Caltech
Student-Faculty Programs

Presentations in Alphabetical Order by Student

M - Medical Engineering and Electrical Engineering 142 Keck 4:10 - 4:30 PM	***Oluwaseun N. Adeyeye*** Howard University *Southern California Edison WAVE Fellow*	Optoelectronic Mode-Locked Laser via Regenerative RF Feedback in Thin-Film Lithium Niobate	Alireza Marandi *Professor of Electrical Engineering and Applied Physics* Rithvik Ramesh *Graduate Student in Electrical Engineering*
J - Applied Physics and Materials Science 125 Steele Lab 1:00 - 1:20 PM	***Ann E. Alekseenko*** University of California, Berkeley *KNI SURF-the-WAVE Prize Fellow*	Structure and Composition Optimization of $FeWO_4$ Photoanodes Enhance Photoresponse in PLD Grown Thin Films	Harry A. Atwater *Howard Hughes Professor of Applied Physics and Materials Science* John Hylak *Graduate Student in Chemical Engineering*
B - Biology 127 Baxter 3:50 - 4:10 PM	***Diego Alfaro Carcoba*** Johns Hopkins University *Center for Evolutionary Science EVO-WAVE Fellow*	Measuring MTCH2-dependent Protein Insertion Into the Outer Mitochondrial Membrane Using a Split-luciferase System and Targeted AAVS1 Integration	Rebecca M. Voorhees *Assistant Professor of Biology and Biological Engineering; Investigator, Heritage Medical Research Institute*
J - Applied Physics and Materials Science 125 Steele Lab 3:10 - 3:30 PM	***Parthorn Ammawat*** *Soli Deo Gloria SURF Fellow*	Design of an Electromagnetic Cat Qubit and Development of Josephson Junction Fabrication Process	Oskar J. Painter *John G Braun Professor of Applied Physics and Physics* Piero Chiappina *Graduate Student in Physics*
T - Physics 103 Downs 1:20 - 1:40 PM	***Yuvan Anand*** *Ernest R. Roberts SURF Fellow*	Observable-projected Ensembles	John P. Preskill *Richard P. Feynman Professor of Theoretical Physics* Alexey Milekhin *IQIM Postdoctoral Scholar Research Associate in Theoretical Physics* Sara Murciano
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Barbara I. Ayala*** University of Puerto Rico, Mayagüez *Amgen Scholar*	Behavioral and Immunological Consequences of Excessive Sugar Intake	Yuki Oka *Professor of Biology; Investigator, Heritage Medical Research Institute* Yameng Zhang *Graduate Student in Neurobiology*

F - Chemical Engineering 113 Spalding Lab 1:40 - 2:00 PM	***Hannah R. Bachmann*** University of Minnesota - Twin Cities *Resnick Sustainability Institute (RSI) WAVE Fellow*	Investigating *Bacillus subtilis* as a Microbial Delivery System for Sustained Plant Peptide Hormone Release in Soil	Gözde S. Demirer *Clare Booth Luce Assistant Professor of Chemical Engineering* Carl McCombe *Postdoctoral Scholar Research Associate in Chemical Engineering*
K - Materials Science 104 Watson 2:00 - 2:20 PM	***Alize G. Bakker*** *Class of '52 60th Reunion SURF Fellow*	Creating an Optimal Neural Tissue Microenvironment Through Mechanosensing	Julia R. Greer *Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering* Peter Serles *Postdoctoral Scholar Fellowship Trainee in Mechanical and Civil Engineering*
O - Geological and Planetary Sciences 101 Schlinger 1:20 - 1:40 PM	***Avni Bansal*** *Mellon Mays SURF Fellow*	Constraints on the Orbital Parameters of Stellar Flybys of the Early Solar System	Konstantin Batygin *Professor of Planetary Science* Ian Brunton *Graduate Student in Planetary Science*
A - Biology and Bioengineering 125 Baxter 1:00 - 1:20 PM	***Ava O. Barbano*** *Larson Scholar*	Identifying the Circuit for Odor-induced Visual Valence in *Drosophila*	Michael H. Dickinson *Esther M. and Abe M. Zarem Professor of Bioengineering and Aeronautics* Ivo Ros *Senior Postdoctoral Scholar Research Associate in Biology and Biological Engineering*
J - Applied Physics and Materials Science 125 Steele Lab 2:00 - 2:20 PM	***Henrik N. Barck*** Harvey Mudd College *KNI SURF-the-WAVE Prize Fellow*	Designing CMOS Fabricated Microrobotic Actuators With Origami Folding Motion	Chiara Daraio *G. Bradford Jones Professor of Mechanical Engineering and Applied Physics; Investigator, Heritage Medical Research Institute* Xiaoxiao Xiong *Graduate Student in Physics*
V - Physics 269 Lauritsen 1:20 - 1:40 PM	***Victoria E. Barry*** Colorado School of Mines	Final Design, Testing, and Validation of BTL Detector Modules, and Trays for CMS BTL Detector at CERN	Maria Spiropulu *Shang-Yi Ch'en Professor of Physics*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Michael K. Battiest*** Pasadena City College/ California State Polytechnic University, Pomona *Carl F. Braun WAVE Fellow*	Theoretical Spectroscopic Ellipsometry for Thin Films of Silicon and Aluminum and Related Compounds	Austin J. Minnich *Professor of Mechanical Engineering and Applied Physics* Finley Donachie *Graduate Student in Materials Science*
F - Chemical Engineering 113 Spalding Lab 1:20 - 1:40 PM	***Patrick T. Bednarz*** Rice University	Noninvasive Monitoring of Cardiovascular and Endometriosis Biomarkers Using an Engineered Acoustic Biosensor	Mikhail G. Shapiro *Max Delbrück Professor of Chemical Engineering and Medical Engineering; Investigator, Howard Hughes Medical Institute* Elizabeth Hughes *Graduate Student in Bioengineering*
R - Astronomy B125 Baxter 4:10 - 4:30 PM	***Sufia Birmingham*** Princeton University	Investigating Changing-Look AGN Subpopulations With Unsupervised Machine Learning Techniques	Matthew J. Graham *Research Professor of Astronomy*
I - Control and Dynamical Systems & Aeronautics 133 Guggenheim 3:10 - 3:30 PM	***Maxwell B. Braithwaite***	Experimental Study of New Flexible Solar Array	Sergio Pellegrino *Joyce and Kent Kresa Professor of Aerospace and Civil Engineering; Senior Research Scientist, JPL* Maria Kechri *Graduate Student in Aerospace*
E - Chemistry and Chemical Engineering 106 Spalding Lab 2:20 - 2:40 PM	***Aniya M. Buckland*** North Carolina A&T State University *Preer WAVE Fellow*	Preparation of Cyclopentane Fragment En Route to Hypatulone A	Brian M. Stoltz *Victor and Elizabeth Atkins Professor of Chemistry; Investigator, Heritage Medical Research Institute* Kim R. Sharp *Graduate Student in Chemistry*
U - Physics 107 Downs 2:20 - 2:40 PM	***James Buda*** University of California, Irvine	Estimation of the Stochastic Gravitational Wave Background Using the Memory Effect	Yanbei Chen *Professor of Physics* Kwinten Fransen *Heising-Simons Postdoctoral Scholar Research Associate in Theoretical Physics*

J - Applied Physics and Materials Science 125 Steele Lab 4:10 - 4:30 PM	***Matthew J. Cantor*** *Dr. Alan K. Marumoto SURF Fellow*	Probing Spin-orbit Coupling in Bilayer Graphene via Symmetric Proximity Coupling From WS_2 Encapsulation	Stevan Nadj-Perge *Professor of Applied Physics and Materials Science* Siu Chi Wang *Graduate Student in Applied Physics* Ankan Mukherjee *Graduate Student in Applied Physics* Nastasija Conic *Graduate Student in Applied Physics*
R - Astronomy B125 Baxter 3:50 - 4:10 PM	***Josie C. Carrillo*** Amherst College *Carl F. Braun WAVE Fellow*	Investigating the Optical Variability in BAL and Non-BAL Quasars as a Parametrizing Factor for BAL Classification	Matthew J. Graham *Research Professor of Astronomy*
U - Physics 107 Downs 3:50 - 4:10 PM	***Vincent Caudillo*** University of California, Irvine *WAVE Fellow*	Searching for Changing-look Active Galactic Nuclei via Multi-epoch X-ray Variability and Optical Spectral Follow-up	Fiona A. Harrison *Harold A. Rosen Professor of Physics* Elias Kammoun *Postdoctoral Scholar Research Associate in Physics*
C - Chemistry 147 Noyes 3:10 - 3:30 PM	***Sherlyn Cazares*** University of Illinois Chicago *Resnick Sustainability Institute (RSI) WAVE Fellow*	Multimetallic Complexes for Small Molecule Reactivity: Expanding Dinuclear Nickel Systems Through Third-Metal Variation	Theodor Agapie *John Stauffer Professor of Chemistry* Matt R. Espinosa *Postdoctoral Scholar Fellowship Trainee in Chemistry*
L - Mechanical Engineering 100 Powell-Booth 3:30 - 3:50 PM	***Nils Jonathan Andreas Cederlund*** Lund University	Soft Contact Normal Quantification Using Flow Matching	Joel W. Burdick *Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering and Bioengineering; Research Scientist, JPL* Emily A. Fourney *Graduate Student in Control and Dynamical Systems*
M - Medical Engineering and Electrical Engineering 142 Keck 3:10 - 3:30 PM	***Christine T. Chang*** *Sampson Carlson SURF Fellow*	Verification of a Next Generation 65 nm CMOS Multi-Modal Wearable Sensor Prototype for Simultaneous Monitoring of 10 Physiochemical Biomarkers	Azita Emami *Andrew and Peggy Cherng Professor of Electrical Engineering and Medical Engineering* Shawn Sheng *Graduate Student in Electrical Engineering*

M - Medical Engineering and Electrical Engineering 142 Keck 1:40 - 2:00 PM	***Ya-Cheng Chang*** National Taiwan University *BaBar SURF Fellow*	Monte Carlo Modeling, Experimental, and Theoretical Study of the Stern-Gerlach Experiment	Lihong Wang *Bren Professor of Medical Engineering and Electrical Engineering* Xukun Lin *Graduate Student in Electrical Engineering* Suleyman Kahraman *Graduate Student in Medical Engineering*
D - Chemistry 153 Noyes 3:10 - 3:30 PM	***Anusha K. Chatha*** *John Stauffer SURF Fellow*	Mechanism of DNA2-Dependent Replication Fork Degradation	Daniel R. Semlow *Assistant Professor of Biochemistry; Ronald and JoAnne Willens Scholar* Maria Altshuller *Graduate Student in Biochemistry and Molecular Biophysics* Victoria MacKrell
P - Humanities and Social Sciences 128 Baxter 3:30 - 3:50 PM	***Arjun S. Chatha*** *Citadel Global Fixed Income SURF Fellow*	Framing the Future: Textual Analysis of Political Discourse on AI and Technological Change	R. Michael Alvarez *Flintridge Foundation Professor of Political and Computational Social Science* Beatrice Magistro *Postdoctoral Scholar Research Associate in Computational Social Science*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Bonnie Chen*** University of Pennsylvania *Southern California Edison WAVE Fellow*	Low-cost Spalled GaAs (110) Thin Film Solar Cells	Harry A. Atwater *Howard Hughes Professor of Applied Physics and Materials Science* Andy Nyholm *Graduate Student in Materials Science*
H - Computer Science 224 Jorgensen 1:20 - 1:40 PM	***Ellie Chen***	Redesigning Caltech CS 2 to Support All Students' Experience	Adam Blank *Teaching Professor of Computing and Mathematical Sciences*
U - Physics 107 Downs 1:20 - 1:40 PM	***Jiakai Chen*** University of Cambridge	Monte Carlo Simulation of the $LiHo_xY_{1-x}F_4$ Quantum Ising Magnet	Daniel Silevitch *Research Professor of Physics* Thomas F. Rosenbaum *President; Professor of Physics*

