

Mechanical Engineering and Medical Engineering

Session **M**

Room: B133 Baxter

1:00 - 1:20 PM	Eitan E. Camacho Massachusetts Institute of Technology <i>Carl F. Braun WAVE Fellow</i>	Extensions of the Voronoi Implicit Interface Method to unstructured meshes with applications to grain boundary evolution within a 3D X-ray diffraction inversion algorithm	Kaushik Bhattacharya <i>Howell N. Tyson, Sr., Professor of Mechanics and Materials Science</i> Carter Cocke <i>Graduate Student in Mechanical Engineering</i>
1:20 - 1:40 PM	Sebastian A. Seda University of Maryland, Baltimore County <i>Southern California Edison WAVE Fellow</i>	Are three-dimensional detonation waves in a confined domain "realistic"?	Guillaume Blanquart <i>Professor of Mechanical Engineering</i> Benjamin R. Breer <i>Graduate Student in Mechanical Engineering</i>
1:40 - 2:00 PM	Aritz Schube Barriola Caltech	Validating a computational flow solver against experimental data for multi-fidelity aerodynamic shape optimization	Steven Brunton <i>Professor of Mechanical Engineering, University of Washington</i> Ana Larrañaga <i>Acting Assistant Professor of Mechanical Engineering, University of Washington</i> Patricia Garcia Caspueñas <i>Graduate Student in Mechanical Engineering, University of Washington</i> Matthew M. Gherman <i>Hearst Postdoctoral Scholar Teaching Fellow in Mathematics</i>
2:00 - 2:20 PM	Justin J. Wu Caltech	Reduced-order temporal forecasting of Southern North Sea velocity fields	Steven Brunton <i>Professor of Mechanical Engineering, University of Washington</i> Freja Petersen <i>Visiting Researcher, University of Washington</i> Matthew M. Gherman <i>Hearst Postdoctoral Scholar Teaching Fellow in Mathematics</i>

2:20 - 2:40 PM	Ting Syuan Huang National Taiwan University <i>BaBar SURF Fellow</i>	Ultrasound-induced flow control to reduce bacterial migration in urinary catheters	Chiara Daraio <i>G. Bradford Jones Professor of Mechanical Engineering and Applied Physics; Investigator, Heritage Medical Research Institute</i> Amanda Y. Lin <i>Graduate Student in Mechanical Engineering</i>
2:40 - 2:50 PM	BREAK		
2:50 - 3:10 PM	Sophia M. Benedick University of Chicago <i>VURP Fellow</i>	Laser-grown superconductors: High-Tc niobium thin films via thermal laser epitaxy	Austin J. Minnich <i>Professor of Mechanical Engineering and Applied Physics</i> David S. Catherall <i>Research Engineer in Mechanical and Civil Engineering</i> Yifei Yan <i>Graduate Student in Applied Physics</i>
3:10 - 3:30 PM	Carlo A. Repetto University of California, Davis	Energy and momentum transport through 3D-printed graded auxetic lattice structures subjected to impact	Guruswami Ravichandran <i>John E. Goode, Jr., Professor of Aerospace and Mechanical Engineering</i> Aditya B. Shedge <i>Graduate Student in Mechanical Engineering</i>
3:30 - 3:50 PM	Nia P. Desai Georgia Institute of Technology <i>Amgen Scholar</i>	Real-time attentional classification using smart glasses	Wei Gao <i>Professor of Medical Engineering; Investigator, Heritage Medical Research Institute</i> Ruixiao Liu <i>Graduate Student in Medical Engineering</i>
3:50 - 4:10 PM	Kaan Baris Oktay University of California, Berkeley	Efficient pulse-width modulation techniques for time-reversal photoacoustic tomography	Lihong Wang <i>Bren Professor of Medical Engineering and Electrical Engineering</i> Indrasen Bhattacharya <i>Postdoctoral Scholar Fellowship Trainee in Medical Engineering</i>
4:10 - 4:30 PM	Said M. Garcia Caltech <i>Margaret Leong and Michael P. Checca SURF Fellow</i>	Wireless neuroelectronic system for recording and stimulation in freely moving rodents	Anqi Zhang <i>Assistant Professor of Medical Engineering; Chen Scholar</i> Jialun Zhu <i>Postdoctoral Scholar Research Associate in Medical Engineering</i>