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Program in Chronological Order

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Chair: Vos, Frans (TU Delft)

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Dubois, Jessica (INSERM-CEA I2BM Neurospin); Germanaud, David (APHP, Hôpital Robert Debré); Angleys, Hugo (INSERM-CEA, NeuroSpin Center, Cognitive Neuroimaging Unit U992,); Leroy, François (INSERM-CEA I2BM Neurospin); Fischer, Clara (CEA, NeuroSpin Center, UNATI (CATI)); Leberberg, Jessica (CEA I2BM Neurospin); Lazeyras, François (Université de Genève); Dehaene-Lambertz, Ghislaine (CNRS-CEA I2BM Neurospin); Hertz-Pannier, Lucie (Neurospin, CEA); Mangin, Jean-François (CEA I2BM NeuroSpin); Hüppi, Petra (Geneva Univ. Hospitals); Lefevre, Julien (Laboratoire des Sciences de l'Information et des Systèmes)*

16:35-16:50 WeAT4.2
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Haeck, Tom (KU Leuven, Leuven, Belgium); Maes, Frederik (Katholieke Universiteit Leuven); Suetens, Paul (Katholieke Universiteit Leuven)*

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17:05-17:20 WeAT4.4
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Cheplygina, Veronika (Erasmus MC); van Opbroek, Annegreet (Erasmus MC - University Medical Center Rotterdam); Ikram, M. Arfan (Erasmus Medical Center, Rotterdam, NL); Vernooij, Meike (Erasmus MC, Rotterdam); de Bruijne, Marleen (Erasmus MC - University Medical Center Rotterdam)*

17:20-17:35 WeAT4.5
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Wang, Siying (University of Oxford); Murgasova, Maria (Kings College London); Hajnal, Joseph V. (King's College London); Ledig, Christian (Imperial College London); Schnabel, Julia (King's College London)*

Thursday, 14 April 2016

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Motion Tracking (Poster Session)

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Gilliam, Christopher (The Chinese University of Hong Kong); Küstner, Thomas (University of Stuttgart, Germany); Blu, Thierry (The Chinese University of Hong Kong)*

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<i>Liu, Yang (Southern Medical Univ.); Zhang, Hua* (School of Biomedical Engineering, Southern Medical Univ.); Ma, Jianhua (School of Biomedical Engineering, Southern Medical Univ.); Bian, Zhaoying (Southern Medical Univ.); Feng, Qianjin (Southern Medical Univ.); Chen, Wufan (Southern Medical Univ.)</i>	
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<i>Liu, Yixun* (Broncus Medical); Cheng, Erkang (Broncus Medical); Wibowo, Henky (Broncus Medical Inc.); Rai, Lav (Broncus Medical Inc.)</i>	
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- 08:15-09:50 ThPoster_T5.2
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- 08:15-09:50 ThPoster_T5.3
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- 08:15-09:50 ThPoster_T5.5
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ThPoster_T6: 08:15-09:50	Virgo/Leo/Taurus
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08:15-09:50 ThPoster_T7.5
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Gordon, Shiri (Ben Gurion University); Dolgopyat, Irit (Technion – Israel Institute of Technology); Kahn, Itamar (Technion – Israel Institute of Technology); Riklin Raviv, Tammy (Ben-Gurion University)*

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08:15-09:50 ThPoster_T8.2
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Urien, Hélène (Télécom ParisTech - CNRS UMR 5141 LTC); Buvat, Irène (UMR 8165 CNRS); Rougon, Nicolas (Institut TELECOM / TELECOM SudParis); Boughdad, Sarah (Université Paris SUD); Bloch, Isabelle (Télécom ParisTech - CNRS UMR 5141 LTCI)*

08:15-09:50 ThPoster_T8.3
Automatic Segmentation of Liver Tumor in CT Images using Deep Convolutional Neural Networks and Graph Cut N/A
Li, Wen (Shenzhen Institutes of Advanced Technology, Chinese Academy of S); Jia, Fucang (Shenzhen Institutes of Advanced Technology, Chinese Academy of S); He, Baochun (Shenzhen Institutes of Advanced Technology, Chinese Academy of S); Hu, Qingmao (Shenzhen Institutes of Advanced Technology, Chinese Academy of S)*

08:15-09:50 ThPoster_T8.4
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Conze, Pierre-Henri (ICube, Université de Strasbourg, CNRS, FMTS); Noblet, Vincent (ICube, University of Strasbourg, CNRS); Rousseau, François (Telecom Bretagne); Heitz, Fabrice (ICube); Memeo, Riccardo (Institut Hospitalo-Universitaire de Strasbourg); Pessaux, Patrick (Institut Hospitalo-Universitaire de Strasbourg)*

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A Multidimensional Data Visualization and Clustering Method: Consensus Similarity Mapping 420-423
Parekh, Vishwa (Johns Hopkins Univ.); Jacobs, Michael A. (The Johns Hopkins Univ. School of Medicine)*

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08:15-09:50 ThPoster_T8.7
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Alberts, Esther (Technische Universität München); Rempfler, Markus (Swiss Federal Institute of Technology Zürich (ETH)); Alber, Georgina (Technische Universität München); Huber, Thomas (Technische Universität München); Kirschke, Jan Stefan (Technische Universität München); Zimmer, Claus (Technische Universität München); Menze, Bjoern (TU Munich)*

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Khalifa, Fahmi (University of Louisville); Soliman, Ahmed (University of Louisville); Taki Eldeen, Ali (Biolumaging Laboratory, Bioengineering Department, University of); Shehata, Mohamed (Biolumaging Laboratory, Bioengineering Department, University of); Mostapha, Mahmoud (University of Louisville); Shaffie, Ahmed (University of Louisville); Ouseph, Rosemary (School of Medicine Kidney Transplantation–Kidney Disease Center); Elmaghraby, Adel (University of Louisville); El-baz, Ayman (University of Louisville)*

ThPoster_T9: 08:15-09:50 Virgo/Leo/Taurus
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Asad, Muhammad (City University London); Yang, Guang (Imperial College London); Slabaugh, Greg (City University London)*

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Pizzolato, Marco (Athena Project-Team, Inria Sophia Antipolis - Mediterranée); Boutelier, Timothe (Olea Medical); Fick, Rutger H.J. (INRIA); Deriche, Rachid (INRIA Sophia Antipolis-Méditerranée)*

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Stojanovska, Jadranka (Univ. of Michigan, Ann Arbor); Ibrahim, El-Sayed (Univ. of Michigan, Ann Arbor); Chalcheska, Nikolovska (Univ. of Michigan, Ann Arbor); Chenevert, Thomas L (Univ. of Michigan)*

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Jain, Saurabh (icometrix, Leuven); Sima, Diana (Katholieke Universiteit Leuven); Sanaei Nezhad, Faezeh (University of Manchester); Williams, Steve (University of Manchester); Van Huffel, Sabine (Katholieke Universiteit Leuven); Maes, Frederik (Katholieke Universiteit Leuven); Smeets, Dirk (icometrix, R&D, Leuven)*

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- 08:15-09:50 ThPoster_T10.1
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- 08:15-09:50 ThPoster_T10.2
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Zhao, Ningning (University of Toulouse); Wei, Qi (University of Cambridge); Basarab, Adrian (Université de Toulouse); Kouamé, Denis (Université de Toulouse, IRT UMR CNRS 5505); Tourneret, Jean-Yves (University of Toulouse)*
- 08:15-09:50 ThPoster_T10.3
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Szasz, Teodora (University of Toulouse); Basarab, Adrian (Université de Toulouse); Vaida, Mircea-Florin (Technical University of Cluj-Napoca); Kouamé, Denis (Université de Toulouse, IRT UMR CNRS 5505)*
- 08:15-09:50 ThPoster_T10.4
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- 08:15-09:50 ThPoster_T10.5
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Otesteanu, Corin Felix (ETH Zurich); Sanabria, Sergio J (ETH Zurich); Goksel, Orcun (ETH Zurich)*

- 08:15-09:50 ThPoster_T11.1
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Abdellah, Marwan (Biomedical Engineering Department, Cairo University); Abdelaziz, Asem (Cairo University, Faculty of Engineering); Eldeib, Ayman M. (Cairo University)*
- 08:15-09:50 ThPoster_T11.3
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Chang, Cheng (Stony Brook University); Gao, Yi (Stony Brook University)*
- 08:15-09:50 ThPoster_T11.4
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Flach, Barbara (ETH Zurich); Makhinya, Maxim (ETH); Goksel, Orcun (ETH Zurich)*

ThAT2: 11:00-12:30	Zenit
Fast MR Acquisition and Reconstruction (Oral Session)	
Chair: Amini, Amir (<i>University of Louisville</i>)	

11:00-11:15	ThAT2.1
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Royuela-del-Val, Javier* (<i>Universidad de Valladolid</i>); Muhammad, Usman (<i>King's College London</i>); Cordero-Grande, Lucilio (<i>King's College London</i>); Martin-Fernandez, Marcos (<i>University of Valladolid</i>); Simmross-Wattenberg, Federico (<i>Universidad de Valladolid</i>); Prieto, Claudia (<i>King's College London</i>); Alberola-López, Carlos (<i>Universidad de Valladolid</i>)	506-509
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Nakarmi, Ukash* (<i>State University of New York, SUNY at Buffalo</i>); Zhou, Yihang (<i>The State University of New York at Buffalo</i>); Lyu, Jingyuan (<i>The State University of New York at Buffalo</i>); Slavakis, Konstantinos (<i>University at Buffalo, SUNY</i>); Ying, Leslie (<i>The State University of New York at Buffalo</i>)	510-513
11:30-11:45	ThAT2.3
Accelerating Magnetic Resonance Imaging via Deep Learning	
Wang, Shanshan (<i>Shenzhen Institutes of Advanced Technology</i>); Su, Zhenghang (<i>Guangdong University of Technology</i>); Ying, Leslie (<i>The State University of New York at Buffalo</i>); Peng, Xi (<i>Shenzhen Institutes of Advanced Technology</i>); Zhu, Shun (<i>Shenzhen Institutes of Advanced Technology</i>); Liang, Feng (<i>School of Industrial Engineering, Nankai University</i>); Feng, Dagan (<i>The University of Sydney</i>); Liang, Dong* (<i>Shenzhen Institutes of Advanced Technology</i>)	514-517
11:45-12:00	ThAT2.4
Compressed Sensing Reconstruction of Dynamic Contrast Enhanced MRI using GPU-Accelerated Convolutional Sparse Coding	
Quan, Tran Minh (<i>Ulsan National Institute of Science and Technology (UNIST)</i>); Jeong, Won-Ki* (<i>Ulsan National Institute of Science and Technology (UNIST)</i>)	518-521
12:00-12:15	ThAT2.5
A Fast Algorithm for Structured Low-Rank Matrix Recovery with Applications to Undersampled MRI Reconstruction	
Ongie, Greg* (<i>University of Iowa</i>); Jacob, Mathews (<i>University of Iowa</i>)	522-525

ThAT3: 11:00-12:30	Kepler & Tycho
Segmentation of Microscopy Images (Oral Session)	
Chair: Ortiz-de-Solorzano, Carlos (<i>Centre for Applied Medical Research</i>)	
Co-Chair: Dufour, Alexandre (<i>Institut Pasteur</i>)	

11:00-11:15	ThAT3.1
Cell Segmentation using Stable Extremal Regions in Multi-Exposure Microscopy Images	
Li, Mingzhong (<i>Missouri University of Science and Technology</i>); Yin, Zhaozheng* (<i>Missouri University of Science and Technology</i>)	526-530
11:15-11:30	ThAT3.2
Jelly Filling Segmentation of Fluorescence Microscopy Images Containing Incomplete Labeling	
Gadgil, Neeraj* (<i>Purdue University</i>); Salama, Paul (<i>Indiana University-Purdue University</i>); Dunn, Kenneth (<i>Indiana University</i>); Delp, Edward (<i>Purdue University</i>)	531-535
11:30-11:45	ThAT3.3
Automatic Recognition and Characterization of Different Non-Parenchymal Cells in Liver Tissue	
Morales-Navarrete, Hernán (<i>Max Planck Institute of Molecular Cell Biology and Genetics</i>); Hidenori, Nonaka (<i>Max Planck Institute of Molecular Cell Biology and Genetics, Roh</i>); Segovia-Miranda, Fabian (<i>Max Planck Institute of Molecular Cell Biology and Genetics</i>); Zerial, Marino* (<i>Max Planck Institute of Molecular Cell Biology and Genetics</i>); Kalaidzidis, Yannis (<i>MPI-CBG</i>)	536-540

11:45-12:00	ThAT3.4
Hierarchical Mix-Pooling and its Applications to BioMedical Image Classification	541-544
<i>Manivannan, Siyamalan* (Computer Vision and Image Processing group, School of Computing.);</i>	
<i>Wang, Ruixuan (Post-doctoral Research Assistant, CVIP Computer Vision and Image);</i>	
<i>Trucco, Emanuele (University of Dundee)</i>	

12:00-12:15	ThAT3.5
Structure-Based Assessment of Cancerous Mitochondria using Deep Networks	545-548
<i>Mishra, Manish (Technische Universität München); Schmitt, Sabine (Institute for Molecular Toxicology and Pharmacology, Helmholtz z); Wang, Lichao (Technical University Munich); Strasser, Michael (Institute of Computational Biology (ICB), Helmholtz zentrum muen); Marr, Carsten (Helmholtz Zentrum Muenchen); Navab, Nassir (TU Munich); Zischka, Hans (Institute for Molecular Toxicology and Pharmacology, Helmholtz z); Peng, Tingying* (Technical University of Munich)</i>	

ThAT4: 11:00-12:30	Meridian
Structural Brain Connectivity - Oral (Oral Session)	
Chair: Vemuri, Baba (<i>University of Florida</i>)	

11:00-11:15	ThAT4.1
Network Comparison with Frequency Domain Persistent Homology	549-553
<i>Solo, Victor* (University of New South Wales); Cassidy, Ben (Columbia University); Rae, Caroline (Neuroscience Research Australia, The University of New South Wal)</i>	