Q - Astronomy B119 Baxter 2:50 - 3:10 PM	***Maylin D. Chen***	Enhancing Astronomical Spectrographic Efficiency Through Automated and Modular Mask-cutting Software Infrastructure	William Schoenell *Software Engineer, Carnegie Observatories* Charles C. Steidel *Lee A. DuBridge Professor of Astronomy*
S - Mathematics 102 Spalding Lab 3:10 - 3:30 PM	***Nancy Chen*** Cornell University	Tropical Hodge Conjecture for Abelian Fourfolds	Tony Yue Yu *Professor of Mathematics* Thorgal Hinault *Graduate Student in Mathematics* Shaowu Zhang *Graduate Student in Mathematics*
E - Chemistry and Chemical Engineering 106 Spalding Lab 4:30 - 4:50 PM	***Yanxin Chen*** Peking University	Investigating the Exchange Energy in $Ba_4Ir_3O_{10}$	Sandeep Sharma *Professor of Chemistry*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Yen-Ru Chen*** University of California, San Diego	Steering Diffusion Policy for Controllable Actions in Robot Manipulation	Aaron D. Ames *Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems* Damiano Marsili *Graduate Student in Computing and Mathematical Sciences* Albert Li *Graduate Student in Control and Dynamical Systems*
A - Biology and Bioengineering 125 Baxter 2:50 - 3:10 PM	***Yun-Shan Chen*** National Taiwan University *BaBar SURF Fellow*	Evaluation of the Glycomic Profile of p97 Disease-Associated Mutants	Tsui-Fen Chou *Research Professor of Biology and Biological Engineering* Chia Yen Liew *Postdoctoral Scholar Research Associate in Biology and Biological Engineering*
C - Chemistry 147 Noyes 2:50 - 3:10 PM	***Jacob A. Cho*** Pennsylvania State University *Amgen Scholar*	Expanding In Situ Capabilities of a Table-top Soft X-Ray Absorption Spectrometer for Probing Electrocatalyst Electronic Structure	Scott K. Cushing *Assistant Professor of Chemistry* Alejandro Arellano *Graduate Student in Applied Physics*

Q - Astronomy B119 Baxter 3:30 - 3:50 PM	***Daria Alice Ciobanu***	Optimizing Transient Recovery and Analysis for Simulated Roman Observations	Jacob Jencson *Staff Scientist in IPAC* Lin Yan *COO Observatory Astronomer*
U - Physics 107 Downs 3:10 - 3:30 PM	***Cyrus Clabeaux*** Stony Brook University	Understanding Black Hole Accretion Flow Properties in GX 339-4 Using NICER and NuSTAR	Fiona A. Harrison *Harold A. Rosen Professor of Physics* Shina Adegoke *Postdoctoral Scholar Research Associate in Physics*
E - Chemistry and Chemical Engineering 106 Spalding Lab 1:40 - 2:00 PM	***Tommaso Colombo*** *John Stauffer SURF Fellow*	Asymmetric Reverse Prenylation of 3-substituted Indoles	Brian M. Stoltz *Victor and Elizabeth Atkins Professor of Chemistry; Investigator, Heritage Medical Research Institute* Jonathan Farhi *Graduate Student in Chemistry*
N - Geological and Planetary Sciences B133 Baxter 2:20 - 2:40 PM	***Oliver T. Crofts*** University of Cambridge *Caltech-Cambridge Exchange*	Pulse Check: Biotic and Abiotic Drivers of the Birch Effect	Woodward W. Fischer *Professor of Geobiology*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Margo T. Crothers*** Washington University in St. Louis *Southern California Edison WAVE Fellow*	Studies in Calcium Isotope Speciation in Urine	John M. Eiler *Robert P. Sharp Professor of Geology and Geochemistry* François Tissot *Professor of Geochemistry; Investigator, Heritage Medical Research Institute* Theo J. Tacail *Postdoctoral Scholar Research Associate in Geochemistry* Rebecca J. Ryan *Postdoctoral Scholar Research Associate in Geochemistry*
K - Materials Science 104 Watson 1:40 - 2:00 PM	***Carl J. Crum*** *Eric Lin and YunJu Peng SURF Fellow*	Verifying a Continuum Approximation for Architected Materials in Two and Three Dimensions	Julia R. Greer *Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering* Cyrus Fiori *Graduate Student in Chemical Engineering*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Daniel C. Darahdgian*** Occidental College	Converting Carbon Dioxide Into Useful Chemicals and Fuels	Harry B. Gray *Arnold O. Beckman Professor of Chemistry* Aisulu Aitbekova *KNI Postdoctoral Scholar Research Associate in Applied Physics and Materials Science*
S - Mathematics 102 Spalding Lab 4:10 - 4:30 PM	***Jacobo de Juan Millon*** *Taylor Lawrence SURF Research Fellow*	Computations of and Upper Bounds on the Optimal t-pebbling of Graphs With Rate r	Matthew M. Gherman *Hearst Postdoctoral Scholar Teaching Fellow in Mathematics*
G - Computer Science 109 Jorgensen 1:00 - 1:20 PM	***Ansh V. Desai*** University of Delaware	Neural Operators for Dissipative Relativistic Magnetohydrodynamics	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Elias R. Most *Assistant Professor of Theoretical Astrophysics* Chuwei Wang *Graduate Student in Computing and Mathematical Sciences* Valentin Duruisseaux *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences*
U - Physics 107 Downs 4:10 - 4:30 PM	***Indie E. Desiderio-Sloane*** *Thomas Lauritsen SURF Fellow*	Testing Accretion Disk Geometry with X-ray Reflection Spectroscopy	Fiona A. Harrison *Harold A. Rosen Professor of Physics* Joanna Piotrowska-Karpov *Postdoctoral Scholar Research Associate in Physics*
V - Physics 269 Lauritsen 2:20 - 2:40 PM	***Francesca Di Cecio*** University of Cambridge *Caltech-Cambridge Exchange*	Quench Dynamics and Metastability of Intertwined Orders	Gil Refael *Taylor W. Lawrence Professor of Theoretical Physics* Gal Shavit *Sherman Fiarchild Postdoctoral Research Associate in Theoretical Physics*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Yichen Di*** Tsinghua University	Boosting Generalization in Neural CFD Surrogates Through FIGConv Refinement	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Valentin Duruisseaux *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences*

H - Computer Science 224 Jorgensen 2:20 - 2:40 PM	***Yuehan Diao*** University of Chicago	Prediction Selection in Two-player Games	Adam C. Wierman *Carl F Braun Professor of Computing and Mathematical Sciences* Tinashe Handina *Graduate Student in Computing and Mathematical Sciences*
A - Biology and Bioengineering 125 Baxter 3:50 - 4:10 PM	***Hanna K. Diop*** University of California, Irvine	Metabolic Contributions of *Lactobacillus brevis* ATCC 367 in Adult *Drosophila melanogaster*	Lea A. Goentoro *Professor of Biology* Judah Bates *Graduate Student in Bioengineering*
M - Medical Engineering and Electrical Engineering 142 Keck 3:30 - 3:50 PM	***Belinda W. Dong*** *Arthur E. Lamel Memorial SURF Fellow*	3D Photonics in CMOS and Transistors in Silicon Photonics	Ali A. Hajimiri *Bren Professor of Electrical Engineering and Medical Engineering* Debjit Sarkar *Graduate Student in Electrical Engineering*
L - Mechanical Engineering 100 Powell-Booth 2:50 - 3:10 PM	***Randolph L. Douge*** *Robert I. and Winifred E. Gardner SURF Fellow*	AprilTag-Based Vision System for Arm-Guided Object Probing With a RealSense Depth Camera	Joel W. Burdick *Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering and Bioengineering; Research Scientist, JPL* Yacine Derder *Assistant Research Engineer in Mechanical and Civil Engineering*
T - Physics 103 Downs 2:50 - 3:10 PM	***Thomas E. Eyres*** University of Cambridge *Caltech-Cambridge Exchange*	A Novel Application of a Frequency Tracking Technique to Nanomechanical Resonators for Mass Sensing	Michael L. Roukes *Frank J. Roshek Professor of Physics, Applied Physics, and Bioengineering*
M - Medical Engineering and Electrical Engineering 142 Keck 2:20 - 2:40 PM	***Saga M. Fagerström*** KTH Royal Institute of Technology	A Mathematical Model of Neuronal Rewiring After Perturbation	Michelle Effros *George van Osdol Professor of Electrical Engineering*

O - Geological and Planetary Sciences 101 Schlinger 3:30 - 3:50 PM	***Yunhan Fang*** University of Michigan, Ann Arbor	Calcium Isotopes in Urine and Nail as a Tracer of Bone Health	François Tissot *Professor of Geochemistry; Investigator, Heritage Medical Research Institute* Theo J. Tacail *Postdoctoral Scholar Research Associate in Geochemistry* Rebecca J. Ryan *Postdoctoral Scholar Research Associate in Geochemistry*
I - Control and Dynamical Systems & Aeronautics 133 Guggenheim 1:20 - 1:40 PM	***Baaqer M. Farhat*** *Chung Ip Wing-Wah Memorial SURF Fellow*	Perception-Based Collision Avoidance for Multi-Agent Systems	Soon-Jo Chung *Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL* Aaron D. Ames *Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems*
U - Physics 107 Downs 4:30 - 4:50 PM	***Kenji P. Farrell***	Developing an Image Simulator for the Ultraviolet Explorer (UVEX) Mission	Fiona A. Harrison *Harold A. Rosen Professor of Physics* Soumyadeep Bhattacharjee *Graduate Student in Astrophysics*
Q - Astronomy B119 Baxter 1:40 - 2:00 PM	***Ethan Feng*** *Ray F. Jurgens SURF Fellow*	Incorporating Uncertainty in the Radio Interferometry Measurement Equation	Gregg W. Hallinan *Professor of Astronomy* Ruby L. Byrne *Postdoctoral Scholar Research Associate in Astronomy*
C - Chemistry 147 Noyes 3:50 - 4:10 PM	***Camilla Fezzi*** *John Stauffer SURF Fellow*	Engineering Native N-Terminal Access to a Membrane Enzyme: Dual Strategies for Structural Isolation of HyMraY	William M. Clemons, Jr. *Arthur and Marian Hanisch Memorial Professor of Biochemistry* Beebee Yusrah Kaudeer *Graduate Student in Chemistry*
T - Physics 103 Downs 3:50 - 4:10 PM	***Aura H. Gamez*** Pasadena City College *Carl F. Braun WAVE Fellow*	Characterizing the Intrinsic Three Dimensionality of CHEX-MATE Galaxy Clusters Using the Sunyaev-Zel'dovich Effect	Jack Sayers *Research Professor of Physics* Adriana Gavidia *Graduate Student in Physics*

