

## POSTER SESSIONS

**Tuesday, October 18**

**10:30 - 12:00 Poster Session 1**

**B1: Brain Analysis 1**

- PS1 - 1 Ordinal Patterns for Connectivity Networks in Brain Disease Diagnosis**  
*Mingxia Liu, Junqiang Du, Biao Jieo, Daoqiang Zhang*
- PS1 - 2 Discovering Cortical Folding Patterns in Neonatal Cortical Surfaces Using Large-scale Dataset**  
*Yu Meng, Gang Li, Li Wang, Weili Lin, John Gilmore, Dinggang Shen*
- PS1 - 3 Modeling Functional Dynamics of Cortical Gyri and Sulci**  
*Xi Jiang, Xiang Li, Jinglei Lv, Shijie Zhao, Shu Zhang, Wei Zhang, Tuo Zhang, Tianming Liu*
- PS1 - 4 A Multi-Stage Sparse Coding Framework to Explore the Effects of Prenatal Alcohol Exposure**  
*Shijie Zhao, Junwei Han, Jinglei Lv, Xi Jiang, Xintao Hu, Shu Zhang, Mary Ellen Lynch, Claire Coles, Lei Guo, Xiaoping Hu, Tianming Liu*
- PS1 - 5 Correlation-Weighted Sparse Group Representation for Brain Network Construction in MCI Classification**  
*Renping Yu, Han Zhang, Le An, Xiaobo Chen, Zhihui Wei, Dinggang Shen*
- PS1 - 6 Temporal Concatenated Sparse Coding of Resting State fMRI Data Reveal Network Interaction Changes in mTBI**  
*Jinglei Lv, Armin Iraji, Fangfei Ge, Shijie Zhao, Xintao Hu, Tuo Zhang, Junwei Han, Lei Guo, Zhifeng Kou, Tianming Liu*
- PS1 - 7 Exploring Brain Networks via Structured Sparse Representation of FMRI Data**  
*Qinghua Zhao, Jianfeng Lu, Jinglei Lv, Xi Jiang, Shijie Zhao, Tianming Liu*
- PS1 - 8 Discover Mouse Gene Coexpression Landscape Using Dictionary Learning and Sparse Coding**  
*Yujie Li, Hanbo Chen, Xi Jiang, Xiang Li, Jinglei Lv, Hanchuan Peng, Joe Tsien, Tianming Liu*
- PS1 - 9 Integrative Analysis of Cellular Morphometric Context Reveals Clinically Relevant Signatures in Lower Grade Glioma**  
*Ju Han, Yunfu Wang, Weidong Cai, Alexander Borowsky, Bahram Parvin, Hang Chang*

POSTER SESSIONS

**PS1 - 10 Mapping Lifetime Brain Volumetry with Covariate-Adjusted Restricted Cubic Spline Regression from Cross-sectional Multi-site MRI**

*Yuankai Huo, Katherine Aboud, Hakmook Kang, Laurie Cutting, Bennett Landman*

**PS1 - 11 Extracting the Core Structural Connectivity Network: Guaranteeing Network Connectedness Through a Graph-Theoretical Approach**

*Demian Wassermann, Dorian Mazauric, Guillermo Alejandro Gallardo Diez, Rachid Deriche*

**PS1 - 12 Fiber Orientation Estimation Using Nonlocal and Local Information**

*Chuyang Ye*

**ML1: Machine Learning 1**

**PS1 - 13 Feature Selection Based on Deep Canonical Correlation Analysis for Automatic Diagnosis of Parkinsons Disease**

*Luyan Liu, Qian Wang, Ehsan Adeli, Lichi Zhang, Han Zhang, Dinggang Shen*

**PS1 - 14 Identifying Relationships in Functional and Structural Connectome Learning Method Data Using a Hypergraph**

*Brent Munsell, Guorong Wu, Yue Gao, Nicholas Desisto, Martin Styner*

**PS1 - 15 Ensemble Hierarchical High-Order Functional Connectivity Networks for MCI Classification**

*Xiaobo Chen, Han Zhang, Dinggang Shen*

**PS1 - 16 Outcome Prediction for Patient with High-grade Gliomas from Brain Functional and Structural Networks**

*Luyan Liu, Han Zhang, Islem Rekik, Qian Wang, Dinggang Shen*

**PS1 - 17 Mammographic Mass Segmentation with Online Learned Shape and Appearance Priors**

*Menglin Jiang, Shaoting Zhang, Yuanjie Zheng, Dimitris Metaxas*

**PS1 - 18 Differential dementia diagnosis on incomplete data with Latent Trees**

*Christian Ledig, Sebastian Kaltwang, Antti Tolonen, Juha Koikkalainen, Philip Scheltens, Frederik Barkhof, Hanneke Rhodius-Meester, Betty Tijms, Afina W. Lemstra, Wiesje van der Flier, Jyrki Lötjönen, Daniel Rueckert*

**PS1 - 19 Bridging Computational Features toward Multiple Semantic Features with Multi-Task Regression: A Study of CT Pulmonary Nodules**

*Sihong Chen, Dong Ni, Jing Qin, Baiying Lei, Tianfu Wang, Jie-Zhi Cheng*

**PS1 - 20 Robust Cancer Treatment Outcome Prediction Dealing with Small-Sized and Imbalanced Data from FDG-PET Images**

*Chunfeng Lian, Su Ruan, Thierry Denœux, Hua Li, Pierre Vera*

## POSTER SESSIONS

**PS1 - 21 Structured Sparse Feature Selection and Kernel Learning for Imaging Genetics Based Alzheimers disease Diagnosis**

*Jialin Peng, Le An, Xiaofeng Zhu, Yan Jin, Dinggang Shen*

**PS1 - 22 Semi-supervised Hierarchical Multimodal Feature and Sample Selection for Alzheimers Disease Diagnosis Blind**

*Le An, Ehsan Adeli, Mingxia Liu, Jun Zhang, Dinggang Shen*

**PS1 - 23 Stability-Weighted Matrix Completion of Incomplete Multi-Modal Data for Disease Diagnosis Anonyms**

*Kim-Han Thung, Ehsan Adeli, Pew-Thian Yap, Dinggang Shen*

**PS1 - 24 Employing Visual Analytics to Aid the Design of White Matter Hyperintensity Classifiers**

*Renata Raidou, Hugo Kuijf, Neda Sepasian, Nicola Pezzotti, Willem Bouvy, Marcel Breeuwer, Anna Vilanova*

### CAI1: Surgical Guidance and Tracking

**PS1 - 25 3D Ultrasonic Needle Tracking with a 1.5D Transducer Array for Guidance of Fetal Interventions**

*Wenfeng Xia, Simeon West, Jean-Martial Mari, Sebastien Ourselin, Anna David, Adrien Desjardins*

**PS1 - 26 Enhancement of Needle Tip and Shaft from 2D Ultrasound Using Signal Transmission Maps**

*Cosmas Mwikirize, John L. Noshier, Ilker Hacihaliloglu*

**PS1 - 27 Plane Assist: The Influence of Haptics on Ultrasound-based Needle Guidance**

*Heather Culbertson, Julie Walker, Michael Raitor, Allison Okamura, Philipp Stolka*

**PS1 - 28 A Surgical Guidance System for Big-Bubble Deep Anterior Lamellar Keratoplasty**

*Hessam Roodaki, Chiara Amat di San Filippo Daniel Zapp, Nassir Navab, Abouzar Eslami*