11:15-11:30	ThAT4.2
Population Learning of Structural Connectivity by White Matter Encoding and Decoding	554-558
<i>Zhu, Dajiang* (University of Southern California); Jahanshad, Neda (Imaging Genetic Center, University of Southern California); Riedel, Brandalyn (University of Southern California); Zhan, Liang (University of Wisconsin-Stout); Faskowitz, Joshua (University of Southern California); Prasad, Gautam (USC); Thompson, Paul (University of Southern California)</i>	

11:30-11:45	ThAT4.3
Structural Parcellation of the Thalamus using Shortest-Path Tractography	559-563
<i>Kasenburg, Niklas* (University of Copenhagen); Darkner, Sune (University of Copenhagen); Hahn, Ute (Aarhus University); Liptrot, Matthew George (University of Copenhagen); Feragen, Aasa (University of Copenhagen)</i>	

11:45-12:00	ThAT4.4
Fiber Clustering based White Matter Connectivity Analysis for Prediction of Autism Spectrum Disorder using Diffusion Tensor Imaging	564-567
<i>Zhang, Fan* (The University of Sydney); Savadjiev, Peter (Harvard Medical School); Cai, Weidong (University of Sydney); Song, Yang (University of Sydney); Verma, Ragini (University of Pennsylvania); Westin, Carl-Fredrik (Brigham and Women's Hospital, Harvard Medical School); O'Donnell, Lauren (Harvard Medical School)</i>	

12:00-12:15	ThAT4.5
Discriminative Fusion of Multiple Brain Networks for Early Mild Cognitive Impairment Detection	568-572
<i>Wang, Qi (Michigan State University); Zhan, Liang (University of Wisconsin-Stout); Thompson, Paul (University of Southern California); Dodge, Hiroko (University of Michigan); Zhou, Jiayu* (Michigan State University)</i>	

ThBT2: 14:00-15:30	Zenit
CT Reconstruction - Oral (Oral Session)	
Chair: Reinhardt, Joseph M. (<i>The University of Iowa</i>)	

14:00-14:15	ThBT2.1
Sparse-View X-Ray Spectral CT Reconstruction using Annihilating Filter-Based Low Rank Hankel Matrix Approach	573-576
<i>Han, Yo Seob (Kaist); Jin, Kyong Hwan (KAIST); Kim, Kyung-Sang (KAIST); Ye, Jong Chul* (Korea Advanced Inst of Science & Tech)</i>	

14:15-14:30	ThBT2.2
Dynamic Pixel Binning Allows Spatial and Angular Resolution Tradeoffs to Improve Image Quality in X-Ray C-Arm CT	577-580
<i>Steg, Alexander (Friedrich-Alexander Univ. Erlangen-Nuremberg); Reichenbach, Marc (Friedrich-Alexander Univ. Erlangen-Nuremberg); Soell, Christopher (Friedrich-Alexander Univ. Erlangen-Nuremberg); Shi, Lan (Friedrich-Alexander Univ. Erlangen-Nuremberg); Maier, Andreas (Friedrich-Alexander-Univ. Erlangen-Nuremberg); Riess, Christian* (Friedrich-Alexander Univ. Erlangen-Nuremberg)</i>	
14:30-14:45	ThBT2.3
Component-Based TV Regularization for X-Ray Tensor Tomography	581-584
<i>Seyyedj, Saeed* (Technischen Universität München); Wiecek, Matthias (Technische Universität München); Sharma, Yash (Technische Universität München); Schaff, Florian (Technische Universität München); Jud, Christoph (Technische Universität München); Pfeiffer, Franz (Technical University Munich); Lasser, Tobias (Technische Universität München)</i>	
14:45-15:00	ThBT2.4
A New Weighted Anisotropic Total Variation Algorithm for Limited Angle Tomography	585-588
<i>Huang, Yixing* (Friedrich-Alexander-Universität Erlangen-Nürnberg); Taubmann, Oliver (Friedrich-Alexander-Universität Erlangen-Nürnberg); Huang, Xiaolin (Friedrich-Alexander-Universität Erlangen-Nürnberg); Haase, Viktor (University of Lübeck); Lauritsch, Guenter (Siemens Healthcare GmbH); Maier, Andreas (Friedrich-Alexander-Universität Erlangen-Nürnberg)</i>	
15:00-15:15	ThBT2.5
Comparison of SART and ETV Reconstruction for Increased C-Arm CT Volume Coverage by Proper Detector Rotation in Liver Imaging	589-592
<i>Stromer, Daniel* (Pattern Recognition Lab, FAU Erlangen-Nuremberg); Amrehn, Mario (Pattern Recognition Lab, FAU Erlangen-Nuremberg); Huang, Yixing (Friedrich-Alexander-Universität Erlangen-Nürnberg); Kugler, Patrick (Siemens Healthcare GmbH); Bauer, Sebastian (Siemens Healthcare GmbH); Lauritsch, Guenter (Siemens Healthcare GmbH); Maier, Andreas (Friedrich-Alexander-Universität Erlangen-Nürnberg)</i>	
ThBT3: 14:00-15:30	Kepler & Tycho
Image Analysis of Neurons (Oral Session)	
Chair: Malandain, Gregoire (INRIA)	
14:00-14:15	ThBT3.1
CRF Formulation of Active Contour Population for Efficient Three-Dimensional Neurite Tracing	593-597
<i>Gulyanov, Sarun (Indiana University-Purdue University Indianapolis); Sharifai, Nima (University of Miami); Kim, Michael D. (University of Miami); Chiba, Akira (University of Miami); Tsechpenakis, Gavril* (Indiana University-Purdue University Indianapolis)</i>	
14:15-14:30	ThBT3.2
Reconstruction of 3D Neuron Morphology using Rivulet Back-Tracking	598-601
<i>Zhang, Donghao (University of Sydney); Liu, Siqi* (University of Sydney); Liu, Sidong (University of Sydney); Feng, Dagan (The University of Sydney); Peng, Hanchuan (Allen Institute for Brain Science); Cai, Weidong (University of Sydney)</i>	
14:30-14:45	ThBT3.3
Maximum Inner Product Search for Morphological Retrieval of Large-Scale Neuron Data	602-606
<i>Li, Zhongyu* (University of North Carolina at Charlotte); Shen, Fumin (University of Electronic Science and Technology of China); Fang, Ruogu (Florida International University); Conjeti, Sailesh (Technical University of Munich); Katouzian, Amin (Technical University of Munich); Zhang, Shaoting (UNC Charlotte)</i>	
14:45-15:00	ThBT3.4
Structured Learning of Assignment Models for Neuron Reconstruction to Minimize Topological Errors	607-611
<i>Funke, Jan* (Institute of Neuroinformatics (INI) UZH/ETH Zurich); Klein, Jonas Robert (ETH Zurich, University of Zurich); Moreno-Noguer, Francesc (Institut de Robòtica i Informàtica Industrial, UPC/CSIC Barcelona); Cardona, Albert (Janelia Research Campus); Cook, Matthew (University of Zurich and ETH Zurich)</i>	
15:00-15:15	ThBT3.5
Smoothness-Constrained Convex Cone Analysis for Signal Extraction from Calcium Imaging Movies	612-616
<i>Strauch, Martin* (RWTH Aachen University); Rothermel, Markus (RWTH Aachen University); Wachowiak, Matt (University of Utah); Merhof, Dorit (RWTH Aachen University)</i>	

ThBT4: 14:00-15:30	Meridian
Segmentation and Registration (Oral Session)	
Chair: Frangi, Alejandro (<i>University of Sheffield</i>)	

14:00-14:15	ThBT4.1
Phase-Based Registration of Cardiac Tagged MR Images using Anatomical Deformation Model	617-620
<i>Zhou, Yitian* (Philips Research); De Craene, Mathieu (Philips Research); Bernard, Olivier (Université de Lyon, CREATIS; CNRS UMR5220; Inserm U1044; INSA-Ly)</i>	

14:15-14:30	ThBT4.2
Contrast-Based Registration of Left Atria to Fluoroscopic Image Sequences by Temporal Markow Filtering and Motion Regularization	621-624
<i>Hoffmann, Matthias* (Friedrich-Alexander-Universität Erlangen-Nürnberg); Strobel, Norbert (Siemens AG); Hornegger, Joachim (Friedrich-Alexander University Erlangen-Nuremberg); Maier, Andreas (Friedrich-Alexander-University Erlangen-Nuremberg)</i>	

14:30-14:45	ThBT4.3
CT and MRI Fusion for Postimplant Prostate Brachytherapy Evaluation	625-628
<i>Dehghan, Ehsan* (IBM Research); Le, Yi (Indiana Univ.); Lee, Junghoon (Johns Hopkins Univ.); Song, Daniel (Johns Hopkins Univ.); Fichtinger, Gabor (Queen's Univ.); Prince, Jerry (Johns Hopkins Univ.)</i>	

14:45-15:00	ThBT4.4
Image Registration and Segmentation in Longitudinal MRI using Temporal Appearance Modeling	629-632
<i>Gao, Yang* (Scientific Computing and Imaging Institute, University of Utah); Zhang, Miaomiao (University of Utah); Grewen, Karen, M (University of North Carolina at Chapel Hill); Fletcher, P. Thomas (University of Utah); Gerig, Guido (University of Utah)</i>	

15:00-15:15	ThBT4.5
Supervised Learning for Brain MR Segmentation via Fusion of Partially Labeled Multiple Atlases	633-637
<i>Deng, Yan (Univ. of Florida); Rangarajan, Anand (Univ. of Florida); Vemuri, Baba* (Univ. of Florida)</i>	

ThCT1: 16:00-17:30	Nadir
Perspectives on Deep Learning for Biomedical and Biological Imaging and Image Analysis (Special Session)	

16:45-17:00	ThCT1.4
Latent Source Mining in FMRI Data via Deep Neural Network	638-641
<i>Huang, Heng (Northwestern Polytechnical University); Hu, Xintao* (Northwestern Polytechnical University, Xian, China); Han, Junwei (Northwestern Polytechnical University); Lv, Jinglei (Northwestern Polytechnical University, China; The University of G); Liu, Nian (Northwestern Polytechnical University); Guo, Lei (Northwestern Polytechnical University); Liu, Tianming (University of Georgia)</i>	

17:00-17:15	ThCT1.5
Multi-Loss Convolutional Networks for Gland Analysis in Microscopy	642-645
<i>BenTaieb, Aicha* (Simon Fraser University); Kawahara, Jeremy (Simon Fraser University); Hamarneh, Ghassan (Simon Fraser University)</i>	

ThCT2: 16:00-17:30	Zenit
Shape Analysis (Oral Session)	
Chair: Gerig, Guido (<i>University of Utah</i>)	
Co-Chair: Linguraru, Marius George (<i>Children's National Health System</i>)	

16:00-16:15	ThCT2.1
Applying Sparse Coding to Surface Multivariate Tensor-Based Morphometry to Predict Future Cognitive Decline	646-650
<i>Zhang, Jie* (Arizona State University); Stonnington, Cynthia (Dept. of Psychiatry and Psychology, Mayo Clinic Arizona, Scottsd); Li, Qingyang (Arizona State University); Shi, Jie (School of Computing, Informatics, and Decision Systems Engineeri); J. Bauer III, Robert (Banner Alzheimer's Institute, Phoenix, AZ); Gutman, Boris (Imaging Genetics Center, Institute for Neuroimaging and Informa); Chen, Kewei (Banner Good Samaritan Medical Center); Reiman, Eric (Banner Alzheimer's Institute, Phoenix, AZ); Thompson, Paul (University of Southern California); Ye, Jieping (Department of Computational Medicine and Bioinformatics, Unvers); Wang, Yalin (Arizona State University)</i>	

16:15-16:30	ThCT2.2
Statistical Shape Analysis of Automatically Segmented Femur Bones: Data from the Osteoarthritis Initiative	
Kashyap, Satyananda* (University of Iowa); Oguz, Ipek (University of Iowa, Ophthalmology); Sonka, Milan (University of Iowa)	651-655
16:30-16:45	ThCT2.3
Bayesian Covariate Selection in Mixed-Effects Models for Longitudinal Shape Analysis	
Muralidharan, Prasanna* (University of Utah); Fishbaugh, James (Scientific Computing and Imaging Institute); Kim, Eun Young (University of Iowa); Paulsen, Jane (The University of Iowa); Johnson, Hans (The University of Iowa); Gerig, Guido (University of Utah); Fletcher, P. Thomas (University of Utah)	656-659
16:45-17:00	ThCT2.4
Optimal Parameter Map Estimation for Shape Representation: A Generative Approach	
Elhabian, Shireen* (University of Utah); Agrawal, Praful (Scientific Computing and Imaging Institute, University of Utah); Whitaker, Ross (University of Utah)	660-663
17:00-17:15	ThCT2.5
Automated Determination of Pedicle Morphometry in the Thoracic Spine	
Knez, Dejan* (University of Ljubljana); Likar, Bostjan (University of Ljubljana); Pernus, Franjo (University of Ljubljana); Vrtovec, Tomaz (University of Ljubljana)	664-667
ThCT3: 16:00-17:30	Kepler & Tycho
Imaging Cellular Processes (Oral Session)	
Chair: Liebling, Michael (IDIAP Research Institute and UC Santa Barbara)	
Co-Chair: Kozubek, Michal (Masaryk University)	
16:00-16:15	ThCT3.1
A Framework for Multi-Angle TIRF Microscope Calibration	
Soubies, Emmanuel* (Université de Nice Sophia Antipolis, I3S, UMR CNRS 7271); Schaub, Sebastien (iBV, UNS-CNRS-INSERM); Radwanska, Agata (iBV, UNS-CNRS-INSERM); Van Obberghen-Schilling, Ellen (iBV, UNS-CNRS-INSERM); Blanc-Feraud, Laure (Université Nice Sophia Antipolis, laboratoire I3S, CNRS, INRIA); Aubert, Gilles (Laboratoire J.A Dieudonne, UMR 6621 CNRS/UNSA,)	668-671
16:15-16:30	ThCT3.2
A Linear Measure of Forster Resonant Energy Transfer (FRET) Efficiency Incorporating a Shot Noise Uncertainty Model for Fluorescence Microscopy Intensity Images	
Holden, Mark* (Kyoto University)	672-675
16:30-16:45	ThCT3.3
An Extension of the FRI Framework for Calcium Transient Detection	
Reynolds, Stephanie* (Imperial College London); Copeland, Caroline (Imperial College London); Schultz, Simon R (Imperial College London); Dragotti, Pier Luigi (Imperial College London)	676-679
16:45-17:00	ThCT3.4
Adaptive Acquisitions in Biomedical Optical Imaging based on Single Pixel Camera: Comparison with Compressive Sensing	
Rousset, Florian* (CREATIS - CNRS UMR5220 - INSERM U1044 - Université de Lyon - INS); Ducros, Nicolas (INSA Lyon, CREATIS); Farina, Andrea (Dipartimento di Fisica, Politecnico di Milano); Valentini, Gianluca (Politecnico di Milano); D'Andrea, Cosimo (Politecnico di Milano, Istituto Italiano di Tecnologia); Peyrin, Francoise (CNRS UMR 5220, INSERM U1044, INSA Lyon, Université de Lyon)	680-683
17:00-17:15	ThCT3.5
Generating Semi-Synthetic Validation Benchmarks for Embryomics	
Stegmaier, Johannes* (Karlsruhe Institute of Technology); Arz, Julian (Karlsruhe Institute of Technology); Schott, Benjamin (Karlsruhe Institute of Technology); Otte, Jens C. (Karlsruhe Institute of Technology); Kobitski, Andrei (Karlsruhe Institute of Technology); Nienhaus, G. Ulrich (Karlsruhe Institute of Technology); Strähle, Uwe (Karlsruhe Institute of Technology); Sanders, Peter (Karlsruhe Institute of Technology); Mikut, Ralf (Karlsruhe Institute of Technology)	684-688

