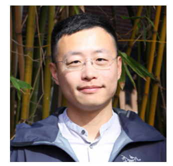
SCHOLARS

MHI 2024-25 PhD SCHOLARS

Each year, a select group of PhD students from the Electrical and Computer Engineering (ECE) Department are named Ming Hsieh Institute Scholars. These students are chosen through a competitive review process conducted by a faculty committee, based on their research excellence and commitment to pursuing an academic career. As MHI Scholars, they play a vital role in supporting the Institute's mission and initiatives, contributing to the advancement of research and academic engagement within the department.

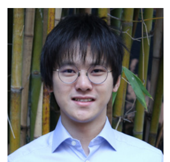
Angsagan Abdigazy
Advisor: Yasser Khan

Shiyu Li
Advisor: Wade Hsu



Zerui Liu
Advisor: Wei Wu

Amir Minoofar
Advisor: Alan Willner



Xinzhou Su
Advisor: Alan Willner

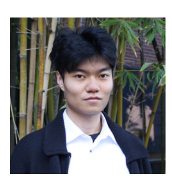
Scholar Angsagan is currently interning at Meta as a Research Scientist in the AR Display team. Scholar Amir has joined Cisco Quantum Lab as a Technical Leader for hardware egineering in Santa Monica. Scholar Zerui has joined Apple in Cuptertino as part of a research and innovation team focused on translating cutting-edge technologies into next generation products.

MHI 2024-25 UNDERGRAD SCHOLARS

The second cohort of MHI Undergraduate Scholars demonstrates the success of establishing a dedicated group of student leaders committed to nurturing the undergraduate research community. These scholars bring together exceptional research experience and strong leadership skills, serving as role models who inspire their peers to engage in research during their time at USC. Their efforts continue to enhance the undergraduate academic experience and foster a culture of curiosity, innovation, and discovery.

Diana Cantini
Advisor: Eun Sok Kim

Sangwon Cha
Advisor: Yasser Khan



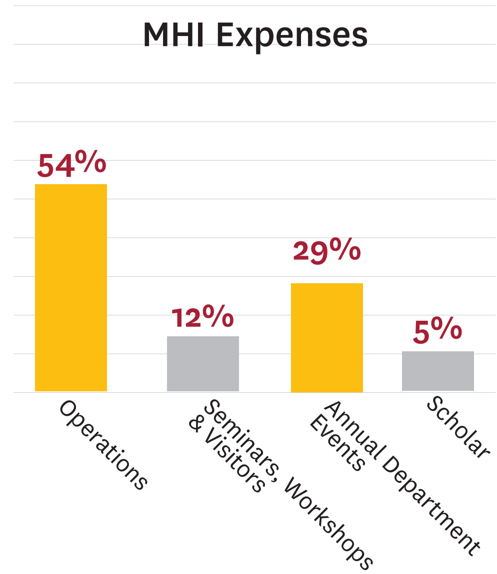
Yao Liu
Advisor: Peter Beerel

June Shao
Advisor: Yasser Khan

Claire Yuan
Advisor: Hossein Hashemi

MING HSIEH INSTITUTE

The Ming Hsieh Institute (MHI) is dedicated to advancing the academic and research mission of the Ming Hsieh Department of Electrical and Computer Engineering. By supporting innovative initiatives and hosting distinguished researchers from around the world, MHI plays a pivotal role in positioning the department at the forefront of emerging fields in electrical and computer engineering.



54%	**Operations** Supported faculty & staff payroll
12%	**Seminars, Workshops, and Visitors** Enabled leading researchers from around the world to visit, give talks, and work with faculty and students
29%	**Annual Department Events** Developed & organized by MHI to encourage collaboration between faculty, students, and alumni
5%	**Scholar Program** Awards, travel funding, workshop and event support to MHI Ph.D. and Undergrad Scholars

MHI Leadership

Shri Narayanan, Director
Hossein Hashemi, Co-Director
Bhaskar Krishnamachari, Co-Director
Cathy Huang, Business Officer
Venice Tang, Communications Manager

2024-2025 Faculty Advisory Council

Salman Avestimehr
Rehan Kapadia
Mahta Moghaddam
Krishna Nayak
Antonio Ortega
Mike Chen
Mihailo Jovanovic

