

## Presentations in Alphabetical Order by Student

Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b><i>Kanika Agarwal</i></b> <i>Richter Scholar</i>	Identification of Lentiviral Vector Integration Sites in a Human Fusogenic Cell Line, 293T-L2	David Baltimore <i>Robert Andrews Millikan</i> <i>Professor of Biology; Nobel</i> <i>Laureate; President Emeritus</i>
C.II - Biology 19 Baxter 1:00 - 1:20 PM	<b><i>Kiefer P. Aguilar</i></b> <i>Marcella Bonsall SURF Fellow</i>	Engineering Immunity: A T-Independent Immunogen to Elicit Programmed Broadly Neutralizing Antibody Response Against HIV	David Baltimore <i>Robert Andrews Millikan</i> <i>Professor of Biology; Nobel</i> <i>Laureate; President Emeritus</i> Kenneth K. Yu <i>Graduate Student in Biology</i>
G.I - Chemistry 210 Baxter 11:20 - 11:40 AM	<b><i>Anguel T. Alexiev</i></b> <i>Stanley and Chenmei Hsu</i> <i>SURF Fellow</i>	Toward the Asymmetric Total Synthesis of (-)-14,15- Dehydroquebrachamine	Brian M. Stoltz <i>Ethel Wilson Bowles and Robert</i> <i>Bowles Professor of Chemistry</i> Hosea Nelson <i>Graduate Student in Chemistry</i>
B.II - Biology 33 Baxter 1:40 - 2:00 PM	<b><i>Shamili Allam</i></b> <i>Samuel P. and Frances Krown</i> <i>SURF Fellow</i>	Using Meiotic Drive in <i>Drosophila melanogaster</i> for Population Control	Bruce A. Hay <i>Professor of Biology</i> Catherine M. Ward <i>Graduate Student in</i> <i>Biochemistry and Molecular</i> <i>Biophysics</i>
J.II - Applied Physics 237 Baxter 1:20 - 1:40 PM	<b><i>Amit Alon</i></b> <i>Ms. Jane Chen SURF Fellow</i>	Coupled Cavity Waveguides and Optical Bistability	Axel Scherer <i>Bernard Neches Professor of</i> <i>Electrical Engineering, Applied</i> <i>Physics, and Physics</i> Uday K. Khankhoje <i>Graduate Student in Electrical</i> <i>Engineering</i>
S.III - Humanities and Social Sciences/Geological and Planetary Sciences 218 Baxter 3:10 - 3:30 PM	<b><i>Veronica J. Anderson</i></b> <i>Caltech-University of Iceland</i> <i>Exchange</i>	Experimental Determination of Melting Rates of Ice in Subglacial Volcanic Eruptions	Magnus Gudmundsson <i>Professor of Geology, University</i> <i>of Iceland</i>
K.I - Computer Science 74 Jorgensen 10:20 - 10:40 AM	<b><i>Arda Antikacioglu</i></b>	On the Practicality of Fast Modular Composition and Polynomial Factorization Over Finite Fields	Chris M. Umans <i>Associate Professor of Computer</i> <i>Science</i>
H.I - Chemical Engineering 113 Spalding 10:40 - 11:00 AM	<b><i>Bamini Balaji</i></b>	Analysis of Thermal and Structural Mechanisms of Silica Microcavity Formation	Andrea M. Armani <i>Assistant Professor of Chemical</i> <i>Engineering and Materials</i> <i>Science, University of Southern</i> <i>California</i>

T.II - Mathematics/ Applied and Computational Mathematics 111 Keck 1:40 - 2:00 PM	<b>Ana S. Balibanu</b> <i>Richter Scholar</i>	Infinite Walks on the Primes of Integer Lattices	Dinakar Ramakrishnan <i>Taussky-Todd-Loneragan Professor of Mathematics</i>
B.II - Biology 33 Baxter 2:00 - 2:20 PM	<b>Gal Barak</b> <i>Shirley and Carl Larson SURF Fellow</i>	2-Hybrid Assay for Mitochondrial Stress in Parkinson's Disease	Bruce A. Hay <i>Professor of Biology</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Allison H. Barnes</b>	Isotopic Investigation of the Ediacaran Carbon Cycle	Woodward W. Fischer <i>Assistant Professor of Geobiology</i>
E.II - Chemistry 127 Baxter 1:20 - 1:40 PM	<b>Marissa C. Barrientos</b>	The Ionization of Strontium and Its Reaction With Oriented Molecules	Philip R. Brooks <i>Professor of Chemistry, Rice University</i> Mitschio Okumura <i>Professor of Chemical Physics</i>
R.II - Humanities and Social Sciences 125 Baxter 1:20 - 1:40 PM	<b>Michael Bea</b> University of California, Berkeley	Fundraising Between the United States Congress and British Parliament	D. Roderick Kiewiet <i>Professor of Political Science</i>
U.II - Astronomy 214 Steele 2:00 - 2:20 PM	<b>Ishwari N. Bendre</b> <i>Caltech-NUS Exchange</i>	Observational and Theoretical Astronomy: Which Way Does the Causation Run?	Jeffrey Funk <i>Associate Professor of Engineering Technology Management, National University of Singapore</i>
O.I - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 11:00 - 11:20 AM	<b>Christopher G. Berlind</b> <i>Samuel P. and Frances Krown SURF Fellow</i>	A Kinetics-Optimizing DNA Sequence Designer	Erik Winfree <i>Associate Professor of Computer Science, Computation and Neural Systems, and Bioengineering</i> Joseph Schaeffer <i>Graduate Student in Computer Science</i>
Q.III - Geological and Planetary Sciences 106 Spalding 2:50 - 3:10 PM	<b>Melissa J. Bernardino</b> California State University, Long Beach <i>Moore Foundation MURF Fellow</i>	Stable Isotope and Trace Element Geochemistry and Paleomagnetism of the Paleocene-Eocene Thermal Maximum as Recorded by the Sierra Blanca Limestone, California	Joseph L. Kirschvink <i>Nico and Marilyn Van Wingen Professor of Geobiology</i> Timothy D. Raub <i>Postdoctoral Scholar in Geology</i>
M.I - Mechanical Engineering/Aeronautics 125 Steele 11:20 - 11:40 AM	<b>Aditya S. Bhujle</b> <i>Larson Scholar</i>	Computational Fluid Dynamics and Thermal Analysis of a Titan Montgolfiere	Timothy E. Colonius <i>Professor of Mechanical Engineering</i> Jeffrey Hall <i>Senior Engineer, JPL</i>

B.III - Biology 33 Baxter 3:10 - 3:30 PM	<b><i>Evan R. Biggs</i></b>	Analysis of Receptor Specificity of Insulin Analogues	Charles T. Roberts <i>Associate Director and Senior Scientist, Oregon National Primate Research Center</i> Ellen Rothenberg <i>Albert Billings Ruddock Professor of Biology</i>
G.I - Chemistry 210 Baxter 10:20 - 10:40 AM	<b><i>Garrett A. Blake</i></b> Pitzer College	Ring Closing Metathesis of Substituted Azobenzenes for Polymer Synthesis	Robert H. Grubbs <i>Victor and Elizabeth Atkins Professor of Chemistry; Nobel Laureate</i> Andrew J. Boydston <i>Postdoctoral Scholar in Chemistry</i>
T.III - Mathematics/ Applied and Computational Mathematics 111 Keck 3:30 - 3:50 PM	<b><i>Anton M. Bongio Karrman</i></b> <i>Northern California Associates SURF Fellow</i>	Structural Optimization Using Sensitivity Analysis and a Level Set Method	Gregoire Allaire <i>Professor of Applied Mathematics, École Polytechnique</i> Dan I. Meiron <i>Professor of Applied and Computational Mathematics and Computer Science</i>
J.III - Applied Physics 237 Baxter 3:10 - 3:30 PM	<b><i>Michael A. Borisov</i></b> <i>Samuel P. and Frances Krown SURF Fellow</i>	Developing a Microfluidic System for On-Chip Reverse Transcription	Michael L. Roukes <i>Professor of Physics, Applied Physics, and Bioengineering</i>
T.I - Mathematics/ Applied and Computational Mathematics 111 Keck 11:00 - 11:20 AM	<b><i>Zarathustra E. Brady</i></b> <i>Richter Scholar</i>	Searching for Multigrades	Matthias Flach <i>Professor of Mathematics</i>
G.I - Chemistry 210 Baxter 10:40 - 11:00 AM	<b><i>Edward H. Bramston-Cook</i></b> <i>Rose Hills Foundation SURF Fellow</i>	Study on the Self-Assembly of Brush Copolymers	Robert H. Grubbs <i>Victor and Elizabeth Atkins Professor of Chemistry; Nobel Laureate</i> Yan Xia <i>Graduate Student in Chemistry</i>
F.I - Chemistry 128 Baxter 10:00 - 10:20 AM	<b><i>Kathryn M. Brennan</i></b>	Adapting CLUSTALW for RNA	John SantaLucia <i>Professor of Chemistry, Wayne State University</i> Robert D. McKeown <i>Professor of Physics</i>

S.III - Humanities and Social Sciences/Geological and Planetary Sciences 218 Baxter 2:50 - 3:10 PM	<b>Peter B. Buhler</b>	Open Basin Lakes on Mars: History and Implications for Noachian and Early Hesperian Hydrology	James W. Head <i>Professor of Geology, Brown University</i> Caleb I. Fassett <i>Postdoctoral Research Associate in Geology, Brown University</i> Michael P. Lamb <i>Assistant Professor of Geology</i>
K.I - Computer Science 74 Jorgensen 11:00 - 11:20 AM	<b>Cesar P. Cervantes</b> California State Polytechnic University, Pomona	Uncertainty Quantification in Measurements of Electronic Excited-State Absorption	Mark Stalzer <i>Executive Director of CACR</i>
Q.III - Geological and Planetary Sciences 106 Spalding 3:30 - 3:50 PM	<b>Laainam Chaipornkaew</b> <i>Ms. Jane Chen SURF Fellow</i>	Constructing Three-Dimensional Map of the Tertiary Unconformity in the South Mountains (SBM), California	Joann M. Stock <i>Professor of Geology and Geophysics</i> Janet C. Harvey <i>Graduate Student in Geology</i>
K.III - Computer Science 74 Jorgensen 2:30 - 3:50 PM <i>(joint presentation)</i>	<b>Rishi J. Chandy</b> <i>Rita A. and Øistein Skjellum SURF Fellow</i>	Inexpensive Sensor Networks for Mapping Ground Shaking After Earthquakes	K. Mani Chandy <i>Simon Ramo Professor and Professor of Computer Science</i>
F.III - Chemistry 128 Baxter 3:10 - 3:30 PM	<b>Eric Y. Chang</b> <i>Richter Scholar</i>	Multi-Step Electron Tunneling Across Outer Membrane Protein A: A Study of Ruthenium-Labeled OmpA Folding	Harry B. Gray <i>Arnold O. Beckman Professor of Chemistry</i> Bert T. Lai <i>Graduate Student in Chemistry</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Stephanie S. Chang</b> <i>Rose Hills Foundation SURF Fellow</i>	Effects of Rac1 Suppression on Directed Cell Migration Using Micropatterned Surfaces	Anand R. Asthagiri <i>Assistant Professor of Chemical Engineering</i> Keiichiro Kushiro <i>Graduate Student in Chemistry</i>
C.III - Biology 19 Baxter 2:50 - 3:10 PM	<b>ZeNan L. Chang</b> <i>Rose Hills Foundation SURF Fellow</i>	Light-Mediated Modulation of a Phosphorelay to Study the Initiation of Sporulation	Michael B. Elowitz <i>Assistant Professor of Biology and Applied Physics; Bren Scholar</i> Joe Levine <i>Graduate Student in Computation and Neural Systems</i>
K.I - Computer Science 74 Jorgensen 10:00 - 10:20 AM	<b>Isaac J. Chao</b> <i>Rose Hills Foundation SURF Fellow</i>	Elastic Deformations	Peter Schröder <i>Professor of Computer Science and Applied and Computational Mathematics</i>

