

Presentations in Alphabetical Order by Student

Oral Presentation	<i>Gabriel P. Aguiar</i>	Disruption of Axion Miniclusters in the Milky Way Environment	Kathryn M. Zurek <i>Professor of Theoretical Physics</i> Jacob Shen <i>Graduate Student in Physics</i>
Oral Presentation	<i>Gerardo I. Aguirre</i> University of California, San Diego <i>Genentech WAVE Fellow</i>	CRISPR Screen Reveals Genes Related to the Enteric Nervous System Development in Zebrafish	Marianne Bronner <i>Distinguished Professor of Biology</i> Can Li <i>Graduate Student in Biology</i>
Oral Presentation	<i>Nezir Alic</i> <i>Robert L. Blinkenberg SURF Fellow</i>	Analysis of iDQ Glitch Detection Statistics During LIGO's Standard Veto Flags	Erik Katsavounidis <i>Senior Research Scientist in Physics, Massachusetts Institute of Technology</i> Geoffrey Mo <i>Graduate Student in Physics, Massachusetts Institute of Technology</i> Alan J. Weinstein <i>Professor of Physics</i>
Oral Presentation	<i>Simon J. Andren</i> Minerva Schools at KGI	Predictive Models for the Reduced Partition Function Ratio (RPFR) of Clumped Organic Isotopologues	John M. Eiler <i>Robert P. Sharp Professor of Geology and Geochemistry</i>
Poster Presentation	<i>Rita Anoh</i> Mount St. Mary's University <i>Southern California Edison WAVE Fellow</i>	Single Particle cryoEM Studies of a Turnover-Modified Form of the Nitrogenase MoFe-Protein	Douglas C. Rees <i>Roscoe Gilkey Dickinson Professor of Chemistry; Investigator, Howard Hughes Medical Institute</i> Rebecca Warmack <i>Postdoctoral Scholar Fellowship Trainee in Chemistry; Associate, Howard Hughes Medical Institute</i>
Poster Presentation	<i>Hope M. Arnett</i>	HOMES Lunar Dust Mitigation Through Electrodynamic Shielding: Implementation and Testing of Modular Electronics Systems	Soon-Jo Chung <i>Bren Professor of Aerospace and Control and Dynamical Systems; Research Scientist, JPL</i>

Oral Presentation	<p><i>Marianne S. Arriola</i> University of California, Santa Barbara <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i></p>	<p>Structure-Based Protein Fitness Prediction and Landscape Navigation Using Graph Neural Networks</p>	<p>Frances H. Arnold <i>Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry; Nobel Laureate</i> Kadina Johnston <i>Graduate Student in Chemical Engineering</i></p>
Oral Presentation	<p><i>Julio C. Arroyo</i> <i>José J. Garcia</i> SURF Fellow</p>	<p>Using Convolutional Neural Networks to Infer What a Person Is Searching for Based on Eye Movements</p>	<p>Markus Meister <i>Anne P. and Benjamin F. Biaggini Professor of Biology</i> Gabriel Kreiman <i>Professor of Neurology, Harvard Medical School</i></p>
Poster Presentation	<p><i>Scarlet M. Au</i> Columbia University <i>Carl F. Braun</i> WAVE Fellow</p>	<p>Evolution of Phytohormone Signaling Pathways and Implications on Agriculture and Metagenomics</p>	<p>Elliot M. Meyerowitz <i>George W. Beadle Professor of Biology; Investigator, Howard Hughes Medical Institute</i> Paul T. Tarr <i>Postdoctoral Scholar in Biology</i></p>
Poster Presentation	<p><i>Beatriz E. Avila-Rimer</i> <i>Manit M. Limlamai</i> SURF Fellow</p>	<p>Automating the Finding of Partial Occupancy to Recognize Symmetry Breaking and Crystalline Defects at Atomic Resolution</p>	<p>Lena Kourkoutis <i>Associate Professor of Applied and Engineering Physics, Cornell University</i> Noah Schnitzer <i>Graduate Student in Materials Science and Engineering, Cornell University</i> Katherine T. Faber <i>Simon Ramo Professor of Materials Science</i></p>
Oral Presentation	<p><i>Nelson G. Badillo</i> University of Notre Dame <i>Information Science and Technology (IST)</i> Venerable WAVE Fellow</p>	<p>Quantifying the Effects of Canted Motor Positioning on Quadrotor Dynamics and Controllability</p>	<p>Soon-Jo Chung <i>Bren Professor of Aerospace and Control and Dynamical Systems; Research Scientist, JPL</i></p>
Oral Presentation	<p><i>Cora N. Barrett</i> Wellesley College <i>Institute for Quantum Information and Matter (IQIM) WAVE Fellow</i></p>	<p>Shedding Light on the Electronic Phases of Strongly Driven Calcium Ruthenate</p>	<p>David Hsieh <i>Professor of Physics</i> Xinwei Li <i>Troesh Postdoctoral Scholar Research Associate in Physics</i></p>

Oral Presentation	<i>Eunice Beato</i> Wellesley College <i>Southern California</i> <i>Edison WAVE Fellow</i>	Possible Disk Obscuration in the Black Hole X-Ray Binary XTE J1550-564	Javier A. Garcia <i>Research Assistant</i> <i>Professor of Physics</i> Riley Connors <i>Postdoctoral Scholar</i> <i>Research Associate in</i> <i>Physics</i>
Oral Presentation	<i>Harris A. Beg</i>	Motion2Recon: A Motion- Robust Semi-Supervised Framework for MR Reconstruction	Shreyas S. Vasanawala <i>Professor of Radiology;</i> <i>Director of MRI, Stanford</i> <i>Children's Hospital</i> Christopher Sandino <i>Graduate Student in</i> <i>Electrical Engineering,</i> <i>Stanford University</i> Adam Blank <i>Teaching Assistant</i> <i>Professor of Computing and</i> <i>Mathematical Sciences</i>
Oral Presentation	<i>Jonathan T. Beltran</i> University of California, Los Angeles <i>Information Science and</i> <i>Technology (IST) WAVE</i> <i>Fellow</i>	Zebra Classification Using Triplet Loss	Pietro Perona <i>Allen E. Puckett Professor</i> <i>of Electrical Engineering</i>
Poster Presentation	<i>Halle G. Blend</i>	The Impact of Blue Sky Laws on Financial Development	Michael J. Ewens <i>Professor of Finance and</i> <i>Entrepreneurship</i>
Oral Presentation	<i>Daria C. Bonds</i> California State University, San Marcos <i>Southern California</i> <i>Edison WAVE Fellow</i>	Azimuthal Dependence of the Circumgalactic Medium in the FIRE Simulations	Philip F. Hopkins <i>Professor of Theoretical</i> <i>Astrophysics</i>
Oral Presentation	<i>Aldair E. Bonilla</i> California State Polytechnic University, Pomona <i>Southern California</i> <i>Edison WAVE Fellow</i>	The Search for Dark Matter	Sunil Golwala <i>Professor of Physics</i> Osmond Wen <i>Graduate Student in</i> <i>Physics</i>

Oral Presentation	<i>Charlotte H. Borcherds</i>	Coordinate-Based Multilayer Perceptrons for Super-Resolution in Medical Resonance Imaging	Shreyas S. Vasanawala <i>Professor of Radiology; Director of MRI, Stanford Children's Hospital</i> Christopher Sandino <i>Graduate Student in Electrical Engineering, Stanford University</i> Katherine L. Bouman <i>Assistant Professor of Computing and Mathematical Sciences and Electrical Engineering; Rosenberg Scholar</i>
Oral Presentation	<i>Mihir M. Borkar</i> <i>Arjun Bansal ('05) and Ria Langheim SURF Fellow</i>	Studying Differential Isoform Expression in the <i>Clytia</i> Jellyfish Using Single-cell RNA Sequencing	Lior S. Pachter <i>Bren Professor of Computational Biology and Computing and Mathematical Sciences</i> Tara Chari <i>Graduate Student in Bioengineering</i>
Oral Presentation	<i>Sarah E. Bowers</i> University of Maryland Baltimore County <i>WAVE Fellow</i>	Hyperspectral Thermal Infrared Remote Sensing of the Fish Creek Basin, Imperial County, California	Joann M. Stock <i>Professor of Geology and Geophysics</i>
Oral Presentation	<i>Makyla E. Boyd</i> Coe College <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Knotting Is not for Naught: Effects of Topology, Friction, and Constituent Materials on 2D Woven Lattices	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Widianto P. Moestopo <i>Graduate Student in Mechanical Engineering</i> Seola Lee <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	<i>Helen M. Brackney</i> <i>Donald Voet and Jerome Vinograd SURF Fellow</i>	Crystal Structures of MurG With Park's Nucleotide and Murgocil	William M. Clemons <i>Professor of Biochemistry</i> Anna K. Orta <i>Graduate Student in Biochemistry and Molecular Biophysics</i>

