ASMUS 2022- Full Program

TIME (SGT)	SESSIONS	CHAIRS
09:00 – 09:15	Opening Remarks and Introduction	*Alison Noble*
09:15 – 10:15	Full Presentations (10 min. + 2 min. Q&A) **AI-enabled Assessment of Cardiac Systolic and Diastolic Function from Echocardiography**, *Esther Puyol-Anton, Bram Ruijsink, Baldeep S. Sidhu, Justin Gould, Bradley Porter, Mark K. Elliott, Vishal Mehta, Haotian Gu, Christopher A. Rinaldi, Martin Cowie, Phil Chowienczyk, Reza Razavi, and Andrew P. King* **Efficient Pix2Vox++ for 3D Cardiac Reconstruction from 2D echo views,** *David Stojanovski, Uxio Hermida, Marica Muffoletto, Pablo Lamata, Arian Beqiri, and Alberto Gomez* **Learning Generalized Non-Rigid Multimodal Biomedical Image Registration from Generic Point Set Data**, *Zachary MC Baum, Tamas Ungi, Christopher Schlenger, Yipeng Hu, and Dean C Barratt* Lightning Talks (3 min.) **Left Ventricle Contouring of Apical Three-Chamber Views on 2D Echocardiography, *Alberto Gomez***, *Mihaela Porumb, Angela Mumith, Thierry Judge, Shan Gao, Woo-Jin Cho Kim, Jorge Oliveira, and Agis Chartsias* **Rapid Lung Ultrasound COVID-19 Severity Scoring with Resource-Efficient Deep Feature Extraction**, *Pierre Raillard, Lorenzo Cristoni, Andrew Walden, Roberto Lazzari, Thomas Pulimood, Louis Grandjean, Claudia AM Gandini Wheeler-Kingshott, Yipeng Hu, and Zachary MC Baum* **Spatio-temporal model for EUS video detection of Pancreatic Anatomy Structures**, *Adrien Meyer, Antoine Fleurentin, Julieta Montanelli, Jean-Paul Mazellier, Lee Swanstrom, Benoit Gallix, Georgios Exarchakis, Leonardo Sosa Valencia, and Nicolas Padoy*	*Andy King* *Wolfgang Wein*
10:15 – 10:30	Break	
10:30 – 11:15	Keynote 1, **Quantitative lung ultrasound: finding new sources of contrast to detect and quantify lung diseases**, *Marie M. Muller*	*Purang Abolmaesumi*
11:15 – 11:30	Break	
11:30 – 12:30	Full Presentations (10 min. + 2 min. Q&A) **Self-Knowledge Distillation for First Trimester Ultrasound Saliency Prediction**, *Mourad Gridach, Elizaveta Savochkina, Lior Drukker, Aris T. Papageorghiou, and J. Alison Noble* **Differential Learning from Sparse and Noisy Labels for Robust Detection of Clinical Landmarks in Echo Cine Series**, *Mobina Mahdavi, Hooman Vaseli, Christina Luong, Nathan Van Woudenberg, Mohammad Jafari, Purang Abolmaesumi, and Teresa Tsang* **Towards Multi-Modal Self-Supervised Video and Ultrasound Pose Estimation for Laparoscopic Liver Surgery**, *Nina Montana-Brown, Joao Ramalhinho, Bongjin Koo, Moustafa Allam, Brian Davidson, Kurinchi Gurusamy, Yipeng Hu, and Matthew J. Clarkson* Lightning Talks (3 min.)	*Hadrien J Reynaud* *Bernhard Kainz*

11:30 – 12:30 (CONTINUE)	**Adnexal Mass Segmentation with Ultrasound Data Synthesis**, *Clara Lebbos, Jen Barcroft, Jeremy Tan, Johanna Müller, Matthew Baugh, Athanasios Vlontzos, Srdjan Saso, and Bernhard Kainz* **Meta-Registration: Learning Test-Time Optimization for Single-Pair Image Registration**, *Zachary MC Baum, Yipeng Hu, and Dean C Barratt* **Prediction of Kidney Transplant Function with Machine Learning from Computational Ultrasound Features**, *Ricky Hu, Rohit Singla, Cailin Ringstrom, Zoe Hu, Victoria Lessoway, Janice Reid, Timothy Murray, Christopher Nguan, and Robert N. Rohling*	
12:30 – 14:00	Lunch break	
14:00 – 14:45	Keynote 2 **From a graduate student's idea to a globally deployed instrument: the decade-long journey to democratize the power of ultrasound by creating a robotic imaging scanner for preclinical research**, *Ryan Gessner*	Stephen Aylward
14:45 – 15:40	Break	
15:40 – 16:40	Full Presentations (10 min. + 2 min. Q&A) **Contact force Prediction for a Robotic Transesophageal Ultrasound Probe via Operating Torque Sensing,** *Yiping Xie, Xilong Hou, Hongbin Liu, James Housden, Kawal Rhode, Zeng-Guang Hou, and Shuangyi Wang* **Automatic Quality Assessment of First Trimester Crown-Rump-Length Ultrasound Images**, *Sevim Cengiz, Ibraheem Hamdi, and Mohammad Yaqub* **RL based Unsupervised Video Summarization framework for Ultrasound Imaging**, *Roshan P Mathews, Mahesh Raveendranatha Panicker, Abhilash R Hareendranathan, Yale Tung Chen, Jacob L Jaremko, Brian Buchanan, Kiran Vishnu Narayan, Kesavadas C, and Greeta Mathews* Lightning Talks (3 min.) **End-to-End Myocardial Infarction Classification from Echocardiographic Scans**, *Mohamed Saeed, and Mohammad Yaqub* **View Classification of Color Doppler Echocardiography via Automatic Alignment between Doppler and B-mode Imaging**, *Jerome Charton, Hui Ren, Jay Khambhati, Jeena DeFrancesco, Justin Cheng, Anam A. Waheed, Sylwia Marciniak, Filipe Moura, Rhanderson Cardoso, Bruno B. Lima, Erik Steen, Eigil Samset, Michael H. Picard, Xiang Li, and Quanzheng Li* **A Universal End-to-End Universal Description of Pulse-Echo Ultrasound Image Reconstruction**, *Dongwoon Hyun*	*Zhe Min* *Alberto Gomez*
16:40– 17:10	Demos **Fully automatic registration and reconstruction of freehand liver ultrasound to MRI**, *Wolfgang Wien* **Robotic Ultrasound for Cardiac Interventions: From Design to Clinical Tests**, *Shuangyi Wang* **Augmented Reality Ultrasound Platform for Lumbar Puncture Guidance**, *Baichuan Jiang* **SpineUs - Real-time spine ultrasound segmentation and landmark detection for scoliosis monitoring,** *Nina Montana Brown* **Robotic Scanning of Aorta based on Intermediate Ultrasound Representations**, Yordanka Velikova	*Zac Baum*
17:10 – 17:25	Break	
17:25 – 17:40	Closing Remarks & Prizes	Stephen Aylward