C.II - Biology 19 Baxter 1:20 - 1:40 PM	<b>Veenadhari Chavakula</b> <i>Franz and Anne Nierlich</i> <i>SURF Fellow</i>	Testing Whether the Innate Immune System Selects Against Influenza Viruses With CpG Motifs	David Baltimore <i>Robert Andrews Millikan</i> <i>Professor of Biology; Nobel Laureate; President Emeritus</i> Jesse D. Bloom <i>Postdoctoral Scholar in Biology</i>
C.I - Biology 19 Baxter 11:00 - 11:20 AM	<b>Allen Chen</b> Pitzer College <i>Amgen Scholar</i>	Molecular Interactions Between IKappaB Kinase and REST	Paul H. Patterson <i>Anne P. and Benjamin F. Biaggini Professor of Biological Sciences</i> Ali Khoshnan <i>Senior Research Fellow in Biology</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Chieh Yu Chen</b>	Using Meiotic Drive Mechanism to Control Vector-Borne Diseases	Bruce A. Hay <i>Professor of Biology</i> Catherine M. Ward <i>Graduate Student in Biochemistry and Molecular Biophysics</i>
V.III - Physics 100 Powell-Booth 2:50 - 3:10 PM	<b>Edward H. Chen</b> <i>The Aerospace Corporation</i> <i>SURF Fellow</i>	Quantum Optomechanical Systems	H. Jeff Kimble <i>William L. Valentine Professor and Professor of Physics</i> Dalziel J. Wilson <i>Graduate Student in Physics</i>
V.III - Physics 100 Powell-Booth 3:30 - 3:50 PM	<b>Huiling Chen</b>	Characterizing Microscale Optical Dipole Traps for Cavity Quantum Electrodynamics	H. Jeff Kimble <i>William L. Valentine Professor and Professor of Physics</i> Cindy A. Regal <i>Robert A. Millikan Postdoctoral Scholar in Experimental Physics</i>
D.I - Biology 228 Baxter 11:00 - 11:20 AM	<b>Lu Chen</b> <i>Siemens Foundation SURF Fellow</i>	Elucidating the Regulation of Dna2 Helicase/Nuclease Activity	Judith L. Campbell <i>Professor of Chemistry and Biology</i>
J.II - Applied Physics 237 Baxter 1:40 - 2:00 PM	<b>Samson Chen</b>	Microscale Platinum Resistors for Heating and Temperature Sensing	Axel Scherer <i>Bernard Neches Professor of Electrical Engineering, Applied Physics, and Physics</i> Aditya Rajagopal <i>Graduate Student in Electrical Engineering</i>
D.I - Biology 228 Baxter 10:20 - 10:40 AM	<b>Wesley G. Chen</b>	Preliminary Work on a High Resolution Electron Cryo-Tomographic Survey of Seven Phylogenetically Diverse, Thin Microbes	Grant J. Jensen <i>Associate Professor of Biology</i> Morgan Beeby <i>Postdoctoral Scholar in Biology</i>

G.III - Chemistry 210 Baxter 2:30 - 2:50 PM	<b>Xi Chen</b> <i>Øistein and Rita A. Skjellum</i> SURF Fellow	Simulation on Temperature Dependence of Solvated Electron Diffusion in H <sub>2</sub> O	Thomas F. Miller <i>Assistant Professor of Chemistry</i>
N.II - Materials Science 102 Steele 2:00 - 2:20 PM	<b>Yutong Chen</b>	A New Method in Determining Unknown Crystal Lattice Using Electron Diffraction	Wenxi Liu <i>Professor of Material Science,</i> <i>Tianjin University</i> William A. Goddard III <i>Charles and Mary Ferkel</i> <i>Professor of Chemistry,</i> <i>Materials Science, and Applied</i> <i>Physics</i>
H.III - Chemical Engineering 113 Spalding 3:30 - 3:50 PM	<b>Justine X. Chia</b> <i>Professor Fredrick H. Shair</i> SURF Fellow	Forced Rayleigh Scattering: A New Approach to Studying the Molecular Motion of Leucine-Zipper Hydrogels	Julia A. Kornfield <i>Professor of Chemical</i> <i>Engineering</i> Bradley D. Olsen <i>Beckman Institute Postdoctoral</i> <i>Scholar in Chemical</i> <i>Engineering</i>
P.III - Bioengineering 228 Baxter 2:30 - 2:50 PM	<b>Eric M. Chin</b> <i>Richter Scholar</i>	An Optical System for Diagnosing and Monitoring Dermal Microvascular Health	Morteza Gharib <i>Hans W. Liepmann Professor</i> <i>of Aeronautics and Professor of</i> <i>Bioengineering</i> Danny Petrusek <i>Senior Research Fellow in</i> <i>Applied and Computational</i> <i>Mathematics and</i> <i>Bioengineering</i>
B.II - Biology 33 Baxter 1:20 - 1:40 PM	<b>Margaret J. Chiu</b> <i>Richter Scholar</i>	Building a Lethal Engineered Underdominance Construct in <i>Drosophila</i>	Bruce A. Hay <i>Professor of Biology</i>
R.II - Humanities and Social Sciences 125 Baxter 1:40 - 2:00 PM	<b>Anthony Y. Chong</b> <i>Thomas E. Everhart SURF</i> <i>Fellow</i>	Application of Mechanism Design to the Caltech Rotation Problem	John O. Ledyard <i>Allen and Lenabelle Davis</i> <i>Professor of Economics and</i> <i>Social Sciences</i>
A.II - Biology 25 Baxter 1:20 - 1:40 PM	<b>Evelyn S. Chou</b>	Determining New Early Transcription Factors Involved in FoxY Expression	Eric H. Davidson <i>Norman Chandler Professor of</i> <i>Cell Biology</i> Joel Smith <i>Postdoctoral Scholar in Biology</i>
K.II - Computer Science 74 Jorgensen 1:40 - 2:20 PM (joint presentation)	<b>Victor C. Chu</b> <i>Arthur E. Lamel Memorial</i> <i>SURF Fellow</i>	Connecting Medical Devices to Cell Phones	K. Mani Chandy <i>Simon Ramo Professor and</i> <i>Professor of Computer Science</i>

F.II - Chemistry 128 Baxter 1:40 - 2:00 PM	<b><i>Kangway V. Chuang</i></b> <i>Amgen Scholar</i>	Auxiliary Based Approach to Chiral Quinone-Derived Amines	Sarah E. Reisman <i>Assistant Professor of Chemistry</i> Lindsay M. Repka <i>Graduate Student in Chemistry</i>
R.III - Humanities and Social Sciences 125 Baxter 3:30 - 3:50 PM	<b><i>Daniel M. Chun</i></b>	Equilibrium Results to Competition in Alternative Electoral Systems With Generalized n-Dimensional Policy Space	Matias J. Iaryczower <i>Assistant Professor of Economics and Political Science</i>
G.II - Chemistry 210 Baxter 1:40 - 2:00 PM	<b><i>Jaeyoon Chung</i></b> <i>Richter Scholar</i>	Visualization of an Early Intermediate Preceding the Formation of a Stable Complex During Protein- Protein Interaction	Shu-ou Shan <i>Assistant Professor of Chemistry</i> Xin Z. Zhang <i>Graduate Student in Chemistry</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b><i>Emma G. Cohen</i></b>	Gas Content of Red Sequence Elliptical Galaxies: Are Dry Mergers Common?	B. Thomas Soifer <i>Professor of Physics</i> Vandana R. Desai <i>Postdoctoral Scholar in Physics</i>
J.I - Applied Physics 237 Baxter 10:20 - 10:40 AM	<b><i>Arianne X. Collopy</i></b> <i>Donald S. Clark SURF Fellow</i>	Nanostructured Electrodes for Improved Charge Carrier Collection in Conjugated Polymer Solar Cells	Harry A. Atwater <i>Howard Hughes Professor and Professor of Applied Physics and Materials Science</i>
Q.III - Geological and Planetary Sciences 106 Spalding 3:10 - 3:30 PM	<b><i>Perrin T. Considine</i></b>	Measuring Iron Isotopes in Marine Particulates to Determine the Source of Bioavailable Iron in the Pacific Ocean	Jess F. Adkins <i>Assistant Professor of Geochemistry and Global Environmental Science</i> Seth John <i>Postdoctoral Scholar in Geochemistry</i>
O.III - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 3:10 - 3:30 PM	<b><i>Laura H. Conwill</i></b>	Effect of Value of a Visual Stimulus on Its Preferential Access to Awareness	Christof Koch <i>Lois and Victor Troendle Professor of Cognitive and Behavioral Biology and Professor of Computation and Neural Systems</i> Milica Milosavljevic <i>Visiting Associate in Economics</i>
J.II - Applied Physics 237 Baxter 2:00 - 2:20 PM	<b><i>Anna E. Craig</i></b> <i>Joanna Wall Muir SURF Fellow</i>	Bio-Inspired Carbon Nanotube Foams	Chiara Daraio <i>Assistant Professor of Aeronautics and Applied Physics</i> Abha Misra <i>Postdoctoral Scholar in Aeronautics</i>

H.III - Chemical Engineering 113 Spalding 2:30 - 2:50 PM	<b>James F. Dama</b> <i>Richter Scholar</i>	Fabrication of a Proof-of-Concept Electrophoresis Device	Richard C. Flagan <i>Irma and Ross McCollum-William H. Corcoran Professor of Chemical Engineering and Professor of Environmental Science and Engineering</i> Andy Downard <i>Graduate Student in Chemical Engineering</i>
M.I - Mechanical Engineering/Aeronautics 125 Steele 10:00 - 10:20 AM	<b>Anik A. Debnath</b>	Creating an Embedded System to Control the UCLA/Caltech Epidural Spinal Cord Implant	Joel W. Burdick <i>Professor of Mechanical Engineering and Bioengineering</i> Tom Desautels <i>Graduate Student in Mechanical Engineering</i>
G.I - Chemistry 210 Baxter 11:00 - 11:20 AM	<b>Laura J. Decker</b> <i>Hannah Bradley SURF Fellow</i>	Design and Synthesis of Polymers Modified With Cyclic Peptides	Robert H. Grubbs <i>Victor and Elizabeth Atkins Professor of Chemistry; Nobel Laureate</i> Rosemary M. Conrad <i>Postdoctoral Scholar in Chemistry</i>
F.II - Chemistry 128 Baxter 1:00 - 1:20 PM	<b>Alan Deng</b>	A Structural Study of the Pathway for Membrane Integration of Tail-Anchored Proteins by TRC40	William M. Clemons <i>Assistant Professor of Chemistry</i> Christian Suloway <i>Graduate Student in Biology</i>
T.II - Mathematics/ Applied and Computational Mathematics 111 Keck 1:00 - 1:20 PM	<b>Domenic A. Denicola</b> <i>Richter Scholar</i>	Noncommutative Geometry Techniques Applied to Quantum Gravity	Matilde Marcolli <i>Professor of Mathematics</i>
T.III - Mathematics/ Applied and Computational Mathematics 111 Keck 2:50 - 3:10 PM	<b>Ryan A. Denlinger</b> <i>The Aerospace Corporation SURF Fellow</i>	Reflectarray Design With Rigorous Scattering Solvers and Integral Equations	Oscar P. Bruno <i>Professor of Applied and Computational Mathematics</i> Timothy J. Elling <i>Staff Scientist in Applied and Computational Mathematics</i>
E.I - Chemistry 127 Baxter 10:00 - 10:20 AM	<b>Tina X. Ding</b> <i>John and Maria Laffin Trust SURF Fellow</i>	Optimizing Interface in Electropolymerization of Methyl, Thienyl, and Mixed Monolayer Surfaces	Nathan S. Lewis <i>George L. Argyros Professor and Professor of Chemistry</i> Leslie E. O'Leary <i>Graduate Student in Chemistry</i>

I.I - Chemical Engineering 102 Spalding 10:00 - 10:20 AM	<b>Yuanyi Dong</b>	Determining the Cytotoxicity of and Cell Tolerance to Bioorthogonal Non-Canonical Amino Acid Tagging	David A. Tirrell <i>Ross McCollum-William H. Corcoran Professor and Professor of Chemistry and Chemical Engineering</i> Alborz Mahdavi <i>Graduate Student in Bioengineering</i>
H.I - Chemical Engineering 113 Spalding 11:00 - 11:20 AM	<b>Diana R. Dou</b> <i>Carol Carmichael SURF Fellow</i>	Generation of Induced Pluripotent Stem Cells From Adult Cells Using Non-Viral Transfection of mRNA	Mark E. Davis <i>Warren and Katharine Schlinger Professor of Chemical Engineering</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Catherine E. Douglass</b> <i>Marcella Bonsall SURF Fellow</i>	Measuring Very Low Antigen Concentrations With Microtoroid Optical Resonators	Andrea M. Armani <i>Assistant Professor of Chemical Engineering and Materials Science, University of Southern California</i>
G.III - Chemistry 210 Baxter 3:30 - 3:50 PM	<b>Garrett K. Drayna</b> <i>The Associates SURF Fellow</i>	Modeling G-Protein Coupled Receptor Loop Conformations Using the Direct Monte Carlo Method	William A. Goddard III <i>Charles and Mary Ferkel Professor of Chemistry, Materials Science, and Applied Physics</i> Ravinder Abrol <i>Postdoctoral Scholar in Chemistry</i>
O.II - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 1:40 - 2:00 PM	<b>Ning Du</b> <i>James J. Morgan SURF Fellow</i>	Development of Electrochemical System for Simultaneous Hydrogen Production and Degradation of Real Wastewater	Michael R. Hoffmann <i>James Irvine Professor of Environmental Science</i> Jina Choi <i>Graduate Student in Environmental Science and Engineering</i>
K.II - Computer Science 74 Jorgensen 1:00 - 1:20 PM	<b>Ryan S. Elmquist</b> <i>Richter Scholar</i>	Design and Implementation of Algorithms to Estimate 3D Relative Pose in Mobile Robot Teams	Stergios Roumeliotis <i>Associate Professor of Computer Science and Engineering, University of Minnesota</i> K. Mani Chandy <i>Simon Ramo Professor and Professor of Computer Science</i>

Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Clara H. Eng</b> <i>Hannah Bradley SURF Fellow</i>	Effect of Conjugation on the Interaction of the Peptide Sequence (KW) <sub>3</sub> With an Artificial Membrane Environment	Ying Chau <i>Assistant Professor of Chemical and Biomolecular Engineering, Hong Kong University of Science and Technology</i> David A. Tirrell <i>Ross McCollum-William H. Corcoran Professor and Professor of Chemistry and Chemical Engineering</i>
W.I - Physics 120 Powell-Booth 11:00 - 11:20 AM	<b>Benjamin J. Faber</b> <i>J. Weldon Green SURF Fellow</i>	Sensitivity Analysis of the BTEC Thermal Model	Gavin D. Buffington <i>Chairman, Department of Physics, Fort Hays State University</i> Michael C. Cross <i>Professor of Theoretical Physics</i>
L.II - Electrical Engineering 114 Steele 2:00 - 2:20 PM	<b>Eythan Familier</b> <i>Captain Pradeep B. Suklikar Memorial SURF Fellow</i>	Stability and Performance of Digital Spectrometers for Wideband Radiometers	Sander Weinreb <i>Faculty Associate in Electrical Engineering; Principal Staff Member, JPL</i> Glenn Jones <i>Graduate Student in Electrical Engineering</i>
L.III - Electrical Engineering 114 Steele 3:30 - 3:50 PM	<b>William Fan</b>	Systems and Electrokinetic Flow Control for Packed 100 x 30µm Isotropic Microchannel in On-Chip Gated Capillary Electrochromatography	Peter A. Willis <i>Member of the Technical Staff, JPL</i> Frank Greer <i>Senior Engineer, JPL</i>
V.II - Physics 100 Powell-Booth 1:00 - 1:20 PM	<b>Daniil Feldman</b> <i>Karen and James Cutts SURF Fellow</i>	An Optical Spectroscopic Database of Infrared Galaxies in the Bootes Field of the NOAO Deep Wide-Field Survey	B. Thomas Soifer <i>Professor of Physics</i> Vandana R. Desai <i>Postdoctoral Scholar in Physics</i>
Q.III - Geological and Planetary Sciences 106 Spalding 2:30 - 2:50 PM	<b>Matthew J. Feldman</b>	Quantifying Fault Offset Across Owens Valley: Paleointensity of the Golden Bear and Coso Dikes	Joseph L. Kirschvink <i>Nico and Marilyn Van Wingen Professor of Geobiology</i> Timothy D. Raub <i>Postdoctoral Scholar in Geology</i>
S.II - Humanities and Social Sciences/Geological and Planetary Sciences 218 Baxter 1:20 - 1:40 PM	<b>Michelle N. Filiba</b> <i>Samuel P. and Frances Krown SURF Fellow</i>	Dynamic Question Selection	Colin F. Camerer <i>Robert Kirby Professor of Behavioral Economics</i> Stephanie W. Wang <i>Postdoctoral Scholar in Economics</i>

<p>E.II - Chemistry 127 Baxter 1:40 - 2:00 PM</p>	<p><b><i>Kristina M. Flavier</i></b> <i>Rose Hills Foundation SURF Fellow</i></p>	<p>Conformational Preferences of Succinic Acid in Media Modeled After the Cell</p>	<p>John D. Roberts <i>Institute Professor of Chemistry, Emeritus</i></p>
<p>V.III - Physics 100 Powell-Booth 3:10 - 3:30 PM</p>	<p><b><i>Paul A. Fleiner</i></b> <i>Caltech-University of Iceland Exchange</i></p>	<p>Fabrication of Bragg Gratings for Plasmonic Waveguides at Optical Wavelengths</p>	<p>Kristjan Leosson <i>Professor of Physics, University of Iceland</i></p>
<p>V.II - Physics 100 Powell-Booth 1:20 - 1:40 PM</p>	<p><b><i>John C. Forbes</i></b></p>	<p>Distribution of Star Formation in Intermediate Redshift Galaxies</p>	<p>B. Thomas Soifer <i>Professor of Physics</i> Jason L. Melbourne <i>Postdoctoral Scholar in Astrophysics</i></p>
<p>Poster Presentations San Pasqual Mall 3:45 - 5:00 PM</p>	<p><b><i>Riley L. Franks</i></b> <i>W.H. Halpenny SURF Fellow</i></p>	<p>Simulation and Analysis of the Metabolic Networks of Synechocystis PCC 6803</p>	<p>Pedro Fernandez de Cordoba <i>Professor of Applied Mathematics, Universidad Politecnica de Valencia</i> Dan I. Meiron <i>Professor of Applied and Computational Mathematics and Computer Science</i></p>
<p>M.I - Mechanical Engineering/Aeronautics 125 Steele 10:20 - 10:40 AM</p>	<p><b><i>Christine L. Fuller</i></b> <i>Kirk and Marjory Dawson Family SURF Fellow</i></p>	<p>Reinventing the Wheel: Development of a Collapsible Wheel for the Axel Rover</p>	<p>Joel W. Burdick <i>Professor of Mechanical Engineering and Bioengineering</i> Pablo Abad-Manterola <i>Graduate Student in Mechanical Engineering</i></p>
<p>L.III - Electrical Engineering 114 Steele 2:30 - 2:50 PM</p>	<p><b><i>Adi Wijaya Gani</i></b> <i>Carolyn Ash SURF Fellow</i></p>	<p>Electrical, Thermal, and Mechanical Characterizations of Implantable Parylene- Coated Microelectrodes and Microcables for Neural Prosthesis</p>	<p>Yu-Chong Tai <i>Professor of Electrical Engineering and Mechanical Engineering</i> Monty Nandra <i>Graduate Student in Electrical Engineering</i></p>
<p>O.II - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 2:00 - 2:20 PM</p>	<p><b><i>Sarvesh Garimella</i></b></p>	<p>The Upper Ocean Fresh Water Content in the Nordic Seas</p>	<p>Daniela Di Iorio <i>Associate Professor of Marine Science, University of Georgia</i> George R. Rossman <i>Professor of Mineralogy</i></p>
<p>K.I - Computer Science 74 Jorgensen 10:40 - 11:00 AM</p>	<p><b><i>Evan S. Gawlik</i></b> <i>The Aerospace Corporation SURF Fellow</i></p>	<p>Structured Integrators for Computational Magnetohydrodynamics</p>	<p>Mathieu Desbrun <i>Associate Professor of Computer Science</i> Patrick G. Mullen <i>Graduate Student in Computer Science</i></p>

E.III - Chemistry 127 Baxter 2:30 - 2:50 PM	<b><i>Tianjia J. Ge</i></b>	Investigating the DNA-Mediated Charge Transport (CT) Pathway of Endonuclease III	Jacqueline K. Barton <i>Arthur and Marian Hanisch Memorial Professor and Professor of Chemistry</i> Christine A. Romano <i>Graduate Student in Chemistry</i>
C.II - Biology 19 Baxter 1:40 - 2:00 PM	<b><i>Theresa L. Geiger</i></b> <i>Arthur R. Adams SURF Fellow</i>	Novel Methods to Study miR-34a Loss-of-Function in Murine Hematopoiesis	David Baltimore <i>Robert Andrews Millikan Professor of Biology; Nobel Laureate; President Emeritus</i> Dinesh S. Rao <i>Graduate Student in Biology</i>
V.I - Physics 100 Powell-Booth 11:20 - 11:40 AM	<b><i>Casey C. Glick</i></b> <i>Caltech-HKU Exchange</i>	Electrorheological Fluid-Based Microfluidic Logic Gates	Weijia Wen <i>Associate Professor of Physics, Hong Kong University of Science and Technology</i>
M.II - Mechanical Engineering/Aeronautics 125 Steele 1:40 - 2:00 PM	<b><i>Keir C. Gonyea</i></b> <i>Dr. Chandler C. Ross SURF Fellow</i>	Optimization of Velocity Interferometer for Any Reflecting Surface (VISAR)	Guruswami Ravichandran <i>John E. Goode, Jr., Professor of Aeronautics and Mechanical Engineering</i> Justin Brown <i>Graduate Student in Mechanical Engineering</i>
V.III - Physics 100 Powell-Booth 2:30 - 2:50 PM	<b><i>Deepthi Gopal</i></b>	Finding Optimal Measurements for Quantum State Discrimination Problems	John P. Preskill <i>John D. MacArthur Professor of Theoretical Physics</i> Stephanie D. Wehner <i>Postdoctoral Scholar in Computer Science</i>
U.I - Astronomy 214 Steele 11:20 - 11:40 AM	<b><i>Giri Gopalan</i></b>	Developing a Systematic Detrending Algorithm for Photometric Time Series Data	Peter P. Plavchan <i>Staff Scientist, IPAC</i>
U.II - Astronomy 214 Steele 1:40 - 2:00 PM	<b><i>Jennifer J. Greco</i></b> <i>Harold and Mary Zirin SURF Fellow</i>	Finding the Initial Mass Function for the G48.9-0.3 Component of the Cluster W51	Jessica R. Lu <i>Millikan Postdoctoral Fellow in Astronomy</i>
W.II - Physics 120 Powell-Booth 1:00 - 1:20 PM	<b><i>Christian D. Griset</i></b> <i>Rose Hills Foundation SURF Fellow</i>	Analysis of the Observed Phase Diagram of Cs <sub>2</sub> CuBr <sub>4</sub>	Gil Refael <i>Associate Professor of Theoretical Physics</i> Jason F. Alicea <i>Postdoctoral Scholar in Theoretical Physics</i>

N.I - Materials Science 102 Steele 10:20 - 10:40 AM	<b>Cameron T. Gross</b> <i>Samuel and Berta Spalter SURF Fellow</i>	Weibull Analysis of Compression and Tension Tests on Nanoscale Zr-Based Metallic Glass Pillars	Julia R. Greer <i>Assistant Professor of Materials Science</i> Dongchan Jang <i>Postdoctoral Scholar in Materials Science</i>
A.I - Biology 25 Baxter 10:20 - 10:40 AM	<b>Pallavi K. Gunalan</b>	Endoplasmic Reticulum Exit Site (ERES) and Upregulated Nicotinic Receptor Dynamics	Henry A. Lester <i>Bren Professor of Biology</i> Rahul Srinivasan <i>Postdoctoral Scholar in Biology</i>
J.II - Applied Physics 237 Baxter 1:00 - 1:20 PM	<b>Thomas O. Gwinn</b> <i>Robert K. and Alice L. Roney SURF Fellow</i>	Infrared Lensing With Plasmonic Microslits	Roger T. Howe <i>Professor of Electrical Engineering, Stanford University</i> Axel Scherer <i>Bernard Neches Professor of Electrical Engineering, Applied Physics, and Physics</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Daniel R. Haas</b>	The Properties of Oscillations in Monolayer Graphene	Marc W. Bockrath <i>Assistant Professor of Applied Physics</i>
V.I - Physics 100 Powell-Booth 10:40 - 11:00 AM	<b>Ryan M. Hamerly</b> <i>David L. Goodstein SURF Fellow</i>	Deformation of a Black Hole Event Horizon by Radially Infalling Particles	Yanbei Chen <i>Assistant Professor of Physics</i>
W.III - Physics 120 Powell-Booth 2:30 - 2:50 PM	<b>Joshua R. Hardenbrook</b> <i>Mellon Mays SURF Fellow</i>	Detecting the Fermiophobic Higgs at the LHC	Harvey B. Newman <i>Professor of Physics</i> Yousi Ma <i>Graduate Student in Physics</i>
Q.I - Geological and Planetary Sciences 106 Spalding 11:00 - 11:20 AM	<b>Thomas N. Harris</b> <i>Kiyo and Eiko Tomiyasu SURF Scholar</i>	Exploring the Role of Non- Gaussian Assumptions in Estimating Subsurface Fault Slip	Mark Simons <i>Professor of Geophysics</i>
I.II - Chemical Engineering 102 Spalding 1:00 - 1:20 PM	<b>Lucas A. Hartsough</b> <i>Thomas C. Hays SURF Fellow</i>	The Creation of a Highly Thermo-Stable and Highly Active P450 From a Chimeric Parent	Frances H. Arnold <i>Dick and Barbara Dickinson Professor of Chemical Engineering and Biochemistry</i> Martina N. Carbone <i>Graduate Student in Chemical Engineering</i>