Oral Presentation	Amelia H. Burns <i>Nellie Bergen and Adrian Foster Tillotson SURF Fellow</i>	The Influence of Prosthetic Aortic Valve Size on Downstream Residence Time	Mory Gharib <i>Hans W. Liepmann Professor of Aeronautics and Bioinspired Engineering</i> Alexandros Rosakis <i>Graduate Student in Medical Engineering</i>
Oral Presentation	Connor C. Call <i>Northwestern University Amgen Scholar</i>	Protocol Optimization for Drug Localization of a Retinopathy-Treating Peptide in Mouse Retina Using Peptide-Fluorescent Dye Conjugate	Julia A. Kornfield <i>Elizabeth W. Gilloon Professor of Chemical Engineering</i> Jin Mo Koo <i>Graduate Student in Chemical Engineering</i>
Oral Presentation	Odalys Callejas <i>University of California, Santa Barbara WAVE Fellow</i>	Evaluating the Exhumation History of the Central Aleutian Arc Using Geobarometry	Claire Bucholz <i>Assistant Professor of Geology</i> Emma Sosa <i>Graduate Student in Geology</i>
Oral Presentation	Ali Cataltepe	A p-adic Analogue of the Quantum Error-Correction Picture of AdS/CFT	Sarthak Parikh <i>Postdoctoral Scholar Teaching Fellow in Mathematics</i>
Oral Presentation	Isha Chakraborty <i>Carl F. Braun SURF Fellow</i>	Methods for Single-Cell eQTL Analysis	Lior S. Pachter <i>Bren Professor of Computational Biology and Computing and Mathematical Sciences</i> Ingileif Hallgrimsdottir <i>Visiting Associate in Statistical Genetics</i>
Oral Presentation	Sean Chang <i>Arthur R. Adams SURF Fellow</i>	Structural and Electrical Properties of Dysprosium Barium Copper Oxide Thin Films	Eren Suyolcu <i>Postdoctoral Associate, Cornell University</i> Darrell G. Schlom <i>Herbert Fisk Johnson Professor of Industrial Chemistry, Cornell University</i> Joseph L. Falson <i>Assistant Professor of Materials Science</i>

Oral Presentation	<i>Simon A. Chau</i> California State University, Long Beach <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Analyzation and Visualization of Mitochondrial DNA via In-Situ Third Generation Hybridization Chain Reaction	Bruce A. Hay <i>Professor of Biology</i>
Oral Presentation	<i>James Y. Chen</i>	Development of a Bioinspired Fin Propulsion System for Maneuverable Autonomous Underwater Vehicles	Mory Gharib <i>Hans W. Liepmann Professor of Aeronautics and Bioinspired Engineering</i> Cecilia Huertas Cerdeira <i>Research Engineer in Aerospace</i>
Oral Presentation	<i>Victoria Chen</i> <i>Dr. Terry Cole SURF Fellow</i>	Simultaneous Integration of a Genetic Circuit Into Multiple Genome Loci in <i>E. coli</i> Using Integrase-Mediated Cassette Exchange	Richard M. Murray <i>Thomas E. and Doris Everhart Professor of Control and Dynamical Systems and Bioengineering</i> John P. Marken <i>Graduate Student in Bioengineering</i>
Oral Presentation	<i>Seunghee Cho</i> <i>Robert T. Herzog SURF Fellow</i>	A Laser-Engraved Carbon Biofuel Cell for Powering Wearable Devices From Human Sweat	Wei Gao <i>Assistant Professor of Medical Engineering</i> You Yu <i>Postdoctoral Scholar Research Associate in Medical Engineering</i>
Oral Presentation	<i>Haeyoung Choi</i>	Optimized Eddy-Viscosity Models for Coherent Structures in Turbulent Jets	Tim E. Colonius <i>Frank and Ora Lee Marble Professor of Mechanical Engineering</i> Ethan M. Pickering <i>Postdoctoral Scholar, Massachusetts Institute of Technology</i>
Oral Presentation	<i>Katelyn L. Chu</i>	Modelling Meningioma in Zebrafish	Marianne Bronner <i>Distinguished Professor of Biology</i> Ayyappa Raja <i>Postdoctoral Scholar Research Associate in Biology and Biological Engineering</i>

Oral Presentation	<i>Kaila Y. Coimbra</i>	Helical-Structured Materials With Variable Centrosymmetry	Chiara Daraio <i>G. Bradford Jones Professor of Mechanical Engineering and Applied Physics</i> Gunho Kim <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	<i>Laura L. Cui</i> Massachusetts Institute of Technology	Local Information Scrambling in Random Quantum Circuits	John P. Preskill <i>Richard P. Feynman Professor of Theoretical Physics</i> Alexander Dalzell <i>Graduate Student in Physics</i>
Oral Presentation	<i>Daniela L. Davalos</i> University of California, Davis <i>WAVE Fellow</i>	Analysis of Turbulent Channel Flow Simulations With Wall Transpiration	Beverley J. McKeon <i>Theodore von Karman Professor of Aeronautics</i> Yuting Huang <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	<i>Isabel T. de la Torre Roehl</i> <i>Edward W. Hughes SURF Fellow</i>	Synthesis of Brain Permeable Na ⁺ /K ⁺ ATPase Inhibitors	Brian M. Stoltz <i>Professor of Chemistry</i> Veronica Hubble <i>James Boswell Postdoctoral Scholar Research Associate in Chemistry</i>
Oral Presentation	<i>Carlos E. Del Angel Aguilar</i> <i>Dr. and Mrs. Daniel C. Harris SURF Fellow</i>	An Organism-Wide Survey of piRNA Activity in <i>Drosophila melanogaster</i>	Alexei Aravin <i>Professor of Biology</i> Yicheng Luo <i>Graduate Student in Biology</i>
Oral Presentation	<i>Dasani K. DelRosario</i> Emory University <i>Humanities and Social Sciences WAVE Fellow</i>	The Role of Overconfidence in Susceptibility to Conspiracy Theory Belief	John P. O'Doherty <i>Professor of Psychology</i> Lisa Kluen <i>Postdoctoral Scholar Fellowship Trainee in Neuroscience</i>
Oral Presentation	<i>Matthew J. Demer</i> University of California, Davis <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Examining the Effects of N-Aryl Pyridinium Additives on Copper-Mediated CO ₂ Reduction via Hammett Analysis	Jonas C. Peters <i>Bren Professor of Chemistry</i> Nicholas B. Watkins <i>Graduate Student in Chemistry</i> Madeline Hicks <i>Graduate Student in Chemistry</i>

Oral Presentation	Monica A. Diaz California State University, Northridge <i>WAVE Fellow</i>	Understanding the Physical Properties of the Kilauea Volcano by Analyzing Long- Period Events	Zachary E. Ross <i>Assistant Professor of Geophysics</i>
Oral Presentation	Christina Dong Pomona College <i>Information Science and Technology (IST) WAVE Fellow</i>	From Human Locomotion to Robot Locomotion	Soon-Jo Chung <i>Bren Professor of Aerospace and Control and Dynamical Systems; Research Scientist, JPL</i>
Poster Presentation	Patrick J. Donohoe <i>Kiyo and Eiko Tomiyasu SURF Scholar</i>	Modeling Martian Landscape Evolution as a Result of Processes of Erosion	Michael P. Lamb <i>Professor of Geology</i> Ben Cardenas <i>Postdoctoral Scholar Fellowship Trainee in Geology</i>
Oral Presentation	Zack L. Dugue	An Analysis of Column Specialization, Time Invariance, and the Effects of Depth on Self Organizing Spiking Neural Networks	Matthew W. Thomson <i>Assistant Professor of Computational Biology; Investigator, Heritage Medical Research Institute</i>
Oral Presentation	Roulnce B. Dukuly Stanford University <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Mannequin Test of Particle Filtration Efficiency and Pressure Drop of Face Masks Used to Curb the Airborne Transmission of COVID-19	Richard C. Flagan <i>Irma and Ross McCollum- William H. Corcoran Professor of Chemical Engineering and Environmental Science and Engineering</i> Buddhi Pushpawela <i>Postdoctoral Scholar Research Associate in Chemical Engineering</i>
Oral Presentation	David M. Dumas University of California, Los Angeles <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Lewis Acid and Charge Effects on Lehn-Type CO ₂ Electroreduction Complexes Supported by Extended π System Ligand Architectures	Theodor Agapie <i>Professor of Chemistry</i>
Oral Presentation	Emily R. Dunn University of California, Los Angeles <i>Amgen Scholar</i>	Altering Immunostaining With Signal Amplification by Exchange Reaction (Immuno-SABER) to Spatially Map Proteins With Stimulated Raman Scattering (SRS) Microscopy	Lu Wei <i>Assistant Professor of Chemistry</i>

