ECE News 2022

Department of Electrical and Computer Engineering
Hagen School of Engineering & Applied Sciences
University of Rochester

Message from our Department Chair

I am honestly proud of all the Department of Electrical and Computer Engineering at the University of Rochester has accomplished during the 2021-2022 academic year. We have seen our faculty and students continue to make significant contributions to their respective fields, and our alumni continue to do so as well.

Our faculty members have been honored with awards and recognitions for their research and teaching. Professor Michael Huang has been named a Fellow of the IEEE. Professor Sandhya Dwarkadas was selected as the Chair of the Computer Sciences Section of the American Association for the Advancement of Science, and was awarded an AMD Corporation Research grant to design and implement supercomputing compilers for tensor-based accurate molecular-dynamics simulations. Professor Michael Scott was awarded a Fulbright Scholarship to teach and conduct research at the Universidade Federal do Rio Grande do Sul in Porto Alegre, Brazil, and was also awarded a grant to develop a more resource-aware language model for Internet-of-Things (IoT) devices. Second-year PhD student Jonathan Eastep of the department's sponsored research, a team led by Gang Long developed the first multi-chiplet integrated Frontier-class 3-core computer for supercomputing, and Ryan Sizemore, a student of Professor Sandhya Dwarkadas, was awarded a Qualcomm Innovation Fellowship for his work on improving cache-coherent shared memory.

Our students have also been very successful. Undergraduate Marcus Jan was named the Outstanding Engineering Senior with Best GPA awarded at Commencement, and Gonzalo Mateos who received the 2021 IEEE Signal Processing Society Pierre Simon Laplace Early Career Technical Achievement Award.

Our undergraduate alumni have had an outstanding year. Yonas Ghebre, Chetan Pandey, and Gaurav Chaus were recipients of the University's Harold W. Samuel Young Alumni Award for Outstanding Achievement. Dr. Ashish Gupta, a Ph.D. student who graduated in 2020, was selected as a Forbes 30 Under 30 Scientist. Dr. Gupta is the co-founder and Chief Technical Officer of Ionetworks, a company that has developed the first fully-flexible, gate-controllable, high-density, high-speed ion channel transistor. Dr. Gupta's company has received a grant from the Office of Naval Research to develop a neuromorphic computer system and its fabrication.

This past summer, we hosted 15 undergraduates for 10 weeks as part of our NSF Research Experiences for Undergraduates program. Today's undergraduate students are the future of our profession, and we are very proud to be able to provide them with this opportunity.

Our activities highlighted in this newsletter represent a small fraction of what our incredible faculty, staff, students, and alumni have achieved in the 2021-2022 academic year. We are very proud of our accomplishments, please send me a note at g.robert@rochester.edu or visit our website https://www.hajim.rochester.edu/ece/ and more.

Gonzalo Mateos
Associate Professor
Department of Electrical and Computer Engineering
William Pratt Fellow of Electronic Imaging
Professor of Electrical and Computer Engineering, Biomedical Engineering, and Imaging Sciences

Celebrating the Class of 2022

The Department of Electrical and Computer Engineering celebrated the Class of 2022 in Strong Auditorium on May 20, 2022. Our graduates, their families, and our faculty members, included scientists, doctors, and entrepreneurs. Congratulations, graduates!

For more photos:
photobucket.com/albums/a/ecedept/ece-2022

Events

View a list of departmental events:
hajim.rochester.edu/ece/news/events.html

Doctoral Defenses in 2022:
hajim.rochester.edu/ece/news/doctoral-defenses.html

Diversity, Equity, and Inclusion

2021 Special Events and Celebrations

Black History Month Special Event: February 22, 2021
Dr. Ashish Gupta, Co-founder of Ionetworks
An Electrical Engineer, the Department of Electrical and Computer Engineering and Ionetworks, Dr. Ashish Gupta's journey from Rochester to Silicon Valley

Women's History Month: March 2021
Women's History Month Calendar
Women's History Month Celebration

Hispanic Heritage Month: September 2021
Hispanic Heritage Month
Hispanic Heritage Month Celebration

Asian Pacific Heritage Month: May 2021
Asian Pacific Heritage Month Celebration
In celebration of Asian Pacific American Heritage Month, the Department of Electrical and Computer Engineering is spotlighting our faculty and Ph.D.student members. These scientists provide guidance and leadership to students and mentoring. Their achievements are an inspiration to the department and our future scientist engineers.

