, the Francis Cri), Weston, Anne E. (Electron Microscopy Science Technology Platform, the Francis Cri), Collinson, Lucy M. (Electron Microscopy Science Technology Platform, the Francis Cri), Reyes-Aldasoro, Constantino Carlos (City University London)

16:45-17:00	WeS62.2

Automated Segmentation of Cervical Nuclei in Pap Smear Images using Deformable Multi-Path Ensemble Model...1514

Zhao, Jie (Peking University), Li, Quanzheng (Harvard Medical School, Massachusetts General Hospital), Li, Hongfeng (Peking University), Zhang, Li (Peking University)

17:00-17:15	WeS62.3

Domain Adaptive Segmentation in Volume Electron Microscopy Imaging...1519

Roels, Joris (Ghent University), Hennies, Julian (European Molecular Biology Laboratory), Saeys, Yvan (VIB - Ghent University), Philips, Wilfried (Gent University), Kreshuk, Anna (European Molecular Biology Laboratory (EMBL))

17:15-17:30	WeS62.4

Facilitating Data Association in Particle Tracking using Autoencoding and Score Matching...1523

Smal, Ihor (Erasmus MC - University Medical Center Rotterdam), Yao, Yao (Erasmus University Medical Center), Galjart, Niels (Erasmus MC - University Medical Center Rotterdam), Meijering, Erik (Erasmus University Medical Center)

17:30-17:45	WeS62.5

Epithelial Segmentation from in Situ Hybridisation Histological Samples using a Deep Central Attention Learning Approach...1527

Song, Tzu-Hsi (University of Birmingham), Landini, Gabriel (University of Birmingham), Fouad, Shereen (Department of Computer Science, Birmingham City University, UK,), Mehanna, Hisham (InHANSE, Institute of Cancer and Genomic Sciences, University Of)

WeS63: 16:30-18:00   Venetian Ballroom C
MR Imaging and Reconstruction (Oral Session)
Chair: Jacob, Mathews (University of Iowa)
Co-Chair: Ciuciu, Philippe (CEA)

16:30-16:45	WeS63.1

Calibrationless Oscar-Based Image Reconstruction in Compressed Sensing Parallel MRI...1532

El Gueddari, Loubna (CEA/NeuroSpin & INRIA-CEA Parietal Team), Ciuciu, Philippe (CEA), Chouzenoux, Emilie (Ligm - Cnrs), Vignaud, Alexandre (CEA/NeuroSpin), Pesquet, Jean-Christophe (CentraleSupélec, INRIA Saclay, University Paris Saclay)

16:45-17:00	WeS63.2

Magnetic Resonance Fingerprinting using Recurrent Neural Networks...1537

Oksuz, Ilkay (King's College London), Cruz, Gastao Jose Lima (King's College London), Clough, James (Kings College London), Bustin, Aurelien (King's College London), Fuin, Niccolo (King's College London), Botnar, Rene (King's College London), Prieto, Claudia (King's College London), King, Andrew Peter (King's College London), Schnabel, Julia (King's College London)

17:00-17:15	WeS63.3

Multi-Shot Sensitivity-Encoded Diffusion MRI using Model-Based Deep Learning (MoDL-MUSSELS)...1541

Aggarwal, Hemant Kumar (University of Iowa), Mani, Merry (University of Iowa), Jacob, Mathews (University of Iowa)

17:15-17:30	WeS63.4

Structurally-Informed Deconvolution of Functional Magnetic Resonance Imaging Data...1545

Bolton, Thomas (EPFL), Farouj, Younes (EPFL), Inan, Mert (Department of Biological Sciences, Mellon College of Science And), Van De Ville, Dimitri (EPFL & UniGE)

17:30-17:45	WeS63.5

Retrospective Correction of Rigid and Non-Rigid Mr Motion Artifacts using GANs...1550

Armanious, Karim (University of Stuttgart), Gatidis, Sergios (University of Tübingen), Nikolaou, Konstantin (Ludwig-Maximilians-University Hospital Munich), Yang, Bin (Institute of Signal Processing and System Theory, University Of), Küstner, Thomas (University of Stuttgart, Germany)

WeS64: 16:30-18:00   Venetian Ballroom DE
Brain Structure Learning (Oral Session)
Chair: Coulon, Olivier, (Aix-Marseille University)
Co-Chair: Barillot, Christian (Irisa umr Cnrs 6074), Inria, Inserm)

16:30-16:45	WeS64.1

Sparse Low-Rank Constrained Adaptive Structure Learning using Multi-Template for Autism Spectrum Disorder Diagnosis...1555

Huang, Fanglin (Shenzhen University), Elazab, Ahmed (Shenzhen University), Ou-Yang, Le (Shenzhen University), Wang, Tianfu (Shenzhen University), Lei, Baiying (Shenzhen University)

16:45-17:00	WeS64.2

A Convolutional Autoencoder Approach to Learn Volumetric Shape Representations for Brain Structures...1559

Yu, Evan (Cornell University), Sabuncu, Mert (Cornell University)

17:00-17:15	WeS64.3

Soft Labeling by Distilling Anatomical Knowledge for Improved MS Lesion Segmentation...1563

Kats, Eytan (Tel Aviv University), Goldberger, Jacob (Bar-Ilan University), Greenspan, Hayit K. (Tel Aviv University)

17:15-17:30	WeS64.4

Improved ICH Classification using Task-Dependent Learning...1567

Bar, Amir (Zebra Medical Vision), Mauda, Michal (Tel-Aviv Medical Center), Turner, Yoni (Shaare Zedek Medical Center), Sfady, Michal (Zebra Medical Vision), Elnekave, Eldad (Zebra Medical Vision)

17:30-17:45	WeS64.5

Quantitative MRI Characterization of Brain Abnormalities in 'de Novo' Parkinsonian Patients...1572

Munoz Ramirez, Veronica (Université Grenoble-Alpes), Forbes, Florence (INRIA Jean Kuntzman Laboratory , Grenoble University), Arbel, Julyan (INRIA Jean Kuntzman Laboratory , Grenoble University), Arnaud, Alexis (INRIA University of Grenoble), Dojat, Michel (INSERM U1216)

ThP5O-01: 11:00-12:00	Foyer

Functional Brain Analysis (Poster Session)

11:00-12:00	ThP5O-01.1

PP1: Two-Stage Spatial Temporal Deep Learning Framework for Functional Brain Network Modeling...1576