Oral Presentation	<i>Liliana B. Edmonds</i> Massachusetts Institute of Technology <i>Information Science and Technology (IST)</i> <i>Venerable WAVE Fellow</i>	Characterizing the AC Magnetic Field Gradient for Microscale Biomedical Device Localization	Azita Emami <i>Andrew and Peggy Cherng Professor of Electrical Engineering and Medical Engineering; Investigator, Heritage Medical Research Institute</i> Saransh Sharma <i>Graduate Student in Electrical Engineering</i>
Oral Presentation	<i>Desmond L. Edwards</i> Massachusetts Institute of Technology <i>Amgen Scholar</i>	Creation of a Joint Experimental and Computational Workflow for the Analysis of <i>in vivo</i> AAV Gene Therapy Expression Levels	Viviana Gradinaru <i>Professor of Neuroscience and Biological Engineering; Investigator, Heritage Medical Research Institute</i>
Oral Presentation	<i>Frenly Espino</i> University of California, Berkeley <i>Institute for Quantum Information and Matter (IQIM) WAVE Fellow</i>	Explorations in the Mathematics of Gauge Theories	Sergei G. Gukov <i>Professor of Theoretical Physics and Mathematics</i> Sunghyuk Park <i>Graduate Student in Mathematics</i>
Oral Presentation	<i>Gabriel M. Fabre</i>	Entanglement Distribution Between Two Remote Nodes at Caltech	Maria Spiropulu <i>Shang-Yi Ch'en Professor of Physics</i>
Oral Presentation	<i>Ellie J. Flint</i> University of California, San Diego <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Quantifying Carbon Export in the Southern Ocean: Observations From Ocean Gliders	Andrew F. Thompson <i>Professor of Environmental Science and Engineering</i> Lily Dove <i>Graduate Student in Environmental Science and Engineering</i>
Oral Presentation	<i>Alex M. Fontani Herreros</i> <i>Reed and Ruth Brantley SURF Fellow</i>	Optimizing Electrochemical CO ₂ Reduction Cell Design for Concentrated Products and Downstream Tandem Catalysis	Jonas C. Peters <i>Bren Professor of Chemistry</i>
Oral Presentation	<i>Jan E. Fowler</i>	Advancing the Power of Affordable Spectroscopy for Education	Melissa R. Hovik <i>Teaching Assistant Professor of Computing and Mathematical Sciences</i> Adam Blank <i>Teaching Assistant Professor of Computing and Mathematical Sciences</i>

Poster Presentation	Bruno A. Freeman	Time Complexity Inference via Static Analysis of Abstract Syntax Trees	Adam Blank <i>Teaching Assistant Professor of Computing and Mathematical Sciences</i>
Poster and Oral Presentations	Ashildur Fridriksdottir University of Iceland	Nanoporous p-GaN for Selective Gas-Phase CO ₂ Reduction	Harry A. Atwater <i>Howard Hughes Professor of Applied Physics and Materials Science</i>
Oral Presentation	Nicole M. Garrido University of California, Los Angeles <i>Center for Environmental Microbial Interactions (CEMI) WAVE Fellow</i>	Characterizing the Microbial Ecology of Coastal Seagrass Roots and Associated Sediments	Victoria Orphan <i>James Irvine Professor of Environmental Science and Geobiology</i> Kriti Sharma <i>Postdoctoral Scholar Research Associate in Geobiology</i>
Oral Presentation	Karlton P. Gaskin Columbia University <i>Humanities and Social Sciences WAVE Fellow</i>	Individuals High in Symptoms of Anorexia Nervosa Display Differences in Attention and Learning	Cindy Hagan <i>Visitor in Neuroscience</i> Ralph Adolphs <i>Bren Professor of Psychology, Neuroscience, and Biology</i>
Oral Presentation	Jesse George-Akpenyi Massachusetts Institute of Technology <i>Information Science and Technology (IST) WAVE Fellow</i>	Developing Metrics and Identifying Key Parameters for Prosthetic Foot Design	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems</i>
Oral Presentation	Isaias H. Ghezze University of California, Santa Barbara <i>Chen Institute BrainWAVE Fellow</i>	Social Learning and the Dynamic Updating of Group Value	Colin F. Camerer <i>Robert Kirby Professor of Behavioral Economics</i> Sarah Tashjian <i>Postdoctoral Scholar Research Associate in Affective Neuroscience</i>
Oral Presentation	Allison T. Glynn	Characterization of Enteric Nervous System Alterations in the Gut of a Mouse Model of Autism Spectrum Disorder	Sarkis K. Mazmanian <i>Luis B. and Nelly Soux Professor of Microbiology; Investigator, Heritage Medical Research Institute</i> Jessica A. Griffiths <i>Graduate Student in Bioengineering</i>

Poster Presentation	Joaquin A. Gomez <i>Dr. David G. Goodwin SURF Fellow</i>	Improving the Modeling Efficiency of Methane Gas Combustion	Guillaume Blanquart <i>Professor of Mechanical Engineering</i> Matthew Yao <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	Julia B. Grossman Brown University	Applying InSAR to Tectonic Deformation in California	Mark Simons <i>John W. and Herberta M. Miles Professor of Geophysics; Chief Scientist, JPL</i>
Poster Presentation	Pedro F. Guicardi Cornell University <i>WAVE Fellow</i>	Action Functionals for Gravitational Theories With Fractal Spatial Hypersurfaces	Matilde Marcolli <i>Robert F. Christy Professor of Mathematics and Computing and Mathematical Sciences</i> Fangzhou Jiang <i>Troesh Postdoctoral Scholar in Theoretical Astrophysics</i>
Oral Presentation	Anthony A. Gutierrez California State University, Northridge <i>Genentech WAVE Fellow</i>	Determining if Insulin-Like Peptides (ILPs) Are Involved in the Dauer Exit Decision	Paul W. Sternberg <i>Bren Professor of Biology</i>
Oral Presentation	Kylie Y. Hansen Massachusetts Institute of Technology <i>Carl F. Braun WAVE Fellow</i>	Probing for Super Fast Transients Using Palomar Gattini-IR	Mansi M. Kasliwal <i>Professor of Astronomy</i> Kishalay De <i>Postdoctoral Scholar Research Associate in Astronomy</i>
Oral Presentation	Luis D. Hidalgo Harvey Mudd College <i>Institute for Quantum Information and Matter (IQIM) WAVE Fellow</i>	Finding the Bounds on the Quantum Fisher Information in Noisy Dynamics	John P. Preskill <i>Richard P. Feynman Professor of Theoretical Physics</i> Tuvia Gefen <i>Postdoctoral Scholar Research Associate in Theoretical Physics</i>

Oral Presentation	<p><i>Richard I. Hopwood</i> University of Arkansas Southern California Edison WAVE Fellow</p>	<p>Mechanical Characterization of Cu and Ni Based Metals Produced via Hydrogel Enabled Additive Manufacturing</p>	<p>Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Rebecca Gallivan <i>Graduate Student in Materials Science</i> Yuchun Sun <i>Graduate Student in Materials Science</i></p>
Oral Presentation	<p><i>Rauful R. Hossain</i> Hunter College Amgen Scholar</p>	<p>Investigating the Inhibition of NF kappa B and TBK1 to Target CB-5083 Drug- Resistant Colon Cancer Cells</p>	<p>Tsui-Fen Chou <i>Research Professor of Biology and Biological Engineering</i> Feng Wang <i>Postdoctoral Scholar Research Associate in Biology and Biological Engineering</i></p>
Oral Presentation	<p><i>Jerry Y. Huang</i> Stephen Adelman Memorial SURF Fellow</p>	<p>Deep Learning Myocardial Strain From Multiplanar Cardiac Magnetic Resonance Images</p>	<p>Albert Hsiao <i>Associate Professor of Radiology, University of California, San Diego</i> Michelle Effros <i>George Van Osdol Professor of Electrical Engineering</i></p>
Oral Presentation	<p><i>Kevin E. Huang</i> Class of '52 SURF Fellow</p>	<p>Optimal Control for a Piecewise Dynamical System</p>	<p>Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i></p>
Oral Presentation	<p><i>Aelin D. Hunt</i> John Stauffer SURF Fellow</p>	<p>Mechanisms of Conductivity Within Cubic Structure $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$</p>	<p>Scott K. Cushing <i>Assistant Professor of Chemistry</i> Kim H. Pham <i>Graduate Student in Chemistry</i></p>

Oral Presentation	<i>Katie Ann R. Huy</i> Whittier College <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Characterizing the Novel Bacterial Species <i>Paraburkholderia edwinii</i> Protecting Against Phenazines	Dianne K. Newman <i>Gordon M. Binder/Amgen Professor of Biology and Geobiology</i> Kurt Dahlstrom <i>Resnick Sustainability Institute Prize Postdoctoral Scholar Research Associate in Biology and Biological Engineering</i>
Poster Presentation	<i>Justin J. Hyon</i>	Expression Profile of <i>Drosophila</i> Olfactory Coreceptor (Orco) in Non-Olfactory Tissues	Elizabeth J. Hong <i>Assistant Professor of Neuroscience</i> Ezgi Kunttas-Tatli <i>Postdoctoral Scholar in Biology</i>
Poster Presentation	<i>Joshua D. Ibrahim</i> University of Pennsylvania <i>Information Science and Technology (IST) Venerable WAVE Fellow</i>	Optimization of Spatially Engineered Microbial Consortia in Bacteria Powered Biobatteries	Richard M. Murray <i>Thomas E. and Doris Everhart Professor of Control and Dynamical Systems and Bioengineering</i>
Oral Presentation	<i>Rohan Iyer</i>	Evolution of Major Element Chemistry in Protoplanetary Disks and Its Connection to Planetesimal Growth	Yoshinori Miyazaki <i>Stanback Postdoctoral Scholar Research Associate in Comparative Planetary Evolution</i>
Oral Presentation	<i>Sahil Jain</i>	Enhancing Quantitative MR Image Reconstruction With Unrolled Convolutional Neural Networks	Shreyas S. Vasanawala <i>Professor of Radiology; Director of MRI, Stanford Children's Hospital</i> Zhitao Li <i>Postdoctoral Research Fellow in Radiology, Stanford University</i> Julian Michael Tyszka <i>Associate Director, Caltech Brain Imaging Center</i>
Poster Presentation	<i>Winnie Wei Jeng</i> Georgia Institute of Technology <i>Carl F. Braun WAVE Fellow</i>	Creating the Wide Field Infrared Camera (WIRC) Exoplanet Transit Software Package Version 1.0	Heather A. Knutson <i>Professor of Planetary Science</i> Michael Greklek-McKeon <i>Graduate Student in Planetary Science</i>