ThCT4: 16:00-17:30	Meridian
Retinal Imaging - Oral (Oral Session)	
Chair: Sonka, Milan (<i>University of Iowa</i>)	

16:00-16:15	ThCT4.1
Glaucoma Classification with a Fusion of Segmentation and Image-Based Features	689-692
<i>Chakravarty, Arunava (International Institute of Information Technology - Hyderabad); Sivaswamy, Jayanthi* (International Institute of Information Technology-Hyderabad)</i>	
16:15-16:30	ThCT4.2
Similarity-Weighted Linear Reconstruction of Anterior Chamber Angles for Glaucoma Classification	693-697
<i>Xu, Yanwu* (Institute for Infocomm Research); Liu, Jiang (Institute for Infocomm Research, A STAR); Wong, Damon (Institute for Infocomm Research); Baskaran, Mani (Singapore Eye Research Institute); Perera, Shamira (Singapore Eye Research Institute); Aung, Tin (Singapore Eye Research Institute)</i>	
16:30-16:45	ThCT4.3
Retinal Vessel Segmentation via Deep Learning Network and Fully-Connected Conditional Random Fields	698-701
<i>Fu, Huazhu* (Institute for Infocomm Research, A*STAR); Xu, Yanwu (Institute for Infocomm Research); Wong, Damon (Institute for Infocomm Research); Liu, Jiang (Institute for Infocomm Research, A STAR)</i>	
16:45-17:00	ThCT4.4
Locally-Adaptive Loosely-Coupled Level Sets for Retinal Layer and Fluid Segmentation in Subjects with Central Serous Retinopathy	702-705
<i>Novosel, Jelena* (Rotterdam Eye Hospital); Wang, Ziyuan (Quantitative Imaging Group, Department of Imaging Physics, Delft); de Jong, Henk (Rotterdam Ophthalmic Institute, Rotterdam, The Netherlands); van Velthoven, Mirjam (Rotterdam Eye Hospital, Rotterdam, The Netherlands); Vermeer, Koenraad A. (Rotterdam Ophthalmic Institute, Rotterdam Eye Hospital); van Vliet, Lucas (TU Delft)</i>	
17:00-17:15	ThCT4.5
Noise-Adaptive Attenuation Coefficient Estimation in Spectral Domain Optical Coherence Tomography Data	706-709
<i>Ghafaryasl, Babak* (TUDelft); Vermeer, Koenraad A. (Rotterdam Ophthalmic Institute, Rotterdam Eye Hospital); de Boer, Johannes F. (Vrije Universiteit Amsterdam); van Velthoven, Mirjam (Rotterdam Eye Hospital, Rotterdam, The Netherlands); van Vliet, Lucas (TU Delft)</i>	

Friday, 15 April 2016

FrPoster_T1: 08:15-09:50	Virgo/Leo/Taurus
Breast Imaging (Poster Session)	

08:15-09:50	FrPoster_T1.1
Full-Wave Attenuation Reconstruction in the Time Domain for Ultrasound Computed Tomography	710-713
<i>Pérez-Liva, Mailyn* (Complutense University of Madrid, Spain); Herraiz, Joaquin L. (Complutense University of Madrid, Spain); Udías, José Manuel (Complutense University of Madrid, Spain); Cox, Ben T. (University College London); Treeby, Bradley E. (University College London)</i>	
08:15-09:50	FrPoster_T1.2
Frequency Domain Continuous-Wave Microwave Induced Thermoacoustic Tomography	714-717
<i>Wang, Xiangtuan (Dept. of Electronic Engineering, Tsinghua University); Liu, Yimin* (Dept. of Electronic Engineering, Tsinghua University)</i>	
08:15-09:50	FrPoster_T1.3
Accurate and Fully Automatic Segmentation of Breast Ultrasound Images by Combining Image Boundary and Region Information	718-721
<i>Daoud, Mohammad I.* (German Jordanian University); Atallah, Ayman A. (German Jordanian University); Awwad, Falah (UAEU); Al-Najar, Mahasen (The University of Jordan)</i>	

08:15-09:50 FrPoster_T1.4
A Weakly Labeled Approach for Breast Tissue Segmentation and Breast Density Estimation in Digital Mammography 722-725
Rami, Ben-Ari (IBM); Zlotnick, Aviad (IBM); Hashoul, Sharbell (IBM)*

08:15-09:50 FrPoster_T1.5
A Multi-View Deep Learning Architecture for Classification of Breast Microcalcifications 726-730
Bekker, Alan Joseph (Bar-Ilan University); Greenspan, Hayit K. (Tel Aviv University); Goldberger, Jacob (Bar-Ilan University)*

FrPoster_T2: 08:15-09:50	Virgo/Leo/Taurus
CT Reconstruction - Poster (Poster Session)	

08:15-09:50 FrPoster_T2.1
Sparsity Seeking Total Generalized Variation for Undersampled Tomographic Reconstruction 731-734
Kazantsev, Daniil (The University of Manchester); Ovtchinnikov, Evgueni (Research Complex at Harwell, STFC, Visualization Group); Withers, Philip J (The University of Manchester); Lionheart, William R. B. (The University of Manchester); Lee, Peter D. (The University of Manchester)*

08:15-09:50 FrPoster_T2.2
Low-Dose CBCT Reconstruction via 3D Dictionary Learning 735-738
Liu, Jin (Southeast University); Chen, Yang (SouthEast University); Hu, Yining (Southeast University); Luo, Limin (University of Southeast)*

08:15-09:50 FrPoster_T2.3
Direct Estimation of Permeability Maps for Low-Dose CT Perfusion 739-742
Fang, Ruogu (Florida International University); Gupta, Ajay (Weill Cornell Medical College, New York-Presbyterian Hospital); Sanelli, Pina (Northwell Health)*

08:15-09:50 FrPoster_T2.4
Predict CT Image from MRI Data using KNN-Regression with Learned Local Descriptors 743-746
Zhong, Liming (Southern Medical University); Lin, Liyan (Southern Medical University); Lu, Zhentai (Southern Medical University); Wu, Yao (Southern Medical University); Lu, Zixiao (Southern Medical University); Huang, Meiyan (Southern Medical University); Yang, Wei (Southern Medical University); Feng, Qianjin (Southern Medical University)*

08:15-09:50 FrPoster_T2.5
Efficient Tomographic Reconstruction for Commodity Processors with Limited Memory Bandwidth 747-750
Inoue, Hiroshi (IBM Research - Tokyo, University of Tokyo)*

FrPoster_T3: 08:15-09:50	Virgo/Leo/Taurus
EEG (Poster Session)	

08:15-09:50 FrPoster_T3.1
Optimized in Vivo Conductivity Estimation using Bem 751-754
de Munck, J. C. (VU University Medical Centre); Dabek, Juhani (University of Helsinki); Hulshof, Joost (VU University Amsterdam, Depth of Mathematics)*

08:15-09:50 FrPoster_T3.2
On the Preconditioning of the Symmetric Formulation for the EEG Forward Problem by Leveraging on Calderon Formulas 755-758
Ortiz Guzman, John Erick (Telecom Bretagne); Pillain, Axelle (Ecole Nationale Supérieure des Télécommunications de Bretagne); Rahmouni, Lyes (Telecom Bretagne); Andriulli, Francesco P. (Institut Mines-Telecom)*

08:15-09:50 FrPoster_T3.3
Neuroactivation Imaging using a Monogenic Framework 759-762
Sanches, J. Miguel (Institute for Systems and Robotics, Instituto Superior Técnico.); Branco, Mariana (Institute for Systems and Robotics. IST, Universidade de Lisboa); Lopes da Silva, Fernando (Swammerdam Institute of Life Sciences, Univ. of Amsterdam)*

08:15-09:50	FrPoster_T3.4
A Mixed Discretized Surface-Volume Integral Equation for Solving EEG Forward Problems with Inhomogeneous and Anisotropic Head Models	
Rahmouni, Lyes* (Telecom Bretagne); Mitharwal, Rajendra (Telecom Bretagne); Andriulli, Francesco P. (Institut Mines-Telecom)	
08:15-09:50	FrPoster_T3.5
Generalized EEG-FMRI Spectral and Spatospectral Heuristic Models	
Labounek, René* (Brno University of Technology); Janecek, David (Brno University of Technology); Marecek, Radek (Central European Institute of Technology, Masaryk University, Br); Lamos, Martin (CEITEC MU); Slavíček, Tomáš (Brno University of Technology); Mikl, Michal (Central European Institute of Technology - CEITEC, Masaryk Univer); Bastinec, Jaromir (Brno University of Technology); Bednařík, Petr (University of Minnesota); Bridwell, David (The Mind Research Network); Brazdil, Milan (Masaryk University Brno); Jan, Jiri (Brno University of Technology)	
08:15-09:50	FrPoster_T3.6
EEG based Functional Connectivity Reflects Cognitive Load during Emotion Regulation	
Xing, Mengqi (University of Illinois at Chicago); Tadayonnejad, Reza (University of Illinois at Chicago); MacNamara, Annmarie (University of Illinois at Chicago); Ajilore, Olusola (University of Illinois at Chicago); Phan, K. Luan (University of Illinois at Chicago; Jesse Brown VA Medical Center); Klumpp, Heide (University of Illinois at Chicago); Leow, Alex D.* (University of Illinois at Chicago)	
FrPoster_T4: 08:15-09:50	Virgo/Leo/Taurus
Fetal Imaging (Poster Session)	
08:15-09:50	FrPoster_T4.1
Construction of a Neonatal Cortical Surface Atlas using Multimodal Surface Matching	
Bozek, Jelena* (University of Zagreb); Fitzgibbon, Sean (University of Oxford); Wright, Robert (Imperial College London); Rueckert, Daniel (Imperial College London); Jenkinson, Mark (University of Oxford); Robinson, Emma (Imperial College London)	
08:15-09:50	FrPoster_T4.2
Hybrid Approach for Automatic Segmentation of Fetal Abdomen from Ultrasound Images using Deep Learning	
Ravishankar, Hariharan* (General Electric Global Research); Prabhu, Sahana (GE Global Research); Vaidya, Vivek (General Electric); Singhal, Nitin (GE Global Research Bangalore)	
08:15-09:50	FrPoster_T4.3
Placental Maturity Evaluation via Feature Fusion and Discriminative Learning	
WanJun, Li (Shenzhen University); Yao, Yuan (Hospital of Nanfang Medical University); Ni, Dong (National-Regional Key Technology Engineering Laboratory for Medi); Chen, Siping (Shenzhen University); Lei, Baiying* (Shenzhen University); Wang, Tianfu (Shenzhen University)	
08:15-09:50	FrPoster_T4.4
Describing Ultrasound Video Content using Deep Convolutional Neural Networks	
Gao, Yuan* (University of Oxford); Maraci, Mohammad Ali (BioMedIA Lab, Institute of Biomedical Engineering, Dept of Eng.); Noble, J Alison (University of Oxford)	
08:15-09:50	FrPoster_T4.5
Plane Identification in Fetal Ultrasound Images using Saliency Maps and Convolutional Neural Networks	
Kumar, Ashnil* (University of Sydney); Sridar, Pradeeba (Indian Institute of Technology Madras); Quinton, Ann (The University of Sydney); Krishnakumar, Ramarathnam (Indian Institute of Technology Madras); Feng, Dagan (The University of Sydney); Nanan, Ralph (The University of Sydney); Kim, Jinman (University of Sydney)	

- 08:15-09:50 FrPoster_T5.1
Image Normalization for Quantitative Immunohistochemistry in Digital Pathology 795-798
Van Eycke, Yves-Rémi (CMMI, Univ. Libre de Bruxelles); Allard, Justine (Erasme Hospital, Univ. Libre de Bruxelles); Derock, Mélanie (CMMI, Univ. Libre de Bruxelles); Salmon, Isabelle (Erasme Hospital, Univ. Libre de Bruxelles); Debeir, Olivier (Univ. Libre de Bruxelles); Decaestecker, Christine (Univ. Libre de Bruxelles)*
- 08:15-09:50 FrPoster_T5.2
Local Structure Prediction for Gland Segmentation 799-802
Manivannan, Siyamalan (Computer Vision and Image Processing group, School of Computing,); Li, Wenqi (University College London); Akbar, Shazia (University of Dundee); Zhang, Jianguo (University of Dundee); Trucco, Emanuele (University of Dundee); McKenna, Stephen (University of Dundee)*
- 08:15-09:50 FrPoster_T5.3
Stain Deconvolution of Histology Images via Independent Component Analysis in the Wavelet Domain 803-806
Alsubaie, Najah (University of Warwick); Raza, Shan E Ahmed (University of Warwick); Rajpoot, Nasir (Qatar University & University of Warwick)*
- 08:15-09:50 FrPoster_T5.4
Co-Occurrence Features Characterizing Gland Distribution Patterns as New Prognostic Markers in Prostate Cancer Whole-Slide Images 807-810
Harder, Nathalie (Definiens AG); Athelougou, Maria (Definiens AG); Hessel, Harald (Pathological Institute of Munich University (LMU)); Buchner, Alexander (Urological Clinic of Munich University (LMU)); Schönmeier, Ralf (Definiens AG); Schmidt, Günter (Definiens AG); Stief, Christian (Urological Clinic of Munich University (LMU)); Kirchner, Thomas (Pathological Institute of Munich University (LMU)); Binnig, Gerd (Definiens AG)*
- 08:15-09:50 FrPoster_T5.5
Recursive Water Flow: A Shape Decomposition Approach for Cell Clump Splitting 811-815
Dorfer, Matthias (Johannes Kepler University Linz); Mattes, Julian Johannes (Software Competence Center Hagenberg GmbH)*
- 08:15-09:50 FrPoster_T5.6
Learning based Super-Resolution of Histological Images 816-819
Vahadane, Abhishek (Indian Institute of Technology Guwahati); Vaid, Neeraj Kumar (Indian Institute of Technology Guwahati); Sethi, Amit (Indian Institute of Technology Guwahati)*

