SCHOLARS
MHI 2021-22 PhD SCHOLARS

Each year, a select group of PhD students from the ECE Department are chosen as Ming Hsieh Institute Scholars. These students are carefully reviewed by a faculty committee on the basis of their research accomplishments and desire for an academic career. They assist MHI in carrying out its mission.
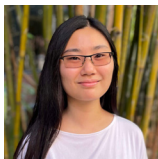
Haleh Akrami
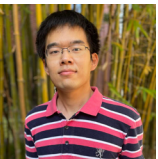Advisor: Richard Leahy

Zalan Fabian
Advisor: Mahdi Soltanolkotabi

Hefei Liu
Advisor: Han Wang

Rodrigo Lobos
Advisor: Justin Haldar

Qinyi Luo
Advisor: Xuehai Qian

**Qiaochu Zhang**
Advisor: Mike Chen

The 2021-2022 MHI Scholars worked very hard as a team to bring the ECE PhD community back after the pendamic. They hosted a series of technical and social events to bring the ECE PhD community back in person. Socially, they hosted several happy hours and game nights for the PhD students to attend in person and reconnect with each other. They also hosted several technical panel discussion with speakers from the industry and our very own alumni (including past MHI Scholars). The panels were designed to provide 1) industry perspectives, 2) life after PhD, and 3) to connect beyond the USC ECE community.

They also served as the ambassadors for the department to lead the discussion for ECE faculty candidate talks. They hosted the talks for the graduate students to attend to learn about how to prepare effective talks. The MHI Scholars also lead discussio with the graduate students after the talks to collect feedbacks to be shared with the faculty committee.

MING HSIEH INSTITUTE

The Ming Hsieh Institute (MHI) is focused on enhancing academic and research programs within the Ming Hsieh Department of Electrical and Computer Engineering. Through supporting innovative activities and hosting leading researchers from around the globe, MHI helps position the department at the forefront of emerging fields within electrical and computer engineering.

MHI Expenses
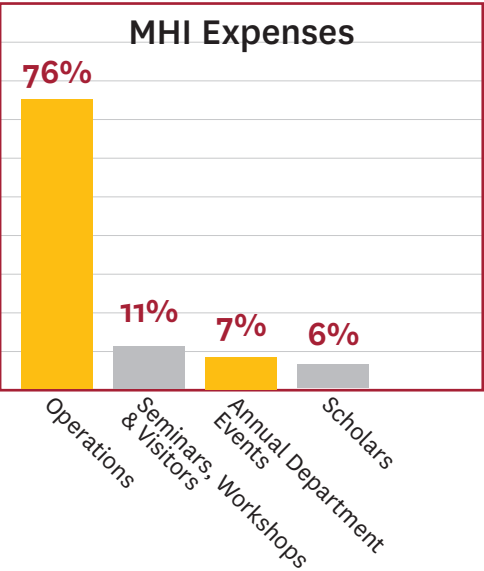
76%	**Operations** — Supported faculty & staff payroll
11%	**Seminars, Workshops, and Visitors** — Enabled leading researchers from around the world to visit, give talks, and work with faculty and students
7%	**Annual Department Events** — Developed & organized by MHI to encourage collaboration between faculty, students, and alumni
6%	**Scholar Program** — Awards, travel funding, workshop and event support to MHI Ph.D. Scholars

Bar chart — Operations: 76%, Seminars, Workshops & Visitors: 11%, Annual Department Events: 7%, Scholars: 6%

MHI Leadership

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

2021-2022 Faculty Advisory Council

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

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

Ming Hsieh Institute
intelligent technologies to empower mankind

by Jocelyn Yip

ANNUAL REPORT
2021/2022

SEMINARS

MHI+Center for Cyber-Physical Systems & IoT Joint Seminar Series

The second edition of the Cyber-Physical Systems Seminar Series was especially active this year. Visitors from industry and leading universities participated in the Spring as part of class EE 598. Even more talks will be scheduled for Fall of 2019.