Oral Presentation	<i>Leo B. Jenkins</i>	Digitalizing Parisian Death Records for Building a Searchable Database	Jean-Laurent Rosenthal <i>Rea A. and Lela G. Axline</i> Professor of Business Economics
Oral Presentation	<i>Nicolas Jimenez-Lozano</i> <i>W.H. Halpenny</i> <i>SURF Fellow</i>	Chemical Oxygen Demand (COD) and Energy Optimization for Portable Primary Effluent Treatment Systems	Michael R. Hoffmann <i>John S. and Sherry Chen</i> Professor of Environmental Science Clément A. Cid <i>Laboratory Manager, Global Environmental Center</i>
Oral Presentation	<i>Anfal A. Jneidi</i> Norco College <i>Aerospace Mentoring Program (AMP) WAVE Fellow</i>	Modeling Passive Propulsion in Vortex Wakes	Beverley J. McKeon <i>Theodore von Karman</i> Professor of Aeronautics Tanner D. Harms <i>Graduate Student in Aerospace</i>
Oral Presentation	<i>Kasper Johansson</i> KTH, Royal Institute of Technology	Mixed Observable RRT: Multi-Agent Planning in Partially Observable Environments	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering and Dynamical Systems</i> Andrew Singletary <i>Graduate Student in Mechanical Engineering</i>
Poster Presentation	<i>Sarah A. Kabboul</i> <i>John Stauffer</i> <i>SURF Fellow</i>	Light-Guided Generation of Ordered Mesostuctures With Defined Wetting Anisotropy Using Artificial and Natural Insolation	Nathan S. Lewis <i>George L. Argyros</i> Professor and Professor of Chemistry Madeline Meier <i>Graduate Student in Chemistry</i>
Poster Presentation	<i>Shevali M. Kadakia</i> <i>Arthur R. Adams</i> <i>SURF Fellow</i>	Implementing the Aerosol Activation Parameterization in the New Earth System Model	Tapio Schneider <i>Theodore Y. Wu</i> Professor of Environmental Science and Engineering; Senior Research Scientist, JPL Anna Jaruga <i>Postdoctoral Scholar, JPL</i>

Oral Presentation	<i>Elya Kandahari</i> University of California, Davis <i>VURP Fellow</i>	Electroanalytical Mechanistic Interrogation of Nickel Promoted Oxidative Addition in the Nozaki-Hiyama-Kishi Reaction	Sarah E. Reisman <i>Bren Professor of Chemistry; Investigator, Heritage Medical Research Institute</i> David Hill <i>Postdoctoral Scholar Research Associate in Chemistry</i>
Oral Presentation	<i>Ishaan Kannan</i>	Star Formation Environments: Clump Properties in Sprial Galaxy NGC 4501 – WISDOM Project X	Lijie Liu <i>Postdoctoral Scholar, National Space Institute Denmark</i> Charles L. Steinhardt <i>Associate Professor, Dark Cosmology Center, Niels Bohr Institute, University of Copenhagen</i>
Poster Presentation	<i>Cole Z. Kappel</i> San Diego Mesa College <i>Carl F. Braun WAVE Fellow</i>	An Environmental Sensing System for the High Contrast Spectroscopy Testbed for Segmented Telescopes (HCST)	Dimitri P. Mawet <i>Professor of Astronomy; Research Scientist, JPL</i>
Oral Presentation	<i>Seenara S. Khan</i> Norco College <i>Aerospace Mentoring Program (AMP) WAVE Fellow</i>	The Study of Rotating Shrouded Propellers	Beverley J. McKeon <i>Theodore von Karman Professor of Aeronautics</i> Emile Oshima <i>Graduate Student in Aerospace</i>
Oral Presentation	<i>Maisha Khanum</i>	Design of Hull and Heating Systems for Lighter-than-Air UAV	Mory Gharib <i>Hans W. Liepmann Professor of Aeronautics and Bioinspired Engineering</i> Cecilia Huertas Cerdeira <i>Research Engineer in Aerospace</i> Peter I. Renn <i>Graduate Student in Aerospace</i>

Oral Presentation	<i>Catherine J. Ko</i> <i>John Stauffer</i> <i>SURF Fellow</i>	Determining Consensus Mutations' Capability and Generality to Stabilize Cytochromes P411 With Novel Evolved Catalytic Activities	Frances H. Arnold <i>Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry; Nobel Laureate</i> Ravi Lal <i>Graduate Student in Chemical Engineering</i>
Poster Presentation	<i>Amelia L. Konomos</i> <i>University of California, Los Angeles</i>	Atmospheric Characterization of Transiting Exoplanet WASP-44b	Heather Knutson <i>Professor of Planetary Science</i> Jessica Spake <i>Postdoctoral Scholar</i> <i>Research Associate in Planetary Science</i>
Oral Presentation	<i>Albert Y. Kyi</i> <i>James J. Morgan</i> <i>SURF Fellow</i>	Engineering Bench Scale Accelerated Limestone Weathering Reactor for Carbon Sequestration	Jess F. Adkins <i>Smits Family Professor of Geochemistry and Global Environmental Science</i> Sijia Dong <i>Postdoctoral Scholar</i> <i>Research Associate in Environmental Science and Engineering</i>
Oral Presentation	<i>Sarah J. Lange</i> <i>College of Marin</i> <i>Carl F. Braun</i> <i>WAVE Fellow</i>	Compiling Radial Velocity Datasets for Exoplanet Discovery	Andrew W. Howard <i>Professor of Astronomy</i> Fei Dai <i>Postdoctoral Scholar</i> <i>Research Associate in Planetary Science</i>
Oral Presentation	<i>Alison S. Lao</i> <i>University of California, San Diego</i>	Development and Optimization of a Wearable Sodium-Selective Sensor With Improved Analytic Performance for Continuous Health Monitoring	Wei Gao <i>Assistant Professor of Medical Engineering</i> Changhao Xu <i>Graduate Student in Medical Engineering</i>
Oral Presentation	<i>Lin L. Lee</i> <i>Dr. Jane Chen</i> <i>SURF Fellow</i>	Return Probabilities of Skip-Free Random Walks	Leonard J. Schulman <i>Professor of Computer Science</i> Jenish Mehta <i>Graduate Student in Computer Science</i>

Oral Presentation	<i>Anna X. Li</i> <i>The Aerospace Corporation SURF Fellow</i>	Passivation of Physical Defects in TiO ₂ Thin Films Through Targeted Electrodeposition	Nathan S. Lewis <i>George L. Argyros</i> <i>Professor and Professor of Chemistry</i> Jake Evans <i>Graduate Student in Chemistry</i>
Oral Presentation	<i>Daniel Z. Li</i> <i>The Aerospace Corporation SURF Fellow</i>	Artificial Intelligence in Particle Streak Velocimetry	Beverley J. McKeon <i>Theodore von Karman</i> <i>Professor of Aeronautics</i> Jacque Tawney <i>Graduate Student in Aerospace</i>
Poster Presentation	<i>Eileen M. Li</i>	Eliciting Decision Algorithms for Choices Under Uncertainty	Kirby K. Nielsen <i>Assistant Professor of Economics</i>
Oral Presentation	<i>Zhuofu Li</i> <i>University of California, Los Angeles</i>	A Search for Short Orbital Period Cataclysmic Variables Stars Using the Zwicky Transient Facility	Shrinivas R. Kulkarni <i>George Ellery Hale</i> <i>Professor of Astronomy and Planetary Science</i> Jan van Roestel <i>Postdoctoral Scholar</i> <i>Research Associate in Physics</i>
Poster Presentation	<i>Ha Eun Lim</i> Cornell University	A Model-Based Metabolic Engineering Approach Towards Optimizing Protein Synthesis in Cell-Free Systems	Richard M. Murray <i>Thomas E. and Doris Everhart</i> <i>Professor of Control and Dynamical Systems and Bioengineering</i> Manisha Kapasiawala <i>Graduate Student in Bioengineering</i>
Oral Presentation	<i>Andrew Y. Lin</i> Massachusetts Institute of Technology	Return Probabilities of Skip-Free Random Walks	Leonard J. Schulman <i>Professor of Computer Science</i> Jenish Mehta <i>Graduate Student in Computer Science</i>
Oral Presentation	<i>Yuying Lin</i> <i>Sung-Hsien Chen Shih</i> <i>SURF Fellow</i>	Ultralight and Flexible Luminescent Solar Concentrators for Space Applications	Harry A. Atwater <i>Howard Hughes Professor of Applied Physics and Materials Science</i> Megan E. Phelan <i>Graduate Student in Materials Science</i>