- 08:15-09:50 FrPoster_T6.1
Discovering True Association between Multimodal Data Sets using Structured and Sparse Canonical Correlation Analysis: A Simulation Study 820-823
Mohammadi-Nejad, Ali-Reza (University of Tehran); Hossein-Zadeh, Gholam-Ali (Univ. of Tehran); Soltanian-Zadeh, Hamid (University of Tehran)*
- 08:15-09:50 FrPoster_T6.2
Integrative Bayesian Analysis of Neuroimaging-Genetic Data through Hierarchical Dimension Reduction 824-828
Azadeh, Shabnam (UT MD Anderson Cancer Center); Hobbs, Brian (UT MD Anderson Cancer Center); Ma, Liangsuo (VCU Institute for Drug and Alcohol Studies); Nielsen, David (Baylor College of Medicine); Moeller, Frederick (VCU Institute for Drug and Alcohol Studies); Baladandayuthapani, Veerabhadran (UT MD Anderson Cancer Center)*
- 08:15-09:50 FrPoster_T6.3
A Data-Driven Method to Study Brain Structural Connectivities via Joint Analysis of Microarray Data and DMRI Data 829-832
Li, Xiao (Northwestern Polytechnical University); Zhang, Tuo (Northwestern Polytechnical University, Xian, China); Liu, Tao (North China University of Science and Technology); Lv, Jinglei (Northwestern Polytechnical University, China; The University of G); Hu, Xintao (Northwestern Polytechnical University, Xian, China); Guo, Lei (Northwestern Polytechnical University); Liu, Tianming (University of Georgia)*

08:15-09:50	FrPoster_T6.4
Genetic Analysis of Cortical Sulci in 1,009 Adults	833-837
<i>Pizzagalli, Fabrizio* (University of Southern California); Auzias, Guillaume (UMR CNRS 6168); Kochunov, Peter (Maryland Psychiatric Research Center, Department of Psychiatry); Faskowitz, Joshua (University of Southern California); McMahon, Katie (Center for Advanced Imaging, Univ. of Queensland, Brisbane, Aust); de Zubizaray, Greig (School of Psychology, University of Queensland, Brisbane, Austr); Martin, Nicholas G. (Queensland Institute of Medical Research); Wright, Margaret (School of Psychology, University of Queensland, Brisbane, Austr); Jahanshad, Neda (Imaging Genetics Center, University of Southern California); Thompson, Paul (University of Southern California)</i>	
08:15-09:50	FrPoster_T6.5
Partial Least Squares Modelling for Imaging-Genetics in Alzheimer's Disease: Plausibility and Generalization	838-841
<i>Lorenzi, Marco* (UCL); Gutman, Boris (Imaging Genetics Center, Institute for Neuroimaging and Informa); Hibar, Derrek Paul (Imaging Genetics Center, Institute for Neuroimaging and Informat); Andre, Altmann (University College London); Jahanshad, Neda (Imaging Genetic Center, University of Southern California); Thompson, Paul (University of Southern California); Ourselin, Sebastien (University College London)</i>	
08:15-09:50	FrPoster_T6.6
Identification of Alzheimer's Disease Risk Factors by Tree-Structured Group Lasso Screening	N/A
<i>Li, Yanan (University of Michigan); Wang, Jie (University of Michigan); Yang, Tao (Arizona State University); Chen, Jun (University of Michigan); Liu, Li (Arizona State University); Zhan, Liang (University of Wisconsin-Stout); Hibar, Derrek Paul (Imaging Genetics Center, Institute for Neuroimaging and Informat); Jahanshad, Neda (Imaging Genetics Center, University of Southern California); Wang, Yalin (Arizona State University); Zhao, Sihai (University of Illinois at Urbana-Champaign); Thompson, Paul (University of Southern California); Ye, Jieping* (University of Michigan)</i>	
FrPoster_T7: 08:15-09:50	Virgo/Leo/Taurus
Machine Learning - Poster (Poster Session)	
08:15-09:50	FrPoster_T7.1
How Are Siblings Similar? How Similar are Siblings? Large-Scale Imaging Genetics using Local Image Features	847-850
<i>Toews, Matthew* (University of Quebec, Ecole de Technologie Superieure); Wells, William (Harvard Medical School)</i>	
08:15-09:50	FrPoster_T7.2
Multi-Modality Stacked Deep Polynomial Network based Feature Learning for Alzheimer's Disease Diagnosis	851-854
<i>Zheng, Xiao (Shanghai University); Shi, Jun* (Shanghai University); Li, Yan (Shenzhen University); Liu, Xiao (Shanghai University); Zhang, Qi (Shanghai University)</i>	
08:15-09:50	FrPoster_T7.3
X-Ray Image Classification using Domain Transferred Convolutional Neural Networks and Local Sparse Spatial Pyramid	855-858
<i>Ahn, Euijoon* (Univ. of Sydney); Kumar, Ashnil (Univ. of Sydney); Kim, Jinman (Univ. of Sydney); Li, Changyang (Univ. of Sydney); Feng, Dagan (The Univ. of Sydney); Fulham, Michael (Royal Prince Alfred Hospital)</i>	
08:15-09:50	FrPoster_T7.4
Adaptive Ensemble Manifold Learning for Neuroimaging Retrieval	859-862
<i>Zhuo, Yanan (Shenzhen University); Ni, Dong (National-Regional Key Technology Engineering Laboratory for Medi); Chen, Siping (Shenzhen University); Lei, Baiying* (Shenzhen University); Wang, Tianfu (National-Regional Key Technology Engineering Laboratory for Medi)</i>	
08:15-09:50	FrPoster_T7.5
Colitis Detection on Computed Tomography using Regional Convolutional Neural Networks	863-866
<i>Liu, Jiamin* (NIH); Wang, David (NIH); Wei, Zhuoshi (Natl Institutes of Health); Lu, Le (NIH); Kim, Lauren (Natl Institutes of Health); Turkbey, Evrim (NIH); Summers, Ronald (Natl Institutes of Health Clinical Center)</i>	
08:15-09:50	FrPoster_T7.6
Multi-Atlas Segmentation using Manifold Learning with Deep Belief Networks	867-871
<i>Nascimento, Jacinto* (Instituto Superior Técnico); Carneiro, Gustavo (University of Adelaide)</i>	

FrPoster_T8: 08:15-09:50	Virgo/Leo/Taurus
Modeling and Simulation - Poster (Poster Session)	
08:15-09:50	FrPoster_T8.1
Assessment of Trabecular Bone Strength at in Vivo CT Imaging with Space-Variant Hysteresis and Finite Element Modelling 872-875	
<i>Chen, Cheng (University of Iowa); Amelon, Ryan (University of Iowa); Heiner, Anneliese (University of Iowa); Saha, Punam K.* (University of Iowa)</i>	
08:15-09:50	FrPoster_T8.2
Evaluation of Numerical Techniques for Solving the Current Injection Problem in Biological Tissues 876-880	
<i>Hyde, Damon* (Boston Children's Hospital and Harvard Medical School); Dannhauer, Moritz (University of Utah); Warfield, Simon K. (Harvard Medical School); MacLeod, Rob (University of Utah); Brooks, Dana (Northeastern University)</i>	
08:15-09:50	FrPoster_T8.3
Incremental Shape Learning of 3D Surfaces of the Knee, Data from the Osteoarthritis Initiative 881-884	
<i>Neubert, Ales* (CSIRO); Naser, Ibrahim (University of Queensland); Paproki, Anthony (The University of Queensland); Engstrom, Craig (University of Queensland); Fripp, Jurgen (CSIRO); Crozier, Stuart (The University of Queensland); Chandra, Shekhar (Australian e-Health Research Centre, CSIRO)</i>	
08:15-09:50	FrPoster_T8.4
Statistical Shape Modeling of Compound Musculoskeletal Structures Around the Thigh Region 885-888	
<i>Chu, Chengwen (Institute for Surgical Technology and Biomechanics, University o); Takao, Masaki (Osaka University); Ogawa, Takeshi (Department of Orthopedic Medical Engineering, Osaka University); Yokota, Futoshi (Graduate School of Information Science, Nara Institute of Scienc); Sato, Yoshinobu (Osaka University Graduate School of Medicine); Zheng, Guoyan* (University of Bern)</i>	
08:15-09:50	FrPoster_T8.5
Automatic Measurement of Orbital Volume in Unilateral Coronal Synostosis 889-893	
<i>Dahl, Vedrana Andersen* (Technical University of Denmark); Einarsson, Gudmundur (Technical University of Denmark); Darvann, Tron Andre (University of Copenhagen); Hermann, Nuno V. (University of Copenhagen); Hove, Hanne Buciek (Copenhagen University Hospital Rigshospitalet); Kakimoto, Naoya (Osaka University Graduate School of Dentistry); Kreiborg, Sven (University of Copenhagen); Dahl, Anders Bjorholm (Technical University of Denmark, Department of Applied Mathemati)</i>	
FrPoster_T10: 08:15-09:50	Virgo/Leo/Taurus
Structural Brain Connectivity - Poster (Poster Session)	
08:15-09:50	FrPoster_T10.1
Anatomical Hubs from Spectral Clustering of Structural Connectomes 894-897	
<i>Mitra, Jhimli* (CSIRO Health and Biosecurity); Ghose, Soumya (CSIRO Health and Biosecurity); Bourgeat, Pierrick (CSIRO); Fripp, Jurgen (CSIRO); Mathias, Jane (School of Psychology, University of Adelaide); Rose, Stephen (Australian eHealth Research Centre, CSIRO CCI); Salvado, Olivier (CSIRO)</i>	
08:15-09:50	FrPoster_T10.2
Diffusion MRI Simulation for Human Brain based on the Atlas 898-902	
<i>Du, Hong Bo (Guizhou Education University); Wang, Li-Hui* (Guizhou University); Liu, Wanyu (Harbin Institute of Technology); Yang, Feng (Beijing Jiaotong University); LI, ZHI (Guizhou University); Zhu, Yuemin (CNRS)</i>	
08:15-09:50	FrPoster_T10.3
Cortical Surface Parcellation via dMRI using Mutual Nearest Neighbor Condition 903-906	
<i>Belaoucha, Brahim* (INRIA Sophia-Antipolis); Clerc, Maureen (INRIA); Papadopoulou, Théodore (INRIA Sophia-Antipolis)</i>	
08:15-09:50	FrPoster_T10.4
Compressive Sensing based Q-Space Resampling for Handling Fast Bulk Motion in HARDI Acquisitions 907-910	
<i>Elhabian, Shireen* (University of Utah); Vachet, Clement (University of Utah); Piven, Joseph (University of North Carolina); Styner, Martin (UNC at Chapel Hill); Gerig, Guido (University of Utah)</i>	

08:15-09:50 FrPoster_T10.5
Iteratively Reweighted L1-Fitting for Model-Independent Outlier Removal and Regularization in Diffusion MRI 911-914
*Tobisch, Alexandra** (German Center for Neurodegenerative Diseases); *Stoecker, Tony* (DZNE); *Groeschel, Samuel* (University Children's Hospital Tuebingen); *Schultz, Thomas* (University of Bonn)

08:15-09:50 FrPoster_T10.6
A Sparse Coding Approach for the Efficient Representation and Segmentation of White Matter Fibers 915-919
*Kumar, Kuldeep** (Ecole de Technologie Superieure); *Desrosiers, Christian* (École de Technologie Supérieure)

FrPoster_T11: 08:15-09:50 Virgo/Leo/Taurus
Tracking and Segmentation in Biological Imaging (Poster Session)

08:15-09:50 FrPoster_T11.1
Joint Cell Segmentation and Tracking using Cell Proposals 920-924
*Akram, Saad Ullah** (Center for Machine Vision Research, University of Oulu); *Kannala, Juho* (Department of Computer Science, Aalto University, Finland); *Eklund, Lauri* (Oulu Center for Cell-Matrix Research, and Faculty of Biochemistr); *Heikkilä, Janne* (Center for Machine Vision Research, University of Oulu)

08:15-09:50 FrPoster_T11.2
Biology-Inspired Visualization of Morphogenetic Motion in the Zebrafish Endoderm 925-929
Thierbach, Konstantin (TU Dresden); *Shah, Gopi* (Max Planck Institute of Molecular Cell Biology and Genetics, Dre); *Glauche, Ingmar* (Faculty of Medicine Carl Gustav Carus, Dresden Univ. of Tec); *Huisken, Jan* (Max Planck Institute of Molecular Cell Biology and Genetics, Dre); *Roeder, Ingo* (Faculty of Medicine Carl Gustav Carus, Dresden Univ. of Tec); *Scherf, Nico** (Faculty of Medicine Carl Gustav Carus, Dresden Univ. of Tec)

08:15-09:50 FrPoster_T11.3
Segmentation of Developing Human Embryo in Time-Lapse Microscopy 930-934
*Khan, Aisha Sajjad** (The Australian National University); *Gould, Stephen* (College of Engineering and Computer Science, The Australian Nat); *Salzmann, Mathieu* (EPFL)