Zhao, Yu (The University of Georgia), Dai, Haixing (University of Georgia), Zhang, Wei (University of Georgia), Ge, Fangfei (Northwestern Polytechnical University), Liu, Tianming (University of Georgia)

11:00-12:00	ThP5O-01.2

PP2: Sensitivity of Derived Clinical Biomarkers to Rs-fMRI Preprocessing Software Versions...1581

Nguyen, Kevin (UT Southwestern), Chin Fatt, Cherise (UT Southwestern), Mellema, Cooper (University of Texas Southwestern Medical Center), Trivedi, Madhukar (UT Southwestern), Montillo, Albert (UT Southwestern)

11:00-12:00	ThP5O-01.3

PP3: Exploring Intrinsic Functional Differences of Gyri, Sulci and 2-Hinge, 3-Hinge Joints on Cerebral Cortex...1585

Ge, Fangfei (Northwestern Polytechnical University), Zhang, Shu (University of Georgia), Huang, Heng (Northwestern Polytechnical University), Jiang, Xi (University of Georgia), Dong, Qinglin (University of Georgia), Guo, Lei (Northwestern Polytechnical University), Wang, Xianqiao (College of Engineering, University of Georgia), Liu, Tianming (University of Georgia)

11:00-12:00	ThP5O-01.4

PP4: A Task Performance-Guided Model of Functional Networks Identification...1590

Zhao, Lin (Northwestern Polytechnical University), Liu, Huan (Northwestern Polytechnical University), Jiang, Xi (University of Georgia), Zhao, Shijie (Northwestern Polytechnical University), He, Zhibin (Northwestern Polytechnical University), Liu, Tianming (University of Georgia), Guo, Lei (Northwestern Polytechnical University), Zhang, Tuo (Northwestern Polytechnical University, Xi'an, China)

11:00-12:00	ThP5O-01.5

PP5: A Two-Stage DBN-Based Method to Exploring Functional Brain Networks in Naturalistic Paradigm FMRI...1594

Zhang, Yin (Northwestern Polytechnical University), Hu, Xintao (Northwestern Polytechnical University, Xi'an, China), He, Chunlin (Northwestern Polytechnical University), Wang, Xiangning (Northwestern Polytechnical University), Ren, Yudan (Northwestern Polytechnical University), Liu, Huan (Northwestern Polytechnical University), Wang, Liting (School of Automation, Northwestern Polytechnical University), Guo, Lei (Northwestern Polytechnical University), Liu, Tianming (University of Georgia)

11:00-12:00	ThP5O-01.6

PP6: Graph Convolutional Network Analysis for Mild Cognitive Impairment Prediction...1598

Zhao, Xin (Shenzhen University), Zhou, Feng (The University of Michigan), Ou-Yang, Le (Shenzhen University), Wang, Tianfu (Shenzhen University), Lei, Baiying (Shenzhen University)

11:00-12:00	ThP5O-01.7

PP7: Classification As a Criterion to Select Model Order for Dynamic Functional Connectivity States in Rest-fMRI Data...1602

Saha, Debbrata Kumar (University of New Mexico), Abrol, Anees (University of New Mexico, the Mind Research Network), Damaraju, Eswar (The Mind Research Network & LBERI, Albuquerque, New Mexico, USA), Rashid, Barnaly (The Mind Research Network, Albuquerque, New Mexico, USA), Plis, Sergey (Los Alamos National Laboratory), Calhoun, Vince (The Mind Research Network/University of New Mexico)

11:00-12:00	ThP5O-01.8

PP8: Cuda Parallelization of Commit Framework for Efficient Microstructure-Informed Tractography...1606

Hernandez-Gutierrez, Erick (Computer Science, Centro De Investigacion En Matematicas, Guanaj), Ramirez-Manzanares, Alonso (University of Guanajuato), Marroquin, Jose Luis (Computer Science, Centro De Investigacion En Matematicas, Guanaj), Ocampo-Pineda, Mario (Computer Science Department, University of Verona, Italy), Daducci, Alessandro (EPFL)

ThP5O-02: 11:00-12:00	Foyer

Image Reconstruction and Restoration (Poster Session)

11:00-12:00	ThP5O-02.1

PP9: A Comparison between Image and Signal Sharpness-Based Axial Localization of Ultrasound Scatterers...1610

Diamantis, Konstantinos (The University of Edinburgh), Dalgarno, Paul (Heriot-Watt University), Anderson, Tom (University of Edinburgh), Jensen, Jorgen (Technical University of Denmark), Sboros, Vassilis (Heriot Watt University)

11:00-12:00	ThP5O-02.2

PP10: Regularisation with a Dictionary of Lines for Medical Ultrasound Image Deconvolution...1614

Anantrasirichai, Nantheera (University of Bristol), Allinovi, Marco (Meyer Childrens Hospital), Hayes, Wesley (Great Ormond Street Hospital), Bull, David Roger (University of Bristol), Achim, Alin (University of Bristol)

11:00-12:00	ThP5O-02.3

PP11: Hybrid-Loss Guided 3D CNN for Dynamic Dual-Tracer PET Reconstruction...1618

Xu, Jinmin (Zhejiang University), Liu, Huafeng (Zhejiang University)

11:00-12:00	ThP5O-02.4

PP12: MRI Reconstruction via Cascaded Channel-Wise Attention Network...1622

Huang, Qiaoying (Rutgers University), Yang, Dong (Rutgers University), Wu, Pengxiang (Rutgers University), Qu, Hui (Rutgers University), Yi, Jingru (Rutgers University), Metaxas, Dimitris (Rutgers University)

11:00-12:00	ThP5O-02.5

PP13: Elastic Net Regularization in Diffuse Optical Tomography Applications...1627

Causin, Paola (Universita' Degli Studi Di Milano), Naldi, Giovanni (Università Degli Studi Di Milano), Weishaeupl, Rada-Maria (Università Degli Studi Di Milano)

11:00-12:00	ThP5O-02.6

PP14: Edge-Guided Semi-Coupled Dictionary Learning Super Resolution for Retina Image...1631

Wang, Weifang (University of Jinan), Dong, Jiwen (University of Jinan), Niu, Sijie (University of Jinan), Chen, Yuehui (University of Jinan)

