

Applied Physics and Materials Science

Session **J**

Room: 153 Noyes

1:20 - 1:40 PM	Yashwanth Nagarajan University of Illinois Urbana-Champaign	Verifying a continuum approximation for architected materials in three dimensions	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Cyrus Fiori <i>Graduate Student in Chemical Engineering</i>
1:40 - 2:00 PM	Noah H. Van Beurden Caltech	Development of a dual-wavelength MSLA platform for spatially controlled photopolymerization of multi-material nanocomposites	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Kaleb Funk <i>Graduate Student in Materials Science</i>
2:00 - 2:20 PM	Lucas J. Flach Caltech <i>Donald S. Clark SURF Fellow</i>	Resin development and monomer synthesis for additively manufactured, architected, glucose-responsive hydrogel microneedles	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Analiese J. Wiedenbeck <i>Graduate Student in Chemistry</i>
2:20 - 2:40 PM	Ziad Siala Caltech <i>Larson Scholar</i>	Reduction pathway control and characterization of HIAM lattices	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Anna Wu <i>Graduate Student in Materials Science</i>
2:40 - 2:50 PM	BREAK		
2:50 - 3:10 PM	Kensei Sakamoto University of Oxford	Design and optimization of adiabatic coupling to focused-ion-beam-fabricated photonic cavities	Andrei Faraon <i>William L. Valentine Professor of Applied Physics and Electrical Engineering</i> Emanuel Green <i>Graduate Student in Applied Physics</i>

3:10 - 3:30 PM	Nimisha Sivaraman University of California, Berkeley <i>KNI SURF-the-WAVE Prize Fellow</i>	Designing a superconducting microwave resonator to magnetically couple to $^{171}\text{Yb}^{3+}:\text{CaWO}_4$	Andrei Faraon <i>William L. Valentine Professor of Applied Physics and Electrical Engineering</i> Chengyi Luo <i>AWS Quantum Postdoctoral Scholar Research Associate in Applied Physics and Materials Science</i>
3:30 - 3:50 PM	Avani Ranka Swarthmore College	Spontaneous chiral symmetry breaking of counter-propagating modes via the Kerr nonlinearity within ultra-high-quality factor optical resonators	Kerry J. Vahala <i>Ted and Ginger Jenkins Professor of Information Science and Technology and Professor of Applied Physics</i> Haojing Chen <i>Postdoctoral Scholar Research Associate in Applied Physics and Materials Science</i>
3:50 - 4:10 PM	Mitchell J. Agnis Caltech <i>Marcella Bonsall SURF Fellow</i>	Development of an acoustic bandgap filter for superfluid helium-4 systems	Keith C. Schwab <i>Professor of Applied Physics</i>
4:10 - 4:30 PM	Benjamin D. Porosoff Caltech <i>The Associates SURF Fellow</i>	Dynamic control of solidification conditions via a movable platform for scalable freeze casting	Katherine T. Faber <i>Simon Ramo Professor of Materials Science, Emeritus</i> Wesley D. Patel <i>Graduate Student in Chemical Engineering</i>
4:30 - 4:50 PM	Mark N. Luo Caltech <i>Carl F. Braun SURF Fellow</i>	Dose-controlled In-Ga eutectic delivery for oxide destabilization in additively manufactured ceramic structures	Katherine T. Faber <i>Simon Ramo Professor of Materials Science, Emeritus</i> Zachary Chase <i>Graduate Student in Materials Science</i>