

# PRIME-MICCAI workshop

**PR**edictive **I**ntelligence in **ME**dicine will reshape our healthcare technologies

**PRIME Program on September 16<sup>th</sup>, 2018 (updated)**

08:00 - 09:00	Registration
09:00 - 09:15	Introduction and Welcome
09:15 - 10:15	<p style="text-align: center;"><b>Oral Session 1: Disease Diagnosis</b></p> <p><b>O1 (09:15 - 9:30):</b> Shared latent structures between imaging features and biomarkers in early stages of Alzheimer's disease <i>Adria Casamitjana (Universitat Politecnica de Catalunya, Spain), Veronica Vilaplana (Universitat Politecnica de Catalunya, Spain), Paula Petrone (Fundacio Pasqual Maragall, Spain), Jose Luis Molinuevo (Fundacio Pasqual Maragall, Spain), Juan Domingo Gispert (Fundacio Pasqual Maragall, Spain)</i></p> <p><b>O2 (09:30 - 09:45):</b> Joint Robust Imputation and Classification for Early Dementia Detection using Incomplete Multi-Modality Data <i>Kim-Han Thung (University of North Carolina, USA), Pew-Thian Yap (University of North Carolina, USA), Dinggang Shen (University of North Carolina, USA)</i></p> <p><b>O3 (09:45 - 10:00):</b> 3D Convolutional Neural Network and Stacked Bidirectional Recurrent Neural Network for Alzheimer's Disease Diagnosis <i>Chiyu Feng (Shenzhen University), Ahmed Elazab (Shenzhen University, China), Peng Yang (Shenzhen University, China), Tianfu Wang (Shenzhen University, China), Baiying Lei (Shenzhen University, China), Xiaohua Xiao (Shenzhen University, China)</i></p> <p><b>O4 (10:00 - 10:15):</b> Transfer Learning for Task Adaptation of Brain Lesion Assessment and Prediction of Brain Abnormalities Progression/Regression using Irregularity Age Map in Brain MRI <i>Muhammad Febrian Rachmadi (University of Edinburgh, UK), Maria del C. Valdes-Hernandez (University of Edinburgh, UK), Taku Komura (University of Edinburgh, UK)</i></p>
10:15 - 11:00	<p style="text-align: center;"><b>Keynote Speech 1</b></p> <p style="text-align: center;"><b>Speaker:</b> Dr. Ipek Oguz (Vanderbilt University) <b>Title:</b> "Medical Image Synthesis with Multi-Atlas Intensity Fusion"</p>
11:00 - 11:30	Coffee Break
11:30 - 12:45	<p style="text-align: center;"><b>Keynote Speech 2</b></p> <p style="text-align: center;"><b>Speaker:</b> Prof. Dinggang Shen (University of North Carolina) <b>Title:</b> "Deep Learning in Image Synthesis and its Applications"</p>
12:45 - 13:00	<b>NVIDIA Tech Talk</b>