Oral Presentation	Jamie A. Littman <i>Frank W. Wood</i> <i>SURF Fellow</i>	Improving the Panoramix Program for Assessment of Cement Related Materials	Rupert J. Myers <i>Lecturer in Sustainable Materials, Imperial College London</i> Meng Gao <i>Graduate Student in Civil and Environmental Engineering, Imperial College London</i> José E. Andrade <i>George W. Housner Professor of Civil and Mechanical Engineering</i>
Oral Presentation	Grace Liu <i>David S. Koons</i> <i>SURF Fellow</i>	Characterizing and Predicting Cytochrome P450-Reductase Interactions Using Machine Learning	Frances H. Arnold <i>Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry; Nobel Laureate</i> Lucas Schaus <i>Graduate Student in Biochemistry and Molecular Biophysics</i>
Poster Presentation	Victoria Liu <i>Marcella Bonsall</i> <i>SURF Fellow</i>	Multi-Task Deep Learning Reconstruction for Jointly Training Multiple Contrasts or Anatomies	Shreyas S. Vasanawala <i>Professor of Radiology; Director of MRI, Stanford Children's Hospital</i> Kanghyun Ryu <i>Postdoctoral Researcher, Stanford University</i> Adam Blank <i>Teaching Assistant Professor of Computing and Mathematical Sciences</i>
Oral Presentation	Graciela Lopez Campos University of Costa Rica	Influence of Slenderness on the Bearing Capacity of a Confined Granular Column	José E. Andrade <i>George W. Housner Professor of Civil and Mechanical Engineering</i> Siavash Monfared <i>Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering</i>

Oral Presentation	<i>Adrian A. Lopez</i> <i>The Associates</i> <i>SURF Fellow</i>	Laser Cooling of Polyatomic Molecules Using π -Bonded Optical Cycling Centers	Nick R. Hutzler <i>Assistant Professor of Physics</i> Phelan Yu <i>Graduate Student in Physics</i>
Oral Presentation	<i>Angelica F. Lopez</i> University of Wisconsin, Madison <i>Genentech WAVE Fellow</i>	Alternative Mechanisms of Notch Activation in Neurons	Carlos Lois <i>Research Professor of Biology</i>
Poster Presentation	<i>Abdullah Al Maruf</i> South Dakota State University	3D Architected Lithium-Ion Battery With Electroplated Interpenetrating-Lattice Electrodes	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Yuchun Sun <i>Graduate Student in Materials Science</i>
Oral Presentation	<i>Kevin A. Marx</i> <i>Hannah Bradley</i> <i>SURF Fellow</i>	Developing a Low Cost and Open Source Syringe Pump	Lior S. Pachter <i>Bren Professor of Computational Biology and Computing and Mathematical Sciences</i> Sina Boeshaghi <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	<i>Leena Mathur</i> University of Southern California	Learning Culturally-Invariant Representations of Affect for Multimodal, Cross-Cultural Affect Perception	Ralph Adolphs <i>Bren Professor of Psychology, Neuroscience, and Biology</i>
Oral Presentation	<i>Haydn C. Maust</i>	Exposition on Complex and Modular Representations of $SL_2(\mathbb{F}_p)$	Anna M. Szumowicz <i>Harry Bateman Instructor of Mathematics</i>
Oral Presentation	<i>Nathan M. McAlister</i>	Tensor-Based Modal Analysis of Fluids Data	Beverley J. McKeon <i>Theodore von Karman Professor of Aeronautics</i> Elizabeth Y. Qian <i>von Karman Instructor in Computing and Mathematical Sciences</i>

Oral Presentation	<i>Gavin M. McCabe</i> <i>Mark Reinecke</i> <i>SURF Fellow</i>	Numerical Monte Carlo Simulation of Cryogenic Buffer Gas Beams	Nick R. Hutzler <i>Assistant Professor of Physics</i> Yuiki Takahashi <i>Graduate Student in Physics</i>
Oral Presentation	<i>Tyrone J. McNichols</i> <i>Alain Porter Memorial</i> <i>SURF Fellow</i>	Simulating the Radio Sky for the DSA-2000	Gregg W. Hallinan <i>Professor of Astronomy</i> Yuping Huang <i>Graduate Student in Astrophysics</i>
Poster Presentation	<i>Alicia M. Mercado</i> Mount Saint Mary's University Los Angeles <i>Genentech WAVE Fellow</i>	CRISPR Interference Interrogation of Key Genes and Regulatory Genomic Elements in Early T-Cell Development	Ellen Rothenberg <i>Distinguished Professor of Biology</i> Xun Wang <i>Graduate Student in Biochemistry and Molecular Biophysics</i>
Oral Presentation	<i>Jennifer Miao</i> Yale University	Optimizing Sortase-Mediated Ligation Reactions for Structural Analysis	Rebecca M. Voorhees <i>Assistant Professor of Biology and Biological Engineering; Investigator, Heritage Medical Research Institute</i>
Poster Presentation	<i>Luke Mrini</i> College of William and Mary	Charge and Energy Transport in Fluctuating Superfluid Hydrodynamics	Anton Kapustin <i>Earle C. Anthony Professor of Theoretical Physics and Mathematics</i>
Oral Presentation	<i>Rithvik R. Musuku</i>	Error Quantification of Particle Tracking in Large Eddy Simulations	Guillaume Blanquart <i>Professor of Mechanical Engineering</i> Matthew Yao <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	<i>Elizabeth B. Nelson</i> Boston University <i>Genentech WAVE Fellow</i>	Structural and Functional Characterization of Get3d in Cyanobacteria	William M. Clemons <i>Professor of Biochemistry</i> Alexandra Barbato <i>Graduate Student in Biochemistry and Molecular Biophysics</i>

Oral Presentation	Jack T. Nguyen <i>Arthur A. Noyes SURF Fellow</i>	The Transcriptional Regulation of Biosynthesis in Aleocharine Rove Beetles	Joseph Parker <i>Assistant Professor of Biology and Biological Engineering</i> Yuriko Kishi <i>Graduate Student in Biology</i>
Oral Presentation	Tyler D. Nguyen <i>Fred and Jean Felberg SURF Fellow</i>	Development of a Biomimetic Fish Robot to Characterize the Optimal Trajectories of a Fish Fin Propulsor	Mory Gharib <i>Hans W. Liepmann Professor of Aeronautics and Bioinspired Engineering</i> Cecilia Huertas Cerdeira <i>Research Engineer in Aerospace</i>
Oral Presentation	Micah K. Nishimoto University of Southern California <i>Carl F. Braun WAVE Fellow</i>	Estimation of Turbulent Compressible Channel Flows Using Spectral Linear Stochastic Estimation	Beverley J. McKeon <i>Theodore von Karman Professor of Aeronautics</i> Anagha Madhusudanan <i>Postdoctoral Scholar Research Associate in Aerospace</i>
Oral Presentation	Addison D. Olmsted Rensselaer Polytechnic Institute	Fabrication of Aligned Graphene Superlattices and Magic Angle Graphene Devices	Stevan Nadj-Perge <i>Assistant Professor of Applied Physics and Materials Science</i> Yiran Zhang <i>Graduate Student in Physics</i>
Poster Presentation	Jaida M. Osman California State University, San Marcos <i>Southern California Edison WAVE Fellow</i>	Progress Toward the Synthesis of Phorbosone A via a Convergent Strategy	Brian M. Stoltz <i>Professor of Chemistry</i> Stephen Sardini <i>Postdoctoral Scholar Fellowship Trainee in Chemistry</i>
Oral Presentation	Samantha Ouertani Brown University <i>Carl F. Braun WAVE Fellow</i>	Determining Rupture Directivity of 2019 Ridgecrest Sequence Aftershocks With Gaussian Mixture Modeling	Zachary E. Ross <i>Assistant Professor of Geophysics</i>
Oral Presentation	Morgan R. Owens University of Texas at Austin <i>Chen Institute BrainWAVE Fellow</i>	Elucidating Mechanisms of Null Capsids	Viviana Gradinaru <i>Professor of Neuroscience and Biological Engineering; Investigator, Heritage Medical Research Institute</i>

Oral Presentation	<i>Ozioma Ozor-Ilo</i> Rice University <i>Information Science and Technology (IST) Venerable WAVE Fellow</i>	Developing Preference Based Learning Algorithm and Generalizations for a Lower Body Exoskeleton Gait Optimization	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems</i>
Oral Presentation	<i>Luis P. Pabon</i> <i>Toshi Kubota Aeronautics SURF Fellow</i>	Stochastic Delay Compensation Controller for Aggressive Multirotor Trajectory Tracking	Soon-Jo Chung <i>Bren Professor of Aerospace and Control and Dynamical Systems; Research Scientist, JPL</i>
Oral Presentation	<i>Emily Pan</i>	User-Friendly, Robust Data Analysis Software for Cryogenic Molecular Beam Data (CryoDAS)	Nick R. Hutzler <i>Assistant Professor of Physics</i> Arian Jadbabaie <i>Graduate Student in Physics</i>
Oral Presentation	<i>Nayree M. Panossian</i> Azusa Pacific University	Evaluation of <i>Thermophilic Bacillus</i> F ₁ -ATPase Rotation Rate at Varying Temperatures	Sandor Volkan-Kacso <i>Research Scientist in Chemistry</i> Rudolph A. Marcus <i>John G. Kirkwood and Arthur Amos Noyes Professor of Chemistry; Nobel Laureate</i>
Oral Presentation	<i>Ekta M. Patel</i>	Expression of Live Cell Reporters in Macrophages	David A. Van Valen <i>Assistant Professor of Biology and Biological Engineering</i> Emily C. Laubscher <i>Graduate Student in Chemistry</i>
Oral Presentation	<i>Hazel R. Pearson</i>	Exploring E(2) Equivariant Graph Neural Networks for Cellular Point Clouds	David A. Van Valen <i>Assistant Professor of Biology and Biological Engineering</i> Uriah Israel <i>Postdoctoral Scholar Research Associate in Biology and Biological Engineering</i>