08:15-09:50 FrPoster_T11.4
Automatic Nuclei and Cytoplasm Segmentation of Leukocytes with Color and Texture-Based Image Enhancement 935-938
*Tareef, Afaf** (University of Sydney); *Song, Yang* (University of Sydney); *Cai, Weidong* (University of Sydney); *Wang, Yue* (Virginia Polytechnic Institute and State University); *Feng, Dagan* (The University of Sydney); *Chen, Mei* (Carnegie Mellon University)

FrAT1: 11:00-12:30 Nadir
Frontiers in Pulmonary Image Analysis (Special Session)

11:45-12:00 FrAT1.4
New Pathways for End-to-End Validation of CT Ventilation Imaging (CTVI) using Deformable Image Registration 939-942
*Kipritidis, John** (University of Sydney); *Woodruff, Henry C.* (University of Sydney); *Eslick, Enid M.* (University of Sydney); *Hegi-Johnson, Fiona* (University of Sydney); *Keall, Paul John* (University of Sydney)

FrAT2: 11:00-12:30 Zenit
Imaging Metabolism and Perfusion (Oral Session)
Chair: Salvado, Olivier (CSIRO)

11:00-11:15 FrAT2.1
Semi-Quantitative Analysis of Prostate Perfusion MRI by Clustering of Pre and Post Contrast Enhancement Phases 943-947
*Samarasinghe, Gihan** (University of New South Wales); *Sowmya, Arcot* (University of New South Wales); *Moses, Daniel* (University of New South Wales)

11:15-11:30	FrAT2.2
Learning Multi-Modality Local and Global Affinities in Graph based Ranking for Automated Lung Tumor Delineation	
Cui, Hui (The University of Sydney); Wang, Xiu Ying* (The University of Sydney); Zhou, Jianlong (National ICT Australia); Gong, Guanzhong (Shandong Cancer Hospital and Institute); Yin, Yong (Shandong Tumor Hospital, China); Zheng, Fu (Shandong Cancer Hospital and Institute); Feng, Dagan (The University of Sydney)	948-951
11:30-11:45	FrAT2.3
MRSI Data Unmixing using Spatial and Spectral Priors in Transformed Domains	
Laruelo, Andrea* (Institut Claudius Regaud, Toulouse, F-31059 France); Chaari, Lotfi (University of Toulouse, IRIT - INP-ENSEEIH, France); Ken, Soleakhena (Institut Claudius Regaud, Toulouse, F-31052 France ; INSERM, UMR); Tourneret, Jean-Yves (University of Toulouse); Batatia, Hadj (University of Toulouse); Laprie, Anne (Institut Claudius Regaud, Toulouse, F-31052 France ; INSERM, UMR825)	952-955
11:45-12:00	FrAT2.4
A Variational Method for Scar Segmentation with Myocardial Contour Correction in DE-CMR Images	
Merino-Caviedes, Susana* (Univ. de Valladolid); Cordero-Grande, Lucilio (King's College London); Pérez, María Teresa (Univ. of Valladolid); Sevilla-Ruiz, María Teresa (Instituto de Ciencias del Corazón, Hospital Clínico Univ.); Revilla-Orodea, Ana (Instituto de Ciencias del Corazón, Hospital Clínico Univ.); Martín-Fernandez, Marcos (Univ. of Valladolid); Alberola-López, Carlos (Univ. de Valladolid)	956-959
12:00-12:15	FrAT2.5
Compartmentalized Low-Rank Regularization with Orthogonality Constraints for High-Resolution MRSI	
Bhattacharya, Ipsita* (The University of Iowa); Jacob, Mathews (University of Iowa)	960-963
FrAT3: 11:00-12:30	Kepler & Tycho
Tracking in Time Lapse Microscopy Data (Oral Session)	
Chair: Olivo-Marin, Jean-Christophe (Institut Pasteur)	
Co-Chair: Dzyubachyk, Oleh (LUMC)	
11:00-11:15	FrAT3.1
A Novel Approach to Identifying Merging/Splitting Events in Time-Lapse Microscopy	
Nam, David (University of Bristol); Arkill, Kenton (University of Bristol); Hodgson, Lorna (University of Bristol); Bull, David Roger (University of Bristol); Verkade, Paul (University of Bristol); Achim, Alin* (University of Bristol)	964-967
11:15-11:30	FrAT3.2
Segmentation and Tracking of Pseudomonas Aeruginosa for Cell Dynamics Analysis in Time-Lapse Images	
Chen, Jianxu* (Univ. of Notre Dame); Cai, Yiqing (Zhejiang Univ.); Wei, Chen (Zhejiang Univ.); Yang, Lin (Univ. of Notre Dame); Alber, Mark (Univ. of Notre Dame); Chen, Danny (Univ. of Notre Dame)	968-971
11:30-11:45	FrAT3.3
An Adaptive Statistical Test to Detect Non Brownian Diffusion from Particle Trajectories	
Briane, Vincent* (Inria); Vimond, Myriam (Ensaï); Kervrann, Charles (Inria)	972-975
11:45-12:00	FrAT3.4
Direct Combination of Multi-Scale Detection and Multi-Frame Association for Tracking of Virus Particles in Microscopy Image Data	
Jaiswal, Astha* (University of Heidelberg, DKFZ Heidelberg); Godinez, William (Novartis Institutes for BioMedical Research Inc.); Lehmann, Maik (University of Applied Sciences, Bingen.); Rohr, Karl (University of Heidelberg, DKFZ Heidelberg)	976-979
12:00-12:15	FrAT3.5
Biophysical Measurements in 2D and 3D Live Cell Imaging using Fluid Dynamics and Optical Flow	
Boquet Pujadas, Aleix (Institut Pasteur); Manich, Maria (Institut Pasteur); Guillen, Nancy (Institut Pasteur); Olivo-Marin, Jean-Christophe (Institut Pasteur); Dufour, Alexandre* (Institut Pasteur)	980-983

FrAT4: 11:00-12:30	Meridian
Functional MRI (Oral Session)	
Chair: Johnson, Hans (<i>The University of Iowa</i>)	

11:00-11:15	FrAT4.1
Identification of Subject-Specific Brain Functional Networks using a Collaborative Sparse Nonnegative Matrix Decomposition Method	984-987

*Li, Hongming** (*University of Pennsylvania*); *Satterthwaite, Theodore D.* (*University of Pennsylvania*);
Fan, Yong (*University of Pennsylvania*)

11:15-11:30	FrAT4.2
Eigenmaps of Dynamic Functional Connectivity: Voxel-Level Dominant Patterns through Eigenvector Centrality	988-991

*Preti, Maria Giulia** (*EPFL / Université de Genève*); *Van De Ville, Dimitri* (*EPFL & UniGE*)

11:30-11:45	FrAT4.3
Individualized Brain Parcellation with Integrated Functional and Morphological Information	992-995

Li, Hongming (*University of Pennsylvania*); *Fan, Yong** (*University of Pennsylvania*)

11:45-12:00	FrAT4.4
Multivariate Hurst Exponent Estimation in FMRI. Application to Brain Decoding of Perceptual Learning	996-1000

Pelle, Hubert (*Ecole Polytechnique*); *Ciuciu, Philippe** (*CEA*); *Rahim, Mehdi* (*INRIA Saclay*);
Dohmatob, Elvis (*INRIA*); *Abry, Patrice* (*ENS Lyon, CNRS*); *van Wassenhove, Virginie* (*CEA.DSV.I2BM, NeuroSpin*; *Inserm Cognitive Neuroimaging Unit*; *Uni*)

12:00-12:15	FrAT4.5
Physiological Noise Model Comparison for Resting-State FMRI at 7 T	1001-1004

Nunes, Sandro (*Institute for Systems and Robotics and Department of Bioengineer*); *Bianciardi, Marta* (*Department of Radiology, A.A. Martinos Center for Biomedical Ima*); *Dias, Afonso* (*Institute for Systems and Robotics and Department of Bioengineer*); *Silveira, L. Miguel* (*INESC-ID and Department of Electrical and Computer Engineering*); *Wald, Lawrence L.* (*A. A. Martinos Center for Biomedical Imaging, Dept. of Radiology*); *Figueiredo, Patricia** (*Instituto Superior Técnico, Universidade de Lisboa*)

FrBT2: 14:00-15:30	Zenit
Ultrasound - Oral (Oral Session)	
Chair: Angelini, Elsa (<i>Columbia University</i>)	

14:00-14:15	FrBT2.1
Automatic Bone Segmentation in Ultrasound Images using Local Phase Features and Dynamic Programming	1005-1008

*Jia, Rui** (*Univ. of Oxford*); *Mellon, Stephen* (*Univ. of Oxford*); *Hansjee, Shanil* (*Univ. of Oxford*); *Monk, Andrew Paul* (*Univ. of Oxford*); *Murray, David* (*Univ. of Oxford*); *Noble, J Alison* (*Univ. of Oxford*)

14:15-14:30	FrBT2.2
Compressive Dynamic Aperture B-Mode Ultrasound Imaging using Annihilating Filter-Based Low-Rank Interpolation	1009-1012

Jin, Kyong Hwan (*KAIST*); *Han, Yo Seob* (*Kaist*); *Ye, Jong Chul** (*Korea Advanced Inst of Science & Tech*)

14:30-14:45	FrBT2.3
Ultrasound Spectroscopy	1013-1016

*Aylward, Stephen** (*Kitware Inc.*); *McCormick, Matt* (*Kitware, Inc.*); *Kang, Hyun Jae* (*Kitware Inc.*);
Razzaque, Sharif (*InnerOptic Technology*); *Kwitt, Roland* (*University of Salzburg*);
Niethammer, Marc (*University of North Carolina at Chapel Hill*)

14:45-15:00	FrBT2.4
Wavelength Average Velocity Estimator for Ultrasound Elastography	1017-1020

Gonzalez, Eduardo (*Pontificia Universidad Catolica del Peru*); *Ormachea, Juvenal* (*University of Rochester*);
Parker, Kevin (*University of Rochester*); *Castañeda, Benjamín** (*Pontificia Universidad Católica del Perú*)

15:00-15:15 FrBT2.5
Fast Low-Cost Single Element Ultrasound Reflectivity Tomography using Angular Distribution Analysis 1021-1024
Kuzmin, Andrey (Skolkovo Institute of Science and Technology); Zhang, Xiang (Massachusetts Institute of Technology); Fincke, Jonathan (Massachusetts Institute of Technology); Feigin, Micha (Massachusetts Institute of Technology); Anthony, Brian W. (Massachusetts Institute of Technology); Lempitsky, Victor (Skolkovo Institute of Science and Technology)*

FrBT3: 14:00-15:30 Kepler & Tycho
Histological Image Analysis (Oral Session)
Chair: Descombes, Xavier (INRIA)
Co-Chair: McKenna, Stephen (University of Dundee)

14:00-14:15 FrBT3.1
Phenotypic Characterization of Breast Invasive Carcinoma via Transferable Tissue Morphometric Patterns Learned from Glioblastoma Multiforme 1025-1028
Han, Ju (University of Nevada, Reno); Fontenay, Gerald (Lawrence Berkeley National Laboratory); Wang, Yunfu (Taihe Hospital, Hubei University of Medicine); Mao, Jian-Hua (Lawrence Berkeley National Laboratory); Chang, Hang (Lawrence Berkeley National Laboratory)*

14:15-14:30 FrBT3.2
Handcrafted Features with Convolutional Neural Networks for Detection of Tumor Cells in Histology Images 1029-1032
Kashif, Muhammad Nasim (Pakistan Institute of Engineering and Applied Sciences); Raza, Shan E Ahmed (University of Warwick); Sirinukunwattana, Korsuk (University of Warwick); Arif, Muhammad (Pakistan Institute of Engineering and Applied Sciences); Rajpoot, Nasir (Qatar University & University of Warwick)*

14:30-14:45 FrBT3.3
An Approach for Detection of Glomeruli in Multisite Digital Pathology 1033-1036
Marée, Raphaël (University of Liège); Dallongeville, Stéphane (Institut Pasteur); Olivo-Marin, Jean-Christophe (Institut Pasteur); Meas-Yedid, Vannary (Institut Pasteur)*

14:45-15:00 FrBT3.4
Automatic Segmentation of Lung Carcinoma in Histological Images using a Visual Dictionary 1037-1040
Wassmer, Florian (ETH Zurich); De Luca, Valeria (ETH Zurich); Casanova, Ruben (University Hospital Zurich); Soltermann, Alex (University Hospital Zurich); Szekely, Gabor (ETH Zurich)*

15:00-15:15 FrBT3.5
Robust Cell Segmentation for Histological Images of Glioblastoma 1041-1045
Kong, Jun (Emory Univ.); Zhang, Pengyue (Stony Brook Univ.); Liang, Yanhui (Stony Brook Univ.); Teodoro, George (Univ. of Brasilia); Brat, Daniel (Emory Univ.); Wang, Fusheng (Emory Univ.)*

FrBT4: 14:00-15:30 Meridian
Optical Imaging - Oral (Oral Session)
Chair: Dijkstra, Jouke (Leiden University Medical Center, Dept of Radiology)

14:00-14:15 FrBT4.1
Robust Real Time Motion Compensation for Intraoperative Video Processing during Neurosurgery 1046-1049
Sdika, Michaël (Creatis); Alston, Laure (Creatis); Mahieu-Williams, Laurent (Creatis); Guyotat, Jacques (Hospices Civils de Lyon); Rousseau, David (CREATIS, Université de Lyon; CNRS UMR 5220; Inserm U620; INSA de); Montcel, Bruno (Creatis)*

14:15-14:30 FrBT4.2
Joint Desmoking and Denoising of Laparoscopy Images 1050-1054
Kotwal, Alankar Shashikant (Indian Institute of Technology Bombay); Bhalodia, Riddhish (Indian Institute of Technology Bombay); Awate, Suyash P (Indian Institute of Technology (IIT), Bombay)*

14:30-14:45 FrBT4.3
Automatic Melanoma Detection via Multi-Scale Lesion-Biased Representation and Joint Reverse Classification 1055-1058
Bi, Lei (University of Sydney); Kim, Jinman (University of Sydney); Ahn, Euijoon (University of Sydney); Feng, Dagan (The University of Sydney); Fulham, Michael (Royal Prince Alfred Hospital)*