**PS1 - 29 Towards Automated Ultrasound Transesophageal Echocardiography and X-Ray Fluoroscopy Fusion using an Image-based Co-registration Method**

*Shanhui Sun, Shun Miao, Tobias Heimann, Terrence Chen, Markus Kaiser, Matthias John, Erin Girard, Rui Liao*

**PS1 - 30 Robust, Real-time, Dense and Deformable 3D Organ Tracking in Laparoscopic Videos**

*Toby Collins, Adrien Bartoli, Nicolas Bourdel, Michel Canis*

**PS1 - 31 Structure-Aware Rank-1 Tensor Approximation for Curvilinear Structure Tracking Using Learned Hierarchical Features**

*Peng Chu, Yu Pang, Erkang Cheng, Ying Zhu, Yefeng Zheng, Haibin Ling*

**PS1 - 32 Real-Time Online Adaption for Robust Instrument Tracking and Pose Estimation**

*Nicola Rieke, David Joseph Tan, Federico Tombari, Josué Page Vizcaino, Chiara Amat di San Filippo, Abouzar Eslami, Nassir Navab*

**PS1 - 33 Integrated Dynamic Shape Tracking and RF Speckle Tracking for Cardiac Motion Analysis**

*Nripesh Parajuli, Allen Lu, John C Stendahl, Maria Zontak, Nabil Boutagy, Melissa Eberle, Imran Alkhalil, Matthew O'Donnell, Albert J Sinusas, James S Duncan*

**PS1 - 34 The Endoscopogram: a 3D Model Reconstructed from Endoscopic Video Frames**

*Qingyu Zhao, True Price, Stephen Pizer, Marc Niethammer, Ron Alterovitz, Julian Rosenman*

**PS1 - 35 Robust Image Descriptors for Real-Time Inter-Examination Retargeting in Gastrointestinal Endoscopy**

*Menglong Ye, Edward Johns, Benjamin Walter, Alexander Meining, Guang Zhong Yang*

**PS1 - 36 Kalman Filter Based Data Fusion for Needle Deflection Estimation Using Optical-EM Sensor**

*Baichuan Jiang, Wenpeng Gao, Daniel Kacher, Thomas Lee, Jayender Jagadeesan*

**PS1 - 37 Bone Enhancement in Ultrasound Based on 3D Local Spectrum Variation for Percutaneous Scaphoid Fracture Fixation**

*Emran Mohammad Abu Anas, Alexander Seitel, Abtin Rasoulian, Paul John, Tamas Ungi, Andras Lasso, Kathryn Darras, David Wilson, Victoria Lessoway, Gabor Fichtinger, Michelle Zec, David R. Pichora, Parvin Mousavi, Robert Rohling, Purang Abolmaesumi*

**PS1 - 38 Bioelectric Navigation: A New Paradigm for Intravascular Device Guidance**

*Bernhard Fuerst, Erin Sutton, Reza Ghotbi, Noah Cowan, Nassir Navab*

**CARD: Cardiac Image Analysis**

**PS1 - 39 Identifying Patients at Risk for Aortic Stenosis through Multimodal Learning**

*Tanveer Syeda-Mahmood, Yufan Guo, Mehdi Moradi, David Beymer, Deepta Rajan, Yu Cao, Yaniv Gur, Mohammadreza Negahdar*

**PS1 - 40 Multi-Input Cardiac Image Super-Resolution using Convolutional Neural Networks**

*Ozan Oktay, Wenjia Bai, Matthew Lee, Ricardo Guerrero, Konstantinos Kamnitsas, Jose Caballero, Antonio M Simoes Monteiro de Marvao, Stuart Cook, Declan O'Regan, Daniel Rueckert*

## POSTER SESSIONS

- PS1 - 41 GPNLPerf: Robust 4D non-rigid motion correction for Myocardial Perfusion analysis**  
*Sheshadri Thiruvankadam, Shriram K S, Bhushan Patil, Gogin Nicolas, Maxime Teisseire, Cyril Cardon, Jerome Knoploch, Navneeth Subramanian, Rakesh Mullick, Sandeep Kaushi*
- PS1 - 42 Recognizing End-diastole and End-systole Frames via Deep Temporal Regression Network**  
*Bin Kong, Yiqiang Zhan, Min Shin, Tom Denney, Shaoting Zhang*
- PS1 - 43 Basal Slice Detection using Long-Axis Segmentation for Cardiac Analysis**  
*Mahsa Paknezhad, Michael Brown, Stephanie Marchesseau*
- PS1 - 44 Spatially-Adaptive Multi-Scale Optimization for Local Parameter Estimation: Application in Cardiac Electrophysiological Models**  
*Jwala Dhamala, John Sapp, Milan Horacek, Linwei Wang*
- PS1 - 45 Reconstruction of Coronary Artery Centrelines from X-ray Angiography using a Mixture of Students T-distributions**  
*Serkan Çimen, Ali Gooya, Nishant Ravikumar, Zeike Taylor, Alejandro Frangi*
- PS1 - 46 Barycentric Subspace Analysis: A New Symmetric Group-Wise Paradigm For Cardiac Motion Tracking**  
*Marc-Michel Rohé, Maxime Sermesant, Xavier Pennec*

**16:00 - 17:30 Poster Session 2**

**B2: Brain Analysis 2 (Connectivity)**

- PS2 - 1 Reveal Consistent Spatial-Temporal Patterns from Dynamic Functional Connectivity for Autism Spectrum Disorder Identification**  
*Yingying zhu, Xiaofeng Zhu, Han Zhang, Wei Gao, Dinggang Shen, Guorong Wu*
- PS2 - 2 Boundary Mapping through Manifold Learning for Connectivity-Based Cortical Parcellation**  
*Salim Arslan, Sarah Parisot, Daniel Rueckert*
- PS2 - 3 Species Preserved and Exclusive Structural Connections Revealed by Sparse CCA**  
*Xiao Li, Lei Du, Tuo Zhang, Xintao Hu, Xi Jiang, Lei Guo, Tianming Liu*
- PS2 - 4 Modularity Reinforcement for Improving Brain Subnetwork Extraction**  
*Chendi Wang, Bernard Ng, Rafeef Abugharbieh*
- PS2 - 5 Effective Brain Connectivity Through a Constrained Autoregressive Model**  
*Alessandro Crimi, Luca Doderò, Vittorio Murino, Diego Sona*
- PS2 - 6 GraMPa: Graph-based Multi-modal Parcellation of the Cortex using Fusion Moves**  
*Sarah Parisot, Ben Glocker, Markus D Schirmer, Daniel Rueckert*
- PS2 - 7 A Continuous Model of Cortical Connectivity**  
*Daniel Moyer, Boris Gutman, Joshua Faskowitz, Neda Jahanshad, Paul Thompson*
- PS2 - 8 Label-Informed Non-Negative Matrix Factorization with Manifold Regularization for Discriminative Subnetwork Detection**  
*Takanori Watanabe, Birkan Tunc, Drew Parker, Junghoon Kim, Ragini Verma*
- PS2 - 9 Predictive Subnetwork Extraction with Structural Priors for Infant Connectomes**  
*Colin J. Brown, Steven P. Miller, Brian G. Booth, Jill G. Zwicker, Ruth E. Grunau, Anne R. Synnes, Vann Chau, Ghassan Hamarneh*
- PS2 - 10 Hierarchical Clustering of Tractography Streamlines Based on Anatomical Similarity**  
*Viviana Siless, Ken Chang, Bruce Fischl, Anastasia Yendiki*
- PS2 - 11 Unsupervised Identification of Clinically Relevant Clusters in Routine Imaging Data**  
*Johannes Hofmanninger, Markus Krenn, Thomas Schlegl, Markus Holzer, Helmut Prosch, Langs Georg*
- PS2 - 12 Probabilistic Tractography for Topographically Organized Connectomes**  
*Dogu Baran Aydogan, Yonggang Shi*