<p><b>13:00 - 14:30</b></p>	<p style="text-align: center;"><b>Lunch and Poster Session</b></p> <p><b>P1: Prediction of severity and treatment outcome for ASD from fMRI</b>  <i>Juntang Zhuang (Yale University, USA), Nicha C. Dvornek (Yale University, USA), Xiaoxiao Li (Yale University, USA), Pamela Ventola (Yale University, USA), James S. Duncan (Yale University, USA)</i></p> <p><b>P2: Enhancement of Perivascular Spaces using a Very Deep 3D Dense Network</b>  <i>Euijin Jung (DGIST, South Korea), Xiaopeng Zong (University of North Carolina, USA), Weili Lin (University of North Carolina, USA), Dinggang Shen (University of North Carolina, USA), Sang Hyun Park (DGIST, South Korea)</i></p> <p><b>P3: Prediction of Hearing Loss Based on Auditory Perception: A Preliminary Study</b>  <i>Muhammad Ilyas (Universit Paris-Est, France), Alice Othmani (Universit Paris-Est, France), Amine Nait-Ali (Universit Paris-Est, France)</i></p> <p><b>P4: Predicting nucleus basalis of Meynert volume from compartmental brain segmentations</b>  <i>Hennadii Madan (University of Ljubljana, Slovenia), Rok Berlot (University Medical Centre Ljubljana, Slovenia), Nicola J Ray (Manchester Metropolitan Univ, UK), Franjo Pernus (Univ of Ljubljana, Slovenia), Ziga Spiclin (University of Ljubljana, Slovenia)</i></p> <p><b>P5: Multi-modal Neuroimaging Data Fusion via Latent Space Learning for Alzheimer's Disease Diagnosis</b>  <i>Tao Zhou (University of North Carolina, USA), Kim-Han Thung (University of North Carolina, USA), Mingxia Liu (University of North Carolina, USA), Feng Shi (Shanghai United Imaging Intelligence Co., Ltd, China), Changqing Zhang (University of North Carolina, USA, Tianjin University, China), Dinggang Shen (University of North Carolina, USA)</i></p> <p><b>P6: Predicting Emotional Intelligence Scores From Multi-Session Functional Brain Connectomes</b>  <i>Anna Lisowska (University of Warwick, UK), Islem Rekik (University of Dundee, UK)</i></p> <p><b>P7: Towards Continuous Health Diagnosis from Faces with Deep Learning</b>  <i>Victor Martin (CentraleSupélec, France, CHANEL Parfums Beaut, France), Renaud Seguier (CentraleSupélec, France), Aurelie Porcheron (CHANEL Parfums Beaut, France), Frederique Morizot (CHANEL Parfums Beaut, France)</i></p> <p><b>P8: XmoNet: a Fully Convolutional Network for Cross-Modality MR Image Inference</b>  <i>Sophia Bano (University College London, UK), Muhammad Asad (Imagination Technologies, UK), Ahmed E. Fetit (Imperial College London, UK), Islem Rekik (University of Dundee, UK)</i></p> <p><b>P9: Generative Adversarial Training for MRA Image Synthesis Using Multi-Contrast MRI</b>  <i>Sahin Olut (Istanbul Technical University, Turkey), Yusuf H. Sahin (Istanbul Technical University, Turkey), Ugur Demir (Istanbul Technical University, Turkey), Gozde Unal (Istanbul Technical University, Turkey)</i></p> <p><b>P10: Prediction to Atrial Fibrillation Using Deep Convolutional Neural Networks</b>  <i>Jungrae Cho (Kyungpook National University, Republic of Korea), Yoonnyun Kim (Keimyung University Dongsan Medical Center, Republic of Korea), Minho Lee (Kyungpook National University, Republic of Korea)</i></p>
<p><b>14:30 - 15:00</b></p>	<p style="text-align: center;"><b>Oral Session 2: Generative Adversarial Learning in Medical Imaging</b></p> <p><b>O5 (14:30 – 14:45): Generation of Amyloid PET Images via Conditional Adversarial Training for Predicting Progression to Alzheimer’s Disease</b>  <i>Yu Yan (Oxford University, UK), Hoileong Lee (Oxford University, UK), Edward Somer (GE Healthcare, UK), Vicente Grau (Oxford University, UK)</i></p> <p><b>O6 (14:45 – 15:00): Diffusion MRI Spatial Super-Resolution Using Generative Adversarial Networks</b>  <i>Enes Albay (Istanbul Technical University, Turkey), Ugur Demir (Istanbul Technical University, Turkey), Gozde Unal (Istanbul Technical University, Turkey)</i></p>
<p><b>15:00 - 15:45</b></p>	<p style="text-align: center;"><b>Keynote Speech 3</b></p> <p style="text-align: center;"><b>Speaker: Dr. Ender Konukoglu (ETH Zurich)</b>  <b>Title: “Subject-Specific Effect Maps”</b></p>
<p><b>15:45 - 16:15</b></p>	<p style="text-align: center;"><b>Oral Session 3: Machine Learning for Prediction</b></p> <p><b>O7 (15:45 - 16:00): Multi-View Brain Network Prediction From a Source View Using Sample</b></p>

	<p>Selection via CCA-based Multi-Kernel Connectomic Manifold Learning  Minghui Zhu (University of Dundee, UK), Islem Rekik (University of Dundee, UK)</p> <p><b>O8 (16:00 - 16:15):</b> Computer Aided Identification of Motion Disturbances Related to Parkinson's Disease  Gudmundur Einarsson (Technical Univ of Denmark), Line K. H. Clemmensen (Technical Univ of Denmark), Ditte Ruda (Univ of Copenhagen, Denmark), Anders Fink-Jensen (Univ of Copenhagen, Denmark), Jannik B. Nielsen (Technical Univ of Denmark), Anne Katrine Pagsberg (Univ of Copenhagen, Denmark), Kristian Winge (Zealand Univ Hospital, Denmark), Rasmus R. Paulsen (Technical Univ of Denmark)</p>
16:15 - 16:45	Coffee Break
16:45 - 17:30	<p style="text-align: center;"><b>Keynote Speech 4</b></p> <p style="text-align: center;"><b>Speaker:</b> Dr. Kilian Pohl (SRI International)  <b>Title:</b> "Identifying Brain Patterns Predicating Diagnosis"</p>
17:30 - 18:00	<p style="text-align: center;"><b>Oral Session 4: Predictive Modeling</b></p> <p><b>O9 (17:30 - 17:45):</b> Predictive Modeling of Longitudinal Data for Alzheimer's Disease Diagnosis Using RNNs  Maryamossadat Aghili (Florida International University, USA), Solale Tabarestani (Florida International University, USA), Malek Adjouadi (Florida International University, USA), Ehsan Adeli (Stanford University, USA)</p> <p><b>O10 (17:45 - 18:00):</b> Predictive Patient Care: Survival model to prevent Medication Non-adherence  T. Janssoone (Semeia, France), P. Rinder (Semeia, France), P. Hornus (Semeia, France), D. Kanoun (Clinique Pasteur, France)</p>
18:00 - 18:30	<p style="text-align: center;">Closing Remarks  NVIDIA Best Paper Award  Best Reviewer Acknowledgment</p>



21<sup>st</sup> INTERNATIONAL CONFERENCE ON MEDICAL IMAGE COMPUTING  
& COMPUTER ASSISTED INTERVENTION  
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