H.III - Chemical Engineering 113 Spalding 2:50 - 3:10 PM	<b>Steve S. He</b>	Assessment of Nonspecific Protein Adsorption Resistance of Zwitterionic Polymers via Optical Microcavities	Richard C. Flagan <i>Irma and Ross McCollum-William H. Corcoran Professor of Chemical Engineering and Professor of Environmental Science and Engineering</i> Jason M. Gamba <i>Graduate Student in Chemical Engineering</i>
U.III - Astronomy 214 Steele 2:30 - 2:50 PM	<b>Brandon S. Hensley</b> <i>Alain Porter Memorial SURF Fellow</i>	On the Detectability of a Dark Matter Feature in the Intensity Energy Spectrum and the Anisotropy Energy Spectrum of the Gamma Ray Background	Anthony C. Readhead <i>Barbara and Stanley R. Rawn, Jr., Professor of Astronomy</i> Vasiliki Pavlidou <i>Postdoctoral Scholar in Astronomy</i>
A.III - Biology 25 Baxter 3:10 - 3:30 PM	<b>Annie V. Hong</b> <i>Rose Hills Foundation SURF Fellow</i>	Characterizing Host-Seeking and Chemotaxis Behavior in Insect-Parasitic Nematodes	Paul W. Sternberg <i>Thomas Hunt Morgan Professor of Biology; Investigator, Howard Hughes Medical Institute</i> Elissa A. Hallem <i>Postdoctoral Scholar in Biology</i>
N.III - Materials Science 102 Steele 2:30 - 2:50 PM	<b>Sarah L. Howell</b> <i>Larson Scholar</i>	Development of FeTi Based Alloys for Improved Hydrogen Absorption and Desorption Characteristics	Brent T. Fultz <i>Professor of Materials Science and Applied Physics</i> Channing C. Ahn <i>Senior Research Associate in Materials Science</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>David C. Hu</b>	Infrared Satellite Data Analysis	Andrew W. Blain <i>Assistant Professor of Astronomy</i>
O.III - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 2:50 - 3:10 PM	<b>Fan Huang</b> <i>Richter Scholar</i>	Test and Optimization of Spike Sorting Algorithms Through Biophysical Modeling	Christof Koch <i>Lois and Victor Troendle Professor of Cognitive and Behavioral Biology and Professor of Computation and Neural Systems</i> Costas Anastassiou <i>Postdoctoral Scholar in Biology</i>
F.III - Chemistry 128 Baxter 2:50 - 3:10 PM	<b>Yuehan Huang</b>	The Folding Mechanism of Cytochrome <i>c-b<sub>562</sub></i> Detected by Time-Resolved Fluorescence Energy Transfer	Harry B. Gray <i>Arnold O. Beckman Professor of Chemistry</i> Nicole D. Bouley <i>Graduate Student in Chemistry</i>

F.I - Chemistry 128 Baxter 10:40 - 11:00 AM	<b>Madiha Hussain</b>	Experimental and Theoretical Studies of Interfacial Chemical Reactions Using Field Induced Droplet Ionization	Jesse L. Beauchamp <i>Mary and Charles Ferkel</i> Professor of Chemistry Evan Neidholdt Graduate Student in Chemistry
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Nadia Iqbal</b> <i>Richter Scholar</i>	Structure Determination of <i>S. aureus</i> Membrane Protein MraY	William M. Clemons Assistant Professor of Chemistry
E.II - Chemistry 127 Baxter 1:00 - 1:20 PM	<b>Anna S. Ivanova</b> <i>Richter Scholar</i>	Synthesis of Novel Titanium Complexes for Inexpensive Carbon Dioxide Reduction	Christopher C. Cummins Professor of Chemistry, Massachusetts Institute of Technology Nathan S. Lewis George L. Argyros Professor and Professor of Chemistry
H.II - Chemical Engineering 113 Spalding 1:00 - 1:20 PM	<b>Ning-Jiun Jan</b>	Machining and Molding Polydicyclopentadiene (pDCPD): On the Microtechnology Potential of a Young Plastic	Julia A. Kornfield Professor of Chemical Engineering
T.I - Mathematics/ Applied and Computational Mathematics 111 Keck 10:20 - 10:40 AM	<b>Casey Jao</b> <i>Richter Scholar</i>	On Free Groups Generated by Two Parabolic Elements of $SL(2, \mathbb{Q})$	Danny C. Calegari <i>Richard Merkin Distinguished</i> Professor of Mathematics Matthew B. Day Postdoctoral Scholar in Mathematics
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Charlie B. Jaramillo</b> California State University, Los Angeles <i>NSF Center for the Science and Engineering of Materials</i> <i>MURF Fellow</i>	Electrical and Optical Properties of Pure and Doped Zinc Phosphide	Harry A. Atwater <i>Howard Hughes Professor and Professor of Applied Physics and Materials Science</i> Scott L. Nickolaisen Professor of Chemistry, California State University, Los Angeles
L.III - Electrical Engineering 114 Steele 2:50 - 3:10 PM	<b>Suyao Ji</b>	Neural Signal Sensing With Platinum Black Electroplated Electrodes	Yu-Chong Tai Professor of Electrical Engineering and Mechanical Engineering
F.I - Chemistry 128 Baxter 11:00 - 11:20 AM	<b>Tony Z. Jia</b> <i>Amgen Scholar</i>	Detecting the Effects of Cholesterol and Other Sterols on Aggregation of Lipids in the Pulmonary Surfactant Layer Using Field-Induced Droplet Ionization Mass Spectrometry	Jesse L. Beauchamp <i>Mary and Charles Ferkel</i> Professor of Chemistry Evan Neidholdt Graduate Student in Chemistry

C.I - Biology 19 Baxter 10:20 - 10:40 AM	<b>Pengsu Jiang</b>	VENs and Differential Expression of Genes Between Autistic and Control Samples	John M. Allman <i>Frank P. Hixon Professor of Neurobiology</i> Nicole A. Tetreault <i>Graduate Student in Biology</i>
F.II - Chemistry 128 Baxter 1:20 - 1:40 PM	<b>Yea-ra Jo</b>	Tail-Anchored Protein Expression Systems for Structural and Biochemical Studies	William M. Clemons <i>Assistant Professor of Chemistry</i> Christian Suloway <i>Graduate Student in Biology</i>
I.II - Chemical Engineering 102 Spalding 1:20 - 1:40 PM	<b>Arvind Kannan</b> <i>Richter Scholar</i>	Engineering New Strategies for Improving Cellulose Hydrolysis: A Multifaceted Approach	Frances H. Arnold <i>Dick and Barbara Dickinson Professor of Chemical Engineering and Biochemistry</i> Pete J. Heinzelman <i>Postdoctoral Scholar in Biochemistry</i>
U.III - Astronomy 214 Steele 2:50 - 3:10 PM	<b>Kirit S. Karkare</b>	Back End Electronics for the OVRO 40-Meter Telescope	Anthony C. Readhead <i>Barbara and Stanley R. Rawen, Jr., Professor of Astronomy</i>
O.III - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 3:30 - 3:50 PM	<b>Robert F. Karol</b>	Autonomous Navigation of a Montgolfier Within Micro- Climates on Titan	Jerrold E. Marsden <i>Carl F Braun Professor of Engineering and Control and Dynamical Systems</i> Julian Nott <i>Consultant Scientist</i>
J.III - Applied Physics 237 Baxter 2:50 - 3:10 PM	<b>Michael W. Kaye</b> <i>Frederick W. Drury, Jr., SURF Fellow</i>	Modeling Optomechanical Crystal Geometries	Oskar J. Painter <i>Assistant Professor of Applied Physics</i>
J.I - Applied Physics 237 Baxter 10:40 - 11:00 AM	<b>Yousif A. Kelaita</b> <i>Mary P. and Dean C. Daily SURF Fellow</i>	Fabrication and Characterization of Stretchable Metamaterials on Elastomeric Substrates	Harry A. Atwater <i>Howard Hughes Professor and Professor of Applied Physics and Materials Science</i>
R.I - Humanities and Social Sciences 125 Baxter 10:40 - 11:00 AM	<b>Lauren C. Kendrick</b> <i>J. Kent Clark SURF Fellow</i>	Living After the Sins of the Fathers: Children of French Collaborators Exorcise Infamy From Their Family History	Kristine L. Haugen <i>Assistant Professor of English</i>
P.II - Bioengineering 228 Baxter 2:00 - 2:20 PM	<b>Adam Z. Khan</b> <i>Caltech-University of Iceland Exchange</i>	Characterization of a Breast Cancer Progression Model With a Hereditary Component	Thorarinn Gudjonsson <i>Professor of Biology, University of Iceland</i>

<p>T.III - Mathematics/ Applied and Computational Mathematics 111 Keck 3:10 - 3:30 PM</p>	<p><b><i>Asif R. Khan</i></b></p>	<p>Parallelization of Secondary Structure Prediction Algorithms for Nucleic Acid Sequences</p>	<p>Niles A. Pierce <i>Associate Professor of Applied and Computational Mathematics and Bioengineering</i> Joseph Zadeh <i>Graduate Student in Bioengineering</i></p>
<p>J.I - Applied Physics 237 Baxter 11:00 - 11:20 AM</p>	<p><b><i>Rishi D. Khanna</i></b></p>	<p>Growth and Characterization of Zinc Oxide for Photovoltaic Applications</p>	<p>Harry A. Atwater <i>Howard Hughes Professor and Professor of Applied Physics and Materials Science</i></p>
<p>Poster Presentations San Pasqual Mall 3:45 - 5:00 PM</p>	<p><b><i>Charles D. Kilpatrick</i></b></p>	<p>The Effect of Convection Zone Pollution on Luminosity and Surface Temperature in the Evolution of Planet Host Stars</p>	<p>Lynne Hillenbrand <i>Associate Professor of Astronomy</i> Ann Marie Cody <i>Graduate Student in Astronomy</i></p>
<p>N.I - Materials Science 102 Steele 11:20 - 11:40 AM</p>	<p><b><i>Daniil A. Kitchaev</i></b></p>	<p>Improving Magnetic Media Storage Capacity Using Phenomena Seen in Magnetic CoNi Multilayers</p>	<p>Kathryn Krycka <i>National Institute of Standards and Technology</i></p>
<p>G.II - Chemistry 210 Baxter 1:00 - 1:20 PM</p>	<p><b><i>Theodore K. Koenig</i></b></p>	<p>Toward the Total Synthesis of Sulvimultine</p>	<p>Brian M. Stoltz <i>Ethel Wilson Bowles and Robert Bowles Professor of Chemistry</i> Christopher E. Henry <i>Postdoctoral Scholar in Chemistry</i></p>
<p>T.II - Mathematics/ Applied and Computational Mathematics 111 Keck 1:20 - 1:40 PM</p>	<p><b><i>Daniel W. Kolodrubetz</i></b> <i>Richter Scholar</i></p>	<p>Numerical Approximations to Renormalization Group Equations for Standard Model With Neutrino Mixing</p>	<p>Matilde Marcolli <i>Professor of Mathematics</i></p>
<p>O.III - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 2:30 - 2:50 PM</p>	<p><b><i>Simon J. Kornblith</i></b> <i>Hugh F. and Audy Lou Colvin SURF Fellow</i></p>	<p>Modulation of Neuronal Responses by Stimulus Category and Attention Across the Medial Temporal Lobe</p>	<p>Christof Koch <i>Lois and Victor Troendle Professor of Cognitive and Behavioral Biology and Professor of Computation and Neural Systems</i> Florian Mormann <i>Visitor in Computation and Neural Systems</i></p>

E.I - Chemistry 127 Baxter 10:20 - 10:40 AM	<b>Jessie C. Ku</b> <i>Richter Scholar</i>	Investigating the Deposition of Metal Catalysts on Structured Semiconductor for VLS Wire Growth and Water Photoelectrolysis	Nathan S. Lewis <i>George L. Argyros Professor and Professor of Chemistry</i> Emily Warren <i>Graduate Student in Chemical Engineering</i>
M.II - Mechanical Engineering/Aeronautics 125 Steele 1:00 - 1:20 PM	<b>Calvin Kuo</b> <i>John and Maria Laffin Trust SURF Fellow</i>	Campus Water Uses and Potential Water Efficiencies	Melany L. Hunt <i>Professor of Mechanical Engineering</i> John Onderdonk <i>Manager for Sustainability Programs</i>
A.II - Biology 25 Baxter 1:40 - 2:00 PM	<b>Sharon R. Kuo</b>	Analysis of the <i>Cis</i> -Regulatory Modules Governing Expression of <i>FoxA</i> in <i>Strongylocentrotus purpuratus</i>	Eric H. Davidson <i>Norman Chandler Professor of Cell Biology</i> Smadar B. Ben-Tabou de-Leon <i>Postdoctoral Scholar in Biology</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Ruslan Kurdyumov</b> <i>Howell N. Tyson, Sr., SURF Fellow</i>	Development of a Sampling System for the Axel Rover	Jerrold E. Marsden <i>Carl F Braun Professor of Engineering and Control and Dynamical Systems</i> Joel W. Burdick <i>Professor of Mechanical Engineering and Bioengineering</i>
P.III - Bioengineering 228 Baxter 3:10 - 3:30 PM	<b>Amy T. Lam</b> <i>Richter Scholar</i>	Dynamic Microenvironments for the Study of Tissue Morphogenesis	Chin-Lin Guo <i>Assistant Professor of Bioengineering and Applied Physics</i>
J.I - Applied Physics 237 Baxter 11:20 - 11:40 AM	<b>Alexander M. Lapidès</b> <i>Richter Scholar</i>	Electronic Measurements of Vapor-Liquid-Solid Grown, Ni-Catalyzed, Si Wires	Harry A. Atwater <i>Howard Hughes Professor and Professor of Applied Physics and Materials Science</i>
F.III - Chemistry 128 Baxter 2:30 - 2:50 PM	<b>Katherine D. Lavoie</b> Occidental College	An Electrochemical Study of Nitric Oxide Synthase and the W70H Mutation	Harry B. Gray <i>Arnold O. Beckman Professor of Chemistry</i> Charlotte A. Whited <i>Graduate Student in Chemistry</i>
S.II - Humanities and Social Sciences/Geological and Planetary Sciences 218 Baxter 2:00 - 2:20 PM	<b>Adrienne M. Law</b> University of California, Los Angeles	Working Memory and Self-Control in Dieters: A Study of Food Preferences	Colin F. Camerer <i>Robert Kirby Professor of Behavioral Economics</i> Todd Hare <i>Postdoctoral Scholar in Neuroeconomics</i>