## POSTER SESSIONS

### ML2: Deep Learning in Medical Imaging

**PS2 - 13 The Automated Learning of Deep Features for Breast Mass Classification from Mammograms**

*Neeraj Dhungel, Gustavo Carneiro, Andrew Bradley*

**PS2 - 14 Multimodal Deep Learning for Cervical Dysplasia Diagnosis**

*Tao Xu, Han Zhang, Xiaolei Huang, Shaoting Zhang, Dimitris Metaxas*

**PS2 - 15 Learning From Experts: Developing Transferable Deep Features for Patient-level Lung Cancer Detection**

*Wei Shen, Mu Zhou, Feng Yang, Di Dong, Caiyun Yang, Yali Zang, Jie Tian*

**PS2 - 16 DeepVessel: Retinal Vessel Segmentation via Deep Learning and Conditional Random Field**

*Huazhu Fu, Yanwu Xu, Stephen Lin, Damon W.K. Wong, Jiang Liu*

**PS2 - 17 Deep Retinal Image Understanding**

*Kevis-Kokitsi Maninis, Jordi Pont-Tuset, Pablo Arbeláez, Luc Van Gool*

**PS2 - 18 3D Deeply Supervised Network for Automatic Liver Segmentation from CT Volumes**

*Qi Dou, Hao Chen, Yueming JIN, Lequan Yu, Jing Qin, Pheng Ann Heng*

**PS2 - 19 Deep Neural Networks for Fast Segmentation of 3D Medical Images**

*Karl Fritscher, UMIT, Patrik Raudaschl, Paolo Zaffino, Maria Francesca Spadea, Greg Sharp, Rainer Schubert*

**PS2 - 20 SpineNet: Automatically Pinpointing Classification Evidence in Spinal MRIs**

*Amir Jamaludin, Timor Kadir, Andrew Zisserman*

**PS2 - 21 A Deep Learning Approach for Semantic Segmentation in Histology Tissue Images**

*Jiazhuo Wang, John D. MacKenzie, Rageshree Ramachandran, Danny Z. Chen*

**PS2 - 22 Spatial Clockwork Recurrent Neural Network for Muscle Perimysium Segmentation**

*Yuanpu Xie, Zizhao Zhang, Manish Sapkota, Lin Yang*

**PS2 - 23 Automated Age Estimation from Hand MRI Volumes using Deep Learning**

*Darko Stern, Christian Payer, Vincent Lepetit, Martin Urschler*

**PS2 - 24 Real-time Standard Scan Plane Detection and Localisation in Fetal Ultrasound using Fully Convolutional Neural Networks**

*Christian Baumgartner, Konstantinos Kamnitsas, Jacqueline Matthew, Sandra Smith, Bernhard Kainz, Daniel Rueckert*

**PS2 - 25 3D Deep Learning for Multi-modal Imaging-guided Survival Time Prediction of Brain Tumor Patients**

*Dong Nie, Han Zhang, Ehsan Adeli, Luyan Liu, Dinggang Shen*

**CAI2: Computer Aided Interventions**

**PS2 - 26 Process Monitoring In The Intensive Care Unit: Assessing Patient Mobility Through Activity Analysis With A Non-Invasive Mobility Sensor**

*Austin Reiter, Andy Jinhua Ma, Nishi Rawat, Christine Shrock, Suchi Saria*

**PS2 - 27 Patient MoCap: Human Pose Estimation under Blanket Occlusion for Hospital Monitoring Applications**

*Felix Achilles, Alexandru-Eugen Ichim, Huseyin Coskun, Federico Tombari, Soheyl Noachtar, Nassir Navab*

**PS2 - 28 Numerical Simulation of Cochlear-Implant Surgery: Towards Patient-Specific Planning**

*Olivier Goury, Yann Nguyen, Renato Torres, Jeremie Dequidt, Christian Duriez*

**PS2 - 29 Real-time 3D Tracking of Articulated Tools for Robotic Surgery**

*Menglong Ye, Lin Zhang, Stamatia Giannarou, Guang Zhong Yang*

**PS2 - 30 Meaningful Assessment of Surgical Expertise: Semantic Labeling with Data and Crowds**

*Marzieh Ershad, Zachary Koesters, Robert Rege, Ann Majewicz*

**PS2 - 31 2D-3D Registration Accuracy Estimation for Optimised Planning of Image-guided Pancreatobiliary Interventions**

*Yipeng Hu, Ester Bonmati, Eli Gibson, John Hipwell, David Hawkes, Steven Bandula, Stephen Pereira, Dean Barratt*

**PS2 - 32 Registration-Free Simultaneous Catheter and Environment Modelling**

*Liang Zhao, Stamatia Giannarou, Su-Lin Lee, Guang Zhong Yang*

**PS2 - 33 Pareto front vs. weighted sum for automatic trajectory planning of Deep Brain Stimulation**

*Noura Hamze, Jimmy Voirin, Pierre Collet, Pierre Jannin, Claire Haegelen, Caroline Essert*

**PS2 - 34 Efficient Anatomy Driven Automated Multiple Trajectory Planning for Intracerebral Electrode Implantation**

*Rachel Sparks, Gergely Zombori, Roman Rodionov, Maria A. Zuluaga, Anna Miserocchi, Andrew W. McEvoy, John Duncan, Sebastien Ourselin*

**PS2 - 35 Recognizing Surgical Activities with Recurrent Neural Networks**

*Robert DiPietro, Colin Lea, Anand Malpani, Narges Ahmidi, S. Swaroop Vedula, Gyusung I. Lee, Mija R. Lee, Gregory D. Hager*



## POSTER SESSIONS

### **PS2 - 36 A Novel Simulation Method to Improve Facial Soft Tissue Prediction Accuracy for Orthognathic Surgery**

*Daeseung Kim, Chien-Ming Chang, Dennis Chiu-Yu Ho, Xiaoyan Zhang, Shunhao Shen, Peng Yuan, Huaming Mai, Guangming Zhang, Xiaobo Zhou, Jaime Gateno, Michael A.K. Liebschner, James J. Xia*

### **VIA: Vascular Image Analysis**

### **PS2 - 37 Extraction of Coronary Vessels in Fluoroscopic X-Ray Sequences Using Vessel Correspondence Optimization**

*Seung Yeon Shin, Soochahn Lee, Kyoung Jin Noh, Il Dong Yun, Kyoung Mu Lee*

### **PS2 - 38 Coronary Centerline Extraction via Optimal Flow Paths and CNN Path Pruning**

*Mehmet Akif Gulsun, Gareth Funka-Lea, Puneet Sharma, Saikiran Rapaka*

### **PS2 - 39 Vascular Registration in Photoacoustic Imaging By Low-Rank Alignment Via Foreground, Background and Complement Decomposition**