2021-22 Number of speakers: 0

2021-22 Budget: $0

MHI Center for Systems and Control-CommNetS Seminar Series

This series is a weekly seminar that brings together faculty and students in communications, networks and controls. One of the primary goals of the series is to expose students to the work taking place in other areas of engineering. (Due to the pandemic, this seminar series was paused for 2020-21)

2021-22 Number of speakers: 0

2021-22 Budget: $0

MHI Computer Engineering Research Seminar Series

This series offers an interdisciplinary perspective on the cutting-edge research and development in the field of computer engineering. Computer engineering deals with the design, development, testing, and evaluation of componenets, systems, and networks. (Due to the pandemic, this seminar series was paused for 2020-21)

2021-22 Number of speakers: 0

2021-22 Budget: $0

MHI Integrated Systems Seminar Series

This series hosts researchers to cover topics related to integrated circuits, systems, and related devices in the context of diverse applications including communication, computation, networking, sensing and imaging. Speakers from academia and industry covered topics related to brain-inspired integrated circuits for computation and communications, silicon integrated circuits, and high-speed integrated transceivers.

2021-22 Number of speakers: 0

2021-22 Budget: $0

MHI Medical Imaging Seminar Series

This series features lecturers from leading universities and medical institutions in the US and abroad on all topics related to the various aspects of medical imaging. (Due to the pandemic, this seminar series was paused for 2020-21)

2021-22 Number of speakers: 0

2021-22 Budget: $0

MHI Nano Materials and Devices Seminar Series

This series aims to expose students to cutting-edge research in the field of nanotechnology. In 2018-19, leaders in academia and industrial research institutes shared their most recent achievement in the diverse field of nanoscale materials, devices and systems.

2021-22 Number of speakers: 0

2021-22 Budget: $0

September 2021

MHI Open House - Undergraduates
An Open House for all undergraduates that are new to ECE. Students were able to interact with professors and upper classmen casually to ask questions. We were so excited to host this event in person this year. The students were very eager to attend and learn about their new home for the next 4 years.

October 2021

MHI Open House - CECS Undergraduates
ECE hosts a very special group of students majoring in CECS. Students majoring in CECS take classes from both the CS and ECE departments. One of the struggles for the students is to find a place call home. This open house allowed them to connect with students graduated from the proogram and ECE faculty and student advisors to let them know the resources ECE has for them.

October 2021

ECE Annual Research Festival
After two years of postponement, we were finally able to resume our ECE Annual Research Festival and in person. We had closed to 100 presenters eagered to share the research they had been working on in the past two years. We had high industry participation given the circumstances. A lab tour to check out the MRI machine, one of three existing, was part of the program to see first hand the many great research on site.

March 2022

IEEE Hsck IoT
Hack IoT is a 24-hour hackathon that focuses on the innovation and the integration of the Internet of Things. Hack IoT 2022 was held of March 26-27 in the EEB Building. This year's theme, "A Mind of Its Own," emphasized the integration of machine learning and autonomous components in the product. Total of 45 participants and 10 volunteer staff attended

April 2022

IEEE K-12 Outreach Initiative
IEEE Signal Processing Society had granted a fund for K-12 Outreach. A team of high school teacher advisory board was formed to advise on how to execute the program. Some modules were greated by graduate students for high school teachers to incorporate into high school cirriculmums. High school students were able to learn about to learn about the subject and experience in person demo during their campus visit

May 2022

USC Makers Showcase
The Spring Showcase was the culmination of different student teams working throughout the school year on unique ECE projects. The projects usually were built by teams meeting in person. However, the pandamic did not stop the USC Makers from their creativity. Students figured out various logistics to ensure members can still build and create during this exceptional time.

May 2022

ECE PhD Commencement Celebration
ECE PhD graduates from the class of 2022 were invited to celebrate their accomplishments from whereever they are at. Their family and friends from all the around the world called in to celebrate this proud moment with them.

UNITED WE STOP COVID!

USC

BE SMART, DO YOUR PART