

July 6: Jayashree Kalpathy-Cramer, MedICI: A Platform for Medical Image Computing Challenges



SYNOPSIS:

Over the last couple of decades, “challenges” have been successfully employed to spur scientific research, “leverage ingenuity” and foster the translation of scientific advances into more widespread use. The topics for the challenges have covered a large spectrum of critical issues from self-driving cars and robots for “dangerous, degraded, human-engineered environments” to topics in energy, education and human health.

“Challenges” have also becoming increasingly important in the medical imaging research community. Such challenges have been an integral part of prestigious conferences such as MICCAI (Medical Image Computing and Computer Assisted Intervention) and International Symposium on Biomedical Imaging (ISBI) and are being planned at a number of other venues. The underlying rationale for these challenges is driven by the realization that every year we see the publication of numerous algorithms published in the scientific literature, yet a very small fraction are translated into clinical use. Challenges can be an effective means to comprehensively assess the performance of algorithms by comparing them on common, sufficiently large and diverse datasets using realistic tasks and valid evaluation metrics.

MedICI is an open-source project that is developing infrastructure and support to host medical imaging challenges across radiology, digital pathology, and genomics. We will describe the architecture of the system including the integration of CodaLab, caMicroscope, and ePAD. We will walk through the process of hosting and participating in challenges from the perspective of the organizer and participant, describe past and on-going challenges and share successes as well as lessons learned.

[Session details...](#)**BIO:**

Dr. Jayashree Kalpathy-Cramer is the co-director of the Quantitative Tumor Imaging at Martinos (QTIM) lab at the Athinoula A. Martinos Center for Biomedical Imaging at Massachusetts General Hospital and Assistant Professor of Radiology at Harvard Medical School. She has a Bachelor of Technology in Electrical Engineering (EE) from IIT Bombay, a Ph.D. in EE from Rensselaer Polytechnic Institute, and an M.S. in Biomedical Informatics from Oregon Health & Science University (OHSU). Her areas of research includes quantitative imaging in cancer, image analysis for retinal imaging, cloud computing and machine learning. She has organized challenges in the area of medical image retrieval and analysis for the last decade.

SUMMARY:

Topic: MedICI: A Platform for Medical Image Computing Challenges

Speaker: Jayashree Kalpathy-Cramer, Ph.D.

Date: Wednesday, July 6, 2016

Time: 11 AM – 12 PM ET

Room: 2W910-912

You are invited to listen to Dr. Kalpathy-Cramer's in the NCI Shady Grove Building on Medical Center Drive or via WebEx.

Presentation: View Dr. Kalpathy-Cramer's presentation slides in PDF and PowerPoint below:

About the NCI CBIIT Speaker Series:

The National Cancer Institute (NCI) Center for Biomedical Informatics and Information Technology (CBIIT) Speaker Series presents talks from innovators in the research and informatics communities. The biweekly presentations allow thought leaders to share their work and discuss trends across a diverse set of domains and interests. The goals of the Speaker Series are: to share leading edge research; to inform the community of new tools, trends, and ideas; to inspire innovation; and to provide a forum from which new collaborations can begin. For additional information, including past speaker series presentations, visit the [CBIIT Speaker Series page](#).

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