*Ryoma Bise, Yinqiang Zheng, Imari Sato, Masakazu Toi*

### **PS2 - 40 From Real MRA to Virtual MRA: Towards an Open-Source Framework (cid:63)**

*Nicolas Passat, Stéphanie Salmon, Jean-Paul Armspach, Benoît Naegel, Christophe Prud'homme, Hugues Talbot, Alexandre Fortin, Simon Garnotel, Odyssee Merveille, Olivia Miracourt, Ranine Tarabay, Vincent Chabannes, Alice Dufour, Anna Jezierska, Olivier Balédent, Emmanuel Durand, Laurent Najman, Marcela Szopos, Marc Thiriet, Julien Jomier*

### **PS2 - 41 Improved Diagnosis of Systemic Sclerosis using Nailfold Capillary Flow**

*Michael Berks, Graham Dinsdale, Andrea Murray, Tonia Moore, Ariane Herrick, Chris Taylor*

### **PS2 - 42 Tensor-based Graph-cut in Riemannian Metric Space and Its Application to Renal Artery Segmentation**

*Chenglong Wang, Masahiro Oda, Yuichiro Hayashi, Yasushi Yoshino, Tokunori Yamamoto, Alejandro Frangi, Kensaku Mori*

### **PS2 - 43 Automatic, Robust, and Globally Optimal Segmentation of Tubular Structures**

*Simon Pezold, Antal Horváth, Ketut Fundana, Charidimos Tsagkas, Michaela Andelová, Katrin Weier, Michael Amann, Philippe C. Cattin*

### **PS2 - 44 Dense Volume-to-Volume Vascular Boundary Detection**

*Jameson Merkow, Alison Marsden, David Kriegman, Zhuowen Tu*

### **PS2 - 45 HALE: Healthy Area of Lumen Estimation for Vessel Stenosis Quantification FN**

*Sethuraman Sankaran, Michiel Schaap, Stanley Hunley, James Min, Charles Taylor, Leo Grady*

**PS2 - 46 3D imaging and localization of peripheral blood vessels based on near infrared stereo vision, ultrasound, and real-time image analysis**

*Alvin Chen, Max Balter, Tim Maguir, Martin Yarmush*

**PS2 - 47 The Minimum Cost Connected Subgraph Problem in Medical Image Analysis**

*Markus Rempfler, Bjoern Andres, Bjoern Menze*

## POSTER SESSIONS

**Wednesday, October 19**

**10:30 - 12:00 Poster Session 3**

### **B3: Brain Analysis 3 (Cortical Morphology)**

- PS3 - 1 A Hybrid Multishape Learning Framework for Longitudinal Prediction of Cortical Surfaces and Fiber Tracts Using Neonatal Data**  
*Islem Rekik, Gang Li, Pew-Thian Yap, Geng Chen, Weili Lin, Dinggang Shen*
- PS3 - 2 Learning-based Topological Correction for Infant Cortical Surfaces**  
*Shijie Hao, Gang Li, Li Wang, Yu Meng, Dinggang Shen*
- PS3 - 3 Riemannian Metric Optimization for Connectivity-driven Surface Mapping**  
*Jin Kyu Gahm, Yonggang Shi*
- PS3 - 4 Riemannian Statistical Analysis of Cortical Geometry with Robustness to Partial Homology and Misalignment**  
*Suyash Awate, Richard Leahy, Anand Joshi*
- PS3 - 5 Modeling Fetal Cortical Expansion using Graph-Regularized Gompertz Models**  
*Ernst Schwartz, Gregor Kasprian, Andras Jakab, Daniela Prayer, Veronika Schöpf, Georg Langs*
- PS3 - 6 Longitudinal analysis of the preterm cortex using multi-modal spectral matching**  
*Eliza Orasanu, Pierre-Louis Bazin, Andrew Melbourne, Marco Lorenzi, Herve Lombaert, Nikki Robertson, Giles S. Kendall, Nikolaus Weiskopf, Neil Marlow, Sebastien Ourselin*

### **ML3: Machine Learning and Applications**

- PS3 - 7 From local to global random regression forests: Exploring anatomical landmark localization**  
*Darko Stern, Thomas Ebner, Martin Urschler*
- PS3 - 8 Regressing Heatmaps for Multiple Landmark Localization using CNNs**  
*Christian Payer, Darko Stern, Horst Bischof, Martin Urschler*
- PS3 - 9 Self-Transfer Learning for Weakly Supervised Lesion Localization**  
*Sangheum Hwang, Hyo-Eun Kim*
- PS3 - 10 Automatic Cystocele Severity Grading in Ultrasound by Spatio-temporal Regression**  
*Dong Ni, Xing Ji, Yaozong Gao, Jie-zhi Cheng, Huifang Wang, Jing Qin, Tianfu Wang, Guorong Wu, Dinggang Shen*

- PS3 - 11 Graphical Modeling of Ultrasound Propagation in Tissue for Automatic Bone Segmentation**  
*Firat Ozdemir, Ece Ozkan, Orcun Goksel*
- PS3 - 12 Bayesian Image Quality Transfer**  
*Ryutaro Tanno, Aurobrata Ghosh, Francesco Grussu, Enrico Kaden, Antonio Criminisi, Daniel Alexander*
- PS3 - 13 Wavelet Appearance Pyramids for Landmark Detection and Pathology Classification: Application to Lumbar Spinal Stenosis**  
*Qiang Zhang, Abhir Bhalerao, Caron Parsons, Emma Helm, Charles Hutchinson*
- PS3 - 14 A Learning-free Approach to Whole Spine Vertebra Localization in MRI**  
*Marko Rak, Klaus Toennies*
- PS3 - 15 Automatic Quality Control for Population Imaging: A Generic Unsupervised Approach**  
*Mohsen Farzi, Jose Maria Pozo, Eugene V. McCloskey, Mark Wilkinson, Alejandro Frangi*
- PS3 - 16 A Cross-Modality Neural Network Transform For Semi-Automatic Medical Image Annotation**  
*Mehdi Moradi, Yufan Guo, Yaniv Gur, Mohammadreza Negahdar, Tanveer Syeda-Mahmood*
- PS3 - 17 Sub-Category Classifiers for Multi-Instance Learning and its application to Retinal Nerve Fiber Layer Visibility Classification**  
*Siyamalan Manivannan, Caroline Cobb, Stephen Burgess, Emanuele Trucco*
- PS3 - 18 Vision-Based Classification of Developmental Disorders Using Eye-Movements**  
*Guido Pusiol, Esteva Andre, Michael C. Frank, Scott S. Hall, Li Fei-Fei, Arnold Milstein*
- PS3 - 19 Scalable Unsupervised Domain Adaptation for Electron Microscopy**  
*Róger Bermúdez-Chacón, Carlos Becker, Mathieu Salzmann, Pascal Fua*
- PS3 - 20 Automated Diagnosis of Neural Foraminal Stenosis Using Synchronized Superpixels Representation**  
*Xiaoxu He, Manas Sharma, Yilong Yin, Gary Brahm, Ashley Mercado, Shuo Li*

**US: Ultrasound Image Analysis**

- PS3 - 21 Hand-held Sound-Speed Mammography Based on Ultrasound Reflector Tracking**  
*Sergio J Sanabria, Orcun Goksel*