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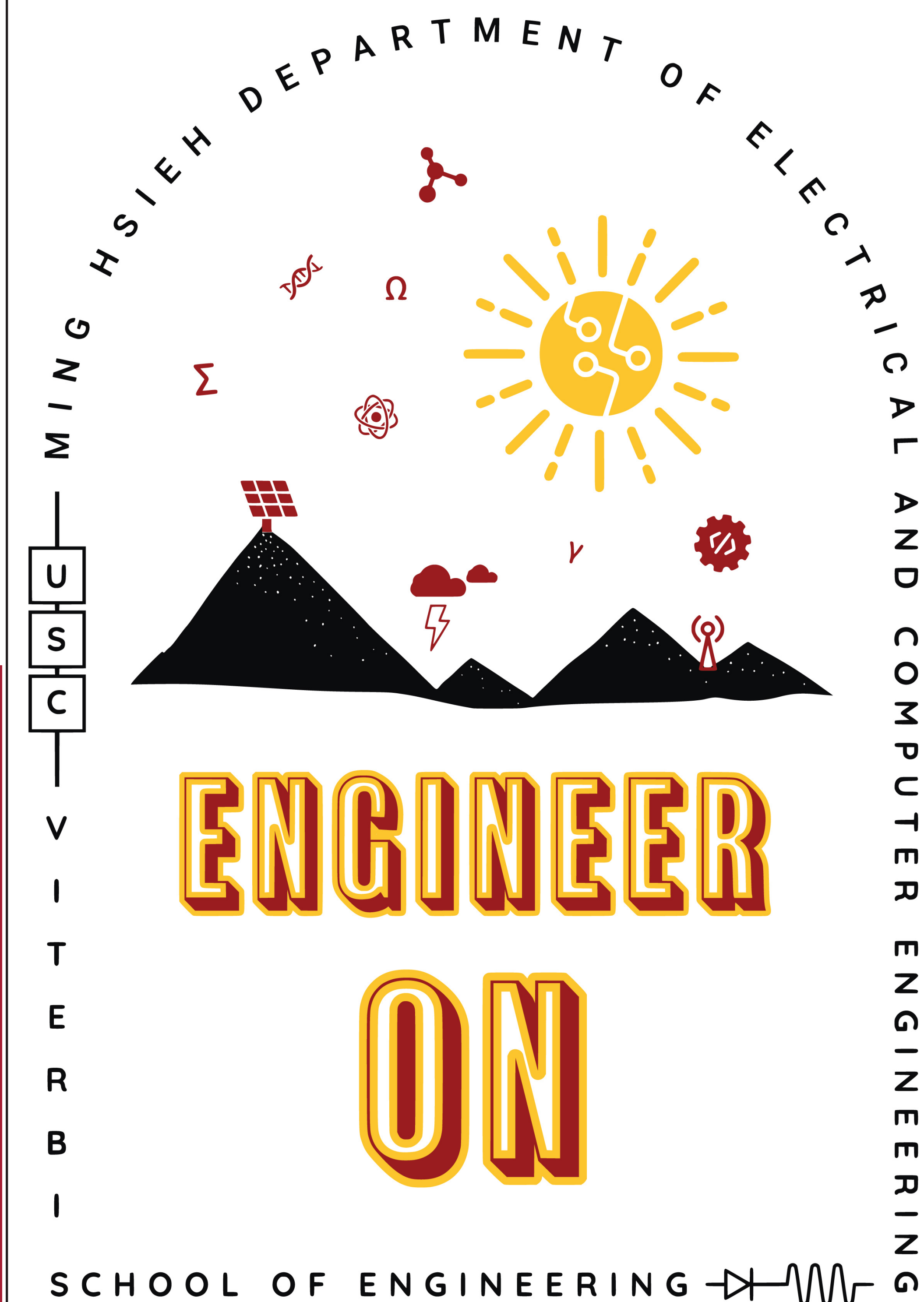
USC Viterbi
School of Engineering
Ming Hsieh Department of Electrical and Computer Engineering

Ming Hsieh Institute

intelligent technologies to empower mankind



by Phattharaporn Singkanipa

ANNUAL REPORT 2024/2025

SEMINARS/ WORKSHOP

Series in AI Foundation for the Sciences

For the lunch series, this will be a space for faculty and specially students with interests in optimization, machine learning, statistics, high-dimensional probability, signal processing and systems to interact and learn about some recent advances in the area. This year we have a particular focus on LLMs. The main focus of the series will be on students. We will put together a list of tutorials/papers to read for the coming weeks. In each session a student will take the lead in presenting the paper and discussing some of the mathematical proofs of the paper in detail. We then will further discuss the paper as a group. In addition to providing a learning environment, this will also help students hone their presentation skills.

2024-25 Number of speakers: pending

2024-25 Budget: $10,000

Cyber-Physical Systems Research Seminar Series

The ECE department intends to expand in the research area of autonomy, Cyber-Physical Systems, and Internet-of-Things, with a plan to hire more faculty. To connect our faculties and students to state-of-the-art researchers and seek potential faculty candidates, we organized the cyber-physical systems research seminar series.