Asian Pacific American Heritage Month: May 2022
Asian Pacific Heritage Month Celebration
In celebration of Asian Pacific American Heritage Month, the Department of Electrical and Computer Engineering is spotlighting our faculty, students, and alumni. We celebrate their contributions to the department, our community, and our society. These scientists have made significant contributions to our society.

International Week of Science and Peace: November 11-12, 2021
Dr. Ashish Gupta
A graduate of Rochester, Ashish Gupta shared his story of research and his career path, especially the human science who are fighting for their rights.

2022-2023 DEI Committee

Top Row, Left to Right: Jingi Hwang, Yi Wang, Jiebo Luo, Michael Huang, Michael Scott, Sandhya Dwarkadas, Michael Huang, Michael Scott, Jiebo Luo, Yi Wang, Jingi Hwang
Bottom Row, Left to Right: Ashish Gupta, Michael Bunker, Michael Bunker, Ashish Gupta

New Faculty and Staff

July 2022
Yang (Yancy) Jiang

Yang (Yancy) Jiang, arrived in July 2022 as a tenure-track assistant professor. After earning a postdoctoral research associate at the UK Department of Engine's Public Health Genomics Unit, Yancy Jiang earned a Ph.D. in Genetics from the University of Cambridge. Yancy Jiang's research focuses on the genetic basis of complex traits, including heritable cognitive ability, and psychiatric disorders. The work has potential applications for drug discovery, cancer biology, stem cell biology, and reconstructive medicine.

September 2022
Ahmet (Ben) Ilhan

Ahmet (Ben) Ilhan joined ECE as the new Staff Accountant in September 2022. His comes to us from Bon Secours Gaillard, Gastroenterology Department.

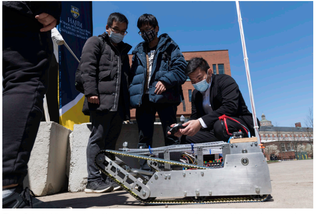
Research & Faculty News

January 2022
Professor Gonzalo Mateos selected for the 2021-2022 Signal Processing Society

Gonzalo Mateos, associate professor of electrical and computer engineering and the Asaro Biggar Family Fellow in Data Science, who has been selected for the 2021-2022 IEEE Signal Processing Society Distinguished Lecturer program. Mateos's research focuses on the intersection of machine learning, signal processing, and network science, and has contributed to a variety of application areas, including cyber-security, data analytics, and the analysis of complex and dynamic networks. Mateos's current research interests include learning from complex data, network topology inference, and distributed machine learning.
Read more: ece.rochester.edu/news/news-archive/archive/#News%20Archive%20%-%20Gonzalo%20Mateos

May 2022
Stephen Wu receives Curtis Award for Teaching Excellence

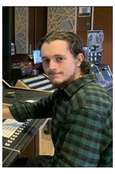
The Curtis Award is awarded to the faculty member who most deeply cares for his students. I have learned so much. I am student and after taking ECE 241, I decided to switch my major to electrical engineering. Professor Wu is a great teacher, and I am very grateful for his support and guidance. Professor Wu's Signals Course (ECE 241 and 242) Awards for Technical Excellence Awards Teaching Excellence Undergraduate Research Awards Leading Edge Fellowship Awards Lecture Series Awards Lecture Series Awards Lecture Series



Thang C. Le (right) demonstrates his team's autonomously controlled robot, which combines several sensors and modules to safely navigate buildings on campus as it delivers packages. (University of Rochester photo/J. Adam Fenster)

October 2022
Jamison Morris AME '23 - Wells Award Recipient

Congratulations to Jameson Morris, AME '23, one of this year's recipients of the Wells Award, given annually to Hajim School students who excel in both engineering or computer science and in the humanities. The award was created by the family of Robert L. Wells, a '39 graduate of mechanical engineering who became a top executive at Westinghouse. Wells felt strongly that engineers "needed the balance of the humanities" to be competent in their field. An internship at the renowned Blackbird recording studio in Nashville this summer cemented Jameson "Max" Morris' desire to become an audio and music engineer. Thanks to his major in the field and his minor in music, this month's Outstanding Student knows what it is like to be on both sides of the microphone. He has recorded and mixed tracks of performances by some of the same student ensembles he performs with. Working with senior lecturer Stephen Roessner, a Grammy Award-winning sound engineer, was invaluable. So were classes on music theory and history. "When you're recording in a studio, obviously you need a lot of technical knowledge, but it is also important to really know music, to be able to communicate with musicians from many genres," Max says.