11:00-12:00	ThP5O-02.7

PP15: Feature Aggregation in Perceptual Loss for Ultra Low-Dose (ULD) CT Denoising...1635

Green, Michael (Tel Aviv University), Marom, Edith M. (Sheba Medical Center), Kiryati, Nahum (Tel Aviv University), Konen, Eli (Sheba Medical Center, Tel Hashomer), Mayer, Arnaldo (Sheba Medical Center)

11:00-12:00	ThP5O-02.8

PP16: Spatially Varying Monte Carlo SURE for the Regularization of Biomedical Images...1639

Pizzolato, Marco (École Polytechnique Fédérale De Lausanne), Deriche, Rachid (INRIA Sophia Antipolis-Méditerranée), Canales-Rodríguez, Erick Jorge (Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne), Thiran, Jean-Philippe (Ecole Polytechnique Fédérale De Lausanne (EPFL))

11:00-12:00	ThP5O-02.9

PP17: 3D High-Resolution Cardiac Segmentation Reconstruction from 2D Views using Conditional Variational Autoencoders...1643

Biffi, Carlo (Imperial College London), Cerrolaza, Juan J. (Imperial College London), Tarroni, Giacomo (Imperial College London), de Marvao, Antonio (Imperial College London), Cook, Stuart A. (Imperial College London), O'Regan, Declan P. (Imperial College London), Rueckert, Daniel (Imperial College London)

11:00-12:00	ThP5O-02.10

PP18: Using Virtual Digital Breast Tomosynthesis for De-Noising of Low-Dose Projection Images...1647

Sahu, Pranjal (StonyBrook University), Huang, Hailiang (Phd Student), Zhao, Wei (Professor), Qin, Hong (StonyBrook University)

11:00-12:00	ThP5O-02.11

PP19: Analytical Fiber ODF Reconstruction in 3D Polarized Light Imaging: Performance Assessment...1652

Alimi, Abib Olushola Yessouffou (INRIA Sophia Antipolis-Méditerranée), Deslauriers-Gauthier, Samuel (Université Côte d'Azur, Inria, France), Matuschke, Felix (Research Centre Jülich), Schmitz, Daniel (Research Centre Jülich), Axer, Markus (Jülich Research Centre), Deriche, Rachid (INRIA Sophia Antipolis-Méditerranée)

11:00-12:00	ThP5O-02.12

PP20: Fast Calculation Method of Average G-Factor for Wave-CAIPI Imaging...1656

Wang, Haifeng (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Qiu, Zhilang (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Su, Shi (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Ying, Leslie (The State University of New York at Buffalo), Liang, Dong (Shenzhen Institutes of Advanced Technology)

11:00-12:00	ThP5O-02.13

PP21: Sparse Tensor Constrained for Low Dose CT Reconstruction...1660

Kang, Yanqin (Anhui Polytechnic University), Liu, Jin (Anhui Polytechnic University), Gu, Yunbo (Southeast University), Chen, Yang (SouthEast University)

11:00-12:00	ThP5O-02.14

PP22: Sparse-View CT Reconstruction Based on Mojette Transform using Convolutional Neural Network...1664

Qu, Zhiping (Dalian University of Technology), Jiang, Min (Dalian University of Technology), Sun, Yi (DaLian University of Technology)

11:00-12:00	ThP5O-02.15

PP23: How Can We Make GAN Perform Better in Single Medical Image Super-Resolution? a Lesion Focused Multi-Scale Approach...1669

Zhu, Jin (University of Cambridge), Yang, Guang (Imperial College London), Liò, Pietro (University of Cambridge)

11:00-12:00	ThP5O-02.16

PP24: ScatGAN for Reconstruction of Ultrasound Scatterers using Generative Adversarial Networks...1674

Al Bahou, Andrawes (ETH Zurich), Tanner, Christine (ETH Zurich), Goksel, Orcun (ETH Zurich)

11:00-12:00	ThP5O-02.17

PP25: A Comparative Study of CNN-Based Super-Resolution Methods in MRI Reconstruction...1678

Zeng, Wei (Nanchang University), Peng, Jie (Nanchang University), Wang, Shanshan (Shenzhen Institutes of Advanced Technology), Liu, Qiegen (Department of Electronic Information Engineering, Nanchang University, China), Liang, Dong (Shenzhen Institutes of Advanced Technology), Li, Zhi-Cheng (Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences)

11:00-12:00	ThP5O-02.18

PP26: 2d Elasticity Reconstruction with Bi-Convex Alternating Direction Method of Multipliers...1683

Mohammed, Shahed Khan (University of British Columbia), Honarvar, Mohammad (University of British Columbia), Kozlowski, Piotr (University of British Columbia), Salcudean, Septimiu E. (University of British Columbia)

11:00-12:00	ThP5O-02.19

PP27: Anisotropic Super Resolution in Prostate MRI using Super Resolution Generative Adversarial Networks...1688

Sood, Rewa (Stanford University), Rusu, Mirabela (Stanford University)

11:00-12:00	ThP5O-02.20

PP28: Accelerated Coronary MRI using 3D SPIRiT-RAKI with Sparsity Regularization...1692

Hosseini, Seyed Amir Hossein (University of Minnesota), Moeller, Steen (Moeller@cmrr.umn.edu), Weingärtner, Sebastian (Stanford University), Ugurbil, Kamil (University of Minnesota), Akcakaya, Mehmet (University of Minnesota)

11:00-12:00	ThP5O-02.21

PP29: Geometric Evaluation of Distortion Correction Methods in Diffusion MRI of the Spinal Cord...1696

Snoussi, Haykel (EMPEEN Research Unit), Caruyer, Emmanuel (Univ Rennes, Inria, CNRS, IRISA), Cohen-Adad, Julien (Polytechnique Montreal), Commowick, Olivier (INRIA), Combès, Benoît (INRIA), Bannier, Elise (IRISA Visages Team Rennes), Kerbrat, Anne (Centre Hospitalier Universitaire De Rennes), Barillot, Christian (Irisa (umr Cnrs 6074), Inria, Inserm)

11:00-12:00	ThP5O-02.22

PP30: Nonlocal Weighted Nuclear Norm Minimization Based Sparse-Sampling CT Image Reconstruction...1700

Yang, Kang (College of Computer Science, Sichuan University, China), Xia, Wenjun (Sichuan University), Bao, Peng (Sichuan University), Zhou, Jiliu (University), Zhang, Yi (Sichuan University)