14:45-15:00 FrBT4.4
Automated Skin Lesion Segmentation via Image-Wise Supervised Learning and Multi-Scale Superpixel based Cellular Automata 1059-1062
Bi, Lei (University of Sydney); Kim, Jinman (University of Sydney); Ahn, Euijoon (University of Sydney); Feng, Dagan (The University of Sydney); Fulham, Michael (Royal Prince Alfred Hospital)*

15:00-15:15 FrBT4.5
Super-Resolved Retinal Image Mosaicing 1063-1067
Köhler, Thomas (Pattern Recognition Lab, FAU Erlangen-Nürnberg); Heinrich, Axel (Pattern Recognition Lab, FAU Erlangen-Nürnberg); Maier, Andreas (Friedrich-Alexander-University Erlangen-Nuremberg); Hornegger, Joachim (Pattern Recognition Lab); Tornow, Ralf-Peter (University of Erlangen)*

FrCT1: 16:00-17:30 Nadir
Computer-Assisted Radiology (Oral Session)
Chair: Karssemeijer, Nico (Radboud University Medical Centre Nijmegen)

16:00-16:15 FrCT1.1
Decomposing the Bony Thorax in X-Ray Images 1068-1071
von Berg, Jens (Philips Research Hamburg); Levrier, Claire (Philips Medisys Paris); Carolus, Heike (Philips Research Hamburg); Young, Stewart (Philips Research Hamburg); Saalbach, Axel (Philips GmbH, Innovative Technologies); Laurent, Patrick (Philips Medisys Paris); Florent, Raoul (Philips Medisys Paris)*

16:15-16:30 FrCT1.2
Accurate Landmark-Based Segmentation by Incorporating Landmark Misdetections 1072-1075
Ibragimov, Bulat (University of Ljubljana); Likar, Bostjan (University of Ljubljana); Pernus, Franjo (University of Ljubljana); Vrtovec, Tomaz (University of Ljubljana)*

16:30-16:45 FrCT1.3
An Image-Retrieval Aided Diagnosis System for Clustered Microcalcifications 1076-1079
Wang, Juan (Illinois Institute of Technology); Yang, Yongyi (Illinois Institute of Technology); Wernick, Miles (Illinois Institute of Technology); Nishikawa, Robert (Department of Radiology, The University of Chicago)*

16:45-17:00 FrCT1.4
Identification of Dysmorphic Syndromes using Landmark-Specific Local Texture Descriptors 1080-1083
Cerrolaza, Juan J. (Children's National Medical Center); Porras, Antonio R. (Children's National Medical Center); Mansoor, Awais (Children's National Health System); Zhao, Qian (Children's National Medical Center); Summar, Marshall (Children's National Medical Center); Linguraru, Marius George (Children's National Health System)*

17:00-17:15 FrCT1.5
An Eye-Tracking Inspired Method for Standardised Plane Extraction from Fetal Abdominal Ultrasound Volumes 1084-1087
Ahmed, Maryam (University of Oxford); Noble, J Alison (University of Oxford)*

FrCT2: 16:00-17:30 Zenit
MR Tissue Quantification (Oral Session)
Chair: Soltanian-Zadeh, Hamid (University of Tehran)

16:00-16:15 FrCT2.1
Diffusion Tensor Distribution Function Metrics Boost Power to Detect Deficits in Alzheimer's Disease 1088-1092
Nir, Talia M. (Imaging Genetics Center, University of Southern California); Zavaliangos-Petropulu, Artemis (University of Southern California); Jahanshad, Neda (Imaging Genetics Center, University of Southern California); Villalon-Reina, Julio (University of California, Los Angeles); Zhan, Liang (University of Wisconsin-Stout); Leow, Alex D. (University of Illinois at Chicago); Bernstein, Matthew (Mayo Clinic, Rochester, MN); Jack, Clifford R (Department of Radiology, Mayo Clinic, Rochester, Minnesota); Weiner, Michael (UCSF); Thompson, Paul (University of Southern California)*

16:15-16:30	FrCT2.2
The Confinement Tensor Model Improves Characterization of Diffusion-Weighted Magnetic Resonance Data with Varied Timing Parameters	
Zucchelli, Mauro* (University of Verona); afzali, Maryam (Sharif University of technology); Yolcu, Cem (University of Padua); Westin, Carl-Fredrik (Brigham and Women's Hospital, Harvard Medical School); Menegaz, Gloria (University of Verona); Ozarslan, Evren (Bogazici University)	1093-1096
16:30-16:45	FrCT2.3
Shore-Based Biomarkers Allow Patient versus Control Classification in Stroke	
Obertino, Silvia* (University of Verona); Brusini, Lorenza (University of Verona, Dept. of Computer Science); Boscolo Galazzo, Ilaria (Dept. of Neuroradiology, University Hospital of Verona, Italy); Zucchelli, Mauro (University of Verona); Granziera, Cristina (University of Lausanne, Dept. of Clinical Neuroscience); Cristani, Marco (Dept. of Computer Science, University of Verona, Italy); Menegaz, Gloria (University of Verona)	1097-1100
16:45-17:00	FrCT2.4
An Experimental Investigation of Labeling Efficiency for Pseudo-Continuous Arterial Spin Labeling	
Chai, Yaqiong (Children's Hospital of Los Angeles/Univ. of Southern Califo); Bush, Adam (Children's Hospital Los Angeles); Coloigner, Julie (Children's Hospital); Chia, Jonathan (Philips Healthcare); Lepore, Natasha* (Univ. of Southern California / Children's Hospital Los Ange); Wood, John (Children's Hospital Los Angeles)	1101-1104
17:00-17:15	FrCT2.5
Spatial and Spectral Anisotropy in Harp Images: An Automated Approach	
Sanz-Estébanez, Santiago* (Universidad de Valladolid); Cordero-Grande, Lucilio (King's College London); Aja-Fernandez, Santiago (Universidad de Valladolid); Martin-Fernandez, Marcos (University of Valladolid); Alberola-López, Carlos (Universidad de Valladolid)	1105-1108
FrCT3: 16:00-17:30 Kepler & Tycho	
Registration Methods for Biological Imaging (Oral Session)	
Chair: Bouthemy, Patrick (Inria)	
Co-Chair: Rohr, Karl (University of Heidelberg, DKFZ Heidelberg)	
16:00-16:15	FrCT3.1
Joint 3D Alignment-Reconstruction Multi-Scale Approach for Cryo Electron Tomography	
Rojbani, Hmida* (University of Strasbourg, CNRS, ICube, University of Tunis ElMan); Baudrier, Etienne (University of Strasbourg, CNRS, ICube); Naegel, Benoît (LSIIT); Mazo, Loïc (University of Strasbourg, CNRS, ICube); Hamouda, Atef (University of Tunis ElManar, LIPAH)	1109-1113
16:15-16:30	FrCT3.2
Demon Registration of OCT and Histology Images through Edge Orientation-Weighted Modality Transformation	
Rekha, Smruti* (TU Delft); Dijkstra, Jouke (Leiden University Medical Center, Dept of Radiology)	1114-1117
16:30-16:45	FrCT3.3
Non-Rigid Registration and Robust Principal Component Analysis with Variation Priors: A High-Throughput Mouse Phenotyping Approach	
Xie, Zhongliu* (Imperial College London); Kitamoto, Asanobu (National Institute of Informatics); Tamura, Masaru (National Institute of Genetics); Shiroishi, Toshihiko (National Institute of Genetics); Gillies, Duncan (Imperial College London)	1118-1122
16:45-17:00	FrCT3.4
Robust Registration of Calcium Images by Learned Contrast Synthesis	
Bogovic, John (HHMI Janelia); Hanslovsky, Philipp (HHMI Janelia); Wong, Allan (HHMI Janelia); Saalfeld, Stephan* (HHMI Janelia)	1123-1126
17:00-17:15	FrCT3.5
Spatio-Temporal Registration of 3D Microscopy Image Sequences of Arabidopsis Floral Meristems	
Michelin, Gaël* (INRIA Sophia Antipolis); Refahi, Yassin (Sainsbury Laboratory, Univ. of Cambridge); Wightman, Raymond (Sainsbury Laboratory, Univ. of Cambridge); Jönsson, Henrik (Sainsbury Laboratory, Univ. of Cambridge); Traas, Jan (Laboratoire de Reproduction et Développement des Plantes, Univer); Godin, Christophe (Inria, Virtual Plants team, UMR AGAP, 34095 Montpellier, France); Malandain, Gregoire (INRIA)	1127-1130

FrCT4: 16:00-17:30	Meridian
Vessel Analysis (Oral Session)	
Chair: Kybic, Jan (Czech Technical University in Prague)	

16:00-16:15 FrCT4.1
Vessel Tree Segmentation via Front Propagation and Dynamic Anisotropic Riemannian Metric 1131-1134
Chen, Da (Université Paris Dauphine); Cohen, Laurent (Paris Dauphine University)*

16:15-16:30 FrCT4.2
Vessel Segmentation from Quantitative Susceptibility Maps for Local Oxygenation Venography 1135-1138
Bazin, Pierre-Louis (Max Planck Institute for Human Cognitive and Brain Sciences); Plessis, Victoire (Max Planck Institute for Human Cognitive and Brain Sciences); Fan, Audrey (Stanford University); Villringer, Arno (Max Planck Institute for Human Cognitive and Brain Sciences); Gauthier, Claudine (Concordia University)*

16:30-16:45 FrCT4.3
Vesselness Estimation through Higher-Order Orientation Tensors 1139-1142
Moreno, Rodrigo (KTH Royal Institute of Technology); Smedby, Örjan (KTH Royal Institute of Technology)*

16:45-17:00 FrCT4.4
Exhaustive Graph Cut-Based Vasculature Reconstruction 1143-1146
Unberath, Mathias (Friedrich-Alexander-Universität Erlangen-Nürnberg); Achenbach, Stephan (Department of Cardiology, University Hospital Erlangen, Erlangen); Fahrig, Rebecca (Stanford); Maier, Andreas (Friedrich-Alexander-University Erlangen-Nuremberg)*

17:00-17:15 FrCT4.5
Virtual Parenchymal Perfusion for Selective Intra-Arterial Therapy of Liver Cancer 1147-1150
Lesage, David (Philips); Pizaine, Guillaume (Philips); Miyayama, Shiro (Department of Diagnostic Radiology, Fukui-ken Saiseikai Hospital); Kobeiter, Hicham (Department of Medical Imaging, Henri Mondor University Hospital); Wood, Bradford (NIH); Mielekamp, Peter (Image Guided Therapy Systems, Philips); van der Sterren, William (Image Guided Therapy Systems, Philips); Radaelli, Alessandro (Philips Healthcare, iXR Division)*

Saturday, 16 April 2016

SaPoster_T1: 08:15-09:50	Virgo/Leo/Taurus
Image Analysis for Histopathology (Poster Session)	

08:15-09:50 SaPoster_T1.1
An Automatic Breast Cancer Grading Method in Histopathological Images based on Pixel-, Object-, and Semantic-Level Features 1151-1154
Cao, Jiajia (Beihang University); Qin, Zengchang (Beihang University); Jing, Juan (Beihang University); Chen, Jianhui (No. 91 Central Hospital of PLA); Wan, Tao (Beihang University)*

08:15-09:50 SaPoster_T1.2
An Improved Hybrid Active Contour Model for Nuclear Segmentation on Breast Cancer Histopathology .. 1155-1158
Jing, Juan (Beihang University); Wan, Tao (Beihang University); Cao, Jiajia (Beihang University); Qin, Zengchang (Beihang University)*

08:15-09:50 SaPoster_T1.3
Segmenting Individual Cervical Cell in Pap Smear Images 1159-1162
Song, Youyi (Shenzhen University); Cheng, Jie-Zhi (Shenzhen University); Ni, Dong (National-Regional Key Technology Engineering Laboratory for Medi); Chen, Siping (Shenzhen University); Lei, Baiying (Shenzhen University); Wang, Tianfu (Shenzhen University)*

08:15-09:50 SaPoster_T1.4
Towards Grading Gleason Score using Generically Trained Deep Convolutional Neural Networks 1163-1167
Källén, Hanna (Lund University); Molin, Jesper (Chalmers University of Technology); Heyden, Anders (Lund University); Lundström, Claes (Linköping University); Åström, Kalle (Lund University)*

08:15-09:50 SaPoster_T1.5
Experiments in Molecular Subtype Recognition based on Histopathology Images 1168-1172
Budinska, Eva (Masaryk University); Bosman, Fred T (University of Lausanne); Popovici, Vlad (Masaryk University)*

08:15-09:50 SaPoster_T1.6
Lung Cancer Survival Prediction from Pathological Images and Genetic Data – An Integration Study 1173-1176
zhu, Xinliang (University of Texas at Arlington); Yao, Jiawen (University of Texas at Arlington); Luo, Xin (UT Southwestern Medical Center at Dallas); Xiao, Guanghua (University of Texas, Southwestern); Xie, Yang (University of Texas, Southwestern); Gazdar, Adi (University of Texas, Southwestern); Huang, Junzhou (University of Texas at Arlington)*

SaPoster_T2: 08:15-09:50 Virgo/Leo/Taurus
CAD (Poster Session)

08:15-09:50 SaPoster_T2.1
3D Diffusion MRI-Based CAD System for Early Diagnosis of Acute Renal Rejection 1177-1180
Shehata, Mohamed (Bioluminescence Laboratory, Bioengineering Department, University of); Khalifa, Fahmi (University of Louisville); Soliman, Ahmed (University of Louisville); Taki Eldeen, Ali (Bioluminescence Laboratory, Bioengineering Department, University of); Abou El-Ghar, Mohamed (Radiology Department, Urology and Nephrology Center, University); Shaffie, Ahmed (University of Louisville); Dwyer, Amy (School of Medicine Kidney Transplantation–Kidney Disease Center); Ouseph, Rosemary (School of Medicine Kidney Transplantation–Kidney Disease Center); El-baz, Ayman (University of Louisville); Keynton, Robert (Bioengineering Department, University of Louisville)*

08:15-09:50 SaPoster_T2.2
Osteoporotic and Neoplastic Compression Fracture Classification on Longitudinal CT 1181-1184
Wang, Yinong (National Institutes of Health); Yao, Jianhua (National Institutes of Health); Burns, Joseph (UC Irvine); Summers, Ronald (National Institutes of Health Clinical Center)*