Poster Presentation	<i>Toussaint M. Pegues</i> <i>Dr. Edray H. Goins</i> <i>SURF Fellow</i>	Development of a Powered Ankle Exoskeleton	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems</i> Maegan Tucker <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	<i>Elana M. Peisner</i> University of Massachusetts Amherst	Facilitating the Production of Large Surface Area Engineered Living Materials Using a Polymer Additive	Julia A. Kornfield <i>Elizabeth W. Gilloon</i> <i>Professor of Chemical Engineering</i> Harry B. Gray <i>Arnold O. Beckman</i> <i>Professor of Chemistry</i> Lealia Xiong <i>Graduate Student in Medical Engineering</i>
Oral Presentation	<i>Jules M. Pénot</i> <i>Robert I. and Winifred E. Gardner SURF Fellow</i>	Interfacing a Monte Carlo Solver With Fluid Dynamics Software to Better Model Soot Formation in Non-Premixed Turbulent Flames	Guillaume Blanquart <i>Professor of Mechanical Engineering</i> Matthew Yao <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	<i>Marcos A. Perez</i> <i>Flintridge Foundation</i> <i>SURF Fellow</i>	Simulating the Study of Exoplanets Using Photonic Spectrographs	Dimitri P. Mawet <i>Professor of Astronomy; Research Scientist, JPL</i> Pradip Gatkine <i>David and Ellen Lee</i> <i>Postdoctoral Scholar</i> <i>Research Associate in Astronomy</i>
Oral Presentation	<i>Kaveh G. Pezeshki</i> Harvey Mudd College	Development of High Crystalline Quality α -Phase Germanium Telluride Films Through Molecular Beam Epitaxy	Joseph L. Falson <i>Assistant Professor of Materials Science</i> Adrian Llanos <i>Graduate Student in Applied Physics</i>
Oral Presentation	<i>Derek G. Poletti</i> Princeton University <i>Resnick Sustainability Institute (RSI) WAVE</i> <i>Fellow</i>	Synthesis and Characterization of Water-Soluble Megasupramolecules for Use in Mist Control	Julia A. Kornfield <i>Elizabeth W. Gilloon</i> <i>Professor of Chemical Engineering</i> Hojin Kim <i>Graduate Student in Chemical Engineering</i>

Oral Presentation	Sahil Pontula Massachusetts Institute of Technology	Electron-Phonon Coupling in Hexagonal Boron Nitride Single-Photon Emitters	Harry A. Atwater <i>Howard Hughes Professor of Applied Physics and Materials Science</i> Hamidreza Akbari <i>Graduate Student in Applied Physics</i>
Oral Presentation	Max Popken <i>Class of '52 60th Reunion SURF Fellow</i>	Estimating Small Failure Probabilities	Konstantin Zuev <i>Teaching Assistant Professor of Computing and Mathematical Sciences</i>
Oral Presentation	Anastasia N. Popova	Entropy of Motif Distribution and Robustness of Complex Networks	Konstantin Zuev <i>Teaching Assistant Professor of Computing and Mathematical Sciences</i>
Oral Presentation	Trinity J. Pruitt University of Oklahoma <i>Humanities and Social Sciences WAVE Fellow</i>	Sampling Noise Does not Change With Experience During Simple Choice	Antonio Rangel <i>Bing Professor of Neuroscience, Behavioral Biology, and Economics</i> Brenden Eum <i>Graduate Student in Social Science</i>
Oral Presentation	Derek Y. Qin	Fourier Continuation Neural Operator for Nonperiodic PDEs	Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i>
Oral Presentation	Juan D. Quiroz	Modeling Single-Armed Protoplanetary Disk HD34282 for Planet Search	Dimitri P. Mawet <i>Professor of Astronomy; Research Scientist, JPL</i> Bin Ren <i>Postdoctoral Scholar Research Associate in Astronomy</i>
Oral Presentation	Emily R. Rainge Pomona College <i>Chen Institute BrainWAVE Fellow</i>	Using an Immunoprecipitation-Mass Spectrometry Approach to Evaluate the Interactome of PLAA and p97	Tsui-Fen Chou <i>Research Professor of Biology</i> Shan Li <i>Postdoctoral Scholar Research Associate in Biology and Biological Engineering</i>

Oral Presentation	Heidi E. Redmond <i>Jack and Edith Roberts SURF Fellow</i>	The Influence of Gender on Social Perception	Ralph Adolphs <i>Bren Professor of Psychology, Neuroscience, and Biology</i> Nina Rouhani <i>Postdoctoral Scholar Fellowship Trainee in Neuroscience</i>
Poster Presentation	Jillian T. Reed <i>Larson Scholar</i>	Optimizing Metal Carbonate Precipitation for Carbon Capture	Harry A. Atwater <i>Howard Hughes Professor of Applied Physics and Materials Science</i> Eowyn Lucas <i>Graduate Student in Materials Science</i>
Oral Presentation	Yolanda D. Reyes <i>American River College Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Characterizing Oxidation States of Transition Metal Polymers Using Electron Energy Loss Spectroscopy	Scott K. Cushing <i>Assistant Professor of Chemistry</i>
Oral Presentation	Raha Riazati	HOMES Lunar Dust Mitigation Through Electrodynamic Shielding: Designing the Microcontroller, Electronics Box, and Power Supply	Soon-Jo Chung <i>Bren Professor of Aerospace and Control and Dynamical Systems; Research Scientist, JPL</i>
Oral Presentation	Kate A. Roberts <i>Kalamazoo College</i>	The Surface Composition of Anomalous Asteroids as a Window Into the Early Solar System	Katherine de Kleer <i>Assistant Professor of Planetary Science and Astronomy</i>
Oral Presentation	Megan L. Robertson <i>Joseph L. Koo and Helen C. Koo SURF Fellow</i>	A Comprehensive Investigation of Ice-Shelf Effects on Meltwater Distributions and Circulation at the Bellingshausen Sea	Andrew F. Thompson <i>Professor of Environmental Science and Engineering</i>
Oral Presentation	Daniela Rodriguez-Chavez <i>Cornell University Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Understanding Sea Surface Height Variability at 10 km Scales	Jörn Callies <i>Assistant Professor of Environmental Science and Engineering</i>

Oral Presentation	Jennifer A. Rodriguez Michigan State University <i>Carl F. Braun</i> <i>WAVE Fellow</i>	Characterization of the Broad-Band X-ray Spectrum of the Black Hole Binary MAXI J1820+070	Fiona A. Harrison <i>Harold A. Rosen Professor of Physics</i> Javier A. Garcia <i>Research Assistant</i> <i>Professor of Physics</i>
Oral Presentation	Kellen R. Rodriguez <i>Bob and Carole Chapman</i> <i>Minority SURF Fellow</i>	A Loser-Take-All DNA Circuit	Lulu Qian <i>Professor of Bioengineering</i> Namita Sarraf <i>Graduate Student in Bioengineering</i>
Poster Presentation	Mitchell J. Rogers University of California, Los Angeles	Investigating the Impact of Biomass Burning Aerosols on Urban Air Quality in Los Angeles	John H. Seinfeld <i>Louis E. Nohl Professor of Chemical Engineering</i>
Oral Presentation	Brith Milenia Rojas University of Rochester <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	The Effect of N-tol-pyridinium Deposition Time on Copper-Mediated CO ₂ Reduction	Jonas C. Peters <i>Bren Professor of Chemistry</i> Nicholas B. Watkins <i>Graduate Student in Chemistry</i> Madeline Hicks <i>Graduate Student in Chemistry</i>
Oral Presentation	Cristian E. Ruano Arens Princeton University <i>KNI SURF-the-WAVE Prize Fellow</i>	Characterization of Microstructure and Morphology of Thin Film Germanium Telluride Grown via Molecular Beam Epitaxy	Joseph L. Falson <i>Assistant Professor of Materials Science</i> Adrian Llanos <i>Graduate Student in Applied Physics</i>
Oral Presentation	Juan M. Santos Pitzer College <i>Center for Environmental Microbial Interactions (CEMI) WAVE Fellow</i>	Identifying the Correlation Between N-oxide Reduction and Resistance to Antibiotics in <i>Achromobacter xylosoxidans</i> Clinical Isolates	Dianne K. Newman <i>Gordon M. Binder/Amgen Professor of Biology and Geobiology</i> Zach Lonergan <i>Postdoctoral Scholar Fellowship Trainee in Biology and Biological Engineering</i>
Oral Presentation	Maria N. Schmeer Washington University in St. Louis	Using Temperature Sensors to Track the Thaw and Erosion Fronts in an Experimental Permafrost Riverbank	Michael P. Lamb <i>Professor of Geology</i> Madison M. Douglas <i>Graduate Student in Geology</i>