11:00-12:00	ThP5O-02.23

PP31: Application of Time-Fractional Order Bloch Equation in Magnetic Resonance Fingerprinting...1704

Wang, Haifeng (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Zou, Lixian (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Ye, Huihui (Zhejiang University), Su, Shi (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Chang, Yuchou (University of Houston – Downtown), Liu, Xin (Shenzhen Institutes of Advanced Technology, Chinese Academyof Sc), Liang, Dong (Shenzhen Institutes of Advanced Technology)

ThP5O-03: 11:00-12:00	Foyer
Ultrasound Imaging and Analysis (Poster Session)	

11:00-12:00	ThP5O-03.1

PP32: On Multifractal Tissue Characterization in Ultrasound Imaging...1708

Villain, Edouard (University of Toulouse), Wendt, Herwig (CNRS, University of Toulouse), Basarab, Adrian (Université De Toulouse), Kouamé, Denis (Université De Toulouse III, IRIT UMR CNRS 5505)

11:00-12:00	ThP5O-03.2

PP33: Realistic Super-Resolution Image Analysis for State of the Art 2d Contrast Enhanced Ultrasound Imaging...1713

Kanoulas, Evangelos (Heriot Watt), Butler, Mairead (Heriot-Watt University), Duncan, William Colin (MRC Centre for Reproductive Health, the University of Edinburgh), Lu, Weiping (Heriot Watt University), Sboros, Vassilis (Heriot Watt University)

PP34: Automatic Segmentation of the Renal Collecting System in 3d Pediatric Ultrasound to Assess the Severity of Hydronephrosis...1717

Roshanitabrizi, Pooneh (Children's National Health System), Mansoor, Awais (Children's National Health System), Cerrolaza, Juan J. (Imperial College London), Zember, Jonathan (Children's National Health System), Pohl, Hans G. (Children's National Health System), Jago, James (Philips Healthcare), Linguraru, Marius George (Children's National Health System)

11:00-12:00 ThP5O-03.4

PP35: Two-Dimensional Temperature Imaging using Diagnostic Ultrasound – Preliminary Studies using Phantom Materials...1721

Hoyt, Kenneth (University of Texas at Dallas)

11:00-12:00 ThP5O-03.5

PP36: Ultrasound Elastography Utilizing Pre-Beam-Formed Data...1725

Mirzaei, Morteza (Concordia University), Asif, Amir (Concordia University), Rivaz, Hassan (Concordia University)

11:00-12:00 ThP5O-03.7

PP37: SUMNet: Fully Convolutional Model for Fast Segmentation of Anatomical Structures in Ultrasound Volumes...1729

Nandamuri, Sumanth (Indian Institute of Technology Kharagpur), China, Debarghya (Indian Institute of Technology, Kharagpur), Mitra, Pabitra (Indian Institute of Technology, Kharagpur), Sheet, Debdoot (Indian Institute of Technology Kharagpur)

11:00-12:00 ThP5O-03.8

PP38: Fusion of Magnetic Resonance and Ultrasound Images: A Preliminary Study on Simulated Data...1733

El mansouri, Oumaima (INP), Basarab, Adrian (Université De Toulouse), Vidal, Fabien (University Hospital, Toulouse), Kouamé, Denis (Université De Toulouse III, IRIT UMR CNRS 5505), Tourneret, Jean-Yves (University of Toulouse)

11:00-12:00 ThP5O-03.9

PP39: Improved Quantitative Contrast-Enhanced Ultrasound Imaging of Hepatocellular Carcinoma Response to Transarterial Chemoembolization...1737

Hoyt, Kenneth (University of Texas at Dallas)

11:00-12:00 ThP5O-03.10

PP40: Fully-Automatic Segmentation of Kidneys in Clinical Ultrasound Images using a Boundary Distance Regression Network...1741

Yin, Shi (Huazhong University of Science and Technology), Zhang, Zhengqiang (Huazhong University of Science and Technology), Li, Hongming (University of Pennsylvania), Peng, Qinmu (Huazhong University of Science and Technology), You, Xinge (Huazhong University of Science and Technology), Furth, Susan (University of Pennsylvania), Tasian, Gregory (The Children's Hospital of Philadelphia), Fan, Yong (University of Pennsylvania)

11:00-12:00 ThP5O-03.11

PP41: Iteratively-Reweighted Beamforming for High-Resolution Ultrasound Imaging...1745

Mahurkar, Amol Ganesh (Indian Institute of Science, Bangalore), Pokala, Praveenkumar (Indian Institute of Science, Bangalore), Seelamantula, Chandra Sekhar (Indian Institute of Science, Bangalore)

11:00-12:00 ThP5O-03.12

PP42: L1 and L2 Norm Depth-Regularized Estimation of the Acoustic Attenuation and Backscatter Coefficients using Dynamic Programming...1749

Vajihi, Zara (Concordia University), Rosado-Mendez, Ivan Miguel (Instituto De Fisica, Universidad Nacional Autonoma De Mexico), Hall, Timothy J. (University of Wisconsin), Rivaz, Hassan (Concordia University)

11:00-12:00 ThP5O-03.13

PP43: GPU Acceleration of Wave Based Transmission Tomography...1753

Wang, Hongjian (Heidelberg University), Huynh, Thai Hoa (Heidelberg University), Gemmeke, Hartmut (Karlsruhe Institute of Technology), Hopp, Torsten (Karlsruhe Institute of Technology), Hesser, Juergen (Heidelberg University)

11:00-12:00 ThP5O-03.14

PP44: Siamese Networks with Location Prior for Landmark Tracking in Liver Ultrasound Sequences...1757

Gomariz, Alvaro (ETH Zurich), Li, Weiye (ETH Zurich), Ozkan, Ece (ETH Zurich), Tanner, Christine (ETH Zurich), Goksel, Orcun (ETH Zurich)

11:00-12:00 ThP5O-03.15

PP45: Multi-Anatomy Localization in Fetal Echocardiography Videos...1761

Patra, Arijit (University of Oxford), Noble, J Alison (University of Oxford)

11:00-12:00 ThP5O-03.16

PP46: Iterative Reconstruction of Medical Ultrasound Images using Spectrally Constrained Phase Updates...1765