08:15-09:50 SaPoster_T2.3
Tumour ROI Estimation in Ultrasound Images via Radon Barcodes in Patients with Locally Advanced Breast Cancer 1185-1189
Tizhoosh, Hamid Reza (University of Waterloo); Gangeh, Mehrdad (University of Toronto); Tadayyon, Hadi (Queen's University, School of Computing); Czarnota, Gregory (University of Toronto, Sunnybrook Health Sciences Centre)*

08:15-09:50 SaPoster_T2.4
Comprehensive Autoencoder for Prostate Recognition on MR Images 1190-1194
Yan, Ke (The Univ. of Sydney); Li, Changyang (Univ. of Sydney); Wang, Xiu Ying (The Univ. of Sydney); Yuan, Yuchen (The Univ. of Sydney); Li, Ang (The Univ. of Sydney); Kim, Jinman (Univ. of Sydney); Li, Biao (Shanghai Jiaotong Univ. School of Medicine); Feng, Dagan (The Univ. of Sydney)*

08:15-09:50 SaPoster_T2.5
Sparsity-Based Liver Metastases Detection using Learned Dictionaries 1195-1198
Ben-Cohen, Avi (Tel Aviv University); Klang, Eyal (Sheba Medical Center); Amitai, Michal (Sheba Medical Center); Greenspan, Hayit K. (Tel Aviv University)*

08:15-09:50 SaPoster_T2.6
Improved Noninvasive Prostate Cancer Assessment using Multiparametric Magnetic Resonance Imaging 1199-1203
Li, Xia (GE Global Research Center); Singanamalli, Asha (GE Global Research Center); Shanbhag, Dattesh (General Electric); Hötker, Andreas (Universitätsmedizin Mainz); Aras, Omer (University of Maryland); Oguz, Akin (Memorial Sloan-Kettering Cancer Center); Bhagalia, Roshni (General Electric)*

Classification Methods for Biological Images (Poster Session)

- 08:15-09:50 SaPoster_T3.1
Automated Mitosis Detection with Deep Regression Networks 1204-1207
*Chen, Hao** (The Chinese University of Hong Kong); *Wang, Xi* (Sichuan University);
Heng, Pheng Ann (The Chinese University of Hong Kong)
- 08:15-09:50 SaPoster_T3.2
Transfer Learning of a Convolutional Neural Network for Hep-2 Cell Image Classification 1208-1211
*Phan, Tran Hong Ha** (University of Sydney); *Kumar, Ashnil* (University of Sydney);
Kim, Jinman (University of Sydney); *Feng, Dagan* (The University of Sydney)
- 08:15-09:50 SaPoster_T3.3
Texture Analysis of 3D Fluorescence Microscopy Images using RSurf 3D Features 1212-1216
*Stoklasa, Roman** (Masaryk University); *Majtner, Tomas* (Masaryk University)
- 08:15-09:50 SaPoster_T3.4
Machine Learning Classification of Complex Vasculature Structures from In-Vivo Bone Marrow 3D Data 1217-1220
*Khorshed, Reema Adel** (Department of Life Sciences, Imperial College London, SW7 2AZ, U);
Lo Celso, Cristina (Department of Life Sciences, Imperial College London, SW7 2AZ, U)
- 08:15-09:50 SaPoster_T3.5
Automated Quantification of the Epidermal Aging Process using In-Vivo Confocal Microscopy 1221-1224
*Robic, Julie** (Clarins Laboratory, ESIEE Paris); *Nkengne, Alex* (Clarins Laboratories); *Perret, Benjamin* (ESIEE Paris); *Coupric, Michel* (ESIEE Paris); *Talbot, Hugues* (Paris-Est University)
- 08:15-09:50 SaPoster_T3.6
Efficient Convolutional Neural Networks for Pixelwise Classification on Heterogeneous Hardware Systems 1225-1228
*Tschopp, Fabian David** (ETH Zurich); *Martel, Julien N.P.* (UZH / ETH-Zurich); *Turaga, Srinivas C* (HHMI Janelia Research Campus); *Cook, Matthew* (University of Zurich and ETH Zurich); *Funke, Jan* (Institute of Neuroinformatics (INI) UZH/ETH Zurich)
- 08:15-09:50 SaPoster_T3.7
Texture Analysis of Tissue Aging using Global and Cluster Constrained Local Coding 1229-1232
*Song, Yang** (University of Sydney); *Cai, Weidong* (University of Sydney); *Zhang, Fan* (The University of Sydney); *Huang, Heng* (University of Texas at Arlington); *Feng, Dagan* (The University of Sydney);
Wang, Yue (Virginia Polytechnic Institute and State University); *Chen, Mei* (Carnegie Mellon University)

Diffusion Weighted MR (Poster Session)

- 08:15-09:50 SaPoster_T4.1
Model-Free Novelty-Based Diffusion MRI 1233-1236
*Golkov, Vladimir** (Technical Univ. of Munich); *Sprenger, Tim* (Technical Univ. of Munich); *Sperl, Jonathan* (GE Global Research); *Menzel, Marion* (GE Global Research); *Czisch, Michael* (Max Planck Institute of Psychiatry);
Sämann, Philipp (Max Planck Institute of Psychiatry); *Cremers, Daniel* (Technical Univ. of Munich)
- 08:15-09:50 SaPoster_T4.2
A New NMF-Autoencoder based Cad System for Early Diagnosis of Prostate Cancer 1237-1240
*Reda, Islam** (Faculty of Computers and Information, Mansoura University - Biol); *Shalaby, Ahmed* (University of Louisville); *Abou El-Ghar, Mohamed* (Radiology Department, Urology and Nephrology Center, University);
Khalifa, Fahmi (University of Louisville); *Elmogy, Mohammed* (Faculty of Computers and Information, Mansoura University); *Ahmed, Aboufotouh* (Information Systems Department, Faculty of Computers and Informat); *Hosseini-Asl, Ehsan* (University of Louisville); *El-baz, Ayman* (University of Louisville);
Keynton, Robert (Bioengineering Department, University of Louisville)

08:15-09:50	SaPoster_T4.3
A Sensitivity Analysis of Q-Space Indices with Respect to Changes in Axonal Diameter, Dispersion and Tissue Composition	
Fick, Rutger H.J.* (INRIA); Pizzolato, Marco (Athena Project-Team, Inria Sophia Antipolis - Mediterranee); Wassermann, Demian (Harvard); Zucchelli, Mauro (University of Verona); Menegaz, Gloria (University of Verona); Deriche, Rachid (INRIA Sophia Antipolis-Méditerranée)	1241-1244
08:15-09:50	SaPoster_T4.4
Steering Second-Order Tensor Voting by Vote Clustering	
Jörgens, Daniel (KTH Royal Institute of Technology); Smedby, Örjan (KTH Royal Institute of Technology); Moreno, Rodrigo* (KTH Royal Institute of Technology)	1245-1248
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Pulmonary Image Analysis (Poster Session)	
08:15-09:50	SaPoster_T7.1
Association between Tumor Heterogeneity and Overall Survival in Patients with Non-Small Cell Lung Cancer	
Song, Jiangdian (Sino-Dutch Biomedical and Information Engineering School, Northe); Dong, Di (Chinese Academy of Sciences); Huang, Yanqi (Department of Radiology, Guangdong General Hospital, Guangdong A); Liu, Zaiyi (Department of Radiology, Guangdong General Hospital, Guangdong A); Tian, Jie* (Chinese Academy of Sciences)	1249-1252
08:15-09:50	SaPoster_T7.2
An Iso-Surfaces based Local Deformation Handling Framework of Lung Tissues	
Soliman, Ahmed* (University of Louisville); Khalifa, Fahmi (University of Louisville); Dunlap, Neal (University of Louisville, Louisville); Wang, Brian (University of Louisville); Abou El-Ghar, Mohamed (Radiology Department, Urology and Nephrology Center, University); El-baz, Ayman (University of Louisville)	1253-1256
08:15-09:50	SaPoster_T7.3
Motion-Induced Monte Carlo Dose Calculation using Deformable Tetrahedral Meshes	
Touileb, Yazid (LIRIS laboratory Université Claude Bernard LYON 1); Manescu, Petru (Claude Bernard University Lyon 1); Ladjal, Hamid* (Lyon University); Azencot, Joseph (Liris Lyon University); Beuve, Michael (IPNL Lyon 1); Shariat, Behzad (Université Lyon 1)	1257-1260
08:15-09:50	SaPoster_T7.4
The Pythagorean Averages as Group Images in Efficient Groupwise Registration	
Poffliet, Mathias* (Vrije Universiteit Brussel); Klein, Stefan (Erasmus MC); Huizinga, Wyke (Erasmus MC - University Medical Center Rotterdam); de Mey, Johan (Universitair Ziekenhuis Brussel); Vandemeulebroucke, Jef (Vrije Universiteit Brussel (VUB); iMinds)	1261-1264
08:15-09:50	SaPoster_T7.5
Segmentation Label Propagation using Deep Convolutional Neural Networks and Dense Conditional Random Field	
Gao, Mingchen (National Institutes of Health); Xu, Ziyue* (National Institutes of Health); Lu, Le (NIH); Wu, Aaron (NIH); Nogues, Isabella (National Institutes of Health); Summers, Ronald (National Institutes of Health Clinical Center); Mollura, Daniel J. (National Institutes of Health)	1265-1268
08:15-09:50	SaPoster_T7.6
Derivation of a Test Statistic for Emphysema Quantification	
Vegas-Sanchez-Ferrero, Gonzalo* (Applied Chest Imaging Lab., Brigham and Women's Hospital, Harvar); Washko, George R. (Brigham Women's Hospital and Harvard Medical School); Rahaghi, Nicholas (University of California, San Diego); Ledesma-Carbayo, Maria J. (Universidad Politécnica de Madrid); San Jose Estepar, Raul (Brigham Women's Hospital and Harvard Medical School)	1269-1273
08:15-09:50	SaPoster_T7.7
Detection of Lung Injury using 4D-CT Chest Images	
Soliman, Ahmed* (University of Louisville); Khalifa, Fahmi (University of Louisville); Shaffie, Ahmed (University of Louisville); Dunlap, Neal (University of Louisville, Louisville); Wang, Brian (University of Louisville); Elmaghraby, Adel (University of Louisville); El-baz, Ayman (University of Louisville)	1274-1277

- 08:15-09:50 SaPoster_T8.1
Identifying Autism Biomarkers in Default Mode Network using Sparse Representation of Resting-State FMRI Data 1278-1281
*Ren, Yudan** (Northwestern Polytechnical Univ.); *Hu, Xintao* (Northwestern Polytechnical Univ., Xian, China);
Lv, Jinglei (Northwestern Polytechnical Univ., China; The Univ. of G); *Guo, Lei* (Northwestern Polytechnical Univ.); *Han, Junwei* (Northwestern Polytechnical Univ.); *Liu, Tianming* (Univ. of Georgia)
- 08:15-09:50 SaPoster_T8.2
Compressed Online Dictionary Learning for Fast Resting-State FMRI Decomposition 1282-1285
*Mensch, Arthur** (Parietal team, INRIA,); *Varoquaux, Gael* (Inria); *Thirion, Bertrand* (INRIA Futurs)
- 08:15-09:50 SaPoster_T8.3
Locality Regularized Sparse Subspace Clustering with Application to Cortex Parcellation on Resting FMRI 1286-1290
*Sui, Xiuchao** (Nanyang Technological University); *Li, Shaohua* (Nanyang Technological University);
Rajapakse, Jagath C (Nanyang Technological University)
- 08:15-09:50 SaPoster_T8.4
Product Hidden Markov Models for Subject-Based Dynamic Functional Connectivity Analysis of the Resting State Brain 1291-1294
*Sourty, Marion** (ICube Uds-CNRS UMR 7357, Institut de Physique Biologique, 4 rue);
Thoraval, Laurent (Strasbourg University); *Armspach, Jean-Paul* (Université de Strasbourg);
Foucher, Jack R (Icube, UMR CNRS 7357, Uds, HUS, FMTS)
- 08:15-09:50 SaPoster_T8.5
Functional Connectivity Analysis for Thalassemia Disease based on Graphical Lasso Model 1295-1298
*Coloigner, Julie** (Children's Hospital); *Phlypo, Ronald* (GIPSA Lab, Grenoble INP); *Bush, Adam* (Children's Hospital Los Angeles); *Lepore, Natasha* (University of Southern California / Children's Hospital Los Ange);
Wood, John (Children's Hospital Los Angeles)
- 08:15-09:50 SaPoster_T8.6
Identifying the Latent Active Patterns Underlying the Dynamic Organization of Human Brain using Resting-State FMRI 1299-1302
*Chu, Congying** (Institute of Automation Chinese Academy of Sciences); *Jiang, Tianzi* (Institute of Automation)
- 08:15-09:50 SaPoster_T8.7
Kernel Partial Least Squares Regression for Relating Functional Brain Network Topology to Clinical Measures of Behavior 1303-1306
*Wong, Eleanor** (Univ. of Utah); *Palande, Sourabh* (Univ. of Utah); *Wang, Bei* (Univ. of Utah);
Zielinski, Brandon (Univ. of Utah); *Anderson, Jeffrey* (Univ. of Utah); *Fletcher, P. Thomas* (Univ. of Utah)
- 08:15-09:50 SaPoster_T8.8
Traces of Human Functional Activity: Moment-to-Moment Fluctuations in FMRI Data 1307-1310
*Dodero, Luca** (Pattern Analysis and Computer Vision (PAVIS), Istituto Italiano); *Sona, Diego* (Istituto Italiano di Tecnologia (IIT)); *Meskaldji, Djalel Eddine* (University of Geneva); *Murino, Vittorio* (Istituto Italiano di Tecnologia); *Van De Ville, Dimitri* (EPFL & UniGE)
- 08:15-09:50 SaPoster_T8.9
Predicting Individual Scores from Resting State FMRI using Partial Least Square Regression 1311-1314
*Meskaldji, Djalel Eddine** (University of Geneva); *Preti, Maria Giulia* (EPFL / Université de Genève); *Bolton, Thomas* (EPFL); *Montandon, Marie-Louise* (Geneva University Hospitals); *Rodriguez, Cristelle* (University Hospitals of Geneva); *Morgenthaler, Stephan* (EPFL); *Giannakopoulos, Panteleimon* (Department of Mental Health and Psychiatry, University Hospitals); *Haller, Sven* (Faculty of Medicine, University of Geneva, Switzerland); *Van De Ville, Dimitri* (EPFL & UniGE)