M - Medical Engineering and Electrical Engineering 142 Keck 4:30 - 4:50 PM	***Said M. Garcia*** *Class of '52 70th Reunion SURF Fellow*	SCOS-CBO: A Miniaturized Dual-wavelength Device for Simultaneous and Non-invasive Measurements of Cerebral Blood Flow, Volume, and Oxygenation	Changhuei Yang *Thomas G. Myers Professor of Electrical Engineering, Bioengineering, and Medical Engineering; Investigator, Heritage Medical Research Institute* Simon Mahler *Postdoctoral Scholar Research Associate in Electrical Engineering*
P - Humanities and Social Sciences 128 Baxter 3:50 - 4:10 PM	***Henry N. Gaston*** *David C. Elliot SURF Fellow*	Deep Learning for Wetland Regulation Enforcement	Hannah Druckenmiller *Assistant Professor of Economics; William H. Hurt Scholar*
H - Computer Science 224 Jorgensen 3:30 - 3:50 PM	***Akshay Ghandikota*** Brown University	Neural Operators for Wildfire Forecasting	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Jiachen Yao *Graduate Student in Computing and Mathematical Sciences*
U - Physics 107 Downs 1:40 - 2:00 PM	***Jackson C. Glass*** University of Virginia *KNI SURF-the-WAVE Prize Fellow*	Investigation of In-situ Iron Doping and Ferromagnetism in 2-dimensional MoS2	Nai-Chang Yeh *Thomas W. Hogan Professor of Physics* Daniel Anderson *Graduate Student in Materials Science*
L - Mechanical Engineering 100 Powell-Booth 3:10 - 3:30 PM	***Alexander T. Gogola*** *Mark Reinecke SURF Fellow*	Robotic Arm for Autonomous Electrical Panel Inspection and Repairs	Joel W. Burdick *Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering and Bioengineering; Research Scientist, JPL* Yacine Derder *Assistant Research Engineer in Mechanical and Civil Engineering*
B - Biology 127 Baxter 2:00 - 2:20 PM	***Zeynep Goktepe*** *James G. and Elaine Peterson SURF Fellow*	Investigating Neural and Physiological Synchronization During Cooperative Gameplay	Shinsuke Shimojo *Gertrude Baltimore Professor of Experimental Psychology* Katelyn Haly *Graduate Student in Neurobiology*

R - Astronomy B125 Baxter 2:20 - 2:40 PM	***Maria F. Gonzalez***	Modeling Core-collapse Supernovae Beyond Shock Breakout	David Vartanyan *NASA Hubble Fellow, Carnegie Observatories* James. W. Fuller *Assistant Professor of Theoretical Astrophysics* Daichi Tsuna *Sherman Fairchild Postdoctoral Scholar Research Associate in Theoretical Physics*
I - Control and Dynamical Systems & Aeronautics 133 Guggenheim 1:40 - 2:00 PM	***Agnes M. Göransson*** Lund University	Toward Shoreline-aware Thermal Water Segmentation for UAVs in Near-shore Environments	Soon-Jo Chung *Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL* Matthew Anderson *Staff Scientist in Computing and Mathematical Sciences* Joshua Cho *Research Engineer in Aerospace* Anahita Eshghetorki *Graduate Student in Mechanical Engineering*
N - Geological and Planetary Sciences B133 Baxter 3:50 - 4:10 PM	***Sadik O. Görgü*** *Saul and Joan Cogen Memorial SURF Fellow*	A Quality Mesh of the Global Ocean for Simulations of the Overturning Circulation	Jörn Callies *Professor of Oceanography and Environmental Science* Henry Peterson *Graduate Student in Environmental Science and Engineering*
T - Physics 103 Downs 1:40 - 2:00 PM	***Charvi Goyal*** *Larson Scholar*	A Quasi-polynomial-time Classical Algorithm for Lindbladian Evolution	John P. Preskill *Richard P. Feynman Professor of Theoretical Physics* Thomas Schuster *Sherman Fairchild Postdoctoral Scholar Research Associate in Theoretical Physics*
T - Physics 103 Downs 3:10 - 3:30 PM	***Suvinay Goyal*** University of Illinois at Urbana-Champaign	Commissioning a 100 mK ADR Cryostat for CMB and Line-Intensity Mapping Applications	James J. Bock *Marvin L. Goldberger Professor of Physics; Senior Research Scientist, JPL* Kenny Lau *Postdoctoral Scholar Research Associate in Physics*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Sofia H. Granieri*** University of Notre Dame *Information Science and Technology (IST) Venerable WAVE Fellow*	Oxygen Generating Smart Bandage for Wound Management	Wei Gao *Professor of Medical Engineering; Investigator, Heritage Medical Research Institute; Ronald and JoAnne Willens Scholar* Kexin Fan *Graduate Student in Medical Engineering*
D - Chemistry 153 Noyes 2:50 - 3:10 PM	***Zoe R. Grogan*** Scripps College	Designing Mechanophore-containing Polymers for Targeted Release of Molecular Cargoes	Maxwell J. Robb *Assistant Professor of Chemistry* Liam A. Ordner *Graduate Student in Chemistry*
P - Humanities and Social Sciences 128 Baxter 3:10 - 3:30 PM	***Pranit S. Gunjal*** *Mr. Alan Menezes and Dr. Karsyn Bailey SURF Fellow*	Exploring Synthetic Conversational Data With LLMs Under Privacy Constraints	R. Michael Alvarez *Flintridge Foundation Professor of Political and Computational Social Science* Rafal D. Kocielnik *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences*
S - Mathematics 102 Spalding Lab 3:50 - 4:10 PM	***Enoch J. Guo***	The Ramanujan-Petersson Question for Noncongruence and Vector-valued Modular Forms	Vesselin A. Dimitrov *Professor of Mathematics*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Amudhan S. Gurumoorthy*** *Thomas Hunt Morgan SURF Fellow*	Observing Sleep Behavior Within Zebrafish Using Clustering	David Prober *Professor of Biology* Yun Chiu *Graduate Student in Neurobiology*
Q - Astronomy B119 Baxter 3:10 - 3:30 PM	***Daria S. Hajimiri*** Stanford University	Investigating Dust Production in Two Unusual Supernovae With JWST	Mansi M. Kasliwal *Professor of Astronomy* Jacob Jencson *Staff Scientist in IPAC*
Q - Astronomy B119 Baxter 3:50 - 4:10 PM	***Charis M. Hall*** *Doris Everhart SURF Fellow*	Finalizing the Characterization of Lyα Emission From a Sample of Low Luminosity, Broad-line QSOs With KCWI	Charles C. Steidel *Lee A. DuBridge Professor of Astronomy* Evan Nuñez *Postdoctoral Scholar in Astrophysics*

H - Computer Science 224 Jorgensen 4:30 - 4:50 PM	***Kailen A. Hargenrader*** *Toni and Bob Perpall SURF Fellow*	Faster Attention for Large Language Models	Yisong Yue *Professor of Computing and Mathematical Sciences* Ivan D. Jimenez Rodriguez *Graduate Student in Computing and Mathematical Sciences*
D - Chemistry 153 Noyes 2:20 - 2:40 PM	***Ruchira S. Hariharan*** Cornell University	A Data-Driven Approach Towards the Electrochemical Nickel-Catalyzed Reductive Cross-Coupling of Piperidines	Sarah E. Reisman *Bren Professor of Chemistry*
I - Control and Dynamical Systems & Aeronautics 133 Guggenheim 2:00 - 2:20 PM	***Narek Harutyunyan*** Brown University	ContractionPPO: Certified Reinforcement Learning via Differentiable Contraction Layers	Soon-Jo Chung *Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL* Matthew Anderson *Staff Scientist in Computing and Mathematical Sciences*
B - Biology 127 Baxter 2:50 - 3:10 PM	***Olivia M. Hatcher*** *Susan S. Murakami SURF Fellow*	Investigating the Contribution of the zfh1 Protein to the Polarity in the Collective Cell Migration of the Caudal Visceral Mesoderm in *Drosophila*	Angelike Stathopoulos *Professor of Biology* Jingjing Sun *Research Scientist in Biology and Biological Engineering*
I - Control and Dynamical Systems & Aeronautics 133 Guggenheim 3:30 - 3:50 PM	***Mason M. Holmes*** Johns Hopkins University *Carl F. Braun WAVE Fellow*	High-throughput, High-strain-rate Material Testing and Characterization via Automated Rapid Direct Impact Tester (ARDIT) for Predictive Modeling	Guruswami Ravichandran *John E. Goode, Jr., Professor of Aerospace and Mechanical Engineering* Aditya B. Shedge *Graduate Student in Mechanical Engineering*
O - Geological and Planetary Sciences 101 Schlinger 3:10 - 3:30 PM	***Natalie R. Homyk*** University of California, Berkeley	Flume Experiments on Cohesive Riverbank Width	Michael P. Lamb *Professor of Geology* Kimberly L. Miller *Laboratory Manager in Geology and Geochemistry* Tingan Li *Postdoctoral Scholar Research Associate in Geology*
G - Computer Science 109 Jorgensen 1:40 - 2:00 PM	***Ryan L. Hsiang*** National Taiwan University *BaBar SURF Fellow*	LeanLibrary: A Unified Framework for Theorem Proving in Lean 4	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Robert Joseph George *Graduate Student in Computing and Mathematical Sciences*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Ying-Hsin Hsiao*** National Taiwan University *BaBar SURF Fellow*	Investigation of the Cancer Cell Resistance Mechanisms to p97/VCP ATPase Inhibitor via Single-Cell and Bulk Phosphoproteomics	Tsui-Fen Chou *Research Professor of Biology and Biological Engineering* Marion Wan Rion Pang *Graduate Student in Bioengineering*
O - Geological and Planetary Sciences 101 Schlinger 4:10 - 4:30 PM	***Cheng-an Hsieh*** National Taiwan University *BaBar SURF Fellow*	The Influence of Transport on Chemistry in the Middle Atmosphere of Venus	Yuk L. Yung *Professor of Planetary Science; Senior Research Scientist, JPL* Ting Juan Liao *Graduate Student in Planetary Science*
M - Medical Engineering and Electrical Engineering 142 Keck 1:00 - 1:20 PM	***Renee C. Hsu*** *Dr. David G. Goodwin SURF Fellow*	Creating a Wearable, Non-invasive Sebum Sensor for Solid-state Cholesterol Detection	Wei Gao *Professor of Medical Engineering; Investigator, Heritage Medical Research Institute; Ronald and JoAnne Willens Scholar* Shadman Khan *Postdoctoral Scholar Fellowship Trainee in Medical Engineering*
L - Mechanical Engineering 100 Powell-Booth 4:50 - 5:10 PM	***Annie M. Hu*** *Crook Family SURF Fellow*	Towards the Design of an Ultra-high Vacuum Compatible Inductively Coupled Plasma (ICP) Source	Austin J. Minnich *Professor of Mechanical Engineering and Applied Physics* Mete Bayrak *Graduate Student in Chemical Engineering*
I - Control and Dynamical Systems & Aeronautics 133 Guggenheim 2:20 - 2:40 PM	***Hongyi Hu*** *Class of '52 SURF Fellow*	Investigating Map-free Thermal Navigation for Aerial Robots in Low-light, Over-water Environments Using Imitation Learning From Traditional Planners	Soon-Jo Chung *Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL* Xingxing Zuo *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences* Nikhil Ranganathan *Graduate Student in Aerospace*
U - Physics 107 Downs 2:50 - 3:10 PM	***Yifan Hu*** Imperial College London	Hard X-ray Contribution in AU Mic Flares and Its Minor Role in Atmospheric Escape	Murray Brightman *NuSTAR Science Operations Specialist*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Elizabeth Huber*** Columbia University *Rev. Dr. Everett Howe and Dr. Isabella Furth WAVE Fellow*	SFB Power Spectrum Emulator: Spherical Fourier-Bessel Power Spectrum Emulation to Constrain Fundamental Cosmology	James J. Bock *Marvin L. Goldberger Professor of Physics; Senior Research Scientist, JPL* James Cheshire *David and Ellen Lee Postdoctoral Scholar Research Associate in Physics*
P - Humanities and Social Sciences 128 Baxter 2:50 - 3:10 PM	***Nishimwe Joise*** Wellesley College *Amgen Scholar*	Using Eye-Tracking to Investigate Social Attention in Autism	Ralph Adolphs *Bren Professor of Psychology, Neuroscience, and Biology* Brenna Outten *Graduate Student in Computation and Neural Systems*
L - Mechanical Engineering 100 Powell-Booth 2:00 - 2:20 PM	***Edward S. Ju*** *Øistein and Rita A. Skjellum SURF Fellow*	A Scalable Control-Barrier Function Framework for Real-Time Resilient Connectivity in UAV Swarms	Aaron D. Ames *Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems* Ryan M. Bena *Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering* Pio Ong *Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering*
V - Physics 269 Lauritsen 1:00 - 1:20 PM	***Raghava K. Kalidindi*** University of Maryland, College Park	Evaluating Quantum-Scale Dispersion Compensation via Pulse Compression and Hong-Ou-Mandel Interference	Maria Spiropulu *Shang-Yi Ch'en Professor of Physics* Venkata (Raju) Valivarthi *Research Scientist in Quantum Science and Technology*
I - Control and Dynamical Systems & Aeronautics 133 Guggenheim 3:50 - 4:10 PM	***Jason M. Kamau*** *M.A.Q. Lutful Haq SURF Fellow*	Advancing ASTM E659 Testing: Investigating and Optimization of the Current ASTM Testing Methods and Apparatus	Joseph E. Shepherd *C.L. "Kelly" Johnson Professor of Aeronautics and Mechanical Engineering* Charline Fouchier *Postdoctoral Scholar Fellowship Trainee in Aerospace*