L.II - Electrical Engineering 114 Steele 1:00 - 1:20 PM	<b>David T. Lee</b> <i>The Aerospace Corporation</i> <i>SURF Fellow</i>	Multivalued Stochastic Relay Circuits	Jehoshua Bruck <i>Gordon and Betty Moore</i> <i>Professor of Computation and</i> <i>Neural Systems and Electrical</i> <i>Engineering</i>
M.II - Mechanical Engineering/Aeronautics 125 Steele 1:20 - 1:40 PM	<b>Edward K. Lee</b>	Carbon Emissions Modeling of Caltech	Melany L. Hunt <i>Professor of Mechanical</i> <i>Engineering</i> John Onderdonk <i>Manager for Sustainability</i> <i>Programs</i>
M.I - Mechanical Engineering/Aeronautics 125 Steele 10:40 - 11:00 AM	<b>Ga Il Lee</b> <i>Frank W. Wood SURF Fellow</i>	Developing a Miniature Robotic Neural Recording Micro-Drive	Joel W. Burdick <i>Professor of Mechanical</i> <i>Engineering and</i> <i>Bioengineering</i> Paul Hebert <i>Graduate Student in</i> <i>Mechanical Engineering</i>
N.II - Materials Science 102 Steele 1:00 - 1:20 PM	<b>Kyung Ha Lee</b>	Mixed Conducting Electrodes for Solid Oxide Fuel Cells	Sossina M. Haile <i>Professor of Materials Science</i> <i>and Chemical Engineering</i> Yoshihiro Yamazaki <i>Postdoctoral Scholar in</i> <i>Materials Science</i>
B.III - Biology 33 Baxter 2:50 - 3:10 PM	<b>Daniel H. Leighton</b> <i>Laurence J. Stuppy SURF</i> <i>Fellow</i>	Antisense: The Critical Features Identified for Constructing a Stable and Specific Alternative to Micro- and siRNA	Bruce A. Hay <i>Professor of Biology</i> Catherine M. Ward <i>Graduate Student in</i> <i>Biochemistry and Molecular</i> <i>Biophysics</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>David A. Leon</b>	A Purge and Trap Method for Quantitative Extraction of Dimethyl Sulfide in Ocean Water	Alex L. Sessions <i>Assistant Professor of</i> <i>Geobiology</i> Alon Amrani <i>Postdoctoral Scholar in</i> <i>Geochemistry</i>
W.I - Physics 120 Powell-Booth 10:40 - 11:00 AM	<b>Brian J. Lester</b>	Development of a Compact All-Optical Atomic Magnetometer	Dmitry Budker <i>Professor of Physics, University</i> <i>of California, Berkeley</i> Brad W. Filippone <i>Professor of Physics</i>

<p>I.III - Chemical Engineering 102 Spalding 3:10 - 3:30 PM</p>	<p><b>Aaron M. Levine</b></p>	<p>Enzyme Ordering in Cellulosomes</p>	<p>Jamie H. Cate <i>Associate Professor of Biochemistry and Molecular Biology, University of California, Berkeley</i> Veronica Zepeda <i>Graduate Student in Molecular and Cell Biology, University of California, Berkeley</i> Frances H. Arnold <i>Dick and Barbara Dickinson Professor of Chemical Engineering and Biochemistry</i></p>
<p>R.III - Humanities and Social Sciences 125 Baxter 3:10 - 3:30 PM</p>	<p><b>Garrett D. Lewis</b> <i>Richter Scholar</i></p>	<p>The Quality of Elected and Appointed Judges: Evidence From State Supreme Courts</p>	<p>Matias J. Iaryczower <i>Assistant Professor of Economics and Political Science</i></p>
<p>B.II - Biology 33 Baxter 1:00 - 1:20 PM</p>	<p><b>Ang Li</b></p>	<p>Repression and Derepression of mRNA Constructs Using Targeted microRNA</p>	<p>Bruce A. Hay <i>Professor of Biology</i> Catherine M. Ward <i>Graduate Student in Biochemistry and Molecular Biophysics</i></p>
<p>R.I - Humanities and Social Sciences 125 Baxter 11:00 - 11:20 AM</p>	<p><b>Christopher Q. Li</b></p>	<p>Creating and Validating Dynamic Stimuli for Social Rewards</p>	<p>Ralph Adolphs <i>Bren Professor of Psychology and Neuroscience and Professor of Biology</i> Alice Lin <i>Graduate Student in Biology</i></p>
<p>U.I - Astronomy 214 Steele 10:40 - 11:00 AM</p>	<p><b>Gongjie Li</b> <i>Richter Scholar</i></p>	<p>Analysis of the Ultraviolet Spectra of Galaxies at Redshift~4</p>	<p>Nick Z. Scoville <i>Francis L. Moseley Professor of Astronomy</i> Peter Capak <i>Staff Scientist in Astronomy</i></p>
<p>B.I - Biology 33 Baxter 10:20 - 10:40 AM</p>	<p><b>Jennifer S. Li</b> <i>Thomas Hunt Morgan SURF Fellow</i></p>	<p>Temporal-Spatial Expression of rbms3 in Developing Zebrafish</p>	<p>Marianne Bronner-Fraser <i>Albert Billings Ruddock Professor of Biology</i> Chathurani S. Jayasena <i>Postdoctoral Scholar in Biology</i></p>
<p>D.I - Biology 228 Baxter 11:20 - 11:40 AM</p>	<p><b>Lily Li</b></p>	<p>Comparison of the Quantitization of GluRIIA Levels in Hyperexcitability Mutants Before and After Activity Induction to Results in <i>Pumilio</i> Mutants</p>	<p>Kai G. Zinn <i>Professor of Biology</i> Kaushiki Menon <i>Postdoctoral Scholar in Biology</i></p>

C.I - Biology 19 Baxter 11:20 - 11:40 AM	<b>Zongyu Li</b>	Construction and Characterization of a Single-Chain Variable Fragment Antibody Against Pyro-Beta-Amyloid	Paul H. Patterson <i>Anne P. and Benjamin F. Biaggini Professor of Biological Sciences</i> Ali Khoshnan <i>Senior Research Fellow in Biology</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Benjamin B. Lin</b> <i>Peter A. Lindstrom, Jr., SURF Fellow</i>	Progress Toward the Development of a Pd-Catalyzed Decarboxylative Ring Contraction	Brian M. Stoltz <i>Ethel Wilson Bowles and Robert Bowles Professor of Chemistry</i> Amanda C. Jones <i>Postdoctoral Scholar in Chemistry</i>
Q.I - Geological and Planetary Sciences 106 Spalding 11:20 - 11:40 AM	<b>Joy Lin</b> <i>Mary Vodopia SURF Fellow</i>	(Uranium-Thorium)/Helium Dating of Martian Rocks	Kenneth A. Farley <i>W.M. Keck Foundation Professor of Geochemistry</i>
V.II - Physics 100 Powell-Booth 1:40 - 2:00 PM	<b>Chao Liu</b> <i>The Associates SURF Fellow</i>	Detection of B-Mode Polarization in the Cosmic Microwave Background Using BICEP2: Vacuum Window Construction and Performance	Andrew E. Lange <i>Marvin L. Goldberger Professor of Physics</i>
E.I - Chemistry 127 Baxter 10:40 - 11:00 AM	<b>Xueliang Liu</b> <i>Rossum Family SURF Fellow</i>	Hybrid Conductive Polymer/Silicon Junctions for Solar Energy Conversion	Nathan S. Lewis <i>George L. Argyros Professor and Professor of Chemistry</i> Michael G. Walter <i>Postdoctoral Scholar in Chemistry</i>
U.I - Astronomy 214 Steele 11:00 - 11:20 AM	<b>Guglielmo P. Lockhart</b>	Mergers of Black Hole Binary Systems: A Perturbative Approach	E. Sterl Phinney <i>Professor of Theoretical Astrophysics</i> Michael Kesden <i>Graduate Student in Theoretical Astrophysics</i>
N.I - Materials Science 102 Steele 10:40 - 11:00 AM	<b>Josue J. Lopez</b> East Los Angeles College	Effects of Focused Ion Bombardment on Single-Layer Graphene	Julia R. Greer <i>Assistant Professor of Materials Science</i>
R.III - Humanities and Social Sciences 125 Baxter 2:50 - 3:10 PM	<b>Dingchao Lu</b>	Effects of Visual Attention on Price Elasticity of Demand	Antonio Rangel <i>Associate Professor of Economics</i>

E.III - Chemistry 127 Baxter 3:10 - 3:30 PM	<b><i>Maria A. Luca</i></b> Scripps College	Crystallographic Determination of the Substrate Site(s) in Nitrogenase	Douglas C. Rees <i>Roscoe Gilkey Dickinson</i> Professor of Chemistry; Investigator, Howard Hughes Medical Institute
B.I - Biology 33 Baxter 11:00 - 11:20 AM	<b><i>Jason R. Lumm</i></b> <i>Richter Scholar</i>	Imaging the Heart Contraction in Developing Quail Embryos During Cardiac Looping	Scott E. Fraser <i>Anna L. Rosen Professor of</i> <i>Biology and Professor of</i> <i>Bioengineering</i>
II - Chemical Engineering 102 Spalding 10:20 - 10:40 AM	<b><i>Helen Y. Luo</i></b> <i>Amgen Scholar</i>	A Model System for the Chemical Synthesis of Multivalent Antibody Structures	David A. Tirrell <i>Ross McCollum-William H.</i> <i>Corcoran Professor and</i> <i>Professor of Chemistry and</i> <i>Chemical Engineering</i> James A. Van Deventer <i>Graduate Student in Chemical</i> <i>Engineering</i>
R.III - Humanities and Social Sciences 125 Baxter 2:30 - 2:50 PM	<b><i>Erik R. Madsen</i></b> <i>Amgen Scholar</i>	Peripheral Visibility of Unattended Stimuli Affects Economic Choices	Antonio Rangel <i>Associate Professor of</i> <i>Economics</i>
U.I - Astronomy 214 Steele 10:20 - 10:40 AM	<b><i>Aliza I. Malz</i></b>	Digging Into Leftover Debris From Galaxy Collisions	Kartik Sheth <i>Staff Scientist in Astronomy</i>
A.II - Biology 25 Baxter 1:00 - 1:20 PM	<b><i>Micah J. Manary</i></b> <i>Toni and Bob Perpall SURF</i> <i>Fellow</i>	Expanding the Sea Urchin Ectoderm Gene Regulatory Network	Eric H. Davidson <i>Norman Chandler Professor of</i> <i>Cell Biology</i> Enhu Li <i>Postdoctoral Scholar in Biology</i>
P.II - Bioengineering 228 Baxter 1:00 - 1:20 PM	<b><i>Sarah E. Marzen</i></b> <i>Amgen Scholar</i>	Another Look at the Two- State System: Testing a New Theory of Non-Equilibrium Statistical Mechanics	Rob B. Phillips <i>Professor of Applied Physics</i> <i>and Mechanical Engineering</i> David D. Wu <i>Graduate Student in</i> <i>Bioengineering</i>
U.II - Astronomy 214 Steele 1:20 - 1:40 PM	<b><i>Michael V. Maseda</i></b> <i>Flintridge Foundation SURF</i> <i>Fellow</i>	Evolution of the Spheroidal Luminosity Function in the GOODS Survey	Richard S. Ellis <i>Steele Family Professor of</i> <i>Astronomy</i> Andrew J. Benson <i>Senior Research Fellow in</i> <i>Theoretical Cosmology</i>

