



Exploring the Power of Foundation/Generative Models in CCBGM Research

Friday, June 2, 2023

Join Zoom Meeting	Meeting will be recorded
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Meeting ID:	873 8075 1428
Password:	203618

AGENDA

11:30 – 11:40 a.m.	Welcome, brief update and overview	Ravi Iyer, UIUC Liewei Wang, Mayo Karl Kochendorfer, UIC
11:40 – 11:55 a.m.	Foundation/Generative Model Presentation – <i>“What they are and what they are going to do: exploring the potential impact in accelerating healthcare-related predictive model development”</i> .	Ravi Iyer, UIUC
11:55 – 12:25 p.m.	Industry Panel - Ravi Madduri, Argonne; Sowmi Utiramerur, Roche; Geralyn Miller, Microsoft; RaviKiran Taire, HCL Group. (4@ 5 min/20 minutes of presentation; 10 minutes discussion)	Moderated by Ravikiran Taire, HCL Tech
12:25 – 12:50 p.m.	Faculty Panel - Mark Anastasio, UIUC; Aaron Mangold, Mayo Clinic; Cheng Zhai, UIUC (3@ 5 min/15 minutes of presentations; 10 minute discussion)	Moderated by Arjun Athreya, Mayo Clinic
12:50 – 1:00 p.m.	Open discussion and meeting wrap-up	
Attendees are welcome to stay and continue discussions		

Center Directors

Ravi Iyer, George and Ann Fisher Distinguished Professor of Engineering, Department of Electrical and Computer Engineering, Department of Computer Science and Coordinated Science Laboratory, University of Illinois at Urbana-Champaign

Liewei Wang, Professor and Chair of Pharmacology, Department of Molecular Pharmacology and Experimental Therapeutics, Mayo Clinic

Karl Kochendorfer, Assistant Vice Chancellor for Health Affairs; Chief Health Information Officer, UI Hospital & Clinics; Associate Professor, Clinical Family Medicine, UI Health

About the Speakers

Industry Panel

Sowmi Utiramerur, VP/Head of Computational Biology Research & Early Development, Roche Diagnostics Solutions

In the current role as Head of Computational Biology Research, Sowmi leads research in areas of Next Generation Sequencing, Inherited Disease Genomics, Clinical Oncology, Immuno Oncology, and ImmunoHistoChemistry. Before joining Roche Diagnostics, he served as Director of Computational Biology, Clinical Genomics Program at Stanford Medicine and Director of Translational Research at Stanford Center for Genomics and Personalized Medicine. He also has many years of experience leading research projects in NGS algorithms, clinical diagnostics at Applied Biosystems/Life Technologies.

Geralyn Miller, Senior Director on the Health and Life Sciences Cloud, Data, and AI team at Microsoft.

She is focused on the transformation of healthcare through the lens of artificial intelligence. Geralyn was a co-founder of the AI for Health program at Microsoft--a multi-year philanthropic effort aimed at bringing artificial intelligence to bear on some of the toughest challenges in global health. Geralyn is a Time Magazine author on AI in healthcare and a speaker on issues of artificial intelligence, ethics, and equity in health.

Ravi Madduri, Computer Scientist in the Data Science and Learning division at Argonne National Laboratory and Senior Scientist at the University of Chicago Consortium for Advanced Science and Engineering (UChicago CASE).

Ravi's research interests are in building sustainable, scalable services for science, reproducible research, large-scale data management and analysis. He co-leads the MVP-CHAMPION project, which is a collaboration between VA and DOE and developed methods that used AI and HPC for solving challenges in biomedicine. Ravi is the PI of the DOE-funded PALISADE-X project that is building privacy preserving federated learning and confidential computing capabilities to develop generalizable and trust-worthy AI models in biomedicine.

Ravikiran Taire, Vice President of Healthcare Markets at HCLTech.

Responsible for HCLTech's client engagements across Healthcare segments including Payers, PBMs, Providers and Health Tech. This involves identifying customer needs and addressing them through technology innovation in collaboration with technology partners. As a technology services company, our interest in Generative AI is across two dimensions: (1) interested in the role of AI in new product development, in driving systems efficiencies thru hyper automation and promoting rapid innovation (2) Evolving use cases that our clients in the Healthcare & Lifesciences industry are interested in.

Faculty Panel

Mark Anastasio, Donald Biggar Willett Professor in Engineering Head, Department of Bioengineering at the University of Illinois at Urbana Champaign. He is affiliate faculty in the department of Computer Science, Electrical and Computer Engineering, Carle Illinois College of Medicine, and Beckman Institute. His primary research concerns computational imaging science, image reconstruction, machine learning, and inverse problems.

Aaron Mangold, Associate Professor, Mayo Clinic. He is a dermatologist with expertise in cutaneous lymphoma and complex medical dermatology. Dr. Mangold directs the multi-disciplinary cutaneous lymphoma clinic as well as the dermatology clinical trials unit. His research focus is in biomarker discover and targeted therapeutics in rare diseases.

Cheng Xiang Zhai, Donald Biggar Willett Professor in Engineering in the Department of Computer Sciences at the University of Illinois at Urbana Champaign. His interests are in developing all kinds of novel Intelligent Information Systems (e.g., intelligent search engines, recommender systems, text analysis engines, and intelligent task assistants) to help people manage and exploit large amounts of data (i.e., "big data") and augment human intelligence, especially text data. I am particularly interested in building such intelligent systems for improving health, medical care, education, and accelerating scientific discovery, and building them based on theoretically sound frameworks, models, and algorithms that are also effective empirically

Arjun Athreya, Electrical and Computer Engineer, Senior Associate Consultant and Asst. Professor of Pharmacology and Psychiatry at Mayo Clinic. Dr. Athreya directs the Health Engineering Systems and Analytics Laboratory (HEAL) with a goal for developing engineering ecosystems using artificial intelligence to enable precision care in the era of digital and decentralized health.