G - Computer Science 109 Jorgensen 2:00 - 2:20 PM	***Minhyuk Kang*** Imperial College London	OrbNet-Materials: Orbital-based GNN for Materials Properties Prediction	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Beom Seok Kang *Graduate Student in Chemical Engineering*
A - Biology and Bioengineering 125 Baxter 2:00 - 2:20 PM	***Pei-yu Kao*** National Taiwan University *BaBar SURF Fellow*	Neural Crest Cells in Jaw Regeneration	Marianne Bronner *Edward B. Lewis Professor of Biology* Miyuki Suzuki *Postdoctoral Scholar Fellowship Trainee in Biology and Biological Engineering*
T - Physics 103 Downs 4:10 - 4:30 PM	***Waly M Z Karim*** University of Rochester	Searching for Pulsation in Low Mass Stars Using Supervised Learning Techniques	James W. Fuller *Assistant Professor of Theoretical Astrophysics* Rocio Kiman *Sherman Fairchild Postdoctoral Scholar Research Associate in Astronomy*
D - Chemistry 153 Noyes 4:30 - 4:50 PM	***Sigríður B. Karlsdóttir*** University of Iceland *Caltech-University of Iceland Exchange*	O-GlcNAc Transferase Activity and Protein-protein Interactions at Synapses	Linda C. Hsieh-Wilson *Milton and Rosalind Chang Professor of Chemistry; Merkin Institute Professor* Jamison Takashima *Graduate Student in Chemistry*
L - Mechanical Engineering 100 Powell-Booth 1:20 - 1:40 PM	***Timothy Kennedy*** Stevens Institute of Technology *Information Science and Technology (IST) Venerable WAVE Fellow*	LIP-guided Reinforcement Learning for Robust and Efficient Bipedal Locomotion	Aaron D. Ames *Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems* Kejun Li *Graduate Student in Computation and Neural Systems*

L - Mechanical Engineering 100 Powell-Booth 1:00 - 1:20 PM	***Raffi A. Khondaker*** University of Virginia	Real-time Occupancy Map Generation From Onboard LiDAR Data for Safety-critical Control	Aaron D. Ames *Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems* Ryan M. Bena *Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering* Gilbert Bahati *Graduate Student in Mechanical Engineering*
M - Medical Engineering and Electrical Engineering 142 Keck 2:50 - 3:10 PM	***Auriyon A. Khosravi*** *Captain Pradeep B. Suklikar Memorial SURF Fellow*	The Development of BLE Wireless Communication Between the 65-nm CMOS Fluorescence Sensor and Bacteria Cells	Azita Emami *Andrew and Peggy Cherng Professor of Electrical Engineering and Medical Engineering* Ting-Yu Cheng *Graduate Student in Electrical Engineering*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Dami Kim*** *Lester Lees Aeronautics SURF Fellow*	Sensor Fusion System for Infrared-based Fire Detection and Localization	Morteza Gharib *Hans W. Liepmann Professor of Aeronautics and Medical Engineering* Julian Humml *Postdoctoral Scholar Research Associate in Aerospace*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Jinsung Kim*** Seoul National University	Design and Simulation of an Acoustic Waveguide for Quasi-point Source Generation in Photoacoustic Tomography	Lihong Wang *Bren Professor of Medical Engineering and Electrical Engineering* Manxiu Cui *Graduate Student in Medical Engineering*

B - Biology 127 Baxter 1:40 - 2:00 PM	***Aurelia H. Kuester***	Mechanistic Insights Into the Binding of Girdin and Daple to Dynein Transport Machinery	Aga Kendrick *Assistant Professor of Biology, Salk Institute for Biological Studies* Rustem F. Ismagilov *Ethel Wilson Bowles and Robert Bowles Professor of Chemistry and Chemical Engineering; Merkin Institute Professor* Álvaro de la Gándara *Postdoctoral Fellow in Biology, Salk Institute for Biological Studies* Delaney Sanders *Research Assistant, Salk Institute for Biological Studies*
F - Chemical Engineering 113 Spalding Lab 1:00 - 1:20 PM	***Sudarshanagopal Kunnavakkkam*** *Arthur A. Noyes SURF Fellow*	Building Cell Radios for Deep-tissue Wireless Detection of Biochemical Factors	Mikhail G. Shapiro *Max Delbrück Professor of Chemical Engineering and Medical Engineering; Investigator, Howard Hughes Medical Institute* William Benman *Postdoctoral Scholar Research Associate in Chemical Engineering*
E - Chemistry and Chemical Engineering 106 Spalding Lab 1:20 - 1:40 PM	***Raquel G. Lample*** *Robb and Eunice Rutledge SURF Fellow*	Preparation of the Enolate Coupling Partner Towards the Total Synthesis of Sesquiterpenoid Dimer Natural Products	Brian M. Stoltz *Victor and Elizabeth Atkins Professor of Chemistry; Investigator, Heritage Medical Research Institute* Chloe Cerione *Graduate Student in Chemistry*
G - Computer Science 109 Jorgensen 2:50 - 3:10 PM	***Edgar A. Larios*** ITESM (Monterrey Campus)	Discovery and Parameter Estimation of PDEs Using Physics-informed Neural Networks (PINNs)	Franca Hoffmann *Assistant Professor of Computing and Mathematical Sciences* Aras Bacho *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences* Kathrin H. Hellmuth *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences*

I - Control and Dynamical Systems & Aeronautics 133 Guggenheim 2:50 - 3:10 PM	***Brandon Lee*** *Mary P. and Dean C. Daily SURF Fellow*	Extreme Amospheric Wind Sensing and Quantification for Adaptive Control of a Fixed-wing UAV	Morteza Gharib *Hans W. Liepmann Professor of Aeronautics and Medical Engineering* Xiaozhou Fan *Postdoctoral Scholar Research Associate in Aerospace*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Brendan D. Lee***	Quantifying Peak-shift Style Exaggeration in Comic Covers and Its Markeplace Signal	Colin F. Camerer *Robert Kirby Professor of Behavioral Economics* Katelyn Haly *Graduate Student in Neurobiology*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Andrea H. Li*** *Crook Family SURF Fellow*	Computational Framework for Predicting Acoustic Force Fields in Ultrasound Neuromodulation	Mikhail G. Shapiro *Max Delbrück Professor of Chemical Engineering and Medical Engineering; Investigator, Howard Hughes Medical Institute* Alen Pavlic *Postdoctoral Scholar Fellowship Trainee in Chemical Engineering*
T - Physics 103 Downs 2:20 - 2:40 PM	***Christine Li*** Columbia University	Universal High-rate Quantum Fault-tolerance via Transversal Dimension Jumping	John P. Preskill *Richard P. Feynman Professor of Theoretical Physics* Qian Xu *Sherman Fairchild Postdoctoral Scholar Research Associate in Theoretical Physics*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Xiang-Yu Li*** National Taiwan University *BaBar SURF Fellow*	Synthesizing and Examining the Novel Magnetic Topological Semimetals Properties of $TaCoTe_2$	Linda Ye *Assistant Professor of Physics* Tao Lu *Graduate Student in Physics*
D - Chemistry 153 Noyes 3:30 - 3:50 PM	***Yushan Li*** University of Illinois at Urbana-Champaign	Understanding the Mutagenic Bypass of HMCES Peptide Adduct	Daniel R. Semlow *Assistant Professor of Biochemistry; Ronald and JoAnne Willens Scholar*
S - Mathematics 102 Spalding Lab 4:30 - 4:50 PM	***Zhongyuan Li*** University of Cambridge *Caltech-Cambridge Exchange*	Investigation of the Generalisability of Reinforcement Learning Algorithms on Mathematical Environments by a Case Study of the Andrews-Curtis Conjecture	Sergei G. Gukov *John D. MacArthur Professor of Theoretical Physics and Mathematics* Muhammad A. Shehper *Research Scientist in Mathematics*

E - Chemistry and Chemical Engineering 106 Spalding Lab 3:10 - 3:30 PM	***Ethan N. Lin*** *John Stauffer SURF Fellow*	Biocatalytic Synthesis of Chiral Phosphonamides Using Engineered Heme Enzymes	Frances H. Arnold *Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry* Hayden Carder *Postdoctoral Scholar Fellowship Trainee in Chemical Engineering*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Ryan X. Lin*** University of Oxford	Searching for (Planetary) Nebulae in CLU PTF Hα Survey Using Segmentation and Machine Learning Algorithms	Shrinivas R. Kulkarni *George Ellery Hale Professor of Astronomy and Planetary Science* Soumyadeep Bhattacharjee *Graduate Student in Astrophysics*
H - Computer Science 224 Jorgensen 3:50 - 4:10 PM	***Thomas Y. Lin*** National Taiwan University *BaBar SURF Fellow*	Learning Physics Causality for Inverse PDEs in Generative Neural Operators	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Jiachen Yao *Graduate Student in Computing and Mathematical Sciences*
S - Mathematics 102 Spalding Lab 3:30 - 3:50 PM	***Yunhao Lou***	Shift Invariance in Half-space Last Passage Percolation and Directed Polymers	Lingfu Zhang *Professor of Mathematics*
A - Biology and Bioengineering 125 Baxter 3:30 - 3:50 PM	***Natalie J. Lytell*** *Laurence J. Stuppy SURF Fellow*	Exploring and Predicting the Combinatorial Effect of Cytokines on Downstream Signaling	Michael B. Elowitz *Roscoe Gilkey Dickinson Professor of Biology and Bioengineering; Investigator, Howard Hughes Medical Institute* Dayeon Shon *Postdoctoral Scholar Fellowship Trainee; Associate, Howard Hughes Medical Institute*
O - Geological and Planetary Sciences 101 Schlinger 4:30 - 4:50 PM	***Wenhao Lyu*** Nanjing University	A Study on the Responses of Ecosystems to Extreme Heatwaves Based on SIF Data	Yuk L. Yung *Professor of Planetary Science; Senior Research Scientist, JPL*

