

## Electrical Engineering

Session **J**

Room: B125 Baxter

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| 10:50 - 11:10 AM   | <b>Vivian C. Yue</b>                                                 | A systematic evaluation of hardware and acquisition parameters for near-infrared imaging                          | Anuradha Godavarty<br><i>Professor of Biomedical Engineering, Virginia Commonwealth University</i><br>Lihong Wang<br><i>Bren Professor of Medical Engineering and Electrical Engineering</i>                                                                                                           |
| 11:10 - 11:30 AM   | <b>Layla Adeli</b><br><i>Sampson Carlson SURF Fellow</i>             | Toward event-driven feature extraction for neuromorphic brain-machine interfaces                                  | Azita Emami<br><i>Andrew and Peggy Cherng Professor of Electrical Engineering and Medical Engineering</i><br>Loai Danial<br><i>Postdoctoral Scholar Research Associate in Electrical Engineering</i>                                                                                                   |
| 11:30 - 11:50 AM   | <b>Aruesha Srivastava</b>                                            | A wireless, oxygen-generating macroencapsulation device for high-density islet transplantation in type 1 diabetes | Siddharth Krishnan<br><i>Assistant Professor of Electrical Engineering, Stanford University</i><br>Kecheng Wang<br><i>Postdoctoral Scholar in Electrical Engineering, Stanford University</i><br>Wei Gao<br><i>Professor of Medical Engineering; Investigator, Heritage Medical Research Institute</i> |
| 11:50 AM - 1:00 PM | <b>LUNCH</b>                                                         |                                                                                                                   |                                                                                                                                                                                                                                                                                                        |
| 1:00 - 1:20 PM     | <b>Sadik O. Görgü</b><br><i>Arthur E. Lamel Memorial SURF Fellow</i> | Wireless non-LOS BAN channel characterization and communication at mmWave                                         | Ali Hajimiri<br><i>Bren Professor of Electrical Engineering and Medical Engineering</i><br>Zachary Szekeres<br><i>Graduate Student in Electrical Engineering</i>                                                                                                                                       |

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| 1:20 - 1:40 PM | <b>Richard Y. Li</b><br><i>William Hassenzahl Family<br/>SURF Fellow</i>        | Advancing monolithic integration of vacuum tubes on CMOS                                                             | Ali Hajimiri<br><i>Bren Professor of Electrical Engineering and Medical Engineering</i><br>David A. Baum<br><i>Graduate Student in Electrical Engineering</i>                                                                                                                                                                                                                                                  |
| 1:40 - 2:00 PM | <b>Katherine C. Robertson</b><br><i>Anne and Ray Destabelle<br/>SURF Fellow</i> | Highly scalable atomic force microscope on an unmodified CMOS chip                                                   | Ali Hajimiri<br><i>Bren Professor of Electrical Engineering and Medical Engineering</i><br>Jatin Mathur<br><i>Graduate Student in Electrical Engineering</i><br>David A. Baum<br><i>Graduate Student in Electrical Engineering</i>                                                                                                                                                                             |
| 2:00 - 2:20 PM | <b>Chloe Wang</b>                                                               | Development of thin-film tactile sensors using PVDF and P(VDF-TrFE-CFE)                                              | Ioannis Kymissis<br><i>Kenneth Brayer Professor of Electrical Engineering, Columbia University</i><br>Peter Ballentine<br><i>Graduate Student in Electrical and Computer Engineering, Columbia University</i><br>Eric Chang<br><i>Graduate Student in Mechanical Engineering, Columbia University</i><br>Wei Gao<br><i>Professor of Medical Engineering; Investigator, Heritage Medical Research Institute</i> |
| 2:20 - 2:30 PM | <b>BREAK</b>                                                                    |                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2:30 - 2:50 PM | <b>Tommaso Colombo</b><br><i>Raymond Jimenez and Jomya Lei SURF Fellow</i>      | Flow-DFL: Decision-focused learning for decision-making under uncertainty via energy-based conditional flow matching | Steven H. Low<br><i>Frank J. Gilloon Professor of Computing and Mathematical Sciences and Electrical Engineering</i><br>Han Xu<br><i>Graduate Student in Computing and Mathematical Sciences</i>                                                                                                                                                                                                               |
| 2:50 - 3:10 PM | <b>Richard H. Feng</b><br><i>Arthur Rock SURF Fellow</i>                        | Ultrashort pulses from an optoelectronically mode-locked laser on nanophotonic lithium niobate                       | Alireza Marandi<br><i>Professor of Electrical Engineering and Applied Physics</i><br>Rithvik Ramesh<br><i>Graduate Student in Electrical Engineering</i><br>Yiting Wang<br><i>Graduate Student in Electrical Engineering</i>                                                                                                                                                                                   |

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| 3:10 - 3:30 PM | <b>Alexander P. Plekhanov</b> | Scaling full-3D inverse design to large-area photonic systems | Kiyoul Yang<br><i>Assistant Professor of Electrical Engineering, Harvard University</i><br>Kerry J. Vahala<br><i>Ted and Ginger Jenkins Professor of Information Science and Technology and Professor of Applied Physics</i> |
| 3:30 - 3:50 PM | <b>Matthew J. Cantor</b>      | Photonic molecule design for quantum frequency conversion     | Kiyoul Yang<br><i>Assistant Professor of Electrical Engineering, Harvard University</i><br>Kerry J. Vahala<br><i>Ted and Ginger Jenkins Professor of Information Science and Technology and Professor of Applied Physics</i> |