October 2022
Congratulations to Kevin Fobare '24 ECE and Seth Roberts '23 AME, recipients of the Patrick Lee Foundation scholarship

The Patrick Lee Foundation provides scholarships to offset the cost of a college education for outstanding students in engineering and technical fields at nine colleges and universities. "Our scholars are entrepreneurial and embrace innovation," the foundation states. "They understand the importance of public service and are leaders in and out of the classroom."

Congratulations to 10 current students who have received these scholarships. They are:
- Hannah Bushey '24, Delainey Hebble '24, and Ethan Hunt '23 of biomedical engineering.
- Charles Fleischmann '23, Elyse Jones '23, and Dalton Moore '24 of mechanical engineering.
- Kevin Fobare '24 of electrical and computer engineering.
- Peri Fogel '24 and Madeline Smith '23 of chemical engineering.
- Seth Roberts '23 of audio and music engineering.

They met with foundation representatives and fellow scholars from Rochester Institute of Technology, Syracuse University, and Monroe Community College at a recent celebration and networking event held on our campus.

Kevin Fobare and Seth Roberts

December 2022
Hesham Elshafey - Grand Challenge Scholar

Hesham Elshafey '25, an electrical and computer engineering major, was well acquainted with grand challenges even before arriving on our campus. While growing up in Tanta, Egypt, Hesham attended Gharbiya—one of 14 Egyptian STEM high schools. The schools are unique in requiring students to work in teams to address the grand challenges that Egypt faces through hands-on, project-based learning.

Hesham is participating in our Grand Challenges Scholar program and is also finding the program a useful framework—to further develop his robotics skills. Learn more

Alumni News

January 2022
Kevin Klem '80 mentors Hajim Students through the Meliora Collective

Electrical engineering alumnus Kevin Klem '80, a participant in the Meliora Collective Mentorship Program, is an example of the wonderful mentors who draw on their own experiences to provide our Hajim students with invaluable career advice. Kem has more than 40 years of industry experience, working for Hughes Aircraft, Raytheon, and, most recently, Ball Aerospace and Technologies. He has worked on a team that engineered sensors and electronics for missiles as well as infrared sensor systems for A-6 fighter planes and on satellite ground station hardware and software for NASA's Earth Observing System.
Read more: rochester.edu/adv/alumni-news-media/2021/12/03/ engineering-insight-for-students-and-recent-graduates-kevinklem-80/

January 2022
Tanzeem Choudhury '97 named a fellow of Association for Computing Machinery (ACM)

Electrical engineering alumna Tanzeem Choudhury '97 has been named a fellow of ACM (Association for Computing Machinery), the world's largest and most prestigious society of computing professionals, for contributions to mobile systems for behavioral sensing and health interventions. Tanzeem, who was an exemplary undergraduate here, is now the Roger and Joelle Burnell Professor in Integrated Health and Technology at Cornell Tech and co-founder of HealthRhythms Inc. She was named one of 35 top innovators under 35 by MIT's Technology Review. Tanzeem is an outspoken advocate for gender equity.

December 2022
Paul Muntner '91

Electrical engineering alumnus Paul Muntner '91, a professor of epidemiology and the associate dean for research at the University of Alabama at Birmingham's School of Public Health, recently received the 2022 Joseph A. Vita Award from the American Heart Association. The award recognizes scientists whose research has had a major impact on the field of cardiovascular biology or cardiovascular health during the past five years. Paul's research focuses on identifying cardiovascular disease (CVD) isk factors and improving CVD prevention and treatment. He currently has 11 grant-funded studies in progress and has published more than 650 articles in peer-reviewed journals. While at Rochester, Paul was our first squash All-American and a Garnish Scholar, earning him a place in our University's Athletic Hall of Fame.

We Want to Hear from You!

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HAJIM
SCHOOL OF ENGINEERING
& APPLIED SCIENCES
UNIVERSITY of ROCHESTER

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