

Presentations in Alphabetical Order by Student

I - Computer Science
100 Powell-Booth
2:50 - 3:10 PM

Ibrahim Adam

Development of a deterministic adaptive mathematics platform for students transitioning from grade 9 (JHS 3) to grade 10 (SHS 1) in Ghana and Kenya

Franca Hoffmann
Assistant Professor of Computing and Mathematical Sciences; William H. Hurt Scholar
Jasmine R. Bryant
Director, Center for Teaching, Learning, and Outreach

J - Electrical Engineering
B125 Baxter
11:10 - 11:30 AM

Layla Adeli
Sampson Carlson SURF Fellow

Toward event-driven feature extraction for neuromorphic brain-machine interfaces

Azita Emami
Andrew and Peggy Cherng Professor of Electrical Engineering and Medical Engineering
Loai Danial
Postdoctoral Scholar Research Associate in Electrical Engineering

C - Chemistry
151 Crellin
3:30 - 3:50 PM

Sulaiman Wahdan S W. AlKadi
John Stauffer SURF Fellow

All-optical electron spin coherence in an axial tungsten complex of relevance to tungstoenzymes

Ryan G. Hadt
Professor of Chemistry
Jonathan Aalto
Graduate Student in Chemistry

S - Physics
B133 Baxter
10:50 - 11:10 AM

Hadwa I. Alruhaili
Class of '52 SURF Fellow

Tensor compression for faster electron transport calculations

Marco Bernardi
Professor of Applied Physics, Physics, and Materials Science
Tommaso Chiarotti
Postdoctoral Scholar Research Associate in Applied Physics and Materials Science

P - Astronomy
106 Spalding Lab
11:30 - 11:50 AM

Anica J. Ancheta

Identifying and characterizing dipper stars in Taurus

Eric J. Gaidos
Professor, Department of Earth Sciences, University of Hawaii at Manoa
Gabiella Zsidi
Postdoctoral Researcher, University of Hawaii at Manoa
Andrew W. Howard
Professor of Astronomy

Poster Session
Hameetman Multipurpose Room
4:00 - 5:45 PM

Adais M. Arora
Thomas C. Hays SURF Fellow

Alkyne synthesis by the cross-coupling of nitroalkanes with nitroalkenes

Marvin Parasram
Assistant Professor of Chemistry, New York University
Brian M. Stoltz
Victor and Elizabeth Atkins Professor of Chemistry; Investigator, Heritage Medical Research Institute

P - Astronomy 106 Spalding Lab 2:50 - 3:10 PM	Kiera E. Aston	Variability in broad emission line components of potential intermediate-mass black holes	Grace M. Olivier <i>Postdoctoral Fellow, Carnegie Institute for Science</i> Michael E. Brown <i>Richard and Barbara Rosenberg Professor of Planetary Astronomy</i>
N - Geological and Planetary Sciences 128 Baxter 1:20 - 1:40 PM	Carolina Ayala-Garnica <i>Ron Sven Rat and Bfield SURF Fellow</i>	Enantioselective crystallization of an RNA precursor and the origin of homochirality	S. Furkan Ozturk <i>Assistant Professor of Geobiology and Geochemistry; William H. Hurt Scholar</i> Kyogo Nagashima <i>Graduate Student in Chemistry</i>
G - Computer Science 127 Baxter 11:10 - 11:30 AM	Maggie Y. Bai <i>Arthur R. Adams SURF Fellow</i>	Shaping bio-realistic spiking neural network dynamics via gradient-based optimization of connectivity parameters	Costas Anastassiou <i>Visiting Associate in Computing and Mathematical Sciences</i> Shayan Farzad <i>Postdoctoral Scientist in Neurosurgery, Cedars-Sinai Medical Center</i>
G - Computer Science 127 Baxter 10:50 - 11:10 AM	Ishita Banerjee <i>The Associates SURF Fellow</i>	Developing a computational optimization framework for cell-class-specific electrical stimulation	Costas Anastassiou <i>Visiting Associate in Computing and Mathematical Sciences</i> Philip Wong <i>Postdoctoral Scientist, Cedars-Sinai Medical Center</i>
P - Astronomy 106 Spalding Lab 11:10 - 11:30 AM	Avni Bansal <i>Flintridge Foundation SURF Fellow</i>	Understanding the cataclysmic variable population in the globular cluster 47 Tucanae	Kareem J. El-Badry <i>Associate Professor of Astronomy</i> Geoffrey Mo <i>Carnegie-Caltech Brinson Postdoctoral Scholar Fellowship Trainee in Astronomy</i>
B - Bioengineering and Biology 142 Keck Laboratory 1:00 - 1:20 PM	Anna S. Becker <i>Rossum Family SURF Fellow</i>	Characterization of the organ systems and vasculature of sleeping and exercised glassfrogs	Carlos A. Taboada <i>Assistant Professor of Biology and Biological Engineering; William H. Hurt Scholar</i> Patrick Simpson <i>Graduate Student in Biology</i>
B - Bioengineering and Biology 142 Keck Laboratory 11:30 - 11:50 AM	Rishi Bhargava <i>Marcella Bonsall SURF Fellow</i>	SNAP: An SSL based neural network for automated pseudo-time generation	Matthew W. Thomson <i>Professor of Computational Biology; Investigator, Heritage Medical Research Institute</i> Hao Wang <i>Graduate Student in Bioengineering</i>

