

**Center for Integrated Circuits and Systems
Microsystems Technology Laboratories
Massachusetts Institute of Technology
Nov. 1, 2023**

Center for Integrated Circuits and Systems

**Ruonan Han, CICS Director
Department of Electrical Engineering and Computer Science
Room 39-527A
Phone (617)-324-5281
E-Mail: ruonan@mit.edu**

CICS Faculty



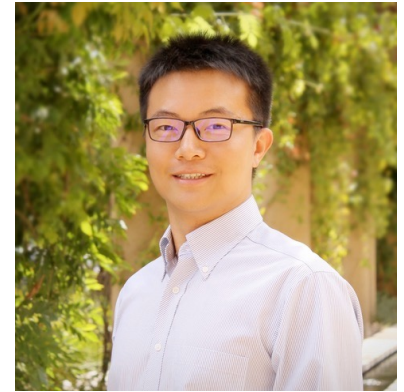
**Ruonan Han,
Director**



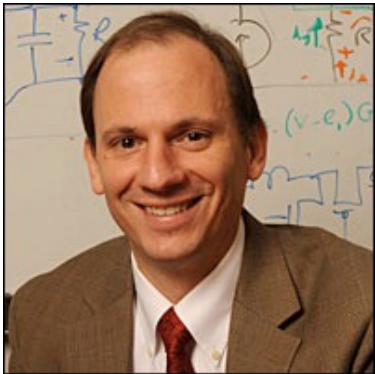
**Anantha
Chandrakasan**



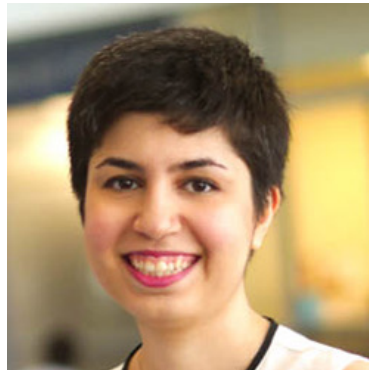
Harry Lee



Song Han



David Perreault



**Negar
Reiskarimian**



Charlie Sodini



Vivienne Sze

Agenda

Morning

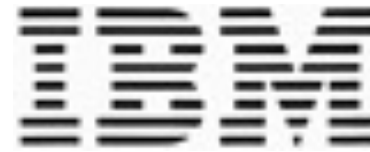
9:00 AM	Prof. Ruonan Han	Welcoming Remarks
9:10 AM	Ji Lin (on behalf of Prof. Song Han)	Research Overview: Model Compression and Efficient AI Computing: From TinyML to Large Language Model
9:20 AM	Ji Lin and Haotian Tang	TinyChat: On-Device Large Language Model
9:45 AM	Prof. Anantha Chandrakasan	Research Overview
9:55 AM	Kyungmi Lee	SecureLoop: Design Space Exploration of Secure DNN Accelerators
10:20 AM		<i>Coffee Break and Demo</i>
10:50 AM	Prof. Vivienne Sze	Research Overview
11:00 AM	Peter Li	GMMMap: Memory-Efficient Continuous Occupancy Map Using Gaussian Mixture Model
11:20 AM	Soumya Sudhakar	Uncertainty from Motion for Deep Neural Network-based Monocular Depth Estimation
11:40 AM	Syed Muhammad Imaduddin (Postdoc of Charlie Sodini, Harry Lee and Thomas Heldt)	Techniques for Ophthalmic Volumetric Blood Flow Measurement
12:05 PM		<i>Lunch</i>

Agenda

Afternoon

1:10 PM	Prof. Ruonan Han	Research Overview
1:20 PM	Eunseok Lee (Co-Advised by Ruonan and Anantha)	A Packageless Anti-Tampering Tag Utilizing Unclonable Sub-THz Wave Scattering at the Chip-Item Interface
1:40 PM	Jinchen Wang	A CMOS-Integrated Color Center Pulse-Sequence Control and Detection System
2:00 PM	Negar Reiskarimian	Research Overview
2:10 PM	Soroush Araei	A Harmonic Blocker-Free Software-Defined Radio: A Passive Approach
2:35 PM		<i>Coffee Break</i>
2:55 PM	Prof. Harry Lee	Research Overview
3:05 PM	Mohamed Elsheikh	Interface Circuits for Analog In-Memory Computing
3:30 PM	Prof. David Perreault	Research Overview
3:40 PM	Amanda Jackson	Large-Signal Characterization of Piezoelectric Resonators for Power Conversion
4:05 PM		<i>Adjourn</i>

CICS Industry Members



- **We need your support. Let us know how we can get better!**

CICS Membership Benefits

- **Access to all research conducted by participating faculty**
- **Bi-annual reviews in early May and early November**
 - Research in all stages from concepts to completion, often unpublished, is presented
- **Attendees get familiarized with CICS faculty & students as well as network with other industrial participants**
- **Close technical interaction and possibility of future collaborative research and/or research contracts**



CICS Membership Benefits (II)

- **Access to CICS website**

- <https://cics.mit.edu>

- **Exclusive contents for CICS members**

- Note: you can only use your “@company.com” email to register*

- **CICS research abstracts**

- **Access to CICS student resume**



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Research Reviews
The last Research Review was on Wednesday, November 2, 2022. Our next Research Review will be held on Wednesday, May 3, 2023.

CICS Student Resume

- [Hanrui Wang - Resume - Apr. 2023](#)
- [So-Yoon Yang - Resume - Apr. 2023](#)
- [Soroush Araei - Resume - Apr. 2023](#)
- [Donghyeon Han - Resume - Apr. 2023](#)
- [Xibi Chen - Resume - Apr. 2023](#)
- [Shahabeddin Mohin - Resume - Apr. 2023](#)
- [Mohamed Elsheikh - Resume - Apr. 2023](#)
- [Kyunami Lee - Resume - Apr. 2023](#)

CICS Membership Benefits (III)

- **CICS assists organizing meetings with graduate students on or around research reviews upon request**
- **Invitation to MTL/CICS reception at ISSCC**
- **CICS assists organizing meetings in Bay Area with graduate students traveling to the West Coast at ISSCC each year upon request**