2024-25 Number of speakers: 8

2024-25 Budget: $10,000

MHI - Physics Joint Seminar Series

This year, the quantum team in ECE and Physics jointed effort and started the joint seminar series. On top of the MHI support, Physics put in fund in support as well. Besides speakers invited by the committee, we also helped organize the seminar of other "drop-by" speakers by other faculties.

2024-25 Number of speakers: 13

2024-25 Budget: $10,000

Joint CSC/CommNets-MHI Seminar Series

Systems, communications, networks, and control underline a number of cutting edge areas of research in modern science and technology and they involve significant interdisciplinary component. Areas that will be directly impacted are communications, signal processing, networking, optimization, control, robotics, systems biology, bio-inspired design, uncertainty quantification, and related areas of applied mathematics.

2024-25 Number of speakers: pending

2024-25 Budget: $10,000

MHI Integrated Systems Seminar Series

ntegrated Systems Seminar Series has been held at USC. Speakers from academia and industry have come to USC to give a talk on various aspects related in Integrated Systems, Circuits, and Devices with wide range of applications including communication, computation, networking, sensing, and imaging.

2024-25 Number of speakers: 6

2024-25 Budget: $10,000

44th Southern California Control Workshop

This bi-anual event brings together researchers from universities throughout Southern California, working in broad areas of systems and control, for a one-day exchange of ideas in an informal and collaborative atmosphere. The objective of the workshop is to provide a forum for graduate students to present their work, interact with fellow students and faculty, and, during breaks, to discuss common research interests as well as to network and establish connections with other colleagues in the field. All of the talks are given by graduate students.

ECE Faculty Retreatl

October 2024

The ECE Faculty Retreat marked a significant milestone as the first gathering of our department as a unified entity. It was a valuable opportunity to connect senior and newly hired faculty members, foster meaningful introductions, and share research expertise across our diverse areas. The retreat proved to be highly productive—sparking innovative ideas, gathering constructive suggestions, and initiating improvements that will support our continued growth and cohesion as one department.

ECE Pioneer - Ming Hsieh

October 2024

The department's namesake, Ming Hsieh, was honored as an ECE Pioneer on October 23, 2024. During the event, he shared his inspiring journey—from humble beginnings in rural Northeastern China to his induction into the U.S. National Academy of Engineering. As an engineer, entrepreneur, and philanthropist, Mr. Hsieh's contributions and generosity to society are truly immeasurable.

ECE Annual Research Festival

November 2024

The 14th Annual Research Festival showcased a dynamic array of research collaborations and innovative projects, including exhibits from student organizations such as USC Makers and IEEE. The event featured over 120 research poster presentations from our researchers, reflecting the breadth and depth of work across the department. This year two special industry guests—Disney's droids, had an exciting encounter with a robot developed by our own Robotics Lab.

ECE Pioneer - Alice Parker

April 2025

Professor Alice Parker was honored as an ECE Pioneer on April 30, 2025. She shared insights from her remarkable 55-year career, spanning from silicon to the brain, using microelectronics as a bridge between the two. The brain has long been at the center of Professor Parker's research focus, and her pioneering work continues to inspire the field. She is also the first female ECE Pioneer, marking a significant milestone in the history of the department.

Social Media Campaign

April 2025

launched a targeted social media campaign timed with graduation to celebrate and capture memorable moments of our graduating students while also expanding our online presence. The campaign was a great success, resulting in a 152% increase in LinkedIn followers and a 75% increase on Instagram.

ECE PhD Commencement Celebration

May 2025

ECE PhD graduates from the Class of 2025 were invited to celebrate their accomplishments from wherever they were in the world. Family and friends from across the globe joined virtually to share in this proud and meaningful occasion. Faculty advisors also took part, sharing heartfelt stories and memorable moments about the graduates with their loved ones, making the celebration both personal and memorable.

STUDENT ORGANIZATIONS

MHI 2024-25 USC MAKERS

This year, eleven Makers projects were fully funded by MHI, enabling our project members and managers to bring their wildest dreams and innovations to life. Each project combined hardware, software, and mechanical components, with the project members' interests and passions. These projects ranged from dance to fashion to drones.

MHI 2024-25 USC IEEE

The IEEE Committee successfully organized the 2025 Hack IoT, and participant feedback has provided valuable insight into the event's strengths and opportunities for improvement. Participants appreciated the variety of hardware options available, and the comfortable and well-equipped workspace provided. Many also expressed enthusiasm about the creative and impressive projects presented throughout the event. One of the most well-received changes this year was the extended duration of the event—approximately 38 hours, compared to 24 hours in previous years. This extension was implemented based on prior feedback requesting more time, and it proved to be a successful improvement. Additionally, participants highlighted the flexibility of the event as a key positive feature..