

Aeronautics, Electrical Engineering, and Medical Engineering

Session **F**

Room: 142 Keck

1:00 - 1:20 PM	Lucas A. Smith <i>Dr. Chandler C. Ross</i> <i>SURF Fellow</i>	Designing cryogenic liquid fuel flow and high pressure nitrogen gas pressure control valves for use in rocketry throttling applications	Morteza Gharib <i>Hans W. Liepmann Professor of Aeronautics and Medical Engineering</i>
1:20 - 1:40 PM	Catherine Qu <i>Fred and Jean Felberg</i> <i>SURF Fellow</i>	Design and fabrication of an EDF-powered drone for emulating flight control systems of self-landing cryogenic rockets	Morteza Gharib <i>Hans W. Liepmann Professor of Aeronautics and Medical Engineering</i> Jack N. Caldwell <i>Graduate Student in Aerospace</i>
1:40 - 2:00 PM	James D. Muren <i>Larson Scholar</i>	Multi-modal mobility morphobot redesign for fully autonomous payload delivery	Reza M. Nemovi <i>Research Engineering Assistant and Lab Coordinator in Aerospace</i> Joshua A. Gurovich <i>Lab Manager and Research Engineering Associate in Aerospace</i>
2:00 - 2:20 PM	Emily Y. Xu <i>DaRin Butz SURF Fellow</i>	Adaptive throttle control for autonomous race cars using meta-learning	Soon-Jo Chung <i>Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL</i> Thomas A. Berrueta <i>Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences</i>
2:20 - 2:40 PM	Taekyung Lee <i>Frederick W. Drury, Jr.,</i> <i>SURF Fellow</i>	Decentralized collaborative learning for fault estimation in multi-spacecraft systems	Soon-Jo Chung <i>Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL</i> Sativik Kumar <i>Graduate Student in Aerospace</i> Vrushabh Zinage <i>Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences</i>

2:40 - 3:00 PM	Daopeng Yuan Shandong University <i>VURP Fellow</i>	Single-shot passive ultrafast all-optical replicated Kerr maging (SPUARK)	Lihong Wang <i>Bren Professor of Medical Engineering and Electrical Engineering</i> Junfu Zheng <i>Graduate Student in Electrical Engineering</i>
3:00 - 3:10 PM	BREAK		
3:10 - 3:30 PM	Shan R. Gupta <i>Robert T. Herzog SURF Fellow</i>	Physics-based inverse design for electromagnetic structures	Ali Hajimiri <i>Bren Professor of Electrical Engineering and Medical Engineering</i> Jatin Mathur <i>Graduate Student in Electrical Engineering</i>
3:30 - 3:50 PM	Brendan J. Rudberg	Integrated distributed Bragg reflector for next-generation chip-scale beam-steering lasers	Mo Li <i>Professor of Electrical and Computer Engineering and Physics, University of Washington</i> Qixuan Lin <i>Graduate Student in Electrical and Computer Engineering, University of Washington</i> Lihong Wang <i>Bren Professor of Medical Engineering and Electrical Engineering</i>
3:50 - 4:10 PM	Layla Adeli <i>Taylor Lawrence SURF Research Fellow</i>	Optimization of iontophoresis drug delivery device for surpassing the blood brain barrier	George Malliaras <i>Prince Philip Professor of Technology, University of Cambridge</i> Andrew Setley <i>Graduate Student in Engineering, University of Cambridge</i> Azita Emami <i>Andrew and Peggy Cherng Professor of Electrical Engineering and Medical Engineering</i>
4:10 - 4:30 PM	Thomas E. Fenton	Quantized acceleration using Allo: Systolic tile implementation	Mircea R. Stan <i>Virginia Microelectronics Consortium (VMEC) Professor of Electrical and Computer Engineering, University of Virginia</i> Yimin Gao <i>Graduate Student in Electrical and Computer Engineering, University of Virginia</i> Glen A. George <i>Teaching Professor of Electrical Engineering</i>