PRIME-MICCAI workshop

PRedictive Intelligence in MEdicine will reshape our healthcare technologies

PRIME Program on October 8th, 2020

SESSION 1: 9:00-13:00 Asia/Europe (UTC)

09:00 - 09:15	Introduction and Welcome
09:15 - 9:50	**Oral Session 1** **O1 (09:15 - 9:21):** Learned deep radiomics for survival analysis with attention *Ludivine Morvan; Cristina Nanni; Bastien Jamet; Clément Bailly; Caroline Bodet-Milin; Stephane Chauvie; Cyrille Touzeau; Philippe Moreau; Elena Zamagni; Francoise Kraeber-Bodéré; Thomas Carlier; Diana Mateus* **O2 (09:22 - 9:28):** Residual Embedding Similarity-Based Network Selection for Predicting Brain Network Evolution Trajectory from a Single Observation *Serkan Göktaş; Alaa Bessadok; Islem Rekik* **O3 (9:29 - 9:35):** Robustification of Segmentation Models Against Adversarial Perturbations In Medical Imaging *Hanwool Park; Amirhossein Bayat; Mohammad Sabokrou; Jan Kirschke; Bjoern Menze* **O4 (9:36 - 9:42):** Low-Dose CT Denoising using Octave Convolution with High and Low Frequency bands *Dong Kyu Won; Sanghyun Park; Dong Hye Ye* **O5 (9:43 - 9:49):** Adversarial Brain Multiplex Prediction from a Single Network for High-Order Connectional Gender-Specific Brain Mapping *Ahmed Nebli; Islem Rekik*
9:50 - 10:05	**Group O1-O5 Q&A Session**
10:05 - 11:00	 **Keynote Speech 1 and Q&A session** **Speaker:** Prof Nassir Navab (Technical University of Munich) **Title**: TBD.
11:00 - 11:15	**Virtual Coffee Break**
11:15 - 11:55	**Oral Session 2** **O6 (11:15 – 11:21):** Conditional Generative Adversarial Network for Predicting 3D Medical Images Affected by Alzheimer's Diseases *Eujiin Jung; Miguel Luna; Sanghyun Park*

	O7 (11:22– 11:28): A Self-ensembling Framework for Semi-supervised Knee Cartilage Defects Assessment with Dual-Consistency *Jiayu Huo; Liping Si; Xi Ouyang; Kai Xuan; Weiwu Yao; Zhong Xue; Qian Wang; Dinggang Shen; Lichi Zhang* **O8 (11:34– 11:40):** mr2NST: Multi-Resolution and Multi-Reference Neural Style Transfer for Mammography *Sheng Wang; Jiayu Huo; Xi Ouyang; Jifei Che; Zhong Xue; Dinggang Shen; Qian Wang; Jie-Zhi Cheng* **O9 (11:41– 11:47):** Template-oriented Multi-task Sparse Low-rank Learning for Parkinson's Diseases Diagnosis *Zihao Chen; Haijun Lei; Yujia Zhao; Zhongwei Huang; Xiaohua Xiao; Ee-Leng Tan; Baiying Lei* **O10 (11:48– 11:54): Joint Clinical Data and CT Image based Prognosis: A Case Study on Postoperative Pulmonary Venous Obstruction Prediction** *Xinrong Hu; Zeyang Yao; Furong Liu; Wen Xie; Hailong Qiu; Yuhao Dong; Qianjun Jia; Meiping Huang; Jian Zhuang; Xiaowei Xu; Yiyu Shi*
11:55 - 12:10	**Group O6-O10 Q&A Session**
12:10 - 13:00	 **Keynote Speech 2 and Q&A session** **Speaker:** Prof Julia Schnabel (King's College London) **Title**: *"Predictive intelligence for image quality, detection and progression"*.

SESSION 2: 14:00-18:00 America/Europe (UTC)

14:00 - 14:40	**Oral Session 3** **O11 (14:05 - 14:11):** Inpainting Cropped Diffusion MRI using Deep Generative Models *Rafi Ayub; Qingyu Zhao; Mary Meloy; Edith Sullivan; Adolf Pfefferbaum; Ehsan Adeli; Kilian Pohl* **O12 (14:12 - 14:18):** Multi-View Brain Hyper-Connectome Autoencoder For Brain State Prediction *Alin Banka; Inis Buzi; Islem Rekik* **O13 (14:19 - 14:25):** Longitudinal prediction of radiation-induced anatomical changes of parotid glands during radiotherapy using deep learning *Donghoon Lee; Sadegh Alam; Saad Nadeem; Jiang Jue; Pengpeng Zhang; Yu-Chi Hu* **O14 (14:26 - 14:32):** Deep Parametric Mixtures for Modeling the Functional Connectome *Nicolas Honnorat; Adolf Pfefferbaum; Edith Sullivan; Kilian Pohl* **O15 (14:33 - 14:39):** Foreseeing Brain Graph Evolution Over Time Using Deep Adversarial Network Normalizer *Zeynep Gurler; Ahmed Nebli; Islem Rekik*
14:40 - 14:55	**Group O11-O15 Q&A Session**
14:55 - 16:00	 **Keynote Speech 3 and Q&A session** **Speaker:** Prof Pew-Thian Yap (University of North Carolina) **Title**: *"Computational Tools for Understanding the Human Brain in its Infancy"*.

16:00 - 16:15	**Virtual Coffee Break**
16:15 - 16:50	**Oral Session 4** **O16 (16:15 – 16:21):** Deep EvoGraphNet Architecture For Time-Dependent Brain Graph Data Synthesis From a Single Timepoint *Ahmed Nebli; Ugur Ali Kaplan; Islem Rekik* **O17 (16:22– 16:28):** Uniformizing Techniques to Process CT scans with 3D CNNs for Tuberculosis Prediction *Hasib Zunair; Aimon Rahman; Nabeel Mohammed; Joseph Paul Cohen* **O18 (16:34– 16:40):** Multimodal Prediction of Breast Cancer Relapse Prior to Neoadjuvant Chemotherapy Treatment *Simona Rabinovici-Cohen; Ami Abutbul; Xose Fernandez; Oliver Hijano Cubelos; Shaked Perek; Tal Tlusty* **O19 (16:41– 16:47):** Context-Aware Synergetic Multiplex Network for Multi-Organ Segmentation of Cervical Cancer MRI *Nesrine Bnouni; Islem Rekik; Mohamed Salah Rhim; Najwa Essoukri Ben Amara*
16:55 - 17:05	**Group O16-O19 Q&A Session**
17:05 - 17:55	 **Keynote Speech 4 and Q&A session** **Speaker:** Prof Linwei Wang (Rochester Institute of Technology) **Title**: *"Improving Generalization when Learning from Small & Heterogeneous Data*".
17:55 - 18:00	**Closing Remarks and Awards**