## POSTER SESSIONS

**PS3 - 22 Ultrasound Tomosynthesis: A New Paradigm for Quantitative Imaging of the Prostate**

*Fereshteh Aalamifar, Reza Seifabadi, Marcelino Bernardo, Ayele H.Negussie, Baris Turkbey, Maria Merino, Peter Pinto, Arman Rahmim, Bradford Wood, Emad Boctor*

**PS3 - 23 Photoacoustic Imaging Paradigm Shift: Towards Using Vendor-Independent Ultrasound Scanners**

*Haichong Zhang, Xiaoyu Guo, Behnoosh Tavakoli, Emad Boctor*

**PS3 - 24 4D Reconstruction of Fetal Heart Ultrasound Images in Presence of Fetal Motion**

*Christine Tanner, Barbara Flach, Celine Eggenberger, Oliver Mattausch, Michael Bajka, Orcun Goksel*

**PS3 - 25 Towards Reliable Automatic Characterization of Neonatal Hip Dysplasia using 3D Ultrasound**

*Niamul Quader, Antony Hodgson, Kishore Mulpuri, Anthony Cooper, Rafeef Abugharbieh*

### REG: Registration and Deformation Estimation

**PS3 - 26 Learning-based Multimodal Image Registration for Prostate Cancer Radiation Therapy**

*Xiaohuan Cao, Yaozong Gao, Jianhua Yang, Guorong Wu, Dinggang Shen*

**PS3 - 27 A Deep Metric for Multimodal Registration**

*Martin Simonovsky, Benjamin Gutierrez-Becker, Diana Mateus, Nassir Navab, Nikos Komodakis*

**PS3 - 28 Learning Optimization Updates for Multimodal Registration**

*Benjamin Gutierrez Becker, Diana Mateus, Loic Peter, Nassir Navab*

**PS3 - 29 Memory Efficient LDDMM for Lung CT**

*Thomas Polzin, Marc Niethammer, Mattias Paul Heinrich, Heinz Handels, Jan Modersitzki*

**PS3 - 30 Inertial Demons: A Momentum-Based Diffeomorphic Registration Framework**

*Andre Santos-Ribeiro, David Nutt, John McGonigle*

**PS3 - 31 Diffeomorphic Density Registration in Thoracic Computed Tomography**

*Caleb Rottman, Ben Larson, Pouya Sabouri, Amit Sawant, Sarang Joshi*

**PS3 - 32 Temporal Registration in In-Utero Volumetric MRI Time Series**

*Ruizhi Liao, Esra Turk, Miaomiao Zhang, Jie Luo, Patricia Grant, Elfar Adalsteinsson, Polina Golland*

- PS3 - 33 Building an Atlas of the Human Hippocampus from Ex Vivo MRI using Hybrid Surface - Volume Groupwise Registration**  
*Daniel Adler, Ranjit Ittyerah, John Pluta, Stephen Pickup, Weixia Liu, David Wolk, Paul Yushkevich*
- PS3 - 34 Deformation Estimation with Automatic Sliding Boundary Computation**  
*Joseph Preston, Sarang Joshi, Ross Whitaker*
- PS3 - 35 Bilateral Weighted Adaptive Local Similarity Measure for Registration in Neurosurgery**  
*Martin Kochan, Marc Modat, Tom Vercauteren, Mark White, Laura Mancini, Gavin Winston, Andrew W. McEvoy, John Thornton, Tarek Yousry, John Duncan, Sebastien Ourselin, Danail Stoyanov*
- PS3 - 36 Model-based Regularisation for Respiratory Motion Estimation with Sparse Features in Image-guided Interventions**  
*Matthias Wilms, In Young Ha, Heinz Handels, Mattias Paul Heinrich*
- PS3 - 37 Carotid Artery Wall Motion Estimated from Ultrasound Imaging Sequences Using a Nonlinear State Space Approach**  
*Zhifan Gao, Yuanyuan Sun, Heye Zhang, Dhanjoo Ghista, Yanjie Li, Huahua Xiong, Xin Liu, Yaoqin Xie, Wanqing Wu*
- PS3 - 38 Accuracy Estimation for Medical Image Registration Using Regression Forests**  
*Hessam Sokooti Oskooyi, Gorkem Saygili, Ben Glocker, Boudewijn P.F. Lelieveldt, Marius Staring*
- PS3 - 39 Embedding Segmented Volume in Finite Element Mesh with Topology Preservation**  
*Kazuya Sase, Teppei Tsujita, Atsushi Konno*
- PS3 - 40 Deformable 3D-2D Registration of Known Components for Image Guidance in Spine Surgery**  
*Ali Uneri, Joseph Goerres, Tharindu De Silva, Matthew Jacobson, Michael Ketcha, Sureerat Reuangamornrat, Gerhard Kleinszig, Sebastian Vogt, A Jay Khanna, Jean-Paul Wolinsky, Jeffrey Siewerdsen*
- PS3 - 41 Anatomically Constrained Video-CT Registration via the V-IMLOP Algorithm**  
*Seth D. Billings, Ayushi Sinha, Austin Reiter, Simon Leonard, Masaru Ishii, Gregory D. Hager, Russell H. Taylor*

## POSTER SESSIONS

### CELL: Cell Image Analysis

**PS3 - 42 Cutting Out The Middleman: Measuring Nuclear Area in Histopathology Slides Without Segmentation**

*Mtiko Veta, Paul van Diest, Josien Pluim*

**PS3 - 43 Subtype Cell Detection with an Accelerated Deep Convolution Neural Network**

*Sheng Wang, Jiawen Yao, Zheng Xu, Junzhou Huang*

**PS3 - 44 Clinical Imaging Biomarker Discovery for Lung Cancer Survival Prediction**

*Jiawen Yao, Sheng Wang, Xinliang Zhu, Junzhou Huang*

**PS3 - 45 3D Segmentation of Glial Cells Using Fully Convolutional Networks and k-Terminal Cut**

*Lin Yang, Yizhe Zhang, Ian Guldner, Siyuan Zhang, Danny Z. Chen*

**PS3 - 46 Detection of Differentiated vs. Undifferentiated Colonies of iPS Cells Using Random Forests Modeled with the Multivariate Polya Distribution**

*Bisser Raytchev, Atsuki Masuda, Masatoshi Minakawa, Kojiro Tanaka, Takio Kurita, Toru Imamura, Masashi Suzuki, Toru Tamaki, Kazufumi Kaneda*