L - Mechanical Engineering
104 Watson
3:10 - 3:30 PM

Rajat V. Bidarkota

Integrated CFD analysis and
control design for jet
interaction in interceptors

Karen M. Siegrist
*Principal Professional Staff,
Johns Hopkins University
Applied Physics Laboratory*
John O'Neil
*Principal Professional Staff,
Johns Hopkins University
Applied Physics Laboratory*
Walter Maier
*Computational Physicist,
Johns Hopkins University
Applied Physics Laboratory*
Nicholas Fezie
*Senior Research Staff, Johns
Hopkins University Applied
Physics Laboratory*
Joanna M. Austin
Professor of Aerospace

U - Physics
101 Schlinger
10:30 - 10:50 AM

Sanzhar Bissenali

Topological phase transitions
in three-dimensional quantum
spin liquids with neural
quantum states

Norman Yao
*Professor of Physics,
Harvard University*
Sajant Anand
*Harvard Quantum Initiative
Postdoctoral Fellow, Harvard
University*
Marco Bernardi
*Professor of Applied Physics,
Physics, and Materials
Science*

L - Mechanical Engineering
104 Watson
3:30 - 3:50 PM

Delta M. Blendea

Visual anemometry in urban
environments using Ned
Kahn's *Shimmer Wall* kinetic
sculpture

Nathaniel Wei
*Assistant Professor of
Mechanical Engineering and
Applied Mechanics,
University of Pennsylvania*
Gil Refael
*Taylor W. Lawrence
Professor of Theoretical
Physics*

R - Mathematics
107 Downs
1:00 - 1:40 PM
(joint presentation)

Giovanni Cabrera

Assessing student
engagement across Math
Camp activities in Kenya via a
mixed-methods evaluation of
activity design

Franca Hoffmann
*Assistant Professor of
Computing and
Mathematical Sciences;
William H. Hurt Scholar*
Jasmine R. Bryant
*Director, Center for
Teaching, Learning, and
Outreach*

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Michelle Cai
John Stauffer SURF Fellow

Morphological and immune
response to gas vesicle
cavitation by focused
ultrasound in mouse glioma
models

Mikhail G. Shapiro
*Max Delbrück Professor of
Chemical Engineering and
Medical Engineering;
Investigator, Howard
Hughes Medical Institute*
George H. Daghlain
*Graduate Student in
Bioengineering*

C - Chemistry
151 Crellin
2:50 - 3:10 PM

Can S. Canpolat
John Stauffer SURF Fellow

Soft ionic polymers for
stretchable ionic circuits

William A. Goddard III
*Charles and Mary Ferkel
Professor of Chemistry,
Materials Science, and
Applied Physics*
Chiara Daraio
*G. Bradford Jones Professor
of Mechanical Engineering
and Applied Physics;
Investigator, Heritage
Medical Research Institute*
Sejun Kim
*Postdoctoral Scholar
Research Associate in
Chemistry*
Max Tepermeister
*Cecil and Sally Drinkward
Postdoctoral Scholar
Research Associate in
Mechanical and Civil
Engineering*