Michailovich, Oleg (University of Waterloo), Basarab, Adrian (Université De Toulouse), Kouamé, Denis (Université De Toulouse III, IRIT UMR CNRS 5505)

ThP5O-04: 11:00-12:00 Foyer
Dynamic and Functional Imaging (Poster Session)

11:00-12:00 ThP5O-04.1

PP47: Colormaps of Computer Tomography Liver Perfusion Parameters Achieved using Different Computing Methods Match...1769

Bevilacqua, Alessandro (ARCES-University of Bologna), Mottola, Margherita (DEI - Università Di Bologna)

11:00-12:00 ThP5O-04.2

PP48: Circular Pearson Correlation using Cosine Series Expansion...1774

Huang, Shih-Gu (University of Wisconsin-Madison), Gritsenko, Andrey (Northeastern University), Lindquist, Martin (Johns Hopkins Bloomberg School of Public Health), Chung, Moo K. (University of Wisconsin-Madison)

11:00-12:00 ThP5O-04.3

PP49: Perfusion Monitoring by Contactless Photoplethysmography Imaging...1778

Lai, Marco (Philips Research), Shan, Caifeng (Philips Research), Ciuhu, Calina (Philips Research), Izamis, Maria-Louisa (Philips)

11:00-12:00 ThP5O-04.4

PP50: Fmri Data Augmentation via Synthesis...1783

Zhuang, Peiye (University of Illinois at Urbana-Champaign), Schwing, Alexander (UIUC), Koyejo, Oluwasanmi (University of Illinois at Urbana-Champaign)

11:00-12:00 ThP5O-04.5

PP51: Explore the Hierarchical Auditory Information Processing via Deep Convolutional Autorncoder...1788

Wang, Liting (School of Automation, Northwestern Polytechnical University), Hu, Xintao (Northwestern Polytechnical University, Xi'an, China), Liu, Huan (Northwestern Polytechnical University), Huang, Heng (Northwestern Polytechnical University), Guo, Lei (Northwestern Polytechnical University), Liu, Tianming (University of Georgia)

11:00-12:00 ThP5O-04.6

PP52: Bold Signal Deconvolution under Uncertain Haemodynamics: A Semi-Blind Approach...1792

Farouj, Younes (EPFL), Karahanoglu, Fikret Isik (Martinos Center for Biomedical Imaging, Harvard Medical School), Van De Ville, Dimitri (EPFL & UniGE)

11:00-12:00	ThP5O-04.7

PP53: Comparison of Brain Connectomes using Geodesic Distance on Manifold: A Twins Study...1797

Yamin, Muhammad Abubakar (PAVIS-IIT), Dayan, Michael (Istituto Italiano Di Tecnologia), Squarcina, Letizia (IRCCS La Nostra Famiglia Bosisio Parini (LC)), Brambilla, Paolo (University of Milan, Fondazione IRCCS Ospedale Maggiore Policlin), Murino, Vittorio (Istituto Italiano Di Tecnologia), Diwadkar, Vaibhav (Wayne State University), Sona, Diego (Istituto Italiano Di Tecnologia (IIT))

11:00-12:00	ThP5O-04.8

PP54: 3D Dynamic MRI for Pelvis Observation - a First Step...1801

Ogier, Augustin C. (Aix Marseille Univ, Université De Toulon, CNRS, LIS, Marseille,), Rapacchi, Stanislas (Aix Marseille Univ. CNRS UMR 7339), Le Troter, Arnaud (Aix Marseille Univ, CNRS, CRMBM, Marseille, France), Bellemare, Marc-Emmanuel (Aix-Marseille Univ, Université De Toulon, CNRS, LIS, Marseille,)

11:00-12:00	ThP5O-04.9

PP55: Using Gradient As a New Metric for Dynamic Connectivity Estimation from Resting Fmri Data...1805

Faghiri, Ashkan (University of New Mexico), Stephen, Julia (The Mind Research Network), Wang, Yu-Ping (Tulane University), Wilson, Tony W (University of Nebraska Medical Center), Calhoun, Vince (The Mind Research Network/University of New Mexico)

11:00-12:00	ThP5O-04.10

PP56: Curve Fitting Criteria to Determine Arterial Input Function for MR Perfusion Analysis...1809

Huang, Adam (National Central University), Lee, Chung-Wei (National Taiwan University Hospital), Liu, Hon-Man (Fu Jen Catholic University Hospital)

11:00-12:00	ThP5O-04.11

PP57: Robust T2 Relaxometry with Hamiltonian MCMC for Myelin Water Fraction Estimation...1813

Yu, Thomas (LTS5 , Signal Processing Laboratory , EPFL), Pizzolato, Marco (École Polytechnique Fédérale De Lausanne), Canales-Rodríguez, Erick Jorge (Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne), Thiran, Jean-Philippe (Ecole Polytechnique Fédérale De Lausanne (EPFL))

ThP5O-05: 11:00-12:00	Foyer

Bioimaging III (Abstracts) (Poster Session)

11:00-12:00	ThP5O-05.1

AP1: Collaborative Online Tuberculosis Mycobacterium Quantification...N/A

Garcia Delgado, Lara (Universidad Politécnica De Madrid), Postigo Camps, Maria (Technical University of Madrid), Cuadrado Sanchez, Daniel (Technical University of Madrid), Gil-Casanova, Sara (Universidad Politécnica De Madrid), Martínez Martínez, Álvaro (Universidad Politécnica De Madrid), Linares, María (Research Institute Hospital 12 De Octubre, Universidad Compluten), Merino, Paloma (Clinical Microbiology Department, Clinico San Carlos Hospital, M), Gimo, Manuel (Centro De Investigação Em Saúde De Manhiça (CISM)), Blanco, Silvia (ISGlobal, Hospital Clínic - Universitat De Barcelona), Bassat, Quique (ISGlobal, Hospital Clínic - Universitat De Barcelona), Santos, Andres (Universidad Politecnica Madrid), García-Basteiro, Alberto (ISGlobal, Hospital Clínic - Universitat De Barcelona), Ledesma-Carbayo, Maria J. (Universidad Politécnica De Madrid), Luengo-Oroz, Miguel Angel (Universidad Politécnica De Madrid)

11:00-12:00	ThP5O-05.2

AP2: High-Throughput Measurements of Biological Cell Electrical Properties using Label-Free Imaging...N/A