**PS3 - 47 Detecting 10,000 Cells in One Second**

*Zheng Xu, Junzhou Huang*

**PS3 - 48 A Hierarchical Convolutional Neural Network for Mitosis Detection in Phase-Contrast Microscopy Images**

*Yunxiang Mao, Zhaozheng Yin*

**16:00 - 17:30 Poster Session 4**

**AD: Alzheimers Disease**

- PS4 - 1 Early Diagnosis of Alzheimers Disease by Joint Feature Selection and Classification on Temporally Structured Support Vector Machine**  
*Yingying zhu, Xiaofeng zhu, Minjeong Kim, Dinggang Shen, Guorong Wu*
- PS4 - 2 Longitudinal Structured Low-Rank Regression for Alzheimers Disease Progression Prediction**  
*Xiaoqian Wang, Dinggang Shen, Heng Huang*
- PS4 - 3 Joint Data Harmonization and Group Cardinality Constrained Classification**  
*Yong Zhang, Sang Hyun Park, Kilian Pohl*
- PS4 - 4 Progressive Graph-Based Transductive Learning for Multi-Modal Classification of Alzheimers Disease**  
*Zhengxia Wang, Xiaofeng Zhu, Ehsan Adeli, Yingying Zhu, Chen Zu, Feiping Nie, Dinggang Shen, Guorong Wu*
- PS4 - 5 Structured Outlier Detection in Neuroimaging Studies With Minimal Convex Polytopes**  
*Erdem Varol, Aristeidis Sotiras, Christos Davatzikos*
- PS4 - 6 Diagnosis of Alzheimers Disease Using View-Aligned Hypergraph Learning with Incomplete Multi-Modality Data**  
*Mingxia Liu, Jun Zhang, Pew-Thian Yap, Dinggang Shen*
- PS4 - 7 New Low-Rank Model to Learn Task Interrelations for Alzheimers Disease Cognitive Assessment Prediction**  
*Zhouyuan Huo, Dinggang Shen, Heng Huang*
- PS4 - 8 Hyperbolic Space Sparse Coding with Its Application on Prediction of Alzheimers Disease in Mild Cognitive Impairment**  
*Jie Zhang, Jie Shi, Cynthia Stonnington, Qingyang Li, Boris Gutman, Kewei Chen, Eric Reiman, Richard Caselli, Paul Thompson, Jieping Ye, Yalin Wang*
- PS4 - 9 Large-scale Collaborative Imaging Genetics Studies of Risk Genetic Factors for Alzheimers Disease Across Multiple Institutions**  
*Qingyang Li, Tao Yang, Liang Zhan, Derrek Hibar, Neda Jahanshad, Yalin Wang, Jieping Ye, Paul Thompson, Jie Wang*
- PS4 - 10 Structured Sparse Low-Rank Regression Model for Brain-Wide and Genome-Wide Associations**  
*Xiaofeng Zhu, Heung-Il Suk, Heng Huang, Dinggang Shen*



## POSTER SESSIONS

### S1: Segmentation 1

**PS4 - 11 Automated Segmentation of Knee MRI using Hierarchical Classifiers and Just Enough Interaction (JEI) based Learning: Data from the Osteoarthritis Initiative**

*Satyananda Kashyap, Ipek Oguz, Honghai Zhang, Milan Sonka*

**PS4 - 12 Dynamically Balanced Online Random Forests for Interactive Scribble-based Segmentation**

*Guotai Wang, Maria A. Zuluaga, Rosalind Pratt, Michael Aertsen, Tom Doel, Maria Klusmann, Anna David, Jan Deprest, Tom Vercauteren, Sebastien Ourselin*

**PS4 - 13 Orientation-Sensitive Overlap Measures For The Validation of Medical Image Segmentations**

*Tasos Papastilianou, Erica Dall' Armellina, Vicente Grau*

**PS4 - 14 High-Throughput Glomeruli Analysis of CT Kidney Images Using Tree Priors and Scalable Sparse Computation**

*Carlos Correa Shokiche, Philipp Baumann, Ruslan Hlushchuk, Valentin Djonov, Mauricio Reyes*

**PS4 - 15 A Surface Patch-Based Segmentation Method for Hippocampal Subfields**

*Benoit Caldirou, Boris C. Bernhardt, Hosung Kim, Jessie Kulaga-Yoskovitz, Neda Bernasconi, Andrea Bernasconi*

**PS4 - 16 Evaluation-Oriented Training Through Surrogate Learning Targets for Improved Multiple Sclerosis Lesion Segmentation**

*Michel Santos, Paula Diniz, Abel Silva-Filho, Wellington Santos*

**PS4 - 17 Corpus Callosum Segmentation in Brain MRIs Via Robust Target-Localization and Joint Supervised Feature Extraction and Prediction**

*Lisa Tang, Tom Brosch, Liu XingTong, Youngjin Yoo, Traboulsee Anthony, David Li, Roger Tam*

**PS4 - 18 Automatic Liver and Lesion Segmentation in CT Using Cascaded Fully Convolutional Neural Networks and 3D Conditional Random Fields**

*Patrick Ferdinand Christ, Mohamed Ezzeldin A. Elshaer, Florian Ettliger, Sunil Ramgopal Tatavatry, Marc Bickel, Patrick Bilic, Markus Rempfler, Marco Armbruster, Felix Hofmann, Melvin D'Anastasi, Wieland Sommer, Seyed-Ahmad Ahmadi, Bjoern Menze*

**PS4 - 19 3D U-Net: Learning Dense Volumetric Segmentation From Sparse Annotation**

*Özgün Çiçek, Ahmed Abdulkadir, Soeren Lienkamp, Thomas Brox, Olaf Ronneberger*

**PS4 - 20 Model-Based Segmentation of Vertebral Bodies from MR Images with 3D CNNs**

*Robert Korez, Bostjan Likar, Franjo Pernus, Tomaz Vrtovec*

POSTER SESSIONS

- PS4 - 21 Pancreas Segmentation using Graph based Data Fusion with Convolutional Neural Networks**  
*Jinzheng Cai, Le Lu, Zizhao Zhang, Fuyong Xing, Lin Yang, Qian Yin*
- PS4 - 22 Spatial Aggregation of Holistically-Nested Networks for Automated Pancreas Segmentation**  
*Holger Roth, Le Lu, Amal Farag, Andrew Sohn, Ronald Summers*
- PS4 - 23 Topology Aware Fully Convolutional Networks For Histology Gland Segmentation**  
*Aïcha BenTaieb, Ghassan Hamarneh*
- PS4 - 24 HeMIS: Hetero-Modal Image Segmentation**  
*Mohammad Havaei, Nicolas Guizard, Nicolas Chapados, Yoshua Bengio*
- PS4 - 25 Deep Learning for Multi-Task Medical Image Segmentation in Multiple Modalities**  
*Pim Moeskops, Jelmer M. Wolterink, Bas H.M. van der Velden, Kenneth G.A. Gilhuijs, Tim Leiner, Max A. Viergever, Ivana Išgum*
- PS4 - 26 Iterative Multi-domain Regularized Deep Learning for Anatomical Structure Detection and Segmentation from Ultrasound Images**  
*Hao Chen, Yefeng Zheng, JinHyeong Park, Pheng Ann HENG, S. Kevin Zhou*
- PS4 - 27 Gland Instance Segmentation by Deep Multichannel Side Supervision**  
*Yan xu, Yang li, Mingyuan liu, Yipei wang, Maode lai, Eric Chang*

**SM: Shape Modeling**

- PS4 - 28 A Multi-Resolution t-Mixture Model Approach to Robust Group-wise Alignment of Shapes**  
*Nishant Ravikumar, Ali Gooya, Serkan Çimen, Alejandro Frangi, Zeike Taylor*
- PS4 - 29 Quantifying Shape Deformations by Variation of Geometric Spectrum**  
*Hajar Hamidian, Jiayi Hu, Zichun Zhong, Jing Hua*
- PS4 - 30 Myocardial Segmentation of Contrast Echocardiograms Using Random Forests Guided by Shape Model**  
*Yuanwei Li, Chin Pang Ho, Navtej Chahal, Roxy Senior, Meng-Xing Tang*
- PS4 - 31 Low-Dimensional Statistics of Anatomical Variability Via Compact Representation of Image Deformations**  
*Miaomiao Zhang, William (Sandy) Wells, Polina Golland*
- PS4 - 32 A Multiscale Cardiac Model for Fast Personalisation and Exploitation**  
*Roch-Philippe Molléro, Xavier Pennec, Hervé Delingette, Nicholas Ayache, Maxime Sermesant*