U - Physics 107 Downs 3:30 - 3:50 PM	***Robert J. Mailliard*** Indiana University Bloomington *WAVE Fellow*	Connecting the Dots: Searching for Little Red Dot Analogs in Nearby Bright Compact Galaxies	Fiona A. Harrison *Harold A. Rosen Professor of Physics* Peter Boorman *Postdoctoral Scholar Research Associate in Physics*
A - Biology and Bioengineering 125 Baxter 1:20 - 1:40 PM	***Darshana Marathe*** University of Cambridge *Caltech-Cambridge Exchange*	Evaluating and Characterising the Antibody Response to Mosaic RBD Nanoparticles as Novel Vaccine Candidates	Pamela J. Bjorkman *David Baltimore Professor of Biology and Biological Engineering; Merken Institute Professor* Jennifer R. Keeffe *Senior Research Scientist in Biology and Biological Engineering* Alexander Cohen *Postdoctoral Scholar Research Associate in Biology and Biological Enginering*
E - Chemistry and Chemical Engineering 106 Spalding Lab 2:50 - 3:10 PM	***Andrew S. Marriott*** University of Cambridge *Caltech-Cambridge Exchange*	Enantioselective Palladium-catalysed Methylation of Alpha-tetralones	Brian M. Stoltz *Victor and Elizabeth Atkins Professor of Chemistry; Investigator, Heritage Medical Research Institute* Sara Siddiqui *Graduate Student in Chemistry*
D - Chemistry 153 Noyes 3:50 - 4:10 PM	***Sophia R. Martinez-Whitman*** Fordham University *Southern California Edison WAVE Fellow*	Investigating the Non-canonical Binding Interface Between NEIL3 Glycosylase and PCNA	Daniel R. Semlow *Assistant Professor of Biochemistry; Ronald and JoAnne Willens Scholar* Richa Nigam *Postdoctoral Scholar Research Associate in Chemistry*
T - Physics 103 Downs 2:00 - 2:20 PM	***Arul R. Mazumder*** Carnegie Mellon University	Early Fault-Tolerant Quantum Algorithms for Matrix Functions via Trotter Extrapolation	John P. Preskill *Richard P. Feynman Professor of Theoretical Physics* Samson Wang *IQIM Postdoctoral Scholar Research Associate in Theoretical Physics*

K - Materials Science 104 Watson 1:00 - 1:20 PM	***Asher L. Medina*** *Kiyo and Eiko Tomiyasu SURF Scholar*	Development of a Microcontroller-Based System for Molecular Beam Epitaxy	Joseph L. Falson *Assistant Professor of Materials Science; William H. Hurt Scholar* Veronica Show *Graduate Student in Materials Science*
C - Chemistry 147 Noyes 1:40 - 2:00 PM	***Philip-David Medows*** *Donald Voet and Jerome Vinograd SURF Fellow*	Structural Characterization of PER2 Nuclear Import via the PER2-NLS2-mmKap-α2 Complex	André Hoelz *Mary and Charles Ferkel Professor of Chemistry and Biochemistry* Chia-Yu Chen *Postdoctoral Scholar Research Associate in Biology and Biological Engineering*
Q - Astronomy B119 Baxter 4:10 - 4:30 PM	***Ricardo J. Mendez*** Dartmouth College *Facebook WAVE Fellow*	Type II AGN at z~2-3	Charles C. Steidel *Lee A. DuBridge Professor of Astronomy*
D - Chemistry 153 Noyes 4:10 - 4:30 PM	***Jesus E. Mendoza*** University of Arizona *Chen Institute BrainWAVE Fellow*	Investigating the Substrate Specificity of O-GlcNAc Transferase (OGT)	Linda C. Hsieh-Wilson *Milton and Rosalind Chang Professor of Chemistry; Merkin Institute Professor* Maia Helterbrand *Graduate Student in Chemistry*
J - Applied Physics and Materials Science 125 Steele Lab 2:20 - 2:40 PM	***Fernando Milach Teixeira*** Iowa State University *Joseph Rhodes, Jr., WAVE Fellow*	Mechanical Characterization and Eutectic Impact on Additively Manufactured Ceramic Composites for Space Exploration	Katherine T. Faber *Simon Ramo Professor of Materials Science* Zachary C. Ahmad *Graduate Student in Materials Science*
T - Physics 103 Downs 1:00 - 1:20 PM	***Mikhail Mints*** *Arthur R. Adams SURF Fellow*	Fragmentation is Efficiently Learnable by Quantum Neural Networks	John P. Preskill *Richard P. Feynman Professor of Theoretical Physics* Eric R. Anschuetz *Sherman Fairchild Postdoctoral Scholar Research Associate in Theoretical Physics*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Marc Moroz*** Hampden-Sydney College *Chen Institute BrainWAVE Fellow*	Biochemical Characterization of UFD-3/PLAA Intrinsically Disordered Regions and Their Role in Neurodegenerative Pathogenesis	Tsui-Fen Chou *Research Professor of Biology and Biological Engineering* Yanping Qiu *Postdoctoral Scholar Research Associate in Biology and Biological Engineering*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Nabeeha W. Mubeen*** Colorado School of Mines	Assembly and Qualification of the Barrel Precision Timing Detector for the High Luminosity Upgrade of CMS at CERN	Maria Spiropulu *Shang-Yi Ch'en Professor of Physics* Soham Bhattacharya *Postdoctoral Scholar Research Associate in Physics*
V - Physics 269 Lauritsen 1:40 - 2:00 PM	***Ishani Mukherjee*** Stanford University	An Analytical Phase-Space Approach to Measurement Device Independent Quantum Key Distribution	Maria Spiropulu *Shang-Yi Ch'en Professor of Physics* Venkata (Raju) Valivarthi *Research Scientist in Quantum Science and Technology*
E - Chemistry and Chemical Engineering 106 Spalding Lab 3:30 - 3:50 PM	***Orna Mukhopadhyay*** *Reed and Ruth Brantley SURF Fellow*	Engineering Hemoproteins for Regiodivergent C-H Amination Toward Pyrrolidines and Piperidines Synthesis	Frances H. Arnold *Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry* Ziqi Li *Postdoctoral Scholar Research Associate in Chemical Engineering*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Stanley A. Muñoz*** University of California, Los Angeles *Center for Evolutionary Science EVO-WAVE Fellow*	Interrogating the AtGet3a-AtGet4 Interaction in the *Arabidopsis thaliana* Guided Entry of Tail-anchored Proteins (GET) Pathway	William M. Clemons, Jr. *Arthur and Marian Hanisch Memorial Professor of Biochemistry* Conner W. Wells *Graduate Student in Chemistry*
D - Chemistry 153 Noyes 2:00 - 2:20 PM	***Linus Z. Murphy*** University of California, Los Angeles	Circular Dichroism Action Spectroscopy for Precise Enantiomeric Excess Measurement	Mitchio Okumura *Professor of Chemical Physics* Leah Stevenson *Graduate Student in Chemistry*
L - Mechanical Engineering 100 Powell-Booth 4:30 - 4:50 PM	***Pat Mutia*** *Dr. Terry Cole SURF Fellow*	Analysis of Urban Seismic Signals From the Community Seismic Network (CSN) Using K-means Clustering	Monica D. Kohler *Research Professor in Mechanical and Civil Engineering*
Q - Astronomy B119 Baxter 2:20 - 2:40 PM	***Kshemaahna Nagi*** *Samuel P. and Frances Krown SURF Fellow*	A Machine Learning Approach to Surveying Solar Energetic Particle Time Profiles	Allan Labrador *Staff Scientist in the Space Radiation Lab* Ashish Mahabal *Deputy Director, Caltech Center for Data-Driven Discovery*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Neha Narayan*** University of Maryland, College Park	Hydroacoustic Analysis of the 2022-2023 Tanaga Island Seismic Unrest	Gabrielle Tepp *Staff Seismologist* Ross Parnell-Turner Robert Dziak Vaibhav Ingale
O - Geological and Planetary Sciences 101 Schlinger 1:00 - 1:20 PM	***Daphne B. Nea*** Pasadena City College	Developing Spectral Analysis Tools for WISER: Spectral Angle Mapper and Spectral Feature Fitting	Bethany L. Ehlmann *Professor of Planetary Science* Judy S. Adler *Operations Coordinator for IPAC* Joshua Garcia-Kimble *Schmidt Scholar*
H - Computer Science 224 Jorgensen 1:40 - 2:00 PM	***Tobjorn L. Nelson***	Restructuring Caltech's CS 2 to Spport Students of All Majors	Adam Blank *Teaching Professor of Computing and Mathematical Sciences*
N - Geological and Planetary Sciences B133 Baxter 1:40 - 2:00 PM	***Holly L. Nerurker Espinoza*** University of St Andrews	Hypervelocity Impact Ionisation of Europa-Relevant Ice Grains for SUDA Data Interpretation of NASA's Europa Clipper Mission	Paul D. Asimow *Eleanor and John R. McMillan Professor of Geology and Geochemistry* Bryana Henderson *Scientist, JPL* Sankhabrata Chandra *Member of the Technical Staff, JPL*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Holly L. Nerurker Espinoza*** University of St Andrews	Hypervelocity Impact Ionisation of Europa-Relevant Ice Grains for SUDA Data Interpretation of NASA's Europa Clipper Mission	Paul D. Asimow *Eleanor and John R. McMillan Professor of Geology and Geochemistry* Bryana Henderson *Scientist, JPL* Sankhabrata Chandra *Member of the Technical Staff, JPL*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Sophia C. Nicolella*** University of Texas at Austin *WAVE Fellow*	ULX Marks the Spot: Searching for Bright UV Emission Around Ultraluminous X-ray Sources	Fiona A. Harrison *Harold A. Rosen Professor of Physics* Hannah Earnshaw *NuSTAR Calibration and Data Scientist*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***John I. Ogbu*** Harvard University *KNI SURF-the-WAVE Prize Fellow*	Wireless Power Transfer System for Low Power, Millimeter Scale Implantable Biomedical Sensors	Azita Emami *Andrew and Peggy Cherng Professor of Electrical Engineering and Medical Engineering* Shengsheng Wang *Graduate Student in Electrical Engineering*
N - Geological and Planetary Sciences B133 Baxter 1:00 - 1:20 PM	***Jaden K. Olah*** Stanford University	Applications of Inverse Theory to Isotopic Data in Order to Elucidate Reaction Dynamics: Principles and Application to Simple Gas Phase Systems	John M. Eiler *Robert P. Sharp Professor of Geology and Geochemistry* Amy E. Hofmann *Research Scientist, JPL* Forrest McCann *Graduate Student in Geochemistry* Noam Lotem *Graduate Student in Geochemistry*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Amitesh Anand Pandey*** *Kirk and Marjory Dawson Family SURF Fellow*	Deep Learning and Coarse Graining on Discrete Element Simulation Data to Learn Constitutive Models for Granular Flow	Kaushik Bhattacharya *Howell N. Tyson, Sr., Professor of Mechanics and Materials Science* Lianghao Cao *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences* Harkirat Singh *Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering*
G - Computer Science 109 Jorgensen 2:20 - 2:40 PM	***Taeyang Park***	Partially Observable Model-Based Reinforcement Learning for Drag Reduction in Compressible Turbulent Flows	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Myrl Marmarelis *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences*
J - Applied Physics and Materials Science 125 Steele Lab 1:20 - 1:40 PM	***Carlton G. Passley*** Delaware State University	Low-Cost Multilayer Antireflective Coatings for Extra-Atmospheric Photovoltaics	Harry A. Atwater *Howard Hughes Professor of Applied Physics and Materials Science* Susana Torres-Londono *Graduate Student in Applied Physics*

