

# Center for Integrated Circuits and Systems (CICS)

Spring Research Review

## Agenda

Nov. 1, 2023

|          |   |  |
|----------|---|--|
| 8:30 AM  |   | <i>Breakfast</i>   |
| 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>   |
| 1:10 PM  | Prof. Ruonan Han  | Research Overview  |
| 1:20 PM  | Eunseok Lee   | 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  | Prof. 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  |   | Adjourn  |