

Newsletter

Fall 2022

DIRECTORS UPDATE

2022 has been a year of fabulous growth for MICS. We officially launched our Hypatia Fellowship Initiative and with a generous gift from Qualcomm, we will recruit the 1st cohort in the spring of 2023. We welcomed Northrop Grumman, a technology company focused on global security and human discovery, as our newest corporate partner. Tarun Soni, NG Fellow and Chief Engineer for the Communications Business Unit, will be representing Northrop on the MICS Industry Board. This year, we also strengthened partnerships with ARM and Intel through new vertical projects.

MICS was excited to welcome two stellar faculty members this year, Massimo Franceschetti, Professor in Electrical and Computer Engineering, and Imani N.S. Munyaka, Assistant Professor in Computer Science and Engineering. Professor Franceschetti is an IEEE and Guggenheim Fellow whose research focuses on physical and information-based foundations of communication and control systems. Professor Munyaka contributes her expertise on human centered computing with current research addressing public policy, security education, privacy, and accessibility to the Center.

We are thankful for the support and partnerships made in 2022 and look forward to new opportunities for engagement in 2023.



MICS Collaboratory

MICS is honored to be one of the thirteen engineering agile centers and institutes moving into the newly opened Franklin Antonio Hall (FAH). FAH is a unique, visionary building designed to intentionally facilitate collaborative research and engagement across disciplines. Our dedicated space on the fourth-floor contains individual faculty offices and working

space for post-doctoral researchers and graduate students. The Collaboratory will also house an integrated mentoring program named the Hypatia Fellows Initiative which will launch its first cohort soon thanks to a generous gift from Qualcomm. Building on social science principles that show an individual engineer can impact ten other engineers, the Hypa-

tia Fellows program is designed to create a stellar constellation of engineers. The Initiative will support individual PhD students with their dissertation work and also provide each Fellow the tools, financial resources, and leadership mentoring to create their own DEI initiative, thereby increasing the impact on the next generation of researchers.



Tara Javidi



Mingu Kang



Rose Yu

FACULTY NEWS & AWARDS

Tara Javidi, along with a broad group of UCSD faculty including MICS faculty Ilkay Altintas, Alon Orlitsky, Piya Pal, and Rose Yu, has been selected to lead the Schmidt AI in Science Postdoctoral Fellowship program at UC San Diego, a Partner of Schmidt Futures \$148M global initiative to accelerate AI use in STEM.

Mingu Kang received Intel's Rising Star Faculty award for early-career academic researchers for his vision of ultralow-power AI processing.

Rose Yu received the National Science Foundation's Early Career Development (CAREER) Award for exemplifying excellence in teaching and research.

Kamalika Chaudhuri is part of a new, NSF funded Institute for Emerging CORE Methods in Data Science (EnCORE) on campus

Tajana Rosing received the 2022 University Researcher Award from the Semiconductor Industry Association (SIA) and the Semiconductor Research Corporation (SRC) in recognition of her excellent work in semiconductor technology and design.

Deian Stefan received a Sloan Research Fellowship given to early career researchers whose creativity, innovation, and research accomplishments make them stand out as the next generation of leaders

Kamalika Chaudhuri



Tajana Rosing



Deian Stefan



CONFERENCES

MICS faculty and students represented the Center at many prestigious conferences in the US and abroad this year.

MICS Co-Director Farinaz Koushanfar gave a keynote talk on Intellectual Property Protection for Deep Learning and Federated Learning Models at the 10th ACM Workshop on Information Hiding and Multimedia Security. She was also a distinguished speaker at ICCAD, giving the IEEE CEDA Keynote address on Automated Cryptographically Secure Private Computing.

Co-Director Tara Javidi traveled to Espoo, Finland for ISIT and to Mumbai, India for the IEEE Information Theory Workshop where she gave the Qualcomm Plenary Talk on A (Con) Sequential View of Information for Statistical Learning and Optimization.



Farinaz Koushanfar at ICCAD

Other conferences featuring MICS faculty include:

- Duygu Kuzum at IEEE IEDM
- Hanh-Phuc Le at ISSCC
- Mingyu Kang at MICRO and ISCA
- Kamalika Chaudhury at ACML
- Rose Yu at NeurIPS and ACM KDD
- Ilkay Altintas at IEEE CCGrid

MICS students had great success at conferences this year as well:

- Byung Hoon Ahn, advised by Hadi Esmaeilzadeh, nominated for best paper award at DAC
- Zhara Ghodsi, Mojan Javaheripi, Nojan Sheybani, Xinqiao Zhang, and Ke Huang, all advised by Farinaz Koushanfar, received an Outstanding Paper Award at NeurIPS