B - Biology 127 Baxter 3:10 - 3:30 PM	***Amrita Pasupathy*** *Dale and Suzanne Burger SURF Fellow*	Exploring Single- and Multi-Modal Embedding Spaces Through Whole-Image and Component Representation Analysis	Matthew W. Thomson *Assistant Professor of Computational Biology; Investigator, Heritage Medical Research Institute*
R - Astronomy B125 Baxter 1:20 - 1:40 PM	***Ariana M. Pearson*** University of Waterloo	Implementation of a Control Algorithm for a Tip-tilt Mirror for Beam Jitter Correction	Dimitri P. Mawet *David Morrisroe Professor of Astronomy; Senior Research Scientist, JPL* Susan Redmond *David and Ellen Lee Postdoctoral Scholar Research Associate in Astronomy*
K - Materials Science 104 Watson 2:20 - 2:40 PM	***Tosten N. Pearson*** Brown University	3D-architected Electrodes for Zinc-ion Batteries	Julia R. Greer *Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering* Yingjin Wang *Graduate Student in Materials Science* Kaiyu Zhao *Graduate Student in Medical Engineering*
C - Chemistry 147 Noyes 3:30 - 3:50 PM	***Anya J. Peedle*** University of Cambridge	Verifying Hits for More Potent DNA2 Inhibitors in Colorectal Cancer	Judith L. Campbell *Professor of Chemistry and Biology* Eunny Bae *Research Scientist in Chemistry and Chemical Engineering*
O - Geological and Planetary Sciences 101 Schlinger 2:20 - 2:40 PM	***Emilia R. Pelegano-Titmuss*** CUNY Hunter College *Resnick Sustainability Institute (RSI) WAVE Fellow*	A Geologic Map of Isla Tortuga: A Contribution to the Volcanic History of the Guaymas Basin, Gulf of California (Mexico)	Joann M. Stock *Professor of Geology and Geophysics* Adriana Piña-Paez *Graduate Student in Geology*

G - Computer Science 109 Jorgensen 3:10 - 3:30 PM	***Cristian D. Peña*** Florida Atlantic University *Information Science and Technology (IST) Venerable WAVE Fellow*	Optimal Experimental Design for Jupiter's Radiation Belt	Franca Hoffmann *Assistant Professor of Computing and Mathematical Sciences* Aras Bacho *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences* Kathrin H. Hellmuth *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences*
N - Geological and Planetary Sciences B133 Baxter 2:50 - 3:10 PM	***Eric M. Pham*** University of California, San Diego	Understanding the Cloud-Aerosol Interactions in Stratocumulus Clouds Using the EDMF Framework	Tapio Schneider *Theodore Y. Wu Professor of Environmental Science and Engineering* Akshay Sridhar *Research Scientist in Environmental Science and Engineering* Anna B. Jaruga *Senior Research Scientist in the Global Environmental Center* Olivia Alcabes *Graduate Student in Environmental Science and Engineering* Sajjad Azimi *Staff Scientist in the Global Environmental Center*
K - Materials Science 104 Watson 1:20 - 1:40 PM	***Sesselja Picchietti*** University of Iceland *Caltech-University of Iceland Exchange*	Substrate-Induced Nonlinear Hall Effect in 2D Materials	Joseph L. Falson *Assistant Professor of Materials Science; William H. Hurt Scholar* Yanni Cho *Graduate Student in Applied Physics*
Q - Astronomy B119 Baxter 1:20 - 1:40 PM	***Andrew S. Qin***	An Interactive Framework for Determining Hypervelocity Star Origins in a Dynamic Galactic Potential	Ana Bonaca *Staff Astronomer, Carnegie Observatories* Kareem J. El-Badry *Assistant Professor of Astronomy*

Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Keaton A. Raney*** Abilene Christian University *Southern California Edison WAVE Fellow*	Analysis of the Dimethylallyl Radical Using Pulse Laser Photolysis Cavity Ring-down Spectroscopy	Mitchio Okumura *Professor of Chemical Physics* Kristen Roehling *Graduate Student in Chemistry*
J - Applied Physics and Materials Science 125 Steele Lab 3:50 - 4:10 PM	***Avani Ranka*** Swarthmore College	Study of Erbium Doping in Germano-silicate Photonic Integrated Circuits	Kerry J. Vahala *Ted and Ginger Jenkins Professor of Information Science and Technology and Professor of Applied Physics* Haojing Chen *Postdoctoral Scholar Research Associate in Applied Physics and Materials Science*
E - Chemistry and Chemical Engineering 106 Spalding Lab 1:00 - 1:20 PM	***Sophia Razavi*** University of California, Berkeley *Amgen Scholar*	Radical-Based Deoxygenation of Alcohols via Visible-Light Irradiation of a Titanium-Porphyrin Complex	Brian M. Stoltz *Victor and Elizabeth Atkins Professor of Chemistry; Investigator, Heritage Medical Research Institute* Benjamin Gross *Graduate Student in Chemistry*
F - Chemical Engineering 113 Spalding Lab 2:20 - 2:40 PM	***Ian E. Rocha*** Northeastern University *Resnick Sustainability Institute (RSI) WAVE Fellow*	Development of a Microfluidic Platform for Uniform Cell-Laden Hydrogel Spheres	Julia A. Kornfield *Elizabeth W. Gilloon Professor of Chemical Engineering* Raj S. Mukkamala *Graduate Student in Chemical Engineering* Rohit Srikanth *Graduate Student in Medical Engineering*
R - Astronomy B125 Baxter 2:00 - 2:20 PM	***Hannah Röttgen*** Ludwig-Maximilians-University (LMU)	Enhancing Binary Black Hole Simulations Through Adaptive Mesh Refinement	Saul A. Teukolsky *Robinson Professor of Theoretical Astrophysics* Mark A. Scheel *Research Professor of Physics* Nils Vu *Sherman Fairchild Postdoctoral Scholar Research Associate in Theoretical Astrophysics*

D - Chemistry 153 Noyes 1:20 - 1:40 PM	***Dennis Rui*** Northwestern University *Amgen Scholar*	Elucidation of cpSRP43-GUN4 Protein Dynamics Through Proximity-Based Biophysical Techniques	Shu-ou Shan *Altair Professor of Chemistry* Alex R. Siegel *Senior Postdoctoral Scholar Research Associate in Chemistry* Yelim Yi *Postdoctoral Scholar Research Associate in Chemistry*
L - Mechanical Engineering 100 Powell-Booth 3:50 - 4:10 PM	***Rodolfo A. Ruiz*** University of California, Los Angeles *Carl F. Braun WAVE Fellow*	Numerical Simulation and Analysis of Homogenized Material Properties Arising From Random Microstructures	Kaushik Bhattacharya *Howell N. Tyson, Sr., Professor of Mechanics and Materials Science* Harkirat Singh *Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering*
B - Biology 127 Baxter 1:20 - 1:40 PM	***Katelyn A. Sadorf*** *Bristol-Myers SURF Fellow*	Investigating the Role of Cortical Structures in Spatial Learning and Navigation Using Acortical Mice	Markus Meister *Anne P. and Benjamin F. Biaggini Professor of Biological Sciences* Jieyu Zheng *Graduate Student in Neurobiology*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Efe Sakarya*** *Kiyo and Eiko Tomiyasu SURF Scholar*	Developing a System to Optimize Microbial Carbon Fixation	Victoria J. Orphan *James Irvine Professor of Environmental Science and Geobiology* Madison Dunitz *Graduate Student in Geobiology*
A - Biology and Bioengineering 125 Baxter 4:10 - 4:30 PM	***Ameerah O. Saliu*** University of Cambridge *Caltech-Cambridge Exchange*	Engineering a Non-immunogenic Drug-inducible Vector System for Self-replicating RNA Vaccine Delivery	Bruce A. Hay *Professor of Biology*
R - Astronomy B125 Baxter 1:40 - 2:00 PM	***Sage J. Santomenna*** Pomona College	Refined Characterization of Brown Dwarf Binary Gliese 229B With Sika	Dimitri P. Mawet *David Morrisroe Professor of Astronomy; Senior Research Scientist, JPL* Jerry Xuan *Graduate Student in Astrophysics*

J - Applied Physics and Materials Science 125 Steele Lab 1:40 - 2:00 PM	***Siam Sarower*** Kennesaw State University *Southern California Edison WAVE Fellow*	Mode-resolved Study of Electron-phonon Interactions in Monolayer and Bilayer MoS2	Marco Bernardi *Professor of Applied Physics, Physics, and Materials Science* David Abramovitch *Graduate Student in Applied Physics*
A - Biology and Bioengineering 125 Baxter 3:10 - 3:30 PM	***Raquel S. Schlichting*** University of California, Los Angeles *Chen Institute BrainWAVE Fellow*	Effects of Oxytocin Receptor Knockdown in Cholecystokinin A Receptor-expressing Neurons in the Ventromedial Ventrolateral Hypothalamus on Female Sexual Learning and Motivation in Female Mice	David J. Anderson *Seymour Benzer Professor of Biology; Investigator, Howard Hughes Medical Institute* Emma Boxer *Postdoctoral Scholar Fellowship Trainee in Biology and Biological Engineering*
G - Computer Science 109 Jorgensen 4:10 - 4:30 PM	***Lennart A. Scholz*** Leibniz University Hannover	Kernelized Stable Fluids for Simulating Physically Accurate Solutions	Houman Owhadi *Professor of Applied and Computational Mathematics and Control and Dynamical Systems* Aras Bacho *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Hanna P. Shan*** California State University, Los Angeles *Amgen Scholar*	Synthesis of Multimechanophore Polymers for the Controlled Release of COS With a Fluorescent Reporter and for Separate Luminescent Systems	Maxwell J. Robb *Assistant Professor of Chemistry* Yu Ling Tseng *Graduate Student in Chemistry*
B - Biology 127 Baxter 2:20 - 2:40 PM	***Ridah S. Shanavas*** *Dr. Jane Chen SURF Fellow*	Building Towards Predictive Modeling of Team Flow Based on Solo Flow Across Cognitive Abilities	Shinsuke Shimojo *Gertrude Baltimore Professor of Experimental Psychology* Mohammad Shehata *Visiting Associate in Biology and Biological Engineering*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Erh-Wei Sheng*** National Tsing Hua University *BaBar SURF Fellow*	cuEquivariance Implementation of OrbNet-Equi for Accelerated Orbital Learning and Foundation-Scale Training	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Beom Seok Kang *Graduate Student in Chemical Engineering*
A - Biology and Bioengineering 125 Baxter 4:30 - 4:50 PM	***Xiaorui Shi*** Tsinghua University	A DNA-based Linear Classifier for Sequential Analog Signals	Lulu Qian *Professor of Bioengineering* Matthew Plazola *Graduate Student in Bioengineering*