J - Electrical Engineering
B125 Baxter
3:30 - 3:50 PM

Matthew J. Cantor

Photonic molecule design for
quantum frequency
conversion

Kiyoul Yang
*Assistant Professor of
Electrical Engineering,
Harvard University*
Kerry J. Vahala
*Ted and Ginger Jenkins
Professor of Information
Science and Technology and
Professor of Applied Physics*

K - Mechanical Engineering
153 Noyes
1:20 - 1:40 PM

Susanna S. Cao
DaRin Butz SURF Fellow

Roll-slip detection for robotic
tactile sensing in contact-rich
manipulation

Monroe D. Kennedy
*Assistant Professor of
Mechanical Engineering,
Stanford University*
Jinho So
*Graduate Student in
Mechanical Engineering,
Stanford University*
Joel W. Burdick
*Richard L. and Dorothy M.
Hayman Professor of
Mechanical Engineering and
Bioengineering; Research
Scientist, JPL*

R - Mathematics
107 Downs
3:10 - 3:30 PM

Ezra Caspary
Class of '36 SURF Fellow

The degree of the symplectic
Stiefel manifold

Yassine El Maazouz
*Harry Bateman Postdoctoral
Scholar Teaching Fellow in
Mathematics*

H - Computer Science
133 Guggenheim
3:30 - 3:50 PM

Rafael I. Castro

Spectral methods for causal
effect estimation in linear
time-series models

Bijan H. Mazaheri
*Assistant Professor of
Engineering, Dartmouth
College*
Leonard J. Schulman
*Professor of Computer
Science*

G - Computer Science
127 Baxter
11:30 - 11:50 AM

Christian W. Cavener

Automated body composition
analysis for cardiac risk
prediction in Duchenne
muscular dystrophy

Shreyas S. Vasanawala
*Professor of Radiology;
Director of MRI, Stanford
Children's Hospital*
Konstantin Zuev
*Teaching Professor of
Computing and
Mathematical Sciences*

S - Physics
B133 Baxter
2:00 - 2:20 PM

**Constantin J.
Cedillo-Vayson de
Pradenne**

Restrictions on non-Clifford
fault tolerance and ruling out
beyond-SQL quantum
metrology

Jordan Cotler
*Assistant Professor of
Physics, Harvard University*
Robert Huang
*Assistant Professor of
Theoretical Physics; William
H. Hurt Scholar*

B - Bioengineering and
Biology
142 Keck Laboratory
10:30 - 10:50 AM

Anusha K. Chatha

Cell-type-specific germline
immune variants as predictors
of immunotherapy response

Hannah Carter
*Professor of Medicine,
University of California,
San Diego*
Noa Popko
*Graduate Student in
Bioinformatics, University of
California, San Diego*
Shinsuke Shimojo
*Gertrude Baltimore
Professor of Experimental
Psychology*

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Hongqiao Chen
*Kiyo and Eiko Tomiyasu
SURF Scholar*

On-policy self-distillation for
physically plausible video
generation

Georgia Gkioxari
*Assistant Professor of
Computing and
Mathematical Sciences and
Electrical Engineering;
William H. Hurt Scholar*
Ziqi Ma
*Graduate Student in
Computing and
Mathematical Sciences*

S - Physics
B133 Baxter
11:10 - 11:30 AM

Runqin Chen
*Karen Roberts and Jim
Sagawa SURF Fellow*

Solving the Navier-Stokes
equation for electron fluids of
finite geometries

Marco Bernardi
*Professor of Applied Physics,
Physics, and Materials
Science*
Tommaso Chiarotti
*Postdoctoral Scholar
Research Associate in
Applied Physics and
Materials Science*

M - Applied Physics and
Materials Science
125 Steele Laboratory
2:30 - 2:50 PM

Sophia X. Chen
*Saul and Joan Cogen
Memorial SURF Fellow*

Development of a sample
mount and high dynamic
range power meter for
ytterbium-based quantum
interfaces