<p>T.I - Mathematics/ Applied and Computational Mathematics 111 Keck 11:20 - 11:40 AM</p>	<p><b>Ben B. McMillan</b> <i>Bob and Carole Chapman Minority SURF Fellow</i></p>	<p>Stochastic Loewner Evolutions and the Ginibre- Girko Ensemble</p>	<p>Nikolai Makarov <i>Professor of Mathematics</i></p>
<p>O.II - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 1:00 - 1:20 PM</p>	<p><b>Gabriel J. Mendoza</b> <i>The Associates SURF Fellow</i></p>	<p>Control of Biological Noise in Molecular Automata</p>	<p>Yaakov Benenson <i>Bauer Fellow, Laboratory for Molecular Automata, Harvard University</i> Erik Winfree <i>Associate Professor of Computer Science, Computation and Neural Systems, and Bioengineering</i></p>
<p>V.I - Physics 100 Powell-Booth 11:00 - 11:20 AM</p>	<p><b>Eric T. Mintun</b></p>	<p>Properties of Pseudocrystals, a Class of Self-Similar Structures Without Long- Range Translational Order</p>	<p>Paul J. Steinhardt <i>Professor of Physics, Princeton University</i> Kenneth G. Libbrecht <i>Professor of Physics</i></p>
<p>I.III - Chemical Engineering 102 Spalding 2:30 - 2:50 PM</p>	<p><b>Shruti Mishra</b> <i>Edward W. Hughes SURF Fellow</i></p>	<p>Directed Evolution of Fungal Cellulase Toward Improved Hydrolysis of Cellulose</p>	<p>Frances H. Arnold <i>Dick and Barbara Dickinson Professor of Chemical Engineering and Biochemistry</i> Indira Wu <i>Graduate Student in Bioengineering</i></p>
<p>Poster Presentations San Pasqual Mall 3:45 - 5:00 PM</p>	<p><b>Austin M. Moehle</b></p>	<p>Ca-Doped BiFeO<sub>3</sub> Thin Films: A Study of Ferroelectric Properties and the Photovoltaic Effect</p>	<p>Ramamoorthy Ramesh <i>Professor of Materials Science and Engineering, University of California, Berkeley</i> Harvey B. Newman <i>Professor of Physics</i></p>
<p>I.II - Chemical Engineering 102 Spalding 1:40 - 2:00 PM</p>	<p><b>Shannon R. Mohler</b></p>	<p>Creating a Diverse Group of Thermostable CBHI Cellulases for Use in Biofuel Applications</p>	<p>Frances H. Arnold <i>Dick and Barbara Dickinson Professor of Chemical Engineering and Biochemistry</i> Pete J. Heitzelman <i>Postdoctoral Scholar in Biochemistry</i></p>
<p>H.II - Chemical Engineering 113 Spalding 1:20 - 1:40 PM</p>	<p><b>Nathan D. Morison</b></p>	<p>Linear and Cyclic Polycyclooctene: Differences in Crystallization</p>	<p>Julia A. Kornfield <i>Professor of Chemical Engineering</i> Iman Hajimorad <i>Graduate Student in Chemical Engineering</i></p>

B.I - Biology  
33 Baxter  
11:20 - 11:40 AM

**Luke S. Moryl**  
*Richter Scholar*

What Does It Mean to Be  
Social? Fundamental  
Differences in Motor  
Response to Human and  
Electronic Motion in  
Competitive Reaction-Based  
Game

Shinsuke Shimojo  
*Professor of Biology*

T.I - Mathematics/  
Applied and Computational  
Mathematics  
111 Keck  
10:00 - 10:20 AM

**Alexandra M. Musat**

Generalized Iterated  
Function Systems

Radu Miculescu  
*Associate Professor of  
Mathematics, Bucharest  
University*  
Danny C. Calegari  
*Richard Merkin Distinguished  
Professor of Mathematics*

I.I - Chemical Engineering  
102 Spalding  
10:40 - 11:00 AM

**Karthik Narsimhan**

Exploring Evolutionary  
Pathways of Improved  
Enzymatic Activity in  
Different Amino Acid  
Compositions

David A. Tirrell  
*Ross McCollum-William H.  
Corcoran Professor and  
Professor of Chemistry and  
Chemical Engineering*  
Frank Truong  
*Graduate Student in Chemical  
Engineering*

H.II - Chemical Engineering  
113 Spalding  
1:40 - 2:00 PM

**Albert Nava**  
California State University,  
Los Angeles  
*NSF Center for the Science and  
Engineering of Materials  
MURF Fellow*

Synthesis and Assembly of  
Mucoadhesive R<sub>f</sub>-PEG/  
R<sub>f</sub>-PRG-PAA Hydrogel  
Drug Delivery System

Julia A. Kornfield  
*Professor of Chemical  
Engineering*  
Ming-Hsin Wei  
*Graduate Student in Chemical  
Engineering*  
Yong Ba  
*Assistant Professor of  
Chemistry, California State  
University, Los Angeles*

Q.II - Geological and  
Planetary Sciences  
106 Spalding  
2:00 - 2:20 PM

**Priya M. Nayak**  
*Samuel P. and Frances Krown  
SURF Fellow*

From the First Radiation of  
Planktonic Animals to the  
Hirnantian Glaciation and  
Mass Extinction: Tracking  
Ordovician Global Change  
With Magnetic Reversal  
Stratigraphy and  
Magnetofossils

Joseph L. Kirschvink  
*Nico and Marilyn Van Wingen  
Professor of Geobiology*  
Timothy D. Raub  
*Postdoctoral Scholar in Geology*

I.III - Chemical Engineering  
102 Spalding  
2:50 - 3:10 PM

**Albert H. Ng**  
*Richter Scholar*

Exploring the Role of Higher-  
Order Energetic Effects in  
Protein Structure

Frances H. Arnold  
*Dick and Barbara Dickinson  
Professor of Chemical  
Engineering and Biochemistry*  
Christopher Snow  
*Postdoctoral Scholar in  
Chemical Engineering*

F.I - Chemistry 128 Baxter 10:20 - 10:40 AM	<b><i>Eva M. Nichols</i></b>	Synthesis and Characterization of a Redox Active Metal-Ligand Framework for Oxygen Activation	Theodor Agapie <i>Assistant Professor of Chemistry</i> Sibo Lin <i>Graduate Student in Chemistry</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b><i>Noele R. Norris</i></b> <i>John and Barbara Gee SURF Fellow</i>	Estimation Using Quantized Innovations for Wireless Sensor Networks	Babak Hassibi <i>Professor of Electrical Engineering</i>
K.III - Computer Science 74 Jorgensen 2:30 - 3:50 PM <i>(joint presentation)</i>	<b><i>Daniel S. Obenshain</i></b> <i>Kiyo and Eiko Tomiyasu SURF Scholar</i>	Real-Time Earthquake Detection, Using a Distributed Seismic Network	Robert W. Clayton <i>Professor of Geophysics</i> K. Mani Chandy <i>Simon Ramo Professor and Professor of Computer Science</i>
W.I - Physics 120 Powell-Booth 11:20 - 11:40 AM	<b><i>Dong Yoon Oh</i></b>	The Simulation for the Backgrounds in the Daya Bay Antineutrino Detector Due to an $^{241}\text{Am}$ - $^{13}\text{C}$ Neutron Source	Robert D. McKeown <i>Professor of Physics</i> Daniel Dwyer <i>Postdoctoral Scholar in Physics</i>
K.II - Computer Science 74 Jorgensen 1:40 - 2:20 PM <i>(joint presentation)</i>	<b><i>Aleksandr Palatnik</i></b>	Cellular Phones for Medical Diagnostics	K. Mani Chandy <i>Simon Ramo Professor and Professor of Computer Science</i>
U.II - Astronomy 214 Steele 1:00 - 1:20 PM	<b><i>Liuyi Pei</i></b> <i>Flintridge Foundation SURF Fellow</i>	Near-Infrared Studies of Galactic Globular Clusters and Dwarf Spheroidal Galaxies	Judith G. Cohen <i>Kate Van Nuys Page Professor of Astronomy</i>
E.I - Chemistry 127 Baxter 11:00 - 11:20 AM	<b><i>Jeanne Y. Peng</i></b> <i>Edward W. Hughes SURF Fellow</i>	Gallium Phosphide Anodes in Two Junction Semiconductor Microwire Photoelectrochemical Cell for Solar Fuel Generation	Nathan S. Lewis <i>George L. Argyros Professor and Professor of Chemistry</i> Greg M. Kimball <i>Graduate Student in Chemistry</i>
W.II - Physics 120 Powell-Booth 1:20 - 1:40 PM	<b><i>Eugeniu S. Plamadeala</i></b>	Order Parameter Symmetry in Superconducting Ironpnictides	Gil Refael <i>Associate Professor of Theoretical Physics</i> Tamar Pereg-Barnea <i>Postdoctoral Scholar in Physics</i>
G.II - Chemistry 210 Baxter 1:20 - 1:40 PM	<b><i>Diane J. Plummer</i></b> <i>Rose Hills Foundation SURF Fellow</i>	Ligand Exploration for the Asymmetric Tsuji-Trost Reaction	Brian M. Stoltz <i>Ethel Wilson Bowles and Robert Bowles Professor of Chemistry</i> Nathan Bennett <i>Graduate Student in Chemistry</i>
W.III - Physics 120 Powell-Booth 3:30 - 3:50 PM	<b><i>Sedona H. Price</i></b> <i>SURF Board SURF Fellow</i>	Combining Shear Statistics to Constrain Cosmological Parameters	Jason D. Rhodes <i>Scientist, JPL</i> Joel Berge <i>Postdoctoral Scholar, JPL</i>

O.I - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 10:20 - 10:40 AM	<b>Amy C. Proctor</b>	Seesaw Gates in RNA	Erik Winfree <i>Associate Professor of Computer Science, Computation and Neural Systems, and Bioengineering</i> Lulu Qian <i>Postdoctoral Scholar in Bioengineering</i>
C.I - Biology 19 Baxter 10:40 - 11:00 AM	<b>Sylvia M. Puglisi</b> <i>Dr. Paraskeva N. Danailov SURF Fellow</i>	Study of Gene Expression in Connected Locations in Adult C57Bl/6J Mouse Brain via Diffusion-Tensor Imaging	John M. Allman <i>Frank P. Hixon Professor of Neurobiology</i>
C.III - Biology 19 Baxter 2:30 - 2:50 PM	<b>Kasra Rahbar</b> <i>Heather and Paul Haaga SURF Fellow</i>	Single Molecule Fluorescence <i>in situ</i> Hybridization in Studying Pluripotency in Mouse Embryonic Stem Cells	Michael B. Elowitz <i>Assistant Professor of Biology and Applied Physics; Bren Scholar</i>
P.II - Bioengineering 228 Baxter 1:20 - 1:40 PM	<b>Pradeep Ramesh</b> <i>Rose Hills Foundation SURF Fellow</i>	Single Molecule Dynamics of Concerted HIV-I Integration ( <i>in vitro</i> ) Using Tethered Particle Motion	Rob B. Phillips <i>Professor of Applied Physics and Mechanical Engineering</i> Geoffrey A. Lovely <i>Graduate Student in Chemistry</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Alexander D. Rasmussen</b>	Active Magnetic Shielding for the EDM Experiment	Brad W. Filippone <i>Professor of Physics</i> Riccardo Schmid <i>Graduate Student in Physics</i>
C.III - Biology 19 Baxter 3:10 - 3:30 PM	<b>Arjun Ravikumar</b>	Improving Segmentation of Time-Lapse Microscopy Image Analysis and Cell Morphology Dependent Simulations of Lateral Inhibition Patterns	Michael B. Elowitz <i>Assistant Professor of Biology and Applied Physics; Bren Scholar</i>
E.II - Chemistry 127 Baxter 2:00 - 2:20 PM	<b>Nicholas Rosa</b> <i>Reed and Ruth Brantley SURF Fellow</i>	C-H Bond Activation in the Dimerization of Bisphenolate "Pincer" Compounds of Group IV Metals	John E. Bercaw <i>Centennial Professor of Chemistry</i> Suzanne R. Golisz <i>Graduate Student in Chemistry</i>
K.III - Computer Science 74 Jorgensen 2:30 - 3:50 PM (joint presentation)	<b>Daniel E. Rosenberg</b> <i>Kiyo and Eiko Tomiyasu SURF Scholar</i>	Earthquake Detection and Early Warning via Inexpensive Accelerometers	K. Mani Chandu <i>Simon Ramo Professor and Professor of Computer Science</i>

