

SYMPOSIUM ON INNOVATIONS IN IMAGING TECHNOLOGY & HEALTHCARE APPLICATIONS

Artificial Intelligence in Medical Imaging and Beyond

Integrating Imaging Technology and Innovations with Data Sciences and Engineering to Advance
Biomedical Research and Healthcare Delivery

Date: December 4, 2018

Time: 11:30AM - 5:30PM

Location: Health Science Research Building I (HSRBI) Auditorium, Emory University

RSVP/Register (free): http://www.radiology.emory.edu/symp_innovation.html

Program

Check-in and Symposium Opening

11:30-12:00 **Check-in, lunch and poster setup/viewing**

12:00-12:10 **Welcome** Hui Mao, PhD, Professor of Radiology and Imaging Sciences

Opening Remarks

Dr. Allan Levey, MD, PhD, Betty Gage Holland Professor and Chair of Department of Neurology, Interim Executive Associate Dean, Emory University School of Medicine

Dr. Carolyn Meltzer, MD, William P. Timmie Professor and Chair of Department of Radiology & Imaging Sciences, Associate Dean of Emory University School of Medicine

Keynote Lecture

Introduced by Dr. Elizabeth Krupinski, PhD, Professor and Vice Chair for Research, Department of Radiology and Imaging Sciences, Emory University School of Medicine

12:10-12:55 **Deep Learning for Brain Quantification and Cancer Radiotherapy**

Dr. Dinggang Shen, PhD, Professor and Director for Quantitative Imaging, Department of Radiology and Biomedical Medical Imaging Center, University of North Carolina Chapel Hill

Session/Theme 1: Integrating Radiology, Data Sciences and Engineering

Moderator: Dr. Hui Mao, Professor and Co-Director of Precision and Quantitative Imaging Program, Department of Radiology and Imaging Sciences, Emory University School of Medicine

- 1:00-1:20 **Challenges and Ethics of Implementing AI in Healthcare** Nabile Safdar, MD, Professor and Vice Chair for Informatics, Department of Radiology and Imaging Sciences, Emory University School of Medicine
- 1:20-1:40 **AI in Radiology: Where are the gaps? Who are the validators? Who has the money** Matt Hawkins, MD, Associate Professor, Department of Radiology and Imaging Sciences, Emory University School of Medicine
- 1:40-2:00 **Translating AI for Biomedical Imaging: Challenges and Opportunities**
May D. Wang, PhD, Professor, Coulter Department of Biomedical Engineering, Emory-Georgia Institute of Technology
- 2:00-2:20 **Multimodal Data Fusion of Brain Imaging Data for Characterizing Health and Disease** Vince Calhoun, PhD, Distinguished University Professor and Director, GSU-GATech-Emory Joint Center for Translational Research in Neuroimaging and Data Science (TReNDS), Georgia State University
- 2:20-2:35 *Coffee Break*

Session/Theme 2: AI Enhanced MI Applications

Moderator: Dr. Elizabeth Krupinski, PhD, Professor and Vice Chair for Research, Department of Radiology and Imaging Sciences

- 2:35-2:55 **Deep Learning Models for fMRI Data Analysis** Tianming Liu, PhD, Professor, Department of Computer Sciences, University of Georgia
- 2:55-3:15 **AI in Image-Guided Radiotherapy** Xiaofeng Yang, PhD, Assistant Professor, Department of Radiation Oncology, Emory University School of Medicine
- 3:15-3:35 **Diagnostic Performance of an Artificial Intelligence Driven Cardiac Structured Reporting System** Ernie Garcia, PhD, Endowed Professor in Cardiac Imaging and Director, Emory Nuclear Cardiology R&D Laboratory, Department of Radiology and Imaging Sciences, Emory University School of Medicine
- 3:35-3:55 **Computational Pathology** Lee Cooper, PhD, Assistant Professor, Department of Biomedical Engineering and Department of Biomedical Informatics, Emory University School of Medicine

3:55-4:15 **Uncovering High-dimensional Physiological Information from Brain Tumor Perfusion MRI Data** Hui Mao, PhD, Professor, Co-Director of Precision and Quantitative Imaging Program, Department of Radiology and Imaging Sciences, Emory University School of Medicine

Panel Discussions, Q/A and Closing Remarks

Moderator: Dr. Elizabeth Krupinski, PhD, Professor and Vice Chair for Research, Department of Radiology and Imaging Sciences

4:15-4:35 Direction and Strategy for Future Development and AI- MI Integration at Emory Healthcare and Beyond

Poster and Network

4:35-5:30

Directions: The Health Sciences Research Building (HSRB), 1760 Haygood Drive, Atlanta, Georgia 30322 or check: <https://bme.gatech.edu/bme/directions-bme-emory>

Parking information: Visitor parking is available in the parking deck located off Lowergate Drive or check: <http://transportation.emory.edu/parking/visitors.html>