Andrei Faraon
*William L. Valentine
Professor of Applied Physics
and Electrical Engineering*
Erin Liu
*Graduate Student in Applied
Physics*

G - Computer Science 127 Baxter 2:30 - 2:50 PM	Seokhyun Chin	Predicting isotope effects with orbital-based deep learning	Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i> John M. Eiler <i>Robert P. Sharp Professor of Geology and Geochemistry</i> Beom Seok Kang <i>Graduate Student in Chemical Engineering</i> Simon Andren <i>Graduate Student in Geochemistry</i>
L - Mechanical Engineering 104 Watson 2:30 - 2:50 PM	Jilly A. Choi <i>Lynn A. Booth and Kent Kresa SURF Fellow</i>	Dexterous five-fingered tendon-driven anthropomorphic robotic hand platform implementing a field-oriented control actuation architecture	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering, Control and Dynamical Systems, and Aerospace</i>
K - Mechanical Engineering 153 Noyes 3:50 - 4:10 PM	Minseung Choi <i>Arthur R. Adam SURF Fellow</i>	Effects of dimensionality and forcing conditions on vortex formation and interactions	Tim E. Colonius <i>Frank and Ora Lee Marble Professor of Mechanical Engineering and Medical Engineering</i> Caroline Cardinale <i>Graduate Student in Mechanical Engineering</i>
E - Chemical Engineering 269 Lauritsen 3:30 - 3:50 PM	Zoe R. Chou <i>Peter A. Lindstrom, Jr., SURF Fellow</i>	Mechanical and rheological characterization of guayule latex systems	Julia A. Kornfield <i>Warren and Katharine Schlinger Professor of Chemical Engineering</i> Siddharth Premnath <i>Graduate Student in Chemical Engineering</i> Florence Müller <i>Postdoctoral Scholar Fellowship Trainee in Chemical Engineering</i>
K - Mechanical Engineering 153 Noyes 2:50 - 3:10 PM	Nicholas A. Ciordas	Neural ODE across the cylinder wake bifurcation	Steven Brunton <i>Professor of Mechanical Engineering, University of Washington</i> Mario Sinani <i>Graduate Student in Mechanical Engineering, University of Washington</i> Soon-Jo Chung <i>Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL</i>

J - Electrical Engineering B125 Baxter 2:30 - 2:50 PM	Tommaso Colombo <i>Raymond Jimenez and Jomya Lei SURF Fellow</i>	Flow-DFL: Decision-focused learning for decision-making under uncertainty via energy-based conditional flow matching	Steven H. Low <i>Frank J. Gilloon Professor of Computing and Mathematical Sciences and Electrical Engineering</i> Han Xu <i>Graduate Student in Computing and Mathematical Sciences</i>
K - Mechanical Engineering 153 Noyes 10:50 - 11:10 AM	Jacobo de Juan Millon <i>Samuel N. Vodopia and Carol J. Hasson SURF Fellow</i>	Non-deterministic categorical Lyapunov theory	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering, Control and Dynamical Systems, and Aerospace</i> Joe Moeller <i>Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering</i>
P - Astronomy 106 Spalding Lab 10:30 - 10:50 AM	Indie E. Desiderio-Sloane <i>Ray F. Jurgens SURF Fellow</i>	Investigating the nature of an unusual supernova: Spectroscopic classification, light curve modeling, and dust formation	Mansi M. Kasliwal <i>Professor of Astronomy</i> Sam Rose <i>Graduate Student in Astrophysics</i>
L - Mechanical Engineering 104 Watson 2:00 - 2:20 PM	Evan W. Dickson	Designing rigid-soft hinges for microscale Kresling origami metamaterials for future application in micro robotics	Glaucio Paulino <i>Professor of Engineering, Princeton University</i> Chiara Daraio <i>G. Bradford Jones Professor of Mechanical Engineering and Applied Physics; Investigator, Heritage Medical Research Institute</i>
C - Chemistry 151 Crellin 3:50 - 4:10 PM	Demetrios A. Dresios <i>Janet Lai SURF Fellow</i>	Determining the correlation between reduction potential and electron spin decoherence in optically addressable biomolecular qubits	Ryan G. Hadt <i>Professor of Chemistry</i> Christian A. Totoiu <i>Graduate Student in Chemical Engineering</i> Arshiyah Alam Laaj <i>Graduate Student in Chemistry</i>
D - Chemistry 147 Noyes 1:00 - 1:20 PM	Vassilios P. Dresios <i>Philip Laipis in Memory of Professor Jerome Vinograd SURF Fellow</i>	Trimetallic nickel-based CO ₂ reduction catalysts and progress towards a synthetic analogue to the [NiFe]-carbon monoxide dehydrogenase C-cluster	Theodor Agapie <i>John Stauffer Professor of Chemistry</i> Leo A. Morag <i>Graduate Student in Chemistry</i>