N - Geological and Planetary Sciences B133 Baxter 3:30 - 3:50 PM	***Alyssa H. Shin*** *The Associates SURF Fellow*	Evaluating the Ecological Utility of Bulk Oxygen Isotopes in Western Amazonian Mammal Enamel	Julia Tejada *Assistant Professor of Geobiology* Joshua S. Anadu *Graduate Student in Geobiology*
N - Geological and Planetary Sciences B133 Baxter 4:10 - 4:30 PM	***Sanskriti Shindadkar*** University of California, Los Angeles	Modeling Methane Flux for Long-term Organic Carbon Sequestration	Alex L. Sessions *Nico and Marilyn van Wingen Professor of Geobiology* Madison Dunitz *Graduate Student in Geobiology*
Q - Astronomy B119 Baxter 2:00 - 2:20 PM	***Grace Showerman*** Michigan State University *Firuza Foundation WAVE Fellow*	Investigating the Origin of Radio Emission in SN 2021bmf: Off-axis GRB or Circumstellar Interaction?	Gregg W. Hallinan *Professor of Astronomy* Jessie M. Miller *Graduate Student in Astrophysics*
C - Chemistry 147 Noyes 2:00 - 2:20 PM	***Talaysha S. Simonds*** *Edward W. Hughes SURF Fellow*	Nucleocytoplasmic Transport of Circadian Clock Proteins	André Hoelz *Mary and Charles Ferkel Professor of Chemistry and Biochemistry* Sabrina Doerrich *Graduate Student in Chemistry*
D - Chemistry 153 Noyes 1:40 - 2:00 PM	***Shreya Sivaramakrishnan*** Shiv Nadar Institution of Eminence	Enzymatic In-Situ Generation of Silylium Ions via Protodesilylation of Allylsilanes	Hosea Nelson *Professor of Chemistry* Kunal Jha *Postdoctoral Scholar Research Associate in Chemistry*
S - Mathematics 102 Spalding Lab 2:50 - 3:10 PM	***David Skigin*** University College London	Estimating Stationary Distributions of Hopf Algebra Markov Chains in Merge	Matilde Marcolli *Robert F. Christy Professor of Mathematics and Computing and Mathematical Sciences*
E - Chemistry and Chemical Engineering 106 Spalding Lab 2:00 - 2:20 PM	***Neiman C. Sneed*** North Carolina Central University *Preer WAVE Fellow*	Selectivity in Palladium-Catalyzed CDC of Substituted Pyrroles for (+)-Cyanocycline A Synthesis	Brian M. Stoltz *Victor and Elizabeth Atkins Professor of Chemistry; Investigator, Heritage Medical Research Institute* Bryce E. Gaskins *Graduate Student in Chemistry*

R - Astronomy B125 Baxter 3:10 - 3:30 PM	***Sam W. Solod*** DePaul University	Spectral-motivated Grid Refinement Criterion for GRMHD Simulations	Elias R. Most *Assistant Professor of Theoretical Astrophysics* Nils Vu *Sherman Fairchild Postdoctoral Scholar Research Associate in Theoretical Astrophysics* Yoonsoon Kim
T - Physics 103 Downs 3:30 - 3:50 PM	***Dallin E. Soukup*** *Dr. Alan Weinstein SURF Fellow*	Evaluating the Feasibility of External Tracers of Aurora Contamination in SPHEREx Data	James J. Bock *Marvin L. Goldberger Professor of Physics; Senior Research Scientist, JPL* Chi Nguyen *Postdoctoral Scholar Research Associate in Physics*
L - Mechanical Engineering 100 Powell-Booth 4:10 - 4:30 PM	***Emily A. Stanton*** *Rita A. and Øistein Skjellum SURF Fellow*	Engineering and Analysis of Guayule Latex-Algae Biocomposites for Sustainable Material Applications	Chiara Daraio *G. Bradford Jones Professor of Mechanical Engineering and Applied Physics; Investigator, Heritage Medical Research Institute* Siddharth Premnath *Graduate Student in Chemical Engineering*
R - Astronomy B125 Baxter 3:30 - 3:50 PM	***Melvin Storbacka*** KTH Royal Institute of Technology	A Reaction Network for Probing Strangeness Equilibration in Neutron Star Mergers	Elias R. Most *Assistant Professor of Theoretical Astrophysics* Jiaxi Wu *Graduate Student in Physics*
N - Geological and Planetary Sciences B133 Baxter 2:00 - 2:20 PM	***Lily P. Strange*** University of California, Santa Barbara *Center for Environmental Microbial Interactions (CEMI) WAVE Fellow*	Methane Mosaics: Architecture of ANME-SRB Mat Aggregates	Victoria J. Orphan *James Irvine Professor of Environmental Science and Geobiology* Daniel Utter *Postdoctoral Scholar Research Associate in Biology and Biological Engineering*
E - Chemistry and Chemical Engineering 106 Spalding Lab 4:50 - 5:10 PM	***Anupama Subramanian*** University of Texas at Austin *Amgen Scholar*	Optimizing the Gas Diffusion Electrode for Lithium Mediated Nitrogen Reduction	Karthish Manthiram *Professor of Chemical Engineering and Chemistry; William H. Hurt Scholar* Gangsan Lee *Postdoctoral Scholar Fellowship Trainee in Chemical Engineering*

A - Biology and Bioengineering 125 Baxter 2:20 - 2:40 PM	***Adeline L. Sun*** University of California, Los Angeles *Amgen Scholar*	Understanding Contributions of Mitochondrial Translocase of the Outer Membrane (TOM) to the Integrated Stress Response Under Iron Deficient Conditions	David C. Chan *Harold and Violet Alvarez Professor of Biology* Yogaditya Chakrabarty *Senior Postdoctoral Scholar in Biology and Biological Engineering*
B - Biology 127 Baxter 4:10 - 4:30 PM	***Marton Szabo*** University of Cambridge *Caltech-Cambridge Exchange*	In Vitro Translation and Aminoacylation of Bpa-tRNA(UAG) for Cotranslational Incorporation of a Site-specific Photo-crosslinker	Rebecca M. Voorhees *Assistant Professor of Biology and Biological Engineering; Investigator, Heritage Medical Research Institute* Lena Bogeholz
J - Applied Physics and Materials Science 125 Steele Lab 4:30 - 4:50 PM	***Jamie Talmor*** Oberlin College *KNI SURF-the-WAVE Prize Fellow*	Fabrication of Helical Trilayer Graphene, a Two-dimensional Material With Exotic Electronic and Topological Properties	Stevan Nadj-Perge *Professor of Applied Physics and Materials Science*
R - Astronomy B125 Baxter 1:00 - 1:20 PM	***Yann C. Terrien*** Institut d'Optique Graduate School	Precision Light Control and Tracking for High-resolution Infrared Spectroscopy at the Diffraction Limit With Keck-HISPEC	Dimitri P. Mawet *David Morrisroe Professor of Astronomy; Senior Research Scientist, JPL* Ashley Baker *Instrument Scientist in Astrophysics* Nemanja Jovanovic *Lead Instrument Scientist in Astronomy*
H - Computer Science 224 Jorgensen 2:00 - 2:20 PM	***Apoorva V. Thanvantri*** *Mary Atwater SURF Fellow*	Improving EV Aggregate Flexibility With End-to-end Learning	Adam C. Wierman *Carl F Braun Professor of Computing and Mathematical Sciences* Christopher T. Yeh *Graduate Student in Computing and Mathematical Sciences* Nicolas Christianson *Postdoctoral Scholar in Computing and Mathematical Sciences*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Jordan L. Threat*** *DaRin Butz SURF Fellow*	Experimental Characterization of Ice Spheres Formed Through Fluid Fragmentation and Flash Freezing	Xiaojing Ruby Fu *Assistant Professor of Mechanical and Civil Engineering* Nathan Jones *Graduate Student in Mechanical Engineering*

G - Computer Science 109 Jorgensen 3:30 - 3:50 PM	***Owen M. Tolbert*** University of Maryland, Baltimore County *Information Science and Technology (IST) Venerable WAVE Fellow*	A Survey of Data-Driven Techniques for Network Inference	Andrew M. Stuart *Bren Professor of Computing and Mathematical Sciences* George Stepaniants *Postdoctoral Scholar Fellowship Trainee in Computing and Mathematical Sciences*
U - Physics 107 Downs 1:00 - 1:20 PM	***Josephine A. Tsai*** Princeton University	Disorder-induced Gapping of the Soft Electronuclear Mode in an Ising Magnet	Thomas F. Rosenbaum *President; Professor of Physics* Daniel Silevitch *Research Professor of Physics*
M - Medical Engineering and Electrical Engineering 142 Keck 3:50 - 4:10 PM	***Deven K. Tseng*** University of California, Santa Barbara *KNI SURF-the-WAVE Prize Fellow*	Optimizing Electrode and Cladding Design for High-efficiency Lithium Niobate Electro-optic Modulators	Alireza Marandi *Professor of Electrical Engineering and Applied Physics* Benjamin Gutierrez *Graduate Student in Applied Physics*
C - Chemistry 147 Noyes 1:20 - 1:40 PM	***Annalissa Valdez*** California State University, Los Angeles *Carl F. Braun WAVE Fellow*	Expanding the Scope of C(sp2)-F Bond Activation Processes Facilitated by Light-absorbing Ni-based Complexes	Ryan G. Hadt *Assistant Professor of Chemistry* Jake Rothbaum *Postdoctoral Scholar Research Associate in Chemistry* Maria Blankemeyer *Graduate Student in Chemistry*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Shuyu W. van Kerkwijk*** University of British Columbia	First Light and Characterization of the DSA-2000 Test Array	Vikram Ravi *Assistant Professor of Astronomy*
C - Chemistry 147 Noyes 4:10 - 4:30 PM	***Diego Antonio Velazquez Vargas*** Instituto Tecnológico de Tijuana *Center for Evolutionary Science EVO-WAVE Fellow*	Towards a Mechanistic Characterization of Type II Single Gene Lysis Proteins via *in vivo* and *in silico* Approaches	William M. Clemons, Jr. *Arthur and Marian Hanisch Memorial Professor of Biochemistry* Roujon Nowzari *Graduate Student in Biochemistry and Molecular Biophysics*

C - Chemistry 147 Noyes 1:00 - 1:20 PM	***Samhitha Venkat*** Georgia Institute of Technology *Liquid Sunlight Alliance (LiSA) WAVE Fellow*	Grand Canonical Quantum Mechanics Study for CO_2RR on PcFe MOF Catalyst	William A. Goddard III *Charles and Mary Ferkel Professor of Chemistry, Materials Science, and Applied Physics* Sejun Kim *Postdoctoral Scholar Research Associate in Chemistry*
A - Biology and Bioengineering 125 Baxter 1:40 - 2:00 PM	***Azucena K. Virgen*** University of California, Davis *Chen Institute BrainWAVE Fellow*	Investigating the Regenerative Capacity of the Craniofacial Neural Crest	Marianne Bronner *Edward B. Lewis Professor of Biology* Tatiana Solovieva *Postdoctoral Scholar Research Associate in Biology and Biological Engineering*
H - Computer Science 224 Jorgensen 1:00 - 1:20 PM	***Robert R. Walker***	x86-64 to ARM Assembly Language	Adam Blank *Teaching Professor of Computing and Mathematical Sciences* Ethan Ordentlich *Teaching Assistant Professor of Computing and Mathematical Sciences*
G - Computer Science 109 Jorgensen 3:50 - 4:10 PM	***Zirui Wang*** Peking University	Blow-up Senarios in the Keller-Segel System	Thomas Y. Hou *Charles Lee Powell Professor of Applied and Computational Mathematics* Xiang Qin *Graduate Student in Applied and Computational Mathematics*
H - Computer Science 224 Jorgensen 2:50 - 3:10 PM	***Miles M. Waugh*** University of California, Irvine	Fourier Neural Operators for Time Dynamics of Antiferromagnetic Mott Insulators	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Chuwei Wang *Graduate Student in Computing and Mathematical Sciences*
D - Chemistry 153 Noyes 1:00 - 1:20 PM	***Callum J. Wolvers*** University of Cambridge *Caltech-Cambridge Exchange*	Refinement of cpSRP43 Chaperone Variants via Secondary Directed Evolution in a Yeast Model of Parkinson's Disease	Shu-ou Shan *Altair Professor of Chemistry* Arpit Gupta *Postdoctoral Scholar Research Associate in Chemistry*

