

CIDSE Invited Talk

with Dr. Jianming Liang

Artificial Intelligence for Computer-Aided Diagnosis in Medical Imaging



Tuesday, October 29, 2019
11:00 AM
Brickyard Engineering 510

Abstract:

Modern imaging systems generate enormous volumes of image data, far exceeding the human capacity for interpretation. However, it is not the images themselves, but rather the clinically relevant information contained within them, that is paramount. Therefore, drawing upon computer vision, deep learning, and mathematics, we are developing comprehensive, high-performance systems that automatically and quantitatively extract clinically important imaging biomarkers to support clinical decision making in diagnosis, therapy, and surgery. In this talk, I will first review several research projects at my lab, including computer-aided diagnosis and prognosis of pulmonary embolism, personalized cardiovascular disease risk stratification, and ensuring high-quality colonoscopy, followed by an outline of our future research objectives, including computer-aided diagnosis across diseases, modalities, and specialties, and deep learning with limited and weakly labeled data.

BIO

Dr. Jianming Liang is an Associate Professor at ASU and an Adjunct Associate Professor of Radiology at Mayo Clinic. He was an inaugural Mayo Clinic-ASU Alliance Fellow. During his sabbatical, he was an Invited Professor at Mila—Quebec Artificial Intelligence Institute and Montreal University Hospital Research Center, where he was immersed in deep learning for medical imaging. Funded by the NIH, his research is highly interdisciplinary, meshing multiple branches of computer science and engineering with several specialties for direct clinical impacts. In addition to his 80 peer-reviewed publications, he has been awarded 27 US patents with an additional 30 patents pending. His research has led to FDA-approved products. Dr. Liang has received an ASU President's Award for Innovation and a CHS Faculty Innovation Award, and he has been inducted into the National Academy of Inventors (NAI).

Hosted by: Yalin Wang

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