B - Bioengineering and Biology 142 Keck Laboratory 3:10 - 3:30 PM	Chrystal Duan	Cross-modality reasoning enabled by multimodal AI agents for diabetic progression inference	Jia Liu <i>Assistant Professor of Bioengineering, Harvard University</i> Wenbo Wang <i>Graduate Student in Bioengineering, Harvard University</i> Wei Gao <i>Professor of Medical Engineering; Investigator, Heritage Medical Research Institute</i>
P - Astronomy 106 Spalding Lab 2:00 - 2:20 PM	Mason G. DuBois <i>Edward C. Stone Voyager SURF Fellow</i>	Characterizing dust from extragalactic Wolf-Rayet binary candidates with the James Webb Space Telescope	Ryan Lau <i>Staff Scientist in IPAC</i> Mansi M. Kasliwal <i>Professor of Astronomy</i>
P - Astronomy 106 Spalding Lab 10:50 - 11:10 AM	Maya D. Edelstein	The influence of planetary mass on mean-motion resonance type in Kepler and TESS multi-planet systems	Fei Dai <i>Assistant Professor of Astronomy, University of Hawaii</i> Zhecheng Hu <i>Graduate Student in Astronomy, Tsinghua University</i> Rob B. Phillips <i>Fred and Nancy Morris Professor of Biophysics, Biology, and Physics</i>
D - Chemistry 147 Noyes 10:30 - 10:50 AM	Kylin M. Elliott <i>John Stauffer SURF Fellow</i>	Trapping distinct states to characterize the MurJ-Lipid II complex	William M. Clemons <i>Arthur and Marian Hanisch Memorial Professor of Biochemistry</i> Grace F. Baron <i>Graduate Student in Chemistry</i>
E - Chemical Engineering 269 Lauritsen 11:30 - 11:50 AM	Shrila Esturi <i>Samuel and Berta Spalter SURF Fellow</i>	Decoding the lanthanome: Medium-throughput characterization of protein affinity and selectivity towards lanthanides	Ariel Furst <i>Associate Professor of Chemical Engineering, Massachusetts Institute of Technology</i> Farid F. Khoury <i>Postdoctoral Fellow in Chemical Engineering, Massachusetts Institute of Technology</i> Cooper Tezak <i>Postdoctoral Fellow in Chemical Engineering, Massachusetts Institute of Technology</i> William M. Clemons <i>Arthur and Marian Hanisch Memorial Professor of Biochemistry</i>