P - Humanities and Social Sciences 128 Baxter 4:30 - 4:50 PM	***Maxwell J. Woodruff Vale*** *Citadel Global Fixed Income SURF Fellow*	Modeling Human Threat Processing Using Immersive Virtual Reality and Multimodal Physiological Data Integration	Dean Mobbs *Professor of Cognitive Neuroscience* Noah S. Okada *Graduate Student in Social Science*
L - Mechanical Engineering 100 Powell-Booth 2:20 - 2:40 PM	***Logan A. Woudstra*** University of Alberta	System Identification to Improve Sim-to-real Transfer of Reinforcement Learning Policies for Humanoid Locomotion	Aaron D. Ames *Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems* Lizhi Yang *Graduate Student in Mechanical Engineering* Blake Werner *Graduate Student in Mechanical Engineering*
O - Geological and Planetary Sciences 101 Schlinger 1:40 - 2:00 PM	***Donglin Wu*** Yale University	Constraining Properties of Dust Formed in Wolf-Rayet Binary WR 112 Using Mid-infrared and Millimeter Observations	Konstantin Batygin *Professor of Planetary Science* Yinuo Han *Postdoctoral Scholar Research Associate in Planetary Science*
G - Computer Science 109 Jorgensen 4:30 - 4:50 PM	***Frank Y. Xiao*** *Arthur Rock SURF Fellow*	Coarse-to-Fine Diffusion Language Models	Pietro Perona *Allen E. Puckett Professor of Electrical Engineering* Rogerio Aristida Guimaraes *Graduate Student in Computation and Neural Systems*
P - Humanities and Social Sciences 128 Baxter 4:10 - 4:30 PM	***Allison Xin*** *J. Kent Clark SURF Fellow*	Modeling Incumbency Effects and Defeat Probabilities in US Congressional Elections	Jonathan N. Katz *Kay Sugahara Professor of Social Sciences and Statistics* Daniel Ebanks *Visitor in Social Sciences*
N - Geological and Planetary Sciences B133 Baxter 3:10 - 3:30 PM	***Claire Xu*** Brown University *Center for Evolutionary Science EVO-WAVE Fellow*	Examining the $\delta^{15}N$ Composition of Fungi and Lichen Amino Acids	Julia Tejada *Assistant Professor of Geobiology* Mattia Tagliavento *Postdoctoral Scholar Research Associate in Geochemistry*

M - Medical Engineering and Electrical Engineering 142 Keck 1:20 - 1:40 PM	***Isabel Xu*** *Dale and Suzanne Burger SURF Fellow*	Closed-loop Soft Bioelectronic Device Integrating Multimodal Sensing and Vagus Nerve Stimulation for Stress Management	Wei Gao *Professor of Medical Engineering; Investigator, Heritage Medical Research Institute; Ronald and JoAnne Willens Scholar* Dickson Yao *Graduate Student in Medical Engineering*
B - Biology 127 Baxter 3:30 - 3:50 PM	***Benjamin Y. Yang*** *Sidney and Nancy Petersen SURF Fellow*	Optimizing Machine Learning-enabled Spatial Barcodes for Pooled Optical Screens	David A. Van Valen *Assistant Professor of Biology and Biological Engineering; Investigator, Heritage Medical Research Institute; HHMI Freeman Hrabowski Scholar* Sam Holtzen *Postdoctoral Scholar Research Associate in Biology and Biological Engineering*
U - Physics 107 Downs 2:00 - 2:20 PM	***Cheng-Hsun Yang*** National Taiwan University *BaBar SURF Fellow*	Investigating Orbital Angular Momentum Light-induced Excitonic States in MoS_2 on Periodic Strained SiO_2 Nanoarray via Scanning Tunneling Microscopy and Photoluminescence	Nai-Chang Yeh *Thomas W. Hogan Professor of Physics* Jen-Te Chang *Graduate Student in Physics*
C - Chemistry 147 Noyes 2:20 - 2:40 PM	***Isabella H. Yang*** University of California, Los Angeles *Amgen Scholar*	Engineering Single-chain AMP-activated Protein Kinase Complexes to Investigate Metabolic Regulation and Hearing Loss	André Hoelz *Mary and Charles Ferkel Professor of Chemistry and Biochemistry* Michael S. Gruhne *Graduate Student in Chemistry*
E - Chemistry and Chemical Engineering 106 Spalding Lab 4:10 - 4:30 PM	***Kerui Yang*** University of Sydney	Function Conditioned Enzyme Generation With Masked Diffusion Language Models	Frances H. Arnold *Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry* Jason Yang *Graduate Student in Chemical Engineering*

V - Physics 269 Lauritsen 2:00 - 2:20 PM	***Yi Wei Yang*** *Gary Stupian SURF Fellow*	Distinguishing Dark Matter Substructure From the Stochastic Gravitational Wave Background in Pulsar Timing Correlations	Kathryn M. Zurek *Professor of Theoretical Physics* Kim V. Berghaus *Sherman Fairchild Postdoctoral Scholar Research Associate in Theoretical Physics*
H - Computer Science 224 Jorgensen 4:10 - 4:30 PM	***Dean Yao***	Forecasting Alzheimer's Disease Progression Using Brain-Age Slopes and Longitudinal MRI	Pratik Chaudhari *Assistant Professor of Electrical and Systems Engineering, University of Pennsylvania* Elena Mantovan *Taussky-Todd-Lonergan Professor of Mathematics*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Wenting Ye*** Emory University	Expanding the CRISPR-Based Toolkit for *in vivo* Gene Editing in Mammalian Systems	David J. Anderson *Seymour Benzer Professor of Biology; Investigator, Howard Hughes Medical Institute*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Kenneth J. Yi*** *J. Weldon Green SURF Fellow*	The Thermoelectric Measurements of Ferromagnetic Quantum Materials	Linda Ye *Assistant Professor of Physics* Takashi Kurumaji *Research Professor in Physics*
N - Geological and Planetary Sciences B133 Baxter 1:20 - 1:40 PM	***Audrey Yin*** University of Virginia *Southern California Edison WAVE Fellow*	Constraining the Lithification Conditions for Martian Regolith Breccia Using Shock Recovery Experiments	Paul D. Asimow *Eleanor and John R. McMillan Professor of Geology and Geochemistry* Jinping Hu *Staff Scientist in Geology and Geochemistry*
O - Geological and Planetary Sciences 101 Schlinger 2:50 - 3:10 PM	***Emily Q. Yu*** *Hannah Bradley SURF Fellow*	Constraining the Organic Carbon Properties of Subsurface Sediment in the Yukon Delta	Michael P. Lamb *Professor of Geology* Yutian Ke *Postdoctoral Scholar Research Associate in Geochemistry*
F - Chemical Engineering 113 Spalding Lab 2:00 - 2:20 PM	***Ryan D. Yu*** *John Stauffer SURF Fellow*	Rationalizing Specific Ion Effects in Electrochemical Nitrate Reduction Using Machine Learning Potential Simulations	Kara D. Fong *Assistant Professor of Chemical Engineering* Madeline Murphy *Graduate Student in Chemical Engineering*

Q - Astronomy B119 Baxter 1:00 - 1:20 PM	***Min Phone Myat Zaw*** Pasadena City College	A Live Modern Interactive Dashboard to Display KOA's Metrics at Scale	Graham Berriman *Member of the Professional Staff in IPAC* Judy S. Adler *Operations Coordinator for IPAC*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Pierre A. Zeineddin*** *Franz and Anne Nierlich SURF Fellow*	A Synthetic Cell Platform: Development of Protein Expressive + Payload Releasing Vesicles and Their Encapsulation in Hydrogels	Matthew W. Thomson *Assistant Professor of Computational Biology; Investigator, Heritage Medical Research Institute*
L - Mechanical Engineering 100 Powell-Booth 1:40 - 2:00 PM	***Eloise Zeng*** *DaRin Butz SURF Fellow*	Integrating and Characterizing the Unitree D1 Robotic Arm for Whole-body Control Research	Aaron D. Ames *Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems* Zachary Olkin *Graduate Student in Control and Dynamical Systems*
Poster Session Hameetman Multipurpose Room 4:00 - 6:00 PM	***Caroline Zhang*** Duke University	Formal Theorem Proving With Large Language Models and Reinforcement Learning for the Andrews-Curtis Conjecture	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Robert Joseph George *Graduate Student in Computing and Mathematical Sciences*
E - Chemistry and Chemical Engineering 106 Spalding Lab 3:50 - 4:10 PM	***Chaoyi T. Zhang*** *Richard H. Cox SURF Fellow*	Sulfoxonium Ylides as a Carbene Precursor in Biocatalysis	Frances H. Arnold *Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry* Chenghao Liu *Postdoctoral Scholar Research Associate in Chemical Engineering* Theophile Lambert *Visitor in Chemical Engineering*
O - Geological and Planetary Sciences 101 Schlinger 2:00 - 2:20 PM	***Junyi Zhao*** University of Michigan, Ann Arbor	Constraining Grain Size Dependent Dynamics in AU Mic's Debris Disk: A Joint JWST and ALMA Study of the Vertical Structure	Konstantin Batygin *Professor of Planetary Science* Yinuo Han *Postdoctoral Scholar Research Associate in Planetary Science*

R - Astronomy B125 Baxter 2:50 - 3:10 PM	***Ruimian Zheng*** Columbia University	Realistic Baryon-ejection From the Recoil of Magnetar Giant Flares	Elias R. Most *Assistant Professor of Theoretical Astrophysics* Yuan Feng *Graduate Student in Physics*
H - Computer Science 224 Jorgensen 3:10 - 3:30 PM	***Shizhao Zheng*** University of Toronto	Quantum Wavefronts: Fourier Neural Operators in Variational Monte Carlo	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Chuwei Wang *Graduate Student in Computing and Mathematical Sciences*
G - Computer Science 109 Jorgensen 1:20 - 1:40 PM	***Jiayi Zhou*** Peking University	Shape Optimization With Neural Operators	Anima Anandkumar *Bren Professor of Computing and Mathematical Sciences* Valentin Duruisseaux *Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences*
O - Geological and Planetary Sciences 101 Schlinger 3:50 - 4:10 PM	***Wenjing Zhou*** University of Manchester	A Critical Review on Variation of Sweat Composition and How Sweat Calcium Affects Bone Health	François Tissot *Professor of Geochemistry; Investigator, Heritage Medical Research Institute* Theo J. Tacail *Postdoctoral Scholar Research Associate in Geochemistry*
J - Applied Physics and Materials Science 125 Steele Lab 3:30 - 3:50 PM	***Alan Zhu*** University of Pennsylvania	Long-range Simultaneous Two-qubit Gates Using Dual-rail Transmons With In Situ Erasure Detection	Oskar J. Painter *John G Braun Professor of Applied Physics and Physics* Gihwan Kim *Graduate Student in Applied Physics*
M - Medical Engineering and Electrical Engineering 142 Keck 2:00 - 2:20 PM	***Mark Zhu*** Stanford University	Spin-dynamics of Coupled Electrons and Nuclei at the Classical and Quantum Interface	Lihong Wang *Bren Professor of Medical Engineering and Electrical Engineering*