Lei, Yang (HP Labs), Shkolnikov, Viktor (HP Labs), Xin, Daisy (HP Labs)

11:00-12:00	ThP5O-05.3

AP3: A Dataset and a Semi-Supervised Clustering Algorithm for Segmentation and Tracking of Immune Cells in Two-Photon Microscopy...N/A

Pizzagalli, Diego Ulisse (Universita Della Svizzera Italiana), Pulfer, Alain (Universita Della Svizzera Italiana), Krause, Rolf (Universita Della Svizzera Italiana), Gonzalez Fernandez, Santiago (Universita Della Svizzera Italiana)

11:00-12:00	ThP5O-05.4

AP4: CNN-Based Bacilli Detection in Sputum Samples for Tuberculosis Diagnosis...N/A

Isart, Antoni (Universitat Politecnica De Catalunya), Espasa, Mateu (Microbiology Laboratory Drassanes Unit, Hospital Universitari Va), Vilaplana, Veronica (Universitat Politecnica De Catalunya), Sayrol, Elisa (Universitat Politecnica De Catalunya)

11:00-12:00	ThP5O-05.5

AP5: Blind Deconvolution using Cycle Consistent Deep Learning...N/A

Lim, Sungjun (Texas A&M University), Ye, Jong Chul (Korea Advanced Inst of Science & Tech)

ThP5O-06: 11:00-12:00	Foyer

Image Segmentation II (Abstracts) (Poster Session)

11:00-12:00	ThP5O-06.1

AP6: Segmentation: A Data Driven Approach Though Neural Network...N/A

Debarnot, Valentin (ITAV, CNRS), Lebrat, Léo (INSA)

11:00-12:00	ThP5O-06.2

AP7: Fusion of Deep Models for Liver Segmentation...N/A

Kavur, Ali Emre (Dokuz Eylul University, Natural and Applied Sciences), Dicle, Oguz (Faculty of Medicine, Department of Radiology), Selver, M. Alper (Dokuz Eylul University)

11:00-12:00	ThP5O-06.3

AP8: Optic Disc and Optic Disc Cup Segmentation with Polar Curves...N/A

Rodrigues Freire, Cefas (Laboratory of Technological Innovation in Health/UFRN), da Costa Moura, Julio Cesar (Laboratory of Technological Innovation in Health/UFRN), Montenegro Silva Barros, Daniele (Laboratory of Technological Innovation in Health/UFRN), de Medeiros Valentim, Ricardo Alexsandro (Laboratory of Technological Innovation in Health/UFRN)

11:00-12:00	ThP5O-06.4

AP9: Meniscus Segmentation using Deep Convolutional Neural Network with Weighted Fusion Based on Coarse-To-Fine Approach in Mr Images...N/A

Kim, SoonBeen (Seoul Women's University), Kim, Hyeonjin (Seoul Women's University), Hong, Helen (Seoul Women's University), Wang, Joon Ho (Samsung Medical Center)

11:00-12:00	ThP5O-06.5

AP10: Orbital Thin Bone Segmentation using Ensemble 2d and 3d Deep Convolutional Neural Networks in Head and Neck Ct Images...N/A

Lee, Soyoung (Seoul Women's University), Lee, Minjin (Seoul Women's University), Hong, Helen (Seoul Women's University), Shim, Kyu Won (Severance Children's Hospital), Park, Seongeun (Severance Children's Hospital)

11:00-12:00	ThP5O-06.6

AP11: Ultrasound Super-Resolution Angiography Based on Radial Fluctuations in Skeletal-Muscular Vessels...N/A

Zhang, Jiabin (Peking University), Dong, Feihong (Peking University), Wang, Di (Peking University), An, Jian (Peking University), Kong, Hanjing (Peking University), Huang, Shuo (Peking University), Jingyi, Yin (Peking University), Zhang, Jue (Peking University)

11:00-12:00 ThP5O-06.7

AP12: Cerebral Vessel Segmentation through Multi-Task Deep Learning...N/A

Zhang, Xiaodong (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Wang, Wei (The First People's Hospital of Foshan), Fu, Xianjun (Shenzhen Institutes of Advanced Technology, Chinese Academy of S), Hu, Qingmao (Shenzhen Institutes of Advanced Technology, Chinese Academy of S)

ThP5O-07: 11:00-12:00 Foyer
Neuroimaging II (Abstracts) (Poster Session)

11:00-12:00 ThP5O-07.1

AP13: Assessment of Middle Cerebral Artery Occlusion in Rat Stroke Model using Pearson Correlation Coefficients...N/A

He, Wuxian (The Hong Kong University of Science and Technology), Tang, Hongtu (Hubei University of Chinese Medicine), Li, Jia (Hubei University of Chinese Medicine), Hou, Chenze (The Hong Kong University of Science and Technology), Shen, Xiaoyan (Zhejiang University of Technology), Liu, Huafeng (Zhejiang University), Yu, Weichuan (The Hong Kong University of Science and Technology)

11:00-12:00 ThP5O-07.2

AP14: Neonatal Brain MRI Cortical Segmentation via Geodesic Transforms...N/A

Paquette, Natacha (Children's Hospital Los Angeles), Suri, Anisha (CIBORG Lab, Department of Radiology, Children's Hospital of Los), Ganesh, Bhavana (CIBORG Lab, Department of Radiology, Children's Hospital of Los), Tsao, Sinchai (University of Washington), Gaonkar, Bilwaj (University of California at Los Angeles), Macyszyn, Luke (University of California, Los Angeles), Wang, Yalin (Arizona State University), Nelson, Marvin (University of Southern California and Keck School of Medicine, C), Panigraphy, Anigraphy (University of Pittsburgh Medical Center), Lepore, Natasha (USC / Children's Hospital Los Angeles)

11:00-12:00 ThP5O-07.3

AP15: Deep Learning for Multi-Site Ms Lesion Segmentation: Two-Step Intensity Standardization and Generalized Loss Function...N/A

Galassi, Francesca (INRIA), Tarride, Solene (INRIA), Vallée, Emmanuel (Orange LABS), Commowick, Olivier (INRIA), Barillot, Christian (IRISA (UMR CNRS 6074), INRIA, INSERM)

11:00-12:00 ThP5O-07.4

AP16: Automated Segmentation for Hyperdense Middle Cerebral Artery Sign in Non-Contrast CT...N/A