F - Aeronautics B122 Gates Annex 10:50 - 11:10 AM	Lucas J. Favretto <i>Fred and Jean Felberg SURF Fellow</i>	Surface chemistry behavior of carbon-based ablative thermal protective systems under hypersonic flow and temperature	Joanna M. Austin <i>Professor of Aerospace</i> William Feasey <i>Graduate Student in Aerospace</i>
I - Computer Science 100 Powell-Booth 3:30 - 3:50 PM	Ethan M. Feng <i>Citadel Global Fixed Income SURF Fellow</i>	A manifold constrained Ensemble Kalman Filter algorithm for nonlinear dynamics	Andrew M. Stuart <i>Bren Professor of Computing and Mathematical Sciences</i> Bohan Chen <i>Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences</i> Sangmin Park <i>von Karman Instructor in Computing and Mathematical Sciences</i>
J - Electrical Engineering B125 Baxter 2:50 - 3:10 PM	Richard H. Feng <i>Arthur Rock SURF Fellow</i>	Ultrashort pulses from an optoelectronically mode-locked laser on nanophotonic lithium niobate	Alireza Marandi <i>Professor of Electrical Engineering and Applied Physics</i> Rithvik Ramesh <i>Graduate Student in Electrical Engineering</i> Yiting Wang <i>Graduate Student in Electrical Engineering</i>
L - Mechanical Engineering 104 Watson 1:00 - 1:20 PM	Riley E. Foard <i>Toni and Bob Perpall SURF Fellow</i>	Manipulating the domain of Rayleigh-Taylor turbulence: Confined vs. self-similar RT regimes	Guillaume Blanquart <i>Professor of Mechanical Engineering</i>
N - Geological and Planetary Sciences 128 Baxter 11:10 - 11:30 AM	Kirby Fung <i>James J. Morgan SURF Fellow</i>	Investigating thresholds of boulder mobilization in post-wildfire debris flows	Michael P. Lamb <i>Professor of Geology</i> Emily Geyman <i>Graduate Student in Geology</i>
N - Geological and Planetary Sciences 128 Baxter 2:00 - 2:20 PM	Vedant Ganesh <i>Hannah Bradley SURF Fellow</i>	Binodal: Towards an n-ary phase diagram generator for geochemical and geological applications	Paul D. Asimow <i>Eleanor and John R. McMillan Professor of Geology and Geochemistry</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Lucas N. Garcia <i>Sidney and Nancy Petersen SURF Fellow</i>	Heritable targeted DNA insertion using the R2Tg retroelement complex	Gözde S. Demirer <i>Clare Booth Luce Assistant Professor of Chemical Engineering</i> Kimberley T. Muchenje <i>Graduate Student in Biology</i>

H - Computer Science 133 Guggenheim 1:20 - 1:40 PM	Avni Garg <i>DaRin Butz SURF Fellow</i>	Conversational video segmentation	Georgia Gkioxari <i>Assistant Professor of Computing and Mathematical Sciences and Electrical Engineering; William H. Hurt Scholar</i> Aadarsh Sahoo <i>Graduate Student in Computing and Mathematical Sciences</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Ido Geffen <i>Robert J. McEliece and David Rutledge SURF Fellow</i>	Printed nanowire phototransistors arrays with dual-modulated synaptic plasticity for neuromorphic computing	Ravinder S. Dahiya <i>Professor of Electrical and Computer Engineering, Northeastern University</i> R. Michael Alvarez <i>Flintridge Foundation Professor of Political and Computational Social Science</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Shrish Goel <i>SURF Board SURF Fellow</i>	Designing MOF based catalysts through electron density descriptors	Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i> Danish Khan <i>Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences</i>
G - Computer Science 127 Baxter 10:30 - 10:50 AM	Zeynep Goktepe <i>Ms. Miaomiao Liu and Mr. Lei Feng SURF Fellow</i>	Growing cells in computers: Surrogate modeling of ion-channel sensitivity in human cortical neurons	Costas Anastassiou <i>Visiting Associate in Computing and Mathematical Sciences</i> Nooshin Abdollahi <i>Postdoctoral Fellow, The Hospital for Sick Children</i>
J - Electrical Engineering B125 Baxter 1:00 - 1:20 PM	Sadik O. Görgü <i>Arthur E. Lamel Memorial SURF Fellow</i>	Wireless non-LOS BAN channel characterization and communication at mmWave	Ali Hajimiri <i>Bren Professor of Electrical Engineering and Medical Engineering</i> Zachary Szekeres <i>Graduate Student in Electrical Engineering</i>
U - Physics 101 Schlinger 2:00 - 2:20 PM	Zoe K. Granadoz <i>The Associates SURF Fellow</i>	Constraint of coronal temperature and properties of local low-luminosity active galactic nuclei	Fiona A. Harrison <i>Harold A. Rosen Professor of Physics</i> Xiurui Zhao <i>Postdoctoral Scholar Research Associate in Physics</i>
F - Aeronautics B122 Gates Annex 1:20 - 1:40 PM	Angel O. Guerra <i>Robert I. and Winifred E. Gardner SURF Fellow</i>	Experimental characterization and validation of the PARSEC Icarus lander primary structure design	Mory Gharib <i>Hans W. Liepmann Professor of Aeronautics and Medical Engineering</i> Jack N. Caldwell <i>Graduate Student in Aerospace</i>