Oral Presentation	<i>Eli J. Seiner</i>	Examining Mental Prototypes of Graphical Data Using Virtual Serial Reproduction Methods	Shinsuke Shimojo <i>Gertrude Baltimore</i> <i>Professor of Experimental Psychology</i> Daw-An Wu <i>Postdoctoral Scholar in Social Neuroscience</i>
Oral Presentation	<i>Mya I. Serrano</i> Rutgers University - Newark <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Synthesis of Ni-CODH Active Site Model	Theodor Agapie <i>Professor of Chemistry</i>
Oral Presentation	<i>Anna L. Shelton</i> University of Richmond <i>KNI SURF-the-WAVE Prize Fellow</i>	Nanophotonic Lithium Niobate Waveguides for Broadband Difference-Frequency Generation	Kerry J. Vahala <i>Ted and Ginger Jenkins</i> <i>Professor of Information Science and Technology and Professor of Applied Physics</i> Leo Wu <i>Graduate Student in Applied Physics</i>
Poster Presentation	<i>Riya Shrivastava</i>	Studying Electromagnetic Transients From Stellar Collisions in Dense Star Clusters	Kyle Kremer <i>NSF Fellow, Carnegie Observatories</i> James W. Fuller <i>Assistant Professor of Theoretical Astrophysics</i>
Oral Presentation	<i>Kaushal N. Shyamsundar</i> <i>Robert K. and Alice L. Roney SURF Fellow</i>	Magnetic Materials and Magnetic Fields in Nanoscale Field Emitters	Axel Scherer <i>Bernard A. Neches</i> <i>Professor of Electrical Engineering, Applied Physics, and Physics</i> Changsoon Choi <i>Graduate Student in Electrical Engineering</i>
Oral Presentation	<i>Uzair Tahamid Siam</i> University of Rochester	Simulations of Multiband Imager Design Choices to Optimize its Application to Studying Exoplanet Atmospheres	Dimitri P. Mawet <i>Professor of Astronomy; Research Scientist, JPL</i> Ashley Baker <i>51 Pegasi b Postdoctoral Scholar Research Associate in Astronomy</i>

Oral Presentation	Jared Siegel University of Chicago	High Precision Line-by-line Radial Velocity Analysis	Andrew W. Howard <i>Professor of Astronomy</i> Ryan Rubenzahl <i>Graduate Student in Astrophysics</i>
Oral Presentation	Breno D. Silva Suffolk University <i>Southern California Edison WAVE Fellow</i>	Understanding the Photochemistry of Ni(II)-Based Cross-Coupling Catalysts	Ryan G. Hadt <i>Assistant Professor of Chemistry</i> David A. Cagan <i>Graduate Student in Chemistry</i>
Oral Presentation	Jay P. Siri <i>J. Kent Clark SURF Fellow</i>	Recovering the Legacy of the Schuster Siblings and Arthur Schuster's International Science Efforts in 19th-Century Siam	Dehn Gilmore <i>Professor of English</i>
Oral Presentation	Kayla J. Smith Central State University	Solving the Mystery of Life on Mars Using Sulfuric Isotopic Fractionation	Yuk L. Yung <i>Professor of Planetary Science; Senior Research Scientist, JPL</i> Danica Adams <i>Graduate Student in Planetary Science</i>
Oral Presentation	Saraswati Soedarmadji <i>Hannah Bradley SURF Fellow</i>	Semi-Supervised Learning Algorithms on Graphs	Elizabeth Y. Qian <i>von Karman Instructor in Computing and Mathematical Sciences</i> Bamdad Hosseini <i>von Karman Instructor of Computing and Mathematical Sciences</i>
Oral Presentation	Leah S. Soldner <i>Homer J. Stewart SURF Fellow</i>	Coiling Stresses, Warping, Hygroscopic, and Thermal Mismatch in the Space Solar Power Project Structure	Sergio Pellegrino <i>Joyce and Kent Kresa Professor of Aerospace and Civil Engineering; Senior Research Scientist, JPL</i> Eleftherios Gdoutos <i>Principal Research Scientist in Aerospace</i>
Oral Presentation	Nina Solovyeva <i>David C. Elliot SURF Fellow</i>	Startups Raising Capital Without Public Disclosures	Michael J. Ewens <i>Professor of Finance and Entrepreneurship</i>

Oral Presentation	<i>Yunxiang Song</i> University of Chicago <i>KNI SURF-the-WAVE</i> <i>Prize Fellow</i>	Design and Fabrication of an Alternating Current Calorimeter for Specific Heat Measurements in Diamond Anvil Cells	Thomas F. Rosenbaum <i>President; Professor of Physics</i> Daniel Silevitch <i>Research Professor of Physics</i> Alex Wertheim <i>Materials Process Engineer</i>
Oral Presentation	<i>Anna M. Soper</i> Harvey Mudd College <i>Facebook WAVE Fellow</i>	Implementing the Largest Exceptional Point on a Dissipative, Time-Multiplexed Photonic Resonator Network	Alireza Marandi <i>Assistant Professor of Electrical Engineering and Applied Physics</i> Christian Leefmans <i>Graduate Student in Applied Physics</i>
Oral Presentation	<i>Johnathon F. Soro</i>	Microscopy-Based Live Cell Perturbation Screens Using dCas9-Mediated Genetic Knockdowns and Spatial Barcodes	David A. Van Valen <i>Assistant Professor of Biology and Biological Engineering</i> Morgan Schwartz <i>Graduate Student in Biology</i>
Oral Presentation	<i>Mohamed Soufi</i> <i>Larson Scholar</i>	Development of an Acoustic 96-Well Plate Reader	Mikhail G. Shapiro <i>Professor of Chemical Engineering; Investigator, Heritage Medical Research Institute</i> Robert C. Hurt <i>Graduate Student in Neurobiology</i>
Oral Presentation	<i>Emily A. Springer</i>	Quantum Simulation of an Open Fermionic System	Austin J. Minnich <i>Professor of Mechanical Engineering and Applied Physics</i>
Oral Presentation	<i>Vishvesha K. Sridhar</i>	CVD Growth of Monolayer Transition Metal Dichalcogenides	Nai-Chang Yeh <i>Professor of Physics</i> Daniel Anderson <i>Graduate Student in Materials Science</i>
Oral Presentation	<i>Irina M. Strugaru</i> Alexandru Ioan Cuza, University of Iasi <i>KNI SURF-the-WAVE</i> <i>Prize Fellow</i>	Assessing the Accuracy of Two-Photon Lithography Nanofabrication for Photonics Devices	Andrei Faraon <i>Professor of Applied Physics and Electrical Engineering</i> Gregory D. Roberts <i>Graduate Student in Applied Physics</i>

Oral Presentation	<i>Nathan M. Suiter</i> Azusa Pacific University	Utilizing Correlation Functions to Develop a Multistate Model of <i>P. denitrificans</i> F ₁ -ATPase and Enhance Single-Molecule Imaging Resolution	Sandor Volkan-Kacso <i>Research Scientist in Chemistry</i> Rudolph A. Marcus <i>John G. Kirkwood and Arthur Amos Noyes Professor of Chemistry; Nobel Laureate</i>
Oral Presentation	<i>Idris O. Sunmola</i> Northwestern University <i>Facebook WAVE Fellow</i>	Augmentation of Skills Assessment Deep Learning Networks in Robot-Assisted Surgery With a Spatial Attention Network	Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i>
Oral Presentation	<i>Aiden E. Swann</i> <i>Carl F. Braun SURF Fellow</i>	High Speed Obstacle Avoidance With Quadcopters	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems</i> Andrew Singletary <i>Graduate Student in Mechanical Engineering</i>
Oral Presentation	<i>Brea A. Swartwood</i>	Deep Learning Aortic Valve Plane Localization	Albert Hsiao <i>Associate Professor of Radiology, University of California, San Diego</i> Melissa R. Hovik <i>Teaching Assistant Professor of Computing and Mathematical Sciences</i>
Poster Presentation	<i>Madeleine C. Swint</i> <i>Harry B. Gray SURF Fellow</i>	Improved Activity of Earth-Abundant MnSbOx Catalysts via Chemical Vapor Deposition for Water-Splitting	Nathan S. Lewis <i>George L. Argyros Professor and Professor of Chemistry</i> Jackie Dowling <i>Graduate Student in Chemistry</i>
Oral Presentation	<i>Riley L. Tam</i> <i>Larson Scholar</i>	Calculating Age Constraints for Glacial Units on Mars	James L. Dickson <i>Research Scientist in Geological and Planetary Sciences</i> Bethany L. Ehlmann <i>Professor of Planetary Science</i>
Oral Presentation	<i>Lance R. Tan</i> University of Pennsylvania	Determining the Predictive Power of Pre-IPO Signals for Post-Public Stock Returns	Michael J. Ewens <i>Professor of Finance and Entrepreneurship</i>