You, Jia (The University of Hong Kong), Yu, Phiip (The University of Hong Kong)

11:00-12:00 ThP5O-07.5

AP17: A Resolution Measurement Algorithm for MRI...N/A

Li, Hao (Johns Hopkins University), Zhao, Can (Johns Hopkins University), Han, Shuo (Johns Hopkins University), Carass, Aaron (Johns Hopkins University), Prince, Jerry (Johns Hopkins University)

11:00-12:00 ThP5O-07.6

AP18: Correlating Dti and 3d-Shore Based Indices with Neurological Disability Scores of Multiple Sclerosis Patients...N/A

Akinci, Muge (University of Trento), Cruciani, Federica (Department of Computer Science, University of Verona, Italy), Brusini, Lorenza (University of Verona, Dept. of Computer Science), Boscolo Galazzo, Ilaria (University of Verona), Calabrese, Massimiliano (Università Di Verona), Jovicich, Jorge (University of Trento), Menegaz, Gloria (University of Verona)

11:00-12:00 ThP5O-07.7

AP19: Using Dynamic 11C-PIB PET to Measure Cerebrospinal Fluid Flow Alterations...N/A

Schubert, Julia Johanna (Centre for Neuroimaging Sciences, IoPPN, King's College London), Veronese, Mattia (Centre for Neuroimaging Sciences, IoPPN, King's College London), Marchitelli, Livia (Centre for Neuroimaging Sciences, IoPPN, King's College London), Bodini, Benedetta (Institute of Psychiatry, King's College London, Department of Neuroimaging), Tonietto, Matteo (Brain and Spine Institute (ICM)), Stankoff, Bruno (Inserm U1127, CNRS UMR7225, Sorbonne Universités, UPMC 06 UMR S 1127, ICM), Brooks, David J. (Imperial College London), Bertoldo, Alessandra (University of Padova), Edison, Paul (Imperial College London), Turkheimer, Federico (King's College London)

11:00-12:00 ThP5O-07.8

AP20: Volumetric Ultrafast Ultrasound Localisation Microscopy in Vivo...N/A

Heiles, Baptiste (CNRS, INSERM, ESPCI Paris, PSL Research University), Hingot, Vincent (PhysMed Paris), Rahal, Line (PhysMed Paris), Lopez, Pauline (PhysMed Paris, CNRS, INSERM, ESPCI Paris, PSL Research University), Bergel, Antoine (PhysMed Paris), Rabut, Claire (PhysMed Paris), Pernot, Mathieu (ESPCI CNRS UMR 7587 INSERM), Tanter, Mickaël (ESPCI, CNRS, INSERM), Couture, Olivier (PhysMed Paris, CNRS, INSERM, ESPCI Paris, PSL Research University,)

11:00-12:00 ThP5O-07.9

AP21: Can the Brain Tell You Smoke? a Machine Learning Based Study on a Large-Scale Structural MRI Data Set...N/A

Prochoroff, Zofia (Jagiellonian University), Lipiński, Michał (Jagiellonian University), Pietruszka, Michal (Jagiellonian University), Droździel, Dawid (Nencki Institute of Experimental Biology Polish Academy of Scien), Złahoda-Huzior, Adriana (AGH University of Science and Technology, Department of Measurem), Szwed, Marcin (Dept of Psychology, Jagiellonian University), Pieciak, Tomasz (AGH University of Science and Technology, Kraków)

ThS71: 12:00-13:30 Venetian Ballroom C
Spline Models in Biomedical Imaging (Special Session)
Chair: Uhlmann, Virginie (EMBL-EBI)
Organizer: Uhlmann, Virginie (EMBL-EBI)

12:00-12:15 ThS71.1

Normal-Based Interpolating Subdivision for the Geometric Representation of Deformable Models (I)...1839

Romani, Lucia (Alma Mater Studiorum University of Bologna), Badoual, Anaïs (Ecole Polytechnique Fédérale De Lausanne), Unser, Michael (EPFL)

12:15-12:30 ThS71.2

Box Spline Projection in Non-Parallel Geometry (I)...1844

Zhang, Kai (University of Florida), Entezari, Alireza (University of Florida)

12:30-12:45 ThS71.3

Curvature – a Comparison of the MDCA and the λ-MDCA Estimator (I)...N/A

Aufschläger, Robert (Universität Passau), Forster-Heinlein, Brigitte (Universität Passau)

12:45-13:00 ThS71.4

Radial B-Splines for Optimal Detection in Images (I)...N/A

Fageot, Julien (EPFL), Uhlmann, Virginie (EMBL-EBI), Depeursinge, Adrien (University of Applied Sciences Western Switzerland Sierre (HES-SO)), Püspöki, Zsuzsanna (EPFL), Sage, Daniel (Ecole Polytechnique Federale de Lausanne (EPFL)), Unser, Michael (EPFL)

Histological Image Analysis (Oral Session)
Chair: Kybic, Jan (Czech Technical University in Prague)
Co-Chair: Rohr, Karl (University of Heidelberg, DKFZ Heidelberg)

12:00-12:15   ThS72.1

Physician-Level Aggregated Classifier for Genetic Muscle Disorders...1850

Kabeya, Yoshinori (IBM Japan), Iwamori, Toshiya (IBM Japan, Ltd), Yonezawa, Sho (IBM Japan), Takeuchi, Yusuke (IBM Japan), Nakano, Hiroki (Watson Health, IBM Japan), Nagisa, Yuhe (IBM), Okubo, Mariko (National Institute of Neuroscience, NCNP), Inoue, Michio (National Center of Neurology and Psychiatry), Tokumasu, Reitaro (IBM Japan), Ozawa, Issei (IBM Japan), Takano, Atsushi (IBM Japan), Nishino, Ichizo (Naitonal Institute of Neuroscience, NCNP)

12:15-12:30   ThS72.2

Mask-Driven Mitosis Detection in Histopathology Images...1855

Dodballapur, Veena (University of Sydney), Song, Yang (University of New South Wales), Huang, Heng (University of Pittsburgh), Chen, Mei (University of Albany State University of New York), Chrzanowski, Wojciech (University of Sydney), Cai, Weidong (University of Sydney)

12:30-12:45   ThS72.3

Few Shot Learning in Histopathological Images: Reducing the Need of Labeled Data on Biological Datasets...1860