M - Applied Physics and
Materials Science
125 Steele Laboratory
2:50 - 3:10 PM

Ella Guo
*Kirk and Marjory Dawson
Family SURF Fellow*

Engineering a cryogenic cold
finger for high-frequency
characterization of
superconducting microwave
resonators

Joseph L. Falson
*Assistant Professor of
Applied Physics and
Materials Science; William
H. Hurt Scholar*
Sandra Glotzer
*Graduate Student in
Materials Science*

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Nikash Gupta
*Shubhangi and Sharad
Fadnavis SURF Fellow*

Virtual Merge models in Hopf
algebra Markov chains

Matilde Marcolli
*Robert F. Christy Professor of
Mathematics and
Computing and
Mathematical Sciences*

E - Chemical Engineering
269 Lauritsen
3:10 - 3:30 PM

Riya Gupta
*Warren and Katharine
Schlinger SURF Fellow*

An automated approach to
uniform latex film formation
on former

Julia A. Kornfield
*Warren and Katharine
Schlinger Professor of
Chemical Engineering*
Siddharth Premnath
*Graduate Student in
Chemical Engineering*
Florence Müller
*Postdoctoral Scholar
Fellowship Trainee in
Chemical Engineering*

I - Computer Science
100 Powell-Booth
3:50 - 4:10 PM

***Amudhan S.
Gurumoorthy***

Using conflict graphs to
determine the best models
against adversarial noise

Daniel Cullina
*Assistant Professor of
Electrical Engineering,
Pennsylvania State
University*
Konstantin Zuev
*Teaching Professor of
Computing and
Mathematical Sciences*

M - Applied Physics and
Materials Science
125 Steele Laboratory
1:20 - 1:40 PM

Muhammed Halil
*Dr. David G. Goodwin
SURF Fellow*

Spatiotemporal dispersion
analysis and theoretical model
fitting of self-excited dust
acoustic waves in cryogenic
water-ice plasma

Paul M. Bellan
Professor of Applied Physics

E - Chemical Engineering
269 Lauritsen
2:00 - 2:20 PM

Easan S. Hamkins
*Professor Fredrick H. Shair
SURF Fellow*

Engineering truly tiny,
genetically encodable,
acoustic actuators in
mammalian cells

Mikhail G. Shapiro
*Max Delbrück Professor of
Chemical Engineering and
Medical Engineering;
Investigator, Howard
Hughes Medical Institute*
Anthony Phung
*Graduate Student in
Bioengineering*

Q - Mathematics 103 Downs 3:30 - 3:50 PM	Hypatia C. Hamkins <i>Olga Taussky-Todd SURF Fellow</i>	The diameter of random regular graphs	John Urschel <i>Class of 1956 Career Development Assistant Professor of Mathematics, Massachusetts Institute of Technology</i> Catherine Babecki <i>Olga Taussky and John Todd/von Karman Postdoctoral Scholar Teaching Fellow in Mathematics</i>
U - Physics 101 Schlinger 1:00 - 1:20 PM	Blake W. Hawkins <i>David C. Elliot SURF Fellow</i>	Classical quantum field theory: A field-ontological interacting many-worlds interpretation	Charles T. Sebens <i>Professor of Philosophy</i>
Q - Mathematics 103 Downs 2:30 - 2:50 PM	Xi He <i>Olga Taussky-Todd SURF Fellow</i>	Density degree set of algebraic varieties	Yu Fu <i>Noether Postdoctoral Scholar Teaching Fellow in Mathematics</i>
N - Geological and Planetary Sciences 128 Baxter 3:10 - 3:30 PM	Natalia M. Hernandez <i>Karen and James Cutts SURF Fellow</i>	Investigating groundwater- driven land deformation in the San Gabriel Valley using InSAR time series analysis	Mark Simons <i>John W. and Herberta M. Miles Professor of Geophysics</i>
G - Computer Science 127 Baxter 1:40 - 2:00 PM	Richard Hoffmann	Physical plausibility emerges from resilience across diverse noