Welcome and Workshop Goals
Stephen R. Aylward
Kitware, USA

Robust Photoacoustic Beamforming using Dense Convolutional Neural Networks
Emran Mohammad Abu Anas, Haichong K. Zhang, Chloe Audigier, and Emad M. Boctor
Johns Hopkins University, USA

GLUENet: Ultrasound Elastography Using Convolutional Neural Network
Golam Kibria and Hassan Rivaz
Concordia University and PERFORM Centre, Canada

A Training Tool for Ultrasound-guided Central Line Insertion with Webcam-based Position Tracking
Mark Asselin, Tamas Ungi, Andras Lasso and Gabor Fichtinger
Queen’s University, Canada

CUST: CNN for Ultrasound thermal image reconstruction using Sparse Time-of-flight information
Younsu Kim, Chloe Audigier, Emran M. Anas, Jens Ziegle, Michael Friebe, and Emad M. Boctor
Johns Hopkins University, USA

Break

Quality Assessment of Fetal Head Ultrasound Images Based on Faster R-CNN
Zehui Lin, Minh Hung Le, Dong Ni, Siping Chen, Shengli Li, Tianfu Wang, and Baiying Lei
Shenzhen University and Shenzhen Maternal and Child Healthcare Hospital, China

Recent Advances in Point-of-Care Ultrasound using Real-Time Image Analysis
Oliver Zetting, Mehrdad Salehi, Raphael Prevost, and Wolfgang Wein
ImFusion GmbH and Technische Universität München, Germany

Lightning Introductions to Live Demonstrations
12:30 – 13:25 Live Demonstrations

- **Fusing Hololens and Point-Of-Care Ultrasound Technology for Intuitive Procedure Guidance**
  
  *Luv Kohli*
  
  *InnerOptic, USA*

- **Markerless Inside-Out Tracking for 3D Ultrasound Compounding**
  
  *Benjamin Busam, Patrick Ruhkamp, Salvatore Virga, Beatrice Lentes, Nassir Navab, Christoph Hennersperger*
  
  *Technische Universitat Munchen and FRAMOS GmbH, Germany; and JHU, USA*

- **Ultrasound-Base Detection of Lung Abnormalities in Ultrasound Imagery using Single Shot Deep Convolutional Networks**
  
  *Sourabh Kulhare, Xinliang Zheng, Courosh Mehanian, Cynthia Gregory, Meihua Zhu, Kenton Gregory, Hua Xie, James McAndrew Jones, Benjamin Wilson*
  
  *Intellectual Ventures Laboratory, USA and Oregon Health Sciences University, USA*

- **Quantitative Echocardiography: Real-time Quality Estimation and View Classification Implemented on a Mobile Android Device**
  
  *Nathan Van Woudenberg, Zhibin Liao, Amir H. Abdi, Hani Girgis, Christina Luong, Hooman Vaseli, Haotian Zhang, Kenneth Gin, Robert Rohling, Teresa Tsang, and Purang Abolmaesumi*
  
  *University of British Columbia and Vancouver General Hospital, Canada*

- **Single-Element Needle-Based Ultrasound Imaging of Spine: An In Vivo Feasibility Study**
  
  *Haichong K. Zhang, Younsu Kim, Abhay Moghekar, Nicholas J. Durr, and Emad M. Boctor*
  
  *Johns Hopkins University, USA*

- **A Training Tool for Ultrasound-guided Central Line Insertion with Webcam-based Position Tracking**
  
  *Mark Asselin, Tamas Ungi, Andras Lasso and Gabor Fichtinger*
  
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- **Recent Advances in Point-of-Care Ultrasound using Real-Time Image Analysis**
  
  *Oliver Zettinig, Mehrdad Salehi, Raphael Prevost, and Wolfgang Wein*
  
  *ImFusion GmbH and Technische Universitat Munchen, Germany*

13:25 – 13:30 Closing Remarks

**Organizing Committee**

Stephen Aylward, Ph.D. - Kitware, USA

Gabor Fichtinger, Ph.D. - Queens University, Canada

Emad Boctor, Ph.D. - Johns Hopkins University, USA

**Program Committee**

Stephen Aylward, Ph.D. - Kitware, USA

Emad Boctor, Ph.D. - Johns Hopkins University, USA

Kevin Cleary, Ph.D. - Children’s National Medical Center, USA

Gabor Fichtinger, Ph.D. - Queens University, Canada

Bradley Freeman, M.D. - Washington University, USA

Deborah Kane, M.D. - Washington University, USA

Luv Kohli, Ph.D. - InnerOptic, USA

Sean Montgomery, M.D. - Duke University Hospital, USA

Matt Oetgen, M.D. - Children’s National Medical Center, USA

Sonia Pujol, Ph.D. - Brigham and Women’s Hospital, USA