Medela, Alfonso (Tecnalia Research & Innovation), Picon, Artzai (Tecnalia Research & Innovation), L. Saratxaga, Cristina (Tecnalia Research & Innovation), Belar, Oihana (BIOEF, Fundación Vasca De Innovación E Investigación Sanitarias), Cabezón, Virginia (BIOEF, Fundación Vasca De Innovación E Investigación Sanitarias), Cicchi, Riccardo (National Institute of Optics, National Research Council. LENS, E), Bilbao, Roberto (BIOEF, Fundación Vasca De Innovación E Investigación Sanitarias), Glover, Ben (Imperial College)

12:45-13:00   ThS72.4

Deep Attentive Feature Learning for Histopathology Image Classification...1865

Wu, Pengxiang (Rutgers University), Qu, Hui (Rutgers University), Yi, Jingru (Rutgers University), Huang, Qiaoying (Rutgers University), Chen, Chao (CUNY Queens College), Metaxas, Dimitris (Rutgers University)

13:00-13:15   ThS72.5

SNOW: Semi-Supervised, NOisy And/or Weak Data for Deep Learning in Digital Pathology...1869

Foucart, Adrien (Université Libre De Bruxelles), Debeir, Olivier (Université Libre De Bruxelles), Decaestecker, Christine (Université Libre De Bruxelles)

Brain Segmentation and Characterization (Oral Session)
Chair: Giancardo, Luca (University of Texas Health Science Center at Houston)
Co-Chair: Cai, Weidong (University of Sydney)

12:00-12:15   ThS73.1

Determining Ischemic Stroke from CT-Angiography Imaging using Symmetry-Sensitive Convolutional Networks...1873

Barman, Arko (University of Texas Health Science Center at Houston), Inam, Mehmet (University of Texas Health Science Center at Houston), Lee, Songmi (University of Texas Health Science Center at Houston), Savitz, Sean (University of Texas Health Science Center at Houston), Sheth, Sunil (University of Texas Health Science Center at Houston), Giancardo, Luca (University of Texas Health Science Center at Houston)

12:15-12:30   ThS73.2

Segmentation and Recovery of Pathological MR Brain Images using Transformed Low-Rank and Structured Sparse Decomposition...1878

Lin, Chuanlu (Shenzhen University), Wang, Yi (Shenzhen University), Wang, Tianfu (Shenzhen University), Ni, Dong (Shenzhen University)

12:30-12:45   ThS73.3

Spherical U-Net for Infant Cortical Surface Parcellation...1882

Zhao, Fenqiang (Zhejiang University), Xia, Shunren (Zhejiang University), Wu, Zhengwang (UNC-Chapel Hill), Wang, Li (UNC-CHAPEL HILL), Chen, Zengsi (China Jiliang University), Lin, Weili (UNC-CHAPEL HILL), Gilmore, John H. (UNC-CHAPEL HILL), Shen, Dinggang (UNC-Chapel Hill), Li, Gang (University of North Carolina at Chapel Hill)

12:45-13:00   ThS73.4

Heritability of Surface Area and Cortical Thickness: A Comparison between the Human Connectome Project and the UK Biobank Dataset...1887

Le Guen, Yann (UNATI, Neurospin, I2BM, CEA, Université Paris-Saclay, Gif-Sur-Yv), Karkar, Slim (CEA - Neurospin), Grigis, Antoine (CEA NeuroSpin), Philippe, Cathy (The French Alternative Energies and Atomic Energy Commission (CE), Mangin, Jean-François (CEA I2BM NeuroSpin), Frouin, Vincent (UNATI, Neurospin, CEA, Universite Paris-Saclay)

13:00-13:15   ThS73.5

Multiple Deep Learning Architectures Achieve Superior Performance Diagnosing Autism Spectrum Disorder using Features Previously Extracted from Structural and Functional MRI...1891

Mellema, Cooper (University of Texas Southwestern Medical Center), Treacher, Alex (University of Texas Southwestern Medical Center), Nguyen, Kevin (UT Southwestern), Montillo, Albert (UT Southwestern)

Pattern Recognition and Classification (Oral Session)
Chair: Schnabel, Julia (King's College London)
Co-Chair: Acosta, Oscar (Univ. of Rennes 1)

12:00-12:15   ThS74.1

Self-Attention Equipped Graph Convolutions for Disease Prediction...1896

Kazi, Anees (Computer Aided Medical Procedures (CAMP), TU Munich, Germany), Sridhar, Arvind Krishna (National Institute of Technology, Tiruchirappalli), Shekarforoush, Shayan (Sharif University of Technology), Kortuem, Karsten (Augenklinik Der Universitat, Klinikum Der Universitat Munchen,), Albarqouni, Shadi (Technical University of Munich), Navab, Nassir (Technische Universität München)

12:15-12:30   ThS74.2

Prostate Cancer Detection and Segmentation in Multi-Parametric MRI via CNN and Conditional Random Field...1900

Cao, Ruiming (University of California, Los Angeles), Zhong, Xinran (University of California, Los Angeles), Shakeri, Sepideh (University of California, Los Angeles), Mohammadian Bajgiran, Amirhossein (University of California, Los Angeles), Afshari, Sohrab (University of California, Los Angeles), Enzmann, Dieter (University of California, Los Angeles), Raman, Steven (University of California, Los Angeles), Sung, Kyunghyun (Univesity of California, Los Angeles)

12:30-12:45   ThS74.3

Classification and Detection in Mammograms with Weak Supervision via Dual Branch Deep Neural Net...1905

Bakalo, Ran (IBM Research), Ben-Ari, Rami (IBM-Research), Goldberger, Jacob (Bar-Ilan University)

12:45-13:00   ThS74.4

Unsupervised Deep Novelty Detection: Application to Muscle Ultrasound and Myositis Screening...1910

Burlina, Philippe (Johns Hopkins University), Joshi, Neil (Johns Hopkins University Applied Physics Laboratory), Billings, Seth (JHU/APL), Wang, I-Jeng (JHU), Albayda, Jemima (JHU/SOM)

13:00-13:15   ThS74.5

Unsupervised Deep Transfer Feature Learning for Medical Image Classification...1915

Ahn, Euijoon (University of Sydney), Kumar, Ashnil (University of Sydney), Feng, Dagan (The University of Sydney), Fulham, Michael (Royal Prince Alfred Hospital), Kim, Jinman (University of Sydney)