MIUA 2022
Conference Programme
https://www.miua2022.com/

Wednesday 27th July 2022

8:00 – 15:00   Registration Desk Opens

9:00 – 9:15   Opening Ceremony

9:15 –10:15   **Oral Session 1: Biomarker Detection**

9:15 - 9:35 Multimodal cardiomegaly classification with image-derived digital biomarkers.   Duvieusart, Benjamin; Krones, Felix H; Parsons, Guy; Tarassenko, Lionel; Papiez, Bartlomiej W; Mahdi, Adam

9:35- 9:55 Proton Density Fat Fraction of Breast Adipose Tissue: Comparison of the Effect of Fat Spectra and Initial Evaluation as a Biomarker. Gordon, Isobel C; Ralli, George P; Fernandes, Carolina; Herlihy, Amy; Brady, Michael

9:55 - 10:15 Revisiting the Shape-Bias of Deep Learning for Dermoscopic Skin Lesion Classification. Lucieri, Adriano; Schmeisser, Fabian; Balada, Christoph Peter; Siddiqui, Shoaib Ahmed; Ahmed, Sheraz; Dengel, Andreas

10:30 – 11:00   ☕ Coffee Break   & Industrial Booth Exhibition

11:00 – 12:00   **Oral Session 2: Novel Imaging, Image Registration and Reconstruction**

11:00 - 11:20 Recursive Deformable Image Registration Network with Mutual Attention. Zheng, Jian-Qing; Wang, Ziyang; Huang, Baoru; Vincent, Tonia; Lim, Ngee Han; Papiez, Bartlomiej W

11:20 - 11:40 Faster Diffusion Cardiac MRI with Deep Learning-based breath hold reduction. Tanzer, Michael; Ferreira, Pedro; Scott, Andrew; Khalique, Zohya; Dwornik, Maria; Pennell, Dudley; Yang, Guang; Rueckert, Daniel; Nielles-Vallespin, Sonia

11:40 - 12:00 Simultaneous Semantic and Instance Segmentation for Colon Nuclei Identification and Counting. Liu, Lihao; Hong, Chenyang; Aviles-Rivero, Angelica I; Schönlieb, Carola-Bibiane

12:00 – 12:50   Break & Industrial Booth Exhibition

13:00 – 14:00   **Keynote Prof. Polina Golland (MIT)**

14:00 – 15:00   **Poster Session** & ☕ Coffee Break & Industrial Booth Exhibition

15:00 – 16:00   **Oral Session 3: Image Interpretation**

15:00 - 15:20 Class Distance Weighted Cross-Entropy Loss for Ulcerative Colitis Severity Estimation. Polat, Gorkem; Ergenc, Ilkay; Kani, Haluk Tarik; Alahdab, Yesim Ozen; Atug, Ozlen; Temizel, Alptekin

15:20 - 15:40 CellCentroidFormer: Combining Self-attention and Convolution for Cell Detection. Wagner, Royden; Rohr, Karl

15:40 - 16:00 Self-Supervision and Multi-Task Learning: Challenges in Fine-Grained COVID-19 Multi-Class Classification from Chest X-rays. Ridzuan, Muhammad; Bawazir, Ameera A; Gollini Navarrete, Ivo; Almakky, Ibrahim; Yaqub, Mohammad

16:00 – 18:00   **WiMIUA Workshop**
Hors d'oeuvre Closing Event WiMIUA Workshop

Thursday 28th July 2022

8:30 – 15:00   Registration Desk Opens

9:00 – 10:00   **Oral Session 4: Image Segmentation**

9:00 - 9:20 Ultrasonography Uterus and Fetus Segmentation with Constrained Spatial-Temporal
Memory FCN. Kong, Bin; Wang, Xin; Wang, Xin; Yang, Haoyu; Cao, Kunlin; Song, Qi; Yin, Youbing

9:20 - 9:40 Fitting Segmentation Networks on Varying Image Resolutions using Splatting Brudfors, Mikael; Balbastre, Yaël; Ashburner, John; Rees, Geraint; Nachev, Parashkev; Ourselin, Sebastien; Cardoso, Jorge

9:40 - 10:00 A Novel Framework for Coarse-Grained Semantic Segmentation of Whole-Slide Images. Bashir, Saad; Raza, Shan; Shaban, Muhammad; Khurram, Ali; Rajpoot, Nasir

10:00 –10:15   ☕ Coffee Break & Industrial Booth Exhibition

10:15 – 11:10   **Oral Session 5: Generative Adversarial Network, Transformer and New Models**