- 08:15-09:50 SaPoster_T10.1
Classification of Multiple Sclerosis Lesion Evolution Patterns: A Study based on Unsupervised Clustering of Asynchronous Time-Series 1315-1319
*Mure, Simon** (Université de Lyon, CREATIS; CNRS UMR5220; Inserm U1044; INSA-Ly); *Grenier, Thomas* (Université de Lyon, CREATIS; CNRS UMR5220; Inserm U1044; INSA-Ly); *Guttmann, Charles* (Brigham and Women's Hospital - Harvard Medical School); *Cotton, François* (Hospices Civils de Lyon - CREATIS); *Benoit-Cattin, Hugues* (INSA Lyon)
- 08:15-09:50 SaPoster_T10.2
Generic Method for Intensity Standardization of Medical Images using Multiscale Curvelet Representation 1320-1323
*Mansoor, Awais** (Children's National Health System);
Linguraru, Marius George (Children's National Health System)
- 08:15-09:50 SaPoster_T10.3
Segmentation of Organs in Pig Offal using Auto-Context 1324-1328
*Amaral, Telmo** (Newcastle University); *Kyriazakis, Ilias* (Newcastle University);
McKenna, Stephen (University of Dundee); *Ploetz, Thomas* (Newcastle University)
- 08:15-09:50 SaPoster_T10.4
Cochlear Implant Electrode Localization in Post-Operative CT using a Spherical Measure 1329-1333
Braithwaite, Benjamin (Technical University of Denmark); *Kjer, Hans Martin** (Technical University of Denmark);
Fagertun, Jens (Technical University of Denmark); *Gonzalez Ballester, Miguel Angel* (Universitat Pompeu Fabra); *Dhanasingh, Anandhan* (MED-EL); *Mistrik, Pavel* (Medel); *Gerber, Nicolas* (University of Bern);
Paulsen, Rasmus R. (Technical University of Denmark)
- 08:15-09:50 SaPoster_T10.5
A Locally Constrained Statistical Shape Model for Robust Nasal Cavity Segmentation in Computed Tomography 1334-1337
*Huang, Robin** (University of Sydney); *Li, Ang* (The University of Sydney); *Bi, Lei* (University of Sydney);
Li, Changyang (University of Sydney); *Young, Paul* (Woolcock Institute of Medical Research); *King, Gregory* (Sydney University); *Feng, Dagan* (The University of Sydney); *Kim, Jinman* (University of Sydney)
- 08:15-09:50 SaPoster_T10.6
Metric Learning for Label Fusion in Multi-Atlas based Image Segmentation 1338-1341
Zhu, Hancan (Institute of Automation, Chinese Academy of Sciences); *Cheng, Hewei* (Institute of Automation);
Yang, Xuesong (Institute of Automation, Chinese Academy of Sciences); *Fan, Yong** (Univ. of Pennsylvania)
- 08:15-09:50 SaPoster_T10.7
Fully Convolutional Networks for Multi-Modality Isointense Infant Brain Image Segmentation 1342-1345
*Nie, Dong** (UNC); *Wang, Li* (UNC-Chapel Hill); *Gao, Yaozong* (The University of North Carolina at Chapel Hill);
Shen, Dinggang (UNC-Chapel Hill)

- 08:15-09:50 SaPoster_T11.1
3D Vascular Path Planning of Chemo-Embolizations using Segmented Hepatic Arteries from MR Angiography 1346-1349
Badoual, Anaïs (Ecole Polytechnique Fédérale de Lausanne); *Gerard, Maxime* (Polytechnique Montreal);
De Leener, Benjamin (Polytechnique Montreal); *Abi-Jaoudeh, Nadine* (National Institutes of Health);
*Kadoury, Samuel** (Polytechnique Montreal)
- 08:15-09:50 SaPoster_T11.2
Quantitation of Arterial Spin Labeling MRI Labeling Efficiency in High Cervical Velocity Conditions using Phase Contrast Angiography 1350-1353
*Juttukonda, Meher** (Vanderbilt University Medical Center); *Jordan, Lori* (Vanderbilt University Medical Center);
Gindville, Melissa (Vanderbilt University Medical Center); *Pruthi, Sumit* (Vanderbilt University Medical Center);
Donahue, Manus (Vanderbilt University Medical Center)

08:15-09:50 SaPoster_T11.3
Location-Specific Prediction of Vulnerable Plaque using IVUS, Virtual Histology, and Spatial Context ... 1354-1358
Zhang, Ling (University of Iowa); Wahle, Andreas (The University of Iowa); Chen, Zhi (The University of Iowa); Lopez, John (Loyola University); Kovarnik, Tomas (Charles University); Sonka, Milan (University of Iowa)*

08:15-09:50 SaPoster_T11.4
Multiscale Distribution Preserving Autoencoders for Plaque Detection in Intravascular Optical Coherence Tomography 1359-1362
Guha Roy, Abhijit (Indian Institution of Technology, Kharagpur); Conjeti, Sailesh (Technical Univ. of Munich); Carlier, Stephane (Univ. Ziekenhuis Brussel); Houissa, Khalil (Univ. of Mons); König, Andreas (Dept of Cardiology, Klinikum Innenstadt der Univ. Mu); Dutta, P.K. (School of Medical Science and Technology, IIT Kharagpur, India); Laine, Andrew F. (Columbia Univ.); Navab, Nassir (Technische Univ. München); Katouzian, Amin (Technical Univ. of Munich); Sheet, Debdoot (Indian Institute of Technology Kharagpur)*

08:15-09:50 SaPoster_T11.5
Deep Vessel Tracking: A Generalized Probabilistic Approach via Deep Learning 1363-1367
Wu, Aaron (NIH); Xu, Ziyue (National Institutes of Health); Gao, Mingchen (National Institutes of Health); Buty, Mario (NIH); Mollura, Daniel J. (National Institutes of Health)*

08:15-09:50 SaPoster_T11.6
Unsupervised Extraction of the Aortic Dissection Membrane based on a Multiscale Piecewise Ridge Model 1368-1371
Morariu, Cosmin Adrian (Duisburg-Essen, Intelligente Systeme); Zohourian, Farnoush (Duisburg-Essen, Intelligente Systeme); Dohle, Daniel (Duisburg-Essen, Department of Thoracic and Cardiovascular Surger); Tsagakis, Konstantinos (Duisburg-Essen, Department of Thoracic and Cardiovascular Surger); Pauli, Josef (Duisburg-Essen, Intelligente Systeme)*

SaAT2: 11:15-12:45	Zenit
MR Acquisition - Oral (Oral Session)	

11:15-11:30 SaAT2.1
Distortion Correction in Fetal EPI using Non-Rigid Registration with Laplacian Constraint 1372-1375
Murgasova, Maria (Kings College London); Lockwood Estrin, Georgia (King's College London); Rutherford, Mary (King's College London); Rueckert, Daniel (Imperial College London); Hajnal, Joseph V. (King's College London)*

11:30-11:45 SaAT2.2
Variance Stabilization of Noncentral-Chi Data: Application to Noise Estimation in MRI 1376-1379
Pieciak, Tomasz (AGH Univ. of Science and Technology); Vegas-Sanchez-Ferrero, Gonzalo (Applied Chest Imaging Lab., Brigham and Women's Hospital, Harvar); Aja-Fernandez, Santiago (Universidad de Valladolid)*

11:45-12:00 SaAT2.3
Reference-Free EPI Nyquist Ghost Correction using Annihilating Filter-Based Low Rank Hankel Matrix for K-Space Interpolation 1380-1383
Lee, Juyoung (Korea Advanced Institute of Science and Technology); Jin, Kyong Hwan (KAIST); Ye, Jong Chul (Korea Advanced Inst of Science & Tech)*

12:00-12:15 SaAT2.4
Simultaneous Bayesian Correction of Slab Boundary Artifacts and Bias Field for High Resolution Ex Vivo MRI 1384-1387
Iglesias, Juan Eugenio (Basque Center on Cognition, Brain and Language (BCBL)); Paz-Alonso, Pedro (Basque Center on Cognition, Brain and Language (BCBL)); Lerma-Usabiaga, Garikoitz (Basque Center on Cognition, Brain and Language (BCBL)); Insausti, Ricardo (Human Neuroanatomy Laboratory, University of Castilla-La Mancha); Miller, Karla (Oxford University Centre for Functional MRI of the Brain (FMRIB)); Caballero Gaudes, Cesar (Basque Center on Cognition, Brain and Language)*

12:15-12:30 SaAT2.5
Sparse and Low-Rank Decomposition of MR Artifact Images using Annihilating Filter-Based Hankel Matrix 1388-1391
Jin, Kyong Hwan (KAIST); Lee, Juyoung (Korea Advanced Institute of Science and Technology); Lee, Dongwook (Korea Advanced Institute for Science and Technology); Ye, Jong Chul (Korea Advanced Inst of Science & Tech)*

SaAT3: 11:15-12:45	Kepler & Tycho
Computer-Aided Histopathology (Oral Session)	
Chair: Munoz-Barrutia, Arrate (<i>Universidad Carlos III de Madrid</i>)	
Co-Chair: Rajpoot, Nasir (<i>Qatar University & University of Warwick</i>)	

11:15-11:30	SaAT3.1
Multi-Class Single-Label Classification of Histopathological Whole-Slide Images	1392-1396
<i>Bug, Daniel*</i> (RWTH Aachen University); <i>Schueler, Julia</i> (Oncotest GmbH); <i>Feuerhake, Friedrich</i> (Hannover Medical School); <i>Merhof, Dorit</i> (RWTH Aachen University)	
11:30-11:45	SaAT3.2
Deep Features to Classify Skin Lesions	1397-1400
<i>Kawahara, Jeremy*</i> (Simon Fraser University); <i>BenTaieb, Aïcha</i> (Simon Fraser University); <i>Hamarneh, Ghassan</i> (Simon Fraser University)	
11:45-12:00	SaAT3.3
A Computational Framework for Disease Grading using Protein Signatures	1401-1404
<i>Zerhouni, Erwan Barry Tarik*</i> (IBM Research-Zurich); <i>Prisacari, Bogdan</i> (IBM Research-Zurich); <i>Zhong, Qing</i> (Institute of Surgical Pathology, University Hospital Zurich); <i>Wild, Peter</i> (University Hospital Zurich); <i>Gabrani, Maria</i> (IBM Research-Zurich)	
12:00-12:15	SaAT3.4
Gland Segmentation in Colon Histology Images using Hand-Crafted Features and Convolutional Neural Networks	1405-1408
<i>Li, Wenqi</i> (University College London); <i>Manivannan, Siyamalan</i> (Computer Vision and Image Processing group, School of Computing,); <i>Akbar, Shazia</i> (University of Dundee); <i>Zhang, Jianguo</i> (University of Dundee); <i>Trucco, Emanuele</i> (University of Dundee); <i>McKenna, Stephen*</i> (University of Dundee)	
12:15-12:30	SaAT3.5
New General Features based on Superpixels for Image Segmentation Learning	1409-1413
<i>Machairas, Vaia*</i> (Mines ParisTech, Centre for Mathematical Morphology); <i>Baldeweck, Thérèse</i> (L'Oréal Research and Innovation); <i>Walter, Thomas</i> (Institut Curie, Mines ParisTech); <i>Decenciere, Etienne</i> (MINES ParisTech)	

SaAT4: 11:15-12:45	Meridian
Machine Learning - Oral (Oral Session)	
Chair: de Bruijne, Marleen (<i>Erasmus MC - University Medical Center Rotterdam</i>)	

11:15-11:30	SaAT4.1
Non-Uniform Patch Sampling with Deep Convolutional Neural Networks for White Matter Hyperintensity Segmentation	1414-1417
<i>Ghafoorian, Mohsen*</i> (Diagnostic Image Analysis Group, Radboud University Medical Cent); <i>Karssemeijer, Nico</i> (Radboud University Medical Centre Nijmegen); <i>Heskes, Tom</i> (Radboud University Nijmegen); <i>van Uden, Inge W.M.</i> (Donders Institute for Brain, Cognition and Behaviour, Department); <i>de Leeuw, Frank-Erik</i> (Donders Institute for Brain, Cognition and Behaviour, Department); <i>Marchiori, Elena</i> (Institute for Computing and Information Sciences, Radboud Univer); <i>van Ginneken, Bram</i> (Radboud University Medical Center); <i>Platel, Bram</i> (Radboud University Nijmegen Medical Centre)	
11:30-11:45	SaAT4.2
A Hybrid Learning Approach for Semantic Labeling of Cardiac CT Slices and Recognition of Body Position	1418-1421
<i>Moradi, Mehdi*</i> (IBM Research); <i>Gur, Yaniv</i> (IBM Almaden Research Center); <i>Wang, Hongzhi</i> (IBM Almaden Research Center); <i>Prasanna, Prasanth</i> (IBM Research - Almaden); <i>Syeda-Mahmood, Tanveer</i> (IBM Almaden Research Center)	
11:45-12:00	SaAT4.3
Automatic Localization of Locally Similar Structures based on the Scale-Widening Random Regression Forest	1422-1425
<i>Stern, Darko*</i> (TU Graz); <i>Ebner, Thomas</i> (TU Graz); <i>Urschler, Martin</i> (Graz University of Technology)	

12:00-12:15

SaAT4.4

Automatic Spine and Pelvis Detection in Frontal X-Rays using Deep Neural

Networks for Patch Displacement Learning 1426-1429

Aubert, Benjamin (Laboratoire de recherche en imagerie et orthopédie (LIO), École); Vazquez, Carlos (École de Technologie Supérieure); Cresson, Thierry (Ecole de Technologie Supérieure); Parent, Stefan (University of Montreal); de Guise, Jacques A. (École de Technologie Supérieure)*

12:15-12:30

SaAT4.5

Real-Time 2D/3D Registration via CNN Regression

1430-1434

Miao, Shun (Siemens Healthcare, Technology Center); Wang, Z. Jane (University of British Columbia); Zheng, Yefeng (Siemens Healthcare Technology Center); Liao, Rui (Siemens Corporation, Corporate Technology)*