

Applied Physics and Electrical Engineering

Session **I**

Room: 135 Gates-Thomas

1:00 - 1:20 PM	Enya Cao University of Pennsylvania	Control of surface morphology in spalled thin silicon for space solar power applications	Harry A. Atwater <i>Howard Hughes Professor of Applied Physics and Materials Science</i> Andy Nyholm <i>Graduate Student in Materials Science</i> Elsie Loukiantchenko <i>Graduate Student in Physics</i>
1:20 - 1:40 PM	Cayley Y. Tolbert-Schwartz Yale University <i>KNI SURF-the-WAVE Prize Fellow</i>	Surface plasmon resonance spectroscopy for investigating the growth of molecular additive layers on copper for CO ₂ reduction	Harry A. Atwater <i>Howard Hughes Professor of Applied Physics and Materials Science</i> Ellis Spickermann <i>Graduate Student in Materials Science</i>
1:40 - 2:00 PM	Miguel G. Guerra Zeferino University of Cambridge <i>Caltech-Cambridge Exchange</i>	Developing a new optical spectrometer to investigate the timing of ionization transitions relative to other plasma phenomena in the Caltech jet experiment	Paul M. Bellan <i>Professor of Applied Physics</i> Joshua Q. Morgan <i>Graduate Student in Applied Physics</i>
2:00 - 2:20 PM	Tomas F. Davis University of Cambridge <i>Caltech-Cambridge Exchange</i>	Designing an integrated, tuneable, Unitary in thin film lithium niobate for GBS	Alireza Marandi <i>Professor of Electrical Engineering and Applied Physics</i> Ofir Yescharim <i>Postdoctoral Scholar Fellowship Trainee in Electrical Engineering</i>
2:20 - 2:40 PM	Elizabeth Seward Yale University <i>KNI SURF-the-WAVE Prize Fellow</i>	On-chip mid-infrared optical parametric oscillation in thin-film lithium niobate-on-sapphire	Alireza Marandi <i>Professor of Electrical Engineering and Applied Physics</i> Selina Zhou <i>Graduate Student in Electrical Engineering</i>
2:40 - 2:50 PM	BREAK		
2:50 - 3:10 PM	Han Na Shin Scripps College	First-principles approach to optical excitations of coherent phonons	Marco Bernardi <i>Professor of Applied Physics, Physics, and Materials Science</i> Sergei Kliavinek <i>Graduate Student in Materials Science</i>

3:10 - 3:30 PM	Jeremiah Bailey Howard University <i>WAVE Fellow</i>	MACE-H-LR: Incorporating long-range interactions into equivariant Hamiltonian prediction	Marco Bernardi <i>Professor of Applied Physics, Physics, and Materials Science</i> Yao Luo <i>Graduate Student in Materials Science</i>
3:30 - 3:50 PM	Kehan Jiao University of California, Los Angeles	Localized reconstruction of electron-phonon interactions from first principles	Marco Bernardi <i>Professor of Applied Physics, Physics, and Materials Science</i> Yao Luo <i>Graduate Student in Materials Science</i>
3:50 - 4:10 PM	Chieh-An Yu National Taiwan University <i>BaBar SURF Fellow</i>	First-principles modeling of phonon-mediated anomalous Hall transport in magnetic materials	Marco Bernardi <i>Professor of Applied Physics, Physics, and Materials Science</i> Lauren A. Tan <i>Graduate Student in Chemistry</i>
4:10 - 4:30 PM	Elizabeth J. Milne University of Cambridge <i>Caltech-Cambridge Exchange</i>	Mathematically modelling neuronal circuit recovery through activity dependent myelination	Michelle Effros <i>George van Osdol Professor of Electrical Engineering</i>
4:30 - 4:50 PM	Todor Miljevic University of Iceland <i>Caltech-University of Iceland Exchange</i>	Design of a quantum bus for simultaneous all-to-all connectivity between superconducting qubits	Mohammad Mirhosseini <i>Assistant Professor of Electrical Engineering and Applied Physics</i> Parth Shah <i>Graduate Student in Electrical Engineering</i> Frank Yang <i>Graduate Student in Applied Physics</i>