10:15 - 10:35 A Deep Generative Model of Neonatal Cortical Surface Development. Fawaz, Abdulah; Robinson, Emma C; Williams, Logan ZJ; Edwards, A. David

10:35 - 10:55 Polyp2Seg: Improved Polyp Segmentation with Vision Transformer. Mandujano Cornejo, Vittorino; Montoya, Javier

10:55 - 11:15 From astronomy to histology: adapting the FellWalker algorithm to deep nuclear instance segmentation. Yeung, Michael; Watts, Todd; Yang, Guang

11:10 – 12:10   **Keynote Prof. Sotirios Tsaftaris (University of Edinburgh)**
12:10 – 12:25   Flash Podium Talk Microsoft

12:25 – 13:00   Break & Industrial Booth Exhibition

13:00 – 13:20   Abstract Submissions: Flash Talks
13:20 – 14:10   Abstract Submissions: Poster Session

14:10 – 15:10   **Oral Session 6: Image Classification**
          14:10 - 14:30 Deep Bayesian Active-learning-to-rank for Endoscopic Image Data. Kadota, Takeaki; Hayashi, Hideaki; Bise, Ryoma ; Tanaka, Kiyohito; Uchida, Seiichi
          14:30 - 14:50 Improving Image Representations via MoCo Pre-Training for Multimodal CXR Classification. Dalla Serra, Francesco; Jacenków, Grzegorz; Dalton, Jeffrey; Deligianni, Fani; O'Neil, Alison Q
          14:50 - 15:10 Multi-scale Graph Neural Networks for Mammography Classification and Abnormality Detection. Pelluet, Guillaume; Rizkallah, Mira; Tardy, Mickael; Acosta, Oscar; Mateus, Diana

15:20 – 16:30   **Poster Session** & ☕ **Coffee Break   & Industrial Booth Exhibition**
16:30 – 17:30   **Microsoft Research Workshop**
          Gala Dinner

Friday 29th July 2022

8:30 – 15:00   Registration Desk Opens

9:00 – 10:00   **Oral Session 7: Image Enhancement, Quality Assessment, and Data Privacy**
          9:00 - 9:20 Privacy Preserving and Communication Efficient Information Enhancement for Imbalanced Medical Image Classification Li, Xiaochuan; Ke, Yuan
          9:20 - 9:40 Non-iterative Blind Deblurring of Digital Microscope Images with Spatially Varying Blur Kaynar, Hasan Furkan; Geissler, Peter; Demaret, Laurent; Seybold, Tamaray; Stechele, Walter
          9:40 - 10:00 Low-effort re-identification techniques based on medical imagery threaten patient privacy. Martínez Esmeral, Laura Carolina; Uhl, Andreas

10:00 –10:15   ☕ Coffee Break & Industrial Booth Exhibition

10:15 – 11:05   **Oral Session 8: Radiomics, Predictive Models, and Quantitative Imaging**
          10:15 - 10:35 Correlation between IBSI morphological features and manually-annotated shape attributes on lung lesions at CT. Isabella; Scialpi, Michele; Aristei, Cynthia; Palumbo, Barbara
          10:35 - 10:55 Large-scale Patch-wise Pathological Image Feature Dataset with a Hardware-agnostic Feature Extraction Tool. Huo, Yuankai; Zhu, Zheyu; Liu, Quan; Deng, Ruining; Asad, Zuhayr; Cui, Can; Yao, Tianyuan
          10:55 - 11:15 Predicting Myocardial Infarction using Retinal OCT Imaging. Maldonado Garcia, Cynthia L; Ravikumar, Nishant; Frangi, Alejandro F

11:05 – 11:15   Break

11:15 – 12:15   **Keynote Prof. Alejandro Frangi (University of Leeds)**
12:15 – 13:00   Break
13:00 – 14:30   **Industrial Panel (MathWorks, Microsoft, Nvidia)**

14:30 – 15:30   **Poster Session** & ☕ Coffee Break   & Industrial Booth Exhibition

15:30 – 16:30   **Oral Session 9: Image-Guided Intervention**
           15:30 - 15:50 A user interface for automatic polyp detection based on deep learning with extended vision. Krenzer, Adrian
           15:50 - 16:10 Using deep learning on X-ray orthogonal coronary angiograms for Quantitative. Coronary Analysis. Busto, Laura; González-Nóvoa, José A.; Juan-Salvadores, Pablo; Jiménez, Víctor; Íñiguez, Andrés; Veiga, Cesar
           16:10 - 16:30 FCN-Transformer Feature Fusion for Polyp Segmentation. Sanderson, Edward; Matuszewski, Bogdan J

16:30 – 17:00   Closing Ceremony and Awards