## POSTER SESSIONS

**PS4 - 33 Transfer Shape Priors Towards High-throughput Microscopy Image Segmentation**

*Fuyong Xing, Xiaoshuang Shi, Zizhao Zhang, Jinzheng Cai, Yuanpu Xie, Lin Yang*

**PS4 - 34 Hierarchical Generative Modeling and Monte-Carlo EM in Riemannian Shape Space for Hypothesis Testing**

*Saurabh Shigwan, Suyash Awate*

**PS4 - 35 Direct Estimation of Wall Shear Stress from Aneurysmal Morphology: A Statistical Approach**

*Ali Sarrami-Foroushani, Toni Lassila, Jose Maria Pozo, Ali Gooya, Alejandro Frangi*

**PS4 - 36 Multi-Task Shape Regression for General Medical Image Segmentation**

*Xiantong Zhen, Yilong Yin, Mousumi Bhaduri, Ilanit Ben Nachum, David Laidley, Shuo Li*

**PS4 - 37 Soft Multi-Organ Shape Models via Generalized PCA: A General Framework**

*Juan J. Cerrolaza, Ronald Summers, Marius George Linguraru*

**PS4 - 38 An Artificial Agent for Anatomical Landmark Detection**

*Florin-Cristian Ghesu, Bogdan Georgescu, Tommaso Mansi, Dominik Neumann, Joachim Hornegger, Dorin Comaniciu*

**Thursday, October 20**

**10:30 - 12:00 Poster Session 5**

**MRI: MR Image Analysis**

- PS5 - 1 Dynamic Volume Reconstruction from Multi-slice Abdominal MRI Using Manifold Alignment**  
*Xin Chen, Muhammad Usman, Daniel Balfour, Paul Marsden, Andrew Reader, Claudia Prieto, Andrew King*
- PS5 - 2 Fast and Accurate Multi-Tissue Deconvolution Using SHORE and H-psd Tensors**  
*Michael Ankele, Lek-Heng Lim, Samuel Groeschel, Thomas Schultz*
- PS5 - 3 Optimisation of Arterial Spin Labelling using Bayesian Experimental Design**  
*David Owen, Andrew Melbourne, David Thomas, Enrico De Vita, Jonathan Rohrer, Sebastien Ourselin*
- PS5 - 4 4D Phase-Contrast Magnetic Resonance CardioAngiography (4D PC-MRCA) creation from 4D flow MRI**  
*Mariana Bustamante, Vikas Gupta, Carl-Johan Carlhäll, Tino Ebbers*
- PS5 - 5 Joint Estimation of Cardiac Motion and T1 Maps for Magnetic Resonance Late Gadolinium Enhancement Imaging**  
*Jens Wetzl, Aurélien F. Stalder, Michaela Schmidt, Yigit H. Akgök, Christoph Tillmanns, Felix Lugauer, Christoph Forman, Joachim Hornegger, Andreas Maier*
- PS5 - 6 Correction of Fat-Water Swaps in Dixon MRI**  
*Ben Glocker, Ender Konukoglu, Ioannis Lavdas, Juan Eugenio Iglesias, Eric O Aboagye, Andrea G Rockall, Daniel Rueckert*
- PS5 - 7 Motion-Robust Reconstruction based on Simultaneous Multi-Slice Registration for Diffusion-Weighted MRI of Moving Subjects**  
*Bahram Marami, Benoit Scherrer, Onur Afacan, Simon Warfield, Ali Gholipour*
- PS5 - 8 Self Super-resolution for Magnetic Resonance Images**  
*Amod Jog, Aaron Carass, Jerry Prince*
- PS5 - 9 Tight Graph Framelets for Sparse Diffusion MRI q-Space Representation**  
*Pew-Thian Yap, Bin Dong, Yong Zhang, Dinggang Shen*
- PS5 - 10 A Bayesian Model to Assess T2 Values and their Changes Over Time in Quantitative MRI**  
*Benoit Combès, Anne Kerbrat, Olivier Commowick, Christian Barillot*

## POSTER SESSIONS

- PS5 - 11 Simultaneous Parameter Mapping, Modality Synthesis, and Anatomical Labeling of the Brain With MR Fingerprinting**  
*Pedro Gómez, Miguel Molina Romero, Çağdas Ulas, Guido Bouincontri, Jonathan Sperl, Derek Jones, Marion Menzel, Bjoern Menze*
- PS5 - 12 XQ-NLM: Denoising Diffusion MRI Data via x-q Space Non-Local Patch Matching**  
*Genq Chen, Yafeng Wu, Dinggang Shen, Pew-Thian Yap*
- PS5 - 13 Spatially Adaptive Spectral Denoising for MR Spectroscopic Imaging using Frequency-Phase Non-Local Means**  
*Dhritiman Das, Eduardo Coello, Rolf Schulte, Bjoern Menze*
- PS5 - 14 Beyond the resolution limit: parameter estimation in partial volume**  
*Zach Eaton-Rosen, Andrew Melbourne, M. Jorge Cardoso, Neil Marlow, Sebastien Ourselin*
- PS5 - 15 A Promising Non-invasive CAD System for Kidney Function Assessment**  
*Mohamed Shehata, Fahmi Khalifa, Ahmed Soliman, Mohamed Abou El-Ghar, Amy Dwyer, Georgy Gimel'farb, Robert Keynton, Ayman El-Baz*
- PS5 - 16 Comprehensive Maximum Likelihood Estimation of Diffusion Compartment Models Towards Reliable Mapping of Brain Microstructure**  
*Aymeric Stamm, Olivier Commowick, Simon Warfield, Simone Vantini*

## S2: Segmentation 2

- PS5 - 17 Enhanced Probabilistic Label Fusion by Estimating Label Confidences through Discriminative Learning**  
*Oualid M. Benkarim, Gemma Piella, Miguel A. González Ballester, Gerard Sanroma*
- PS5 - 18 Feature Sensitive Label Fusion with Random Walker for Atlas-based Image Segmentation**  
*Siqi Bao, Albert C. S. Chung*
- PS5 - 19 Automatic Lymph Node Cluster Segmentation using Holistically-Nested Networks and Structured Optimization in CT Images**  
*Isabella Noguez, Le Lu, Xiaosong Wang, Holger Roth, Gedas Bertasius, Nathan Lay, Jianbo Shi, Yohannes Tsehay, Ronald Summers*
- PS5 - 20 Deep Fusion Net for Multi-Atlas Segmentation: Application to Cardiac MR Images**  
*Heran YANG, Jian Sun, Huibin Li, Lisheng Wang, Zongben Xu*
- PS5 - 21 Prior-based Coregistration and Cosegmentation**  
*Mahsa Shakeri, Enzo Ferrante, Stavros Tsogkas, Sarah Lippé, Samuel Kadoury, Iasonas kokkinos, Nikos Paragios*