Poster Presentation	<i>Anna T. Tifrea</i> <i>Larson Scholar</i>	Ultrasound-Activated Drug Delivery in the GI Tract Using Gas Vesicles	Mikhail G. Shapiro <i>Professor of Chemical Engineering; Investigator, Heritage Medical Research Institute</i> Paulene Abundo <i>Graduate Student in Chemical Engineering</i>
Oral Presentation	<i>Katie A. Toman</i> Sonoma State University <i>Joseph Rhodes, Jr., WAVE Fellow</i>	Vortex Fiber Nulling for Exoplanet Characterization and Observation	Dimitri P. Mawet <i>Professor of Astronomy; Research Scientist, JPL</i> Daniel Echeverri <i>Graduate Student in Physics</i>
Oral Presentation	<i>Haruna Tomono</i>	Developing a Dual-Tag Mass Spectrometry Technique to Examine Directional Protein Trafficking Between the Mitochondria and Nucleus	Tsui-Fen Chou <i>Research Professor of Biology and Biological Engineering</i> William Rosencrans <i>Graduate Student in Biochemistry and Molecular Biophysics</i>
Oral Presentation	<i>Gwendolyn L. Tsai</i> Johns Hopkins University <i>Carl F. Braun WAVE Fellow</i>	Modeling the "Bleed and Feed" Method of Nuclear Reactor Core Cooling	Joseph E. Shepherd <i>C.L. "Kelly" Johnson Professor of Aeronautics and Mechanical Engineering</i> Branson Davis <i>Graduate Student in Aeronautics</i>
Oral Presentation	<i>Gabriella P. Twombly</i>	Non-Venture Capital Backed Startups	Michael J. Ewens <i>Professor of Finance and Entrepreneurship</i>
Oral Presentation	<i>Chibuike K. Uwakwe</i> Harvard College <i>KNI SURF-the-WAVE Prize Fellow</i>	A Highly Sensitive Electrochemical Sensor for Simultaneous Multiplexed Detection of Purine Metabolites in Sweat	Wei Gao <i>Assistant Professor of Medical Engineering</i> Yiran Yang <i>Graduate Student in Medical Engineering</i>
Poster Presentation	<i>Jynessa M. Valladon</i> San Jose State University <i>Southern California Edison WAVE Fellow</i>	Using NED to Locate Host Galaxies of Gravitational Wave Events	George Helou <i>Research Professor of Physics; Executive Director of IPAC</i> David O. Cook <i>Staff Scientist in IPAC</i>

Oral Presentation	<i>Rohan Vemu</i> University of Pennsylvania <i>Amgen Scholar</i>	Tracking Stress Hormone Dynamics in Sweat Using Wearable Graphene-Based Wireless Health System	Wei Gao <i>Assistant Professor of Medical Engineering</i>
Oral Presentation	<i>Taylor M. Venenciano</i> Pomona College	Creation of the Keck Planet Imager and Characterizer (KPIC) Calibration Databases and KPIC Calibration Data Analysis	Dimitri P. Mawet <i>Professor of Astronomy; Research Scientist, JPL</i> Jason J. Wang <i>51 Pegasi b Postdoctoral Scholar Research Associate in Astronomy</i>
Oral Presentation	<i>Amy-Doan P. Vo</i> <i>John Stauffer SURF Fellow</i>	I. Development of a Genetically Encoded Small Protein Tag for Live-Cell Imaging With Stimulated Raman Scattering Microscopy; II. Hydrogen-Deuterium Exchange in Proteins Monitored by Raman Spectroscopy	Lu Wei <i>Assistant Professor of Chemistry</i> Kun Miao <i>Graduate Student in Chemistry</i>
Poster and Oral Presentations	<i>Alexis H. Wang</i>	Improving Continuous Authentication in Smartphones Using Behavioral Biometrics	Kiran S. Balagani <i>Associate Professor of Computer Science, New York Institute of Technology</i> Adam C. Wierman <i>Professor of Computing and Mathematical Sciences</i>
Oral Presentation	<i>Angel Wang</i>	Myrmecophily and Inter-nest Migration	Joseph Parker <i>Assistant Professor of Biology and Biological Engineering</i> Thomas H. Naragon <i>Graduate Student in Chemistry</i>
Poster Presentation	<i>Alana Weiss</i> Pomona College <i>Amgen Scholar</i>	Gene Silencing by RNA Interference in the Oribatid Mite, <i>Archezogetes longisetosus</i>	Joseph Parker <i>Assistant Professor of Biology and Biological Engineering</i> Adrian Brueckner <i>Postdoctoral Scholar in Biology and Biological Engineering</i>

Oral Presentation	Tomás A. Wexler <i>Lester Lees Aeronautics SURF Fellow</i>	Using Resolvent Analysis to Visualize Vortices in Incompressible Boundary Layer Flows	Beverley J. McKeon <i>Theodore von Karman Professor of Aeronautics</i> Salvador Gomez <i>Graduate Student in Aerospace</i>
Oral Presentation	Leo A. Williams	Site Saturation Mutagenesis on N-Acetyl-Alpha-Glucosaminidase (NAGLU) to Develop an Enzyme Suitable for Enzyme Replacement Therapy for Treatment of Mucopolysaccharidosis Type III C	Tsui-Fen Chou <i>Research Professor of Biology and Biological Engineering</i> Kai-Wen Cheng <i>Postdoctoral Scholar Research Associate in Biology and Biological Engineering</i>
Poster Presentation	Zhiqin Xu University of Wisconsin, Madison	The Synthesis and Property Characterization of ZnO via Hydrogel Enabled Additive Manufacturing	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Rebecca Gallivan <i>Graduate Student in Materials Science</i>
Poster Presentation	Isabell Yang <i>Thomas Hunt Morgan SURF Fellow</i>	Genome Reduction of <i>Mimecitini</i> Rove Beetle Social Parasites	Joseph Parker <i>Assistant Professor of Biology and Biological Engineering</i> Sheila A. Kitchen <i>Postdoctoral Scholar in Biology and Biological Engineering</i>
Oral Presentation	Lynn Yang	Stray Light View of Accreting Atolls	Fiona A. Harrison <i>Harold A. Rosen Professor of Physics</i> Renee Ludlam <i>Einstein Postdoctoral Scholar Research Associate in Physics</i>
Oral Presentation	Andrew G. Yates Cornell University	Quantum Gravity in the Noisy Lab	John P. Preskill <i>Richard P. Feynman Professor of Theoretical Physics</i> Sepehr Nezami <i>Sherman Fairchild Postdoctoral Scholar in Theoretical Physics</i>

Oral Presentation	<i>Kala C. Youngblood</i> University of North Carolina Greensboro <i>Resnick Sustainability Institute (RSI) WAVE Fellow</i>	Synthetic Methods for Non-Symmetric Phenazines	Sarah E. Reisman <i>Bren Professor of Chemistry; Investigator, Heritage Medical Research Institute</i> Alexandra Beard <i>Graduate Student in Chemistry</i>
Oral Presentation	<i>Ga Eun Yun</i>	Simulations for the Optimization of HOMES	Soon-Jo Chung <i>Bren Professor of Aerospace and Control and Dynamical Systems; Research Scientist, JPL</i>
Oral Presentation	<i>Sol Bin Yun</i> University of Michigan, Ann Arbor	NuSTAR Stray Light Analysis of GS 1826-24	Fiona A. Harrison <i>Harold A. Rosen Professor of Physics</i> Brian W. Grefenstette <i>Research Scientist in Physics</i>
Oral Presentation	<i>Elizabeth Zhang</i> University of California, Los Angeles <i>KNI SURF-the-WAVE Prize Fellow</i>	UV Curable Polybutadiene- Based Resin for 3D Printable Polymer Electrolyte	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Fernando Villafuerte <i>Graduate Student in Materials Science</i> Yuchun Sun <i>Graduate Student in Materials Science</i>
Oral Presentation	<i>Emily L. Zhang</i>	Exploring the Effect of Media Consumption on Attitudes Towards Asian Americans	Ralph Adolphs <i>Bren Professor of Psychology, Neuroscience, and Biology</i> Tessa Rusch <i>Postdoctoral Scholar Research Associate in Neuroscience</i>
Poster Presentation	<i>Hongyu Zhang</i> Hamilton College	Monitoring Changes in Soft Pulse Profile Shape in the X-ray Binary Her X-1	Fiona A. Harrison <i>Harold A. Rosen Professor of Physics</i> McKinley C. Brumback <i>Postdoctoral Scholar Research Associate in Physics</i>

Oral Presentation	<i>Tianyi Zhang</i> <i>John Stauffer</i> <i>SURF Fellow</i>	Progress Toward Asymmetric Pd-Catalyzed Conjugate Addition of Arylboronic Acids to β -substituted α,β -Unsaturated Lactams	Brian M. Stoltz <i>Professor of Chemistry</i> Alexander Q. Cusumano <i>Graduate Student in Chemistry</i>
Oral Presentation	<i>Lian Zhu</i> <i>Warren and Katharine Schlinger SURF Fellow</i>	Probiotic pH Biosensors for Ultrasound Imaging of Intestinal Inflammation	Mikhail G. Shapiro <i>Professor of Chemical Engineering; Investigator, Heritage Medical Research Institute</i> Marjorie T. Buss <i>Graduate Student in Chemical Engineering</i>
Poster Presentation	<i>Fangyu N. Zou</i> <i>Ernest H. Swift</i> <i>SURF Fellow</i>	Imprinting of Nanostructures Generated by Inorganic Phototropic Growth	Nathan S. Lewis <i>George L. Argyros</i> <i>Professor and Professor of Chemistry</i> Kathryn Hamann <i>Graduate Student in Chemistry</i>