

Electrical Engineering and Medical Engineering

Session **M**

Room: 142 Keck

1:00 - 1:20 PM	Renee C. Hsu <i>Dr. David G. Goodwin SURF Fellow</i>	Creating a Wearable, Non-invasive Sebum Sensor for Solid-state Cholesterol Detection	Wei Gao <i>Professor of Medical Engineering; Investigator, Heritage Medical Research Institute; Ronald and JoAnne Willens Scholar Shadman Khan Postdoctoral Scholar Fellowship Trainee in Medical Engineering</i>
1:20 - 1:40 PM	Isabel Xu <i>Dale and Suzanne Burger SURF Fellow</i>	Closed-loop Soft Bioelectronic Device Integrating Multimodal Sensing and Vagus Nerve Stimulation for Stress Management	Wei Gao <i>Professor of Medical Engineering; Investigator, Heritage Medical Research Institute; Ronald and JoAnne Willens Scholar Dickson Yao Graduate Student in Medical Engineering</i>
1:40 - 2:00 PM	Ya-Cheng Chang <i>National Taiwan University BaBar SURF Fellow</i>	Monte Carlo Modeling, Experimental, and Theoretical Study of the Stern-Gerlach Experiment	Lihong Wang <i>Bren Professor of Medical Engineering and Electrical Engineering Xukun Lin Graduate Student in Electrical Engineering Suleyman Kahraman Graduate Student in Medical Engineering</i>
2:00 - 2:20 PM	Mark Zhu <i>Stanford University</i>	Spin-dynamics of Coupled Electrons and Nuclei at the Classical and Quantum Interface	Lihong Wang <i>Bren Professor of Medical Engineering and Electrical Engineering</i>
2:20 - 2:40 PM	Saga M. Fagerström <i>KTH Royal Institute of Technology</i>	A Mathematical Model of Neuronal Rewiring After Perturbation	Michelle Effros <i>George van Osdol Professor of Electrical Engineering</i>
2:40 - 2:50 PM	BREAK		

2:50 - 3:10 PM	Auriyon A. Khosravi <i>Captain Pradeep B. Suklikar Memorial SURF Fellow</i>	The Development of BLE Wireless Communication Between the 65-nm CMOS Fluorescence Sensor and Bacteria Cells	Azita Emami Andrew and Peggy Cherng <i>Professor of Electrical Engineering and Medical Engineering</i> Ting-Yu Cheng <i>Graduate Student in Electrical Engineering</i>
3:10 - 3:30 PM	Christine T. Chang <i>Sampson Carlson SURF Fellow</i>	Verification of a Next Generation 65 nm CMOS Multi-Modal Wearable Sensor Prototype for Simultaneous Monitoring of 10 Physiochemical Biomarkers	Azita Emami Andrew and Peggy Cherng <i>Professor of Electrical Engineering and Medical Engineering</i> Shawn Sheng <i>Graduate Student in Electrical Engineering</i>
3:30 - 3:50 PM	Belinda W. Dong <i>Arthur E. Lamel Memorial SURF Fellow</i>	3D Photonics in CMOS and Transistors in Silicon Photonics	Ali A. Hajimiri <i>Bren Professor of Electrical Engineering and Medical Engineering</i> Debjit Sarkar <i>Graduate Student in Electrical Engineering</i>
3:50 - 4:10 PM	Deven K. Tseng University of California, Santa Barbara <i>KNI SURF-the-WAVE Prize Fellow</i>	Optimizing Electrode and Cladding Design for High-efficiency Lithium Niobate Electro-optic Modulators	Alireza Marandi <i>Professor of Electrical Engineering and Applied Physics</i> Benjamin Gutierrez <i>Graduate Student in Applied Physics</i>
4:10 - 4:30 PM	Oluwaseun N. Adeyeye Howard University <i>Southern California Edison WAVE Fellow</i>	Optoelectronic Mode-Locked Laser via Regenerative RF Feedback in Thin-Film Lithium Niobate	Alireza Marandi <i>Professor of Electrical Engineering and Applied Physics</i> Rithvik Ramesh <i>Graduate Student in Electrical Engineering</i>
4:30 - 4:50 PM	Said M. Garcia <i>Class of '52 70th Reunion SURF Fellow</i>	SCOS-CBO: A Miniaturized Dual-wavelength Device for Simultaneous and Non-invasive Measurements of Cerebral Blood Flow, Volume, and Oxygenation	Changhuei Yang <i>Thomas G. Myers Professor of Electrical Engineering, Bioengineering, and Medical Engineering; Investigator, Heritage Medical Research Institute</i> Simon Mahler <i>Postdoctoral Scholar Research Associate in Electrical Engineering</i>