- PS5 - 22 Globally Optimal Label Fusion with Shape Priors**  
*Ipek Oguz, Satyananda Kashyap, Hongzhi Wang, Paul Yushkevich, Milan Sonka*
- PS5 - 23 Joint Segmentation and CT Synthesis for MRI-only Radiotherapy Treatment Planning**  
*Ninon Burgos, Filipa Guerreiro, Jamie McClelland, Simeon Nill, David Dearnaley, Nandita deSouza, Uwe Oelfke, Antje-Christin Knopf, Sebastien Ourselin, M. Jorge Cardoso*
- PS5 - 24 Regression Forest-based Atlas Localization and Direction Speci(cid:12)c Atlas Generation for Pancreas Segmentation**  
*Masahiro Oda, Natsuki Shimizu, Kenichi Karasawa, Yukitaka Nimura, Takayuki Kitasaka, Kazunari Misawa, Michitaka Fujiwara, Daniel Rueckert, Kensaku Mori*
- PS5 - 25 Accounting for the Confound of Meninges in Segmenting Entorhinal and Perirhinal Cortices in T1-weighted MRI**  
*Long Xie, Laura Wisse, Sandhitsu Das, Hongzhi wang, David Wolk, Jose V. Manjon, Paul Yushkevich*
- PS5 - 26 7T-Guided Learning Framework for Improving the Segmentation of 3T MR Images**  
*Khosro Bahrami, Islem Rekik, Feng Shi, Yaozong Gao, Dinggang Shen*
- PS5 - 27 Multivariate Mixture Model for Cardiac Segmentation from Multi-Sequence MRI**  
*Xiahai Zhuang*
- PS5 - 28 Fast Fully Automatic Segmentation of the Human Placenta from Motion Corrupted MRI**  
*Amir Alansary, Konstantinos Kamnitsas, Alice Davidson, King's Rostislav Khlebnikov, Martin Rajchl, Christina Malamateniou, Mary Rutherford, Joseph Hajnal, Ben Glocker, Daniel Rueckert, Bernhard Kainz*
- PS5 - 29 Multi-Organ Segmentation using Vantage Point Forests and Binary Context Features**  
*Mattias Paul Heinrich, Maximilian Blendsowski*
- PS5 - 30 Multiple Object Segmentation and Tracking by Bayes Risk Minimization**  
*Tomáš Sixta, Boris Flach*
- PS5 - 31 Crowd-algorithm collaboration for large-scale endoscopic image annotation with confidence**  
*Lena Maier-Hein, Tobias Ross, Janek Gröhl, Ben Glocker, Sebastian Bodenstedt, Christian Stock, Eric Heim, Michael Goetz, Sebastian Wirkert, Hannes Götz Kenngott, Stefanie Speidel, Klaus Maier-hein*

## POSTER SESSIONS

**PS5 - 32 Emphysema Quantification on Cardiac CT Scans Using Hidden Markov Measure Field Model: The MESA Lung Study**

*Jie Yang, Elsa Angelini, Pallavi Balte, Eric Hoffman, Colin Wu, Bharath Venkatesh, R. Graham Barr, Andrew Laine*

### RECON: Reconstruction

**PS5 - 33 ASL-incorporated Pharmacokinetic Modelling of PET Data with Reduced Acquisition Time: Application to Amyloid Imaging**

*Catherine Scott, Jieqing Jiao, Andrew Melbourne, Jonathan Schott, Brian Hutton, Sebastien Ourselin*

**PS5 - 34 Probe-based Rapid Hybrid Hyperspectral and Tissue Surface Imaging Aided by Fully Convolutional Networks**

*Jianyu Lin, Neil T. Clancy, Xueqing Sun, Ji Qi, Mirek Janatka, Danail Stoyanov, Daniel S. Elson*

**PS5 - 35 Efficient Low-Dose CT Denoising by Locally-Consistent Non-Local Means (LC-NLM)**

*Michael Green, Edith Marom, Nahum Kiryati, Eli Konen, Arnaldo Mayer*

**PS5 - 36 Deep Learning Computed Tomography**

*Tobias Würfl, Florin Ghesu, Vincent Christlein, Andreas Maier*

**PS5 - 37 Axial Alignment for Anterior Segment Swept Source Optical Coherence Tomography via Robust Low-rank Tensor Recovery**

*Yanwu Xu, Lixin Duan, Huazhu Fu, Xiaoqin Zhang, Damon W.K. Wong, Baskaran Mani, Tin Aung, Jiang Liu*

**PS5 - 38 3D Imaging from Video and Planar Radiography**

*Julien Pansiot, Edmond Boyer*

**PS5 - 39 Semantic Reconstruction-based Nuclear Cataract Grading from Slit-lamp Lens Images**

*Yanwu Xu, Lixin Duan, Damon W.K. Wong, Tien Yin Wong, Jiang Liu*

**PS5 - 40 Vessel Orientation Constrained Quantitative Susceptibility Mapping (QSM) Reconstruction**

*Suheyla Cetin, Berkin Bilgic, Audrey Fan, Samantha Holdsworth, Gozde Unal*

**PS5 - 41 Spatial-Angular Sparse Coding for HARDI**

*Evan Schwab, Rene Vidal, Nicolas Charon*

**PS5 - 42 Compressed Sensing Dynamic MRI Reconstruction using GPU-accelerated 3D Convolutional Sparse Coding**

*Tran Minh Quan, Won-Ki Jeong*

**CIA: Cancer Image Analysis**

- PS5 - 43 Image-based Computer-Aided Diagnostic System for Early Diagnosis of Prostate Cancer**  
*Islam Reda, Ahmed Shalaby, Mohammed Elmogy, Ahmed AbouElfotouh, Fahmi Khalifa, Mohamed Abou El-Ghar, Georgy Gimel'farb, Ayman El-Baz*
- PS5 - 44 Multidimensional Texture Analysis for Improved Prediction of Ultrasound Liver Tumor Response to Chemotherapy Treatment**  
*Omar Al-Kadi, Dimitri Van de ville, Adrien Depeursinge*
- PS5 - 45 Classification of Prostate Cancer Grades and T-Stages based on Tissue Elasticity Using Medical Image Analysis**  
*Shan Yang, Vladimir Jojic, Jun Lian, Ronald Chen, Hongtu Zhu, Ming Lin*
- PS5 - 46 Automatic Determination of Hormone Receptor Status in Breast Cancer using Thermography**  
*Siva Teja Kakileti, Krithika Venkataramani, Himanshu Madhu*
- PS5 - 47 Prostate Cancer: Improved Tissue Characterization by Temporal Modeling of Radio-Frequency Ultrasound Echo Data**  
*Layan Nahlawi, Farhad Imani, Mena Gaed, Jose A. Gomez, Madeleine Moussa, Eli Gibson, Aaron Fenster, Aaron Ward, Purang Abolmaesumi, Hagit Shatkay, Parvin Mousavi*
- PS5 - 48 Classifying Cancer Grades Using Temporal Ultrasound for Transrectal Prostate Biopsy**  
*Shekoofeh Azizi, Farhad Imani, Jin Tae Kwak, Amir Tahmasebi, Sheng Xu, Pingkun Yan, Jochen Kruecker, Baris Turkbey, Peter Choyke, Peter Pinto, Bradford Wood, Parvin Mousavi, Purang Abolmaesum*
- PS5 - 49 Characterization of Lung Nodule Malignancy using Hybrid Shape and Appearance Features**  
*Mario Buty, Ziyue Xu, Mingchen Gao, Ulas Bagci, Aaron Wu, Daniel J. Mollur*