I.III - Chemical Engineering 102 Spalding 3:30 - 3:50 PM	<b>Gregory J. Rubinstein</b> <i>Arthur R. Adams SURF Fellow</i>	Coarse-Graining of Ionic Interactions With Amino Acids	Garegin Papoian <i>Assistant Professor of Chemistry, University of North Carolina, Chapel Hill</i> John H. Seinfeld <i>Louis E. Nohl Professor and Professor of Chemical Engineering</i>
G.III - Chemistry 210 Baxter 3:10 - 3:30 PM	<b>Neha Samdaria</b>	Binding of Chloride to Polypropyleneimine and Polyamidoamine Dendrimers in Aqueous Solutions	William A. Goddard III <i>Charles and Mary Ferkel Professor of Chemistry, Materials Science, and Applied Physics</i> Mamadou S. Diallo <i>Research Fellow in Chemistry</i>
F.I - Chemistry 128 Baxter 11:20 - 11:40 AM	<b>Keshav S. Sapatnekar</b>	Fundamental Studies of Ozonolysis at Gas-Liquid Interfaces	Jesse L. Beauchamp <i>Mary and Charles Ferkel Professor of Chemistry</i>
R.II - Humanities and Social Sciences 125 Baxter 2:00 - 2:20 PM	<b>Mallika S. Saran</b>	Identification and Estimation of Bounds on School Performance Measures: Analysis of a Mixture Model With Verification	Robert P. Sherman <i>Professor of Economics and Statistics</i>
O.I - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 10:00 - 10:20 AM	<b>Karthik V. Sarma</b> <i>Arthur Rock SURF Fellow</i>	Leak Suppression for Catalyzed Nucleic Acid Entropy-Driven Reactions	Erik Winfree <i>Associate Professor of Computer Science, Computation and Neural Systems, and Bioengineering</i> David Zhang <i>Graduate Student in Computation and Neural Systems</i>
J.III - Applied Physics 237 Baxter 2:30 - 2:50 PM	<b>Franz A. Sauer</b> <i>Lester Lees Aeronautics SURF Fellow</i>	Designing a Ballistic Pendulum for the Caltech Spheromak Formation/Astrophysical Jet Experiment to Measure Plasma Jet Momentum	Paul M. Bellan <i>Professor of Applied Physics</i> Auna L. Moser <i>Graduate Student in Applied Physics</i>
R.I - Humanities and Social Sciences 125 Baxter 11:20 - 11:40 AM	<b>Eric T. Schropp</b>	The Contribution of Coastline Irregularities to Warfare and Politics in China and Europe	Philip T. Hoffman <i>Rea A. and Lela G. Axline Professor of Business Economics and Professor of History</i>

<p>A.I - Biology 25 Baxter 10:00 - 10:20 AM</p>	<p><b><i>John D. Schulman</i></b></p>	<p>Caton: Spike Sorting Software for Multi-Site Probes</p>	<p>Gyorgy Buzsaki <i>Professor of Neuroscience, Rutgers University</i> Henry Lester <i>Bren Professor of Biology</i></p>
<p>N.II - Materials Science 102 Steele 1:20 - 1:40 PM</p>	<p><b><i>Nicholas E. Scianmarello</i></b></p>	<p>Synthesis and Characterization of Proton Conducting Solid Electrolytes: <math>Cs_5H_3(SO_4)_4</math> and <math>(Cs_{1-x}Rb_x)_5H_3(SO_4)_4</math></p>	<p>Sossina M. Haile <i>Professor of Materials Science and Chemical Engineering</i> Chatr Panithipongwut <i>Graduate Student in Materials Science</i></p>
<p>A.I - Biology 25 Baxter 10:40 - 11:00 AM</p>	<p><b><i>Kimberly M. Scott</i></b> <i>Amgen Scholar</i></p>	<p>Detecting Multiple Oligomerization States by Multidimensional Analysis of FRET Images</p>	<p>Henry A. Lester <i>Bren Professor of Biology</i></p>
<p>L.III - Electrical Engineering 114 Steele 3:10 - 3:30 PM</p>	<p><b><i>Jasmine S. Sears</i></b></p>	<p>Fly Eyes as a Template for Antireflective Microlenses</p>	<p>Changhuei Yang <i>Assistant Professor of Electrical Engineering and Bioengineering</i> Ying Min Wang <i>Graduate Student in Electrical Engineering</i></p>
<p>Q.I - Geological and Planetary Sciences 106 Spalding 10:40 - 11:00 AM</p>	<p><b><i>Ayon Sen</i></b> <i>Kiyo and Eiko Tomiyasu SURF Scholar</i></p>	<p>Characterizing Mantle Plumes Using Numerical Models of Mantle Convection and Seismic Wave Propagation</p>	<p>Michael C. Gurnis <i>John E. and Hazel S. Smits Professor of Geophysics</i> Eh Tan <i>Staff Member in Computational Infrastructure for Geodynamics</i></p>
<p>W.III - Physics 120 Powell-Booth 3:10 - 3:30 PM</p>	<p><b><i>Daniel P. Sexton</i></b></p>	<p>The Search for ADD Large Extra Dimensions at the LHC</p>	<p>Harvey B. Newman <i>Professor of Physics</i> Marat I. Gataullin <i>Assistant Scientist in Experimental High Energy Physics</i></p>
<p>N.I - Materials Science 102 Steele 11:00 - 11:20 AM</p>	<p><b><i>Juying Shang</i></b></p>	<p>Towards Synthesis of Gold Nanopillars Using the Vapor- Liquid-Solid Process</p>	<p>Julia R. Greer <i>Assistant Professor of Materials Science</i> Andrew T. Jennings <i>Graduate Student in Materials Science</i></p>

M.I - Mechanical Engineering/Aeronautics 125 Steele 11:00 - 11:20 AM	<b>Nitin Sharma</b> <i>William Hassenzahl Family SURF Fellow</i>	Microprocessor System to Stimulate/Record a High Density Electrode Array	Joel W. Burdick <i>Professor of Mechanical Engineering and Bioengineering</i> Tom Desautels <i>Graduate Student in Mechanical Engineering</i>
I.I - Chemical Engineering 102 Spalding 11:00 - 11:20 AM	<b>Dongying Shen</b> <i>Richard T. Jones SURF Fellow</i>	The Effect of Underlying Substrate Compliance on the Maturation of Cell-Cell Contacts in Multi-Cellular Epithelial Aggregation	Anand R. Asthagiri <i>Assistant Professor of Chemical Engineering</i> Jin-Hong Kim <i>Graduate Student in Bioengineering</i>
W.II - Physics 120 Powell-Booth 1:40 - 2:00 PM	<b>Jing Shi</b>	Spin-Polarized Scanning Tunneling Spectroscopic Studies of Heterostructures Based on Ferromagnetic Manganites	Nai-Chang Yeh <i>Professor of Physics</i> Cameron Hughes <i>Graduate Student in Physics</i>
O.I - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 1:20 - 1:40 PM	<b>Sang Ha Shin</b> <i>Kiyo and Eiko Tomiyasu SURF Scholar</i>	Steel Building Collapse Analysis: Closer Look at the Blind Analysis Contest of a Four-Story Building	Swaminathan Krishnan <i>Assistant Professor of Civil Engineering and Geophysics</i> Matthew Muto <i>Postdoctoral Scholar in Civil Engineering</i>
O.II - Computation and Neural Systems/Civil Engineering/Environmental Science and Engineering 142 Keck 11:20 - 11:40 AM	<b>Seung Woo Shin</b>	A Verifying Compiler for DNA Chemical Reaction Networks	Erik Winfree <i>Associate Professor of Computer Science, Computation and Neural Systems, and Bioengineering</i> Shawn M. Ligocki <i>Research Analyst in Electrical Engineering</i>
A.II - Biology 25 Baxter 2:00 - 2:20 PM	<b>Esther Shyu</b>	Skeletogenic Gene Studies in Representative Cidaroid <i>E. tribuloides</i>	Eric H. Davidson <i>Norman Chandler Professor of Cell Biology</i> Joel Smith <i>Postdoctoral Scholar in Biology</i>
L.II - Electrical Engineering 114 Steele 1:40 - 2:00 PM	<b>Constantine Sideris</b> <i>Brenda and Louis J. Alpinieri SURF Fellow</i>	Biomolecular Spectroscopy: Designing Low-Cost, Portable Biosensors in CMOS	Ali A. Hajimiri <i>Professor of Electrical Engineering</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Kedron P. Silsbee</b> <i>Edward C. and Alice Stone SURF Fellow</i>	Calculating the Spectrum of Radiation From Interstellar Tumbling Dust	Christopher M. Hirata <i>Assistant Professor of Astrophysics</i>

<p>A.III - Biology 25 Baxter 2:30 - 2:50 PM</p>	<p><b><i>Natnaree Siriwon</i></b></p>	<p>The Regulatory Role of the Wnt Signaling Pathway in <i>Strongylocentrotus purpuratus</i> Endoderm Specification</p>	<p>Eric H. Davidson <i>Norman Chandler Professor of Cell Biology</i> Isabelle S. Peter <i>Postdoctoral Scholar in Biology</i></p>
<p>S.III - Humanities and Social Sciences/Geological and Planetary Sciences 218 Baxter 3:30 - 3:50 PM</p>	<p><b><i>Benjamin L. Slawski</i></b></p>	<p>Using Cloud-Tracked Wind Data to Observe the Madden-Julian Oscillation</p>	<p>Yuk L. Yung <i>Professor of Planetary Science</i></p>
<p>Q.I - Geological and Planetary Sciences 106 Spalding 10:20 - 10:40 AM</p>	<p><b><i>Alexandra L. Smith</i></b></p>	<p>Examination of Cassini Images to Investigate Possible Presence of Low Altitude Cloud and Fog Banks on the South Polar Surface of Titan and Corresponding Implications of Surface Liquid</p>	<p>Michael E. Brown <i>Richard and Barbara Rosenberg Professor of Planetary Astronomy</i></p>
<p>T.I - Mathematics/ Applied and Computational Mathematics 111 Keck 10:40 - 11:00 AM</p>	<p><b><i>Michael T. Smith</i></b></p>	<p>Analogues of the Curve Complex</p>	<p>Danny C. Calegari <i>Richard Merkin Distinguished Professor of Mathematics</i> Matthew B. Day <i>Postdoctoral Scholar in Mathematics</i></p>
<p>G.III - Chemistry 210 Baxter 2:50 - 3:10 PM</p>	<p><b><i>Da Hye Song</i></b> <i>Class of '36 SURF Fellow</i></p>	<p>Extending the Scope of eFF, a Method to Compute Excited Electron Dynamics</p>	<p>William A. Goddard III <i>Charles and Mary Ferkel Professor of Chemistry, Materials Science, and Applied Physics</i> Andres Jaramillo-Botero <i>Staff Scientist in Chemistry</i></p>
<p>P.II - Bioengineering 228 Baxter 1:40 - 2:00 PM</p>	<p><b><i>Dan Song</i></b></p>	<p>A Census of Lac Repressor at the Single-Cell Level</p>	<p>Rob B. Phillips <i>Professor of Applied Physics and Mechanical Engineering</i> Hernan G. Garcia <i>Graduate Student in Physics</i></p>
<p>P.III - Bioengineering 228 Baxter 2:50 - 3:10 PM</p>	<p><b><i>Shyam R. Srinivasan</i></b> <i>Toshi Kubota Aeronautics SURF Fellow</i></p>	<p>Dynamic Edge Detection in Zebrafish Models of Cardiac Morphogenesis</p>	<p>Morteza Gharib <i>Hans W. Liepmann Professor of Aeronautics and Professor of Bioengineering</i> Derek G. Rinderknecht <i>Graduate Student in Bioengineering</i></p>

Q.II - Geological and Planetary Sciences 106 Spalding 1:40 - 2:00 PM	<b>William M. Steinhardt</b> <i>Nellie Bergen and Adrian Foster Tillotson SURF Fellow</i>	Implications of Exceptional Southeast California Exposure on Earth's Magnetic History	Joseph L. Kirschvink <i>Nico and Marilyn Van Wingen Professor of Geobiology</i> Timothy D. Raub <i>Postdoctoral Scholar in Geology</i>
B.III - Biology 33 Baxter 3:30 - 3:50 PM	<b>William I. Suh</b>	Control of Endoreduplication in <i>Arabidopsis</i> by CYCLIN D3 and LGO	Elliot M. Meyerowitz <i>George W. Beadle Professor of Biology</i> Adrienne H. Roeder <i>Postdoctoral Scholar in Biology</i>
F.II - Chemistry 128 Baxter 2:00 - 2:20 PM	<b>Vincentius J. Suhardi</b> <i>Harry B. Gray SURF Fellow</i>	Asymmetric $\alpha$ -Chlorination of Sily Enol Ethers	Sarah E. Reisman <i>Assistant Professor of Chemistry</i>
Q.II - Geological and Planetary Sciences 106 Spalding 1:20 - 1:40 PM	<b>Vivian Z. Sun</b>	Understanding the North American Permian-Triassic Mass Extinction Record: Isotopic Study of Quinn River Formation, Nevada	Joseph L. Kirschvink <i>Nico and Marilyn Van Wingen Professor of Geobiology</i> Timothy D. Raub <i>Postdoctoral Scholar in Geology</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Tamas Szalay</b> <i>Victor Neher SURF Fellow</i>	Design and Development of an Ion Mobility Spectrometer	Michael L. Roukes <i>Professor of Physics, Applied Physics, and Bioengineering</i>
K.III - Computer Science 74 Jorgensen 2:30 - 3:50 PM (joint presentation)	<b>Lihsh Tang</b>	Inexpensive Sensor Networks for Mapping Ground Shaking After Earthquakes	K. Mani Chandy <i>Simon Ramo Professor and Professor of Computer Science</i>
S.III - Humanities and Social Sciences/Geological and Planetary Sciences 218 Baxter 2:30 - 2:50 PM	<b>Jamie N. Tayar</b>	Chemical Composition of Protoplanetary Disks	Geoffrey A. Blake <i>Professor of Cosmochemistry and Planetary Sciences and Professor of Chemistry</i> Colette V. Salyk <i>Graduate Student in Geology</i>
E.I - Chemistry 127 Baxter 11:20 - 11:40 AM	<b>Jordan C. Theriot</b> <i>Sidney R. and Nancy M. Petersen SURF Fellow</i>	Composites of Metalloporphyrins and Carbon Black for Chemical Vapor Sensing	Nathan S. Lewis <i>George L. Argyros Professor and Professor of Chemistry</i> Edgardo Garcia <i>Graduate Student in Chemistry</i>

<p>B.I - Biology 33 Baxter 10:40 - 11:00 AM</p>	<p><b>Leslie M. Tong</b> <i>Stephen Adelman Memorial SURF Fellow</i></p>	<p>The Differentiation of MGE From Mouse Embryonic Stem Cells</p>	<p>Arturo Alvarez-Buylla <i>Professor of Neurology, University of California, San Francisco</i> David V. Hansen <i>Postdoctoral Scholar in Neurology, University of California, San Francisco</i> Marianne Bronner-Fraser <i>Albert Billings Ruddock Professor of Biology</i></p>
<p>A.I - Biology 25 Baxter 11:00 - 11:20 AM</p>	<p><b>Gloria E. Tran</b> <i>Amgen Scholar</i></p>	<p>Polysaccharide A From <i>Bacteroides fragilis</i> Suppresses the Induction of Inflammatory Cytokines in Response to LPS</p>	<p>Sarkis K. Mazmanian <i>Assistant Professor of Biology</i> June L. Round <i>Postdoctoral Scholar in Biology</i></p>
<p>M.II - Mechanical Engineering/Aeronautics 125 Steele 2:00 - 2:20 PM</p>	<p><b>John A. Ulvestad</b> <i>University of North Dakota</i></p>	<p>In-Situ Instruments for Extreme Environments</p>	<p>Alberto E. Behar <i>Senior Member of the Technical Staff, JPL</i> Jaret B. Matthews <i>Member of the Technical Staff, JPL</i></p>
<p>L.II - Electrical Engineering 114 Steele 1:20 - 1:40 PM</p>	<p><b>Narain K. Vijayashanker</b> <i>Fred and Jean Felberg SURF Fellow</i></p>	<p>Design of Low Voltage, Low- Dropout CMOS Linear Regulators</p>	<p>Azita Emami <i>Assistant Professor of Electrical Engineering</i> Juhwan Yoo <i>Graduate Student in Electrical Engineering</i></p>
<p>K.I - Computer Science 74 Jorgensen 11:20 - 11:40 AM</p>	<p><b>Stephen C. Voinea</b> <i>Marcella Bonsall SURF Fellow</i></p>	<p>An Analysis of the Stump Kernel for Infinite Ensemble Learning</p>	<p>Yaser S. Abu-Mostafa <i>Professor of Electrical Engineering and Computer Science</i></p>
<p>N.III - Materials Science 102 Steele 2:50 - 3:10 PM</p>	<p><b>Yi J. Wang</b></p>	<p>Supercritical Activation of Cu- BTC and MIL-101</p>	<p>Brent T. Fultz <i>Professor of Materials Science and Applied Physics</i> Channing C. Ahn <i>Senior Research Associate in Materials Science</i></p>
<p>G.II - Chemistry 210 Baxter 2:00 - 2:20 PM</p>	<p><b>Ziyang Wang</b></p>	<p>Effects of Mutations of Finger-Loop on the Function of Signal Recognition Particle</p>	<p>Shu-ou Shan <i>Assistant Professor of Chemistry</i></p>

Poster Presentations  
San Pasqual Mall  
3:45 - 5:00 PM

**Marissa L. Weichman**

Statistical Analysis of the  
Interaction of TDP-43 With  
the Human Genome, and Its  
Possible Role in ALS

Tom Maniatis  
*Professor of Molecular and  
Cellular Biology, Harvard  
University*  
Douglas C. Rees  
*Roscoe Gilkey Dickinson  
Professor of Chemistry;  
Investigator, Howard Hughes  
Medical Institute*

O.I - Computation and  
Neural Systems/Civil  
Engineering/Environmental  
Science and Engineering  
142 Keck  
10:40 - 11:00 AM

**Talia M. Weiss**

Adapting Non-Nucleic Acid  
Input to a DNA Circuit

Erik Winfree  
*Associate Professor of Computer  
Science, Computation and  
Neural Systems, and  
Bioengineering*  
Lulu Qian  
*Postdoctoral Scholar in  
Bioengineering*

I.I - Chemical Engineering  
102 Spalding  
11:20 - 11:40 AM

**Kevin T. Welch**

Computational Modeling of  
Nanoparticles Under  
Laminar Flow Conditions

Krishnendu Roy  
*Associate Professor of  
Biomedical Engineering, The  
University of Texas at Austin*  
Anand R. Asthagiri  
*Assistant Professor of Chemical  
Engineering*

C.III - Biology  
19 Baxter  
2:00 - 2:20 PM

**Qing Yu Weng**

Characterization of Dendritic  
Cell Behavior in Response to  
Toll-Like Receptor  
Stimulation

David Baltimore  
*Robert Andrews Millikan  
Professor of Biology; Nobel  
Laureate; President Emeritus*  
Lili Yang  
*Scientist in Biology*

N.II - Materials Science  
102 Steele  
1:40 - 2:00 PM

**Stephen K. Wilke**  
*Robert T. Herzog SURF Fellow*

Micro-Engineering of Solid  
Oxide Fuel Cell Anodes:  
Fabrication of Metallic  
Inverse Opal Structures on  
Ceramic Substrates

Sossina M. Haile  
*Professor of Materials Science  
and Chemical Engineering*  
Evan C. Brown  
*Graduate Student in Materials  
Science*

T.III - Mathematics/  
Applied and Computational  
Mathematics  
111 Keck  
2:30 - 2:50 PM

**Christopher A. Wong**

New Approaches to  
Computing the Spectra and  
Pseudospectra of Hermitian  
and Non-Hermitian  
Schrödinger Operators

Anders C. Hansen  
*von Kármán Instructor of  
Applied and Computational  
Mathematics*

S.II - Humanities and Social  
Sciences/Geological and  
Planetary Sciences  
218 Baxter  
1:40 - 2:00 PM

**Katherine M. Wong**

An Experimental Approach  
to Understanding the  
Relationship Between  
Curiosity and Monetary  
Reward

Colin F. Camerer  
*Robert Kirby Professor of  
Behavioral Economics*  
Stephanie W. Wang  
*Postdoctoral Scholar in  
Economics*

R.I - Humanities and Social Sciences 125 Baxter 10:20 - 10:40 AM	<b>Shelley J. Wong</b>	Macroeconomic Experiments With Fiat and a General Equilibrium Setting	Charles R. Plott <i>Edward S. Harkness Professor of Economics and Political Science</i>
W.II - Physics 120 Powell-Booth 2:00 - 2:20 PM	<b>Teng-Pao Wu</b>	Scanning Tunneling Spectroscopic Studies of Graphene and Graphene- Based Devices	Nai-Chang Yeh <i>Professor of Physics</i> Marcus Teague <i>Graduate Student in Physics</i>
K.II - Computer Science 74 Jorgensen 1:20 - 1:40 PM	<b>Patrick J. Xia</b>	An Approximation Scheme for Networked Radiation Sensing Systems	K. Mani Chandy <i>Simon Ramo Professor and Professor of Computer Science</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Suiyi Xin</b>	Calculating Genetic Modules Based on Genotype- Phenotype Correlation	Grant J. Jensen <i>Associate Professor of Biology</i> Dylan M. Morris <i>Graduate Student in Biology</i>
Poster Presentations San Pasqual Mall 3:45 - 5:00 PM	<b>Lili Yang</b>	An Empirical Study of Inertia in Elections	Leeat Yariv <i>Associate Professor of Economics</i>
H.II - Chemical Engineering 113 Spalding 2:00 - 2:20 PM	<b>Lita F. Yang</b>	Self-Assembled Liquid Crystalline Gels	Julia A. Kornfield <i>Professor of Chemical Engineering</i> Zuleikha Kurji <i>Graduate Student in Chemistry</i>
A.I - Biology 25 Baxter 11:20 - 11:40 AM	<b>Vivian Yang</b>	Identification of Gene(s) That Mediates Species- Specific Niche Occupying Phenotype During <i>Bacteroides fragilis</i> Colonization of the Axenic Mouse Gut	Sarkis K. Mazmanian <i>Assistant Professor of Biology</i> Sung-Eun Lee <i>Graduate Student in Biology</i>
W.III - Physics 120 Powell-Booth 2:50 - 3:10 PM	<b>Andy L. Yen</b> <i>Rose Hills Foundation SURF Fellow</i>	Search for Low Mass Strings at the Large Hadron Collider	Harvey B. Newman <i>Professor of Physics</i> Marat I. Gataullin <i>Assistant Scientist in Experimental High Energy Physics</i>
V.II - Physics 100 Powell-Booth 2:00 - 2:20 PM	<b>Cindy X. You</b> <i>Rose Hills Foundation SURF Fellow</i>	Automated Analysis of Visual Field Defects	Wolfgang Fink <i>Visiting Associate in Physics; Senior Researcher, JPL</i>
W.I - Physics 120 Powell-Booth 10:20 - 10:40 AM	<b>Matthew C. Yu</b>	Measuring Electrical and Mechanical Properties of Nanoscale, Metal-Metal Contacts Using an Atomic Force Microscope	Michael L. Roukes <i>Professor of Physics, Applied Physics, and Bioengineering</i> Philip X.L. Feng <i>Senior Staff Scientist in Physics</i>

I.II - Chemical Engineering 102 Spalding 2:00 - 2:20 PM	<b>Xinlin Yu</b>	Cellulase Engineering: Multi Carbohydrate Binding Modules to Improve Activity of HJPLUS	Frances H. Arnold <i>Dick and Barbara Dickinson Professor of Chemical Engineering and Biochemistry</i> Pete J. Heinzelman <i>Postdoctoral Scholar in Biochemistry</i>
T.II - Mathematics/ Applied and Computational Mathematics 111 Keck 2:00 - 2:20 PM	<b>Gjergji Zaimi</b>	On Some Inequalities Involving Schur Polynomials and Other Symmetric Functions	Paul D. Nelson <i>Graduate Student in Mathematics</i> Richard M. Wilson <i>Professor of Mathematics</i>
A.III - Biology 25 Baxter 2:50 - 3:10 PM	<b>Erin N. Zampaglione</b> <i>Bristol-Myers SURF Fellow</i>	Study of Spatial Gene Expression in Sea Urchin Larval Development	R. Andrew Cameron <i>Senior Research Associate in Biology</i>
D.I - Biology 228 Baxter 10:40 - 11:00 AM	<b>Bonnie Zhang</b>	A Comprehensive Survey of Thin Bacteria by Electron Cryo-Tomography to Discover Novel Ultrastructures at High Resolution	Grant J. Jensen <i>Associate Professor of Biology</i> Morgan Beeby <i>Postdoctoral Scholar in Biology</i>
A.III - Biology 25 Baxter 3:30 - 3:50 PM	<b>Yuanjun Zhang</b>	Steinernema Jumping Responses to Volatile Stimuli	Paul W. Sternberg <i>Thomas Hunt Morgan Professor of Biology; Investigator, Howard Hughes Medical Institute</i> Adler R. Dillman <i>Graduate Student in Biology</i>
H.III - Chemical Engineering 113 Spalding 3:10 - 3:30 PM	<b>Qinren Zhen</b> <i>Arthur A. Noyes SURF Fellow</i>	Studying the Thermodynamics of Respirable Fragment Release From Pollen	Richard C. Flagan <i>Irma and Ross McCollum-William H. Corcoran Professor of Chemical Engineering and Professor of Environmental Science and Engineering</i>
E.III - Chemistry 127 Baxter 2:50 - 3:10 PM	<b>Xida Zheng</b> <i>David S. Koons SURF Fellow</i>	Observing the Oxidation of the Iron-Sulfur Cluster in Endonuclease III Through DNA Mediated Charge Transport Using Transition Metal Complexes	Jacqueline K. Barton <i>Arthur and Marian Hanisch Memorial Professor and Professor of Chemistry</i> Eric D. Olmon <i>Graduate Student in Chemistry</i>
H.I - Chemical Engineering 113 Spalding 11:20 - 11:40 AM	<b>Lily Zhou</b>	Solid State NMR Studies on Reaction Intermediates of Metal Borohydrides Hydrogen Storage Systems	Sonjong Hwang <i>Member of the Professional Staff in Chemical Engineering; Lecturer in Chemistry</i> Jason Zan <i>Member of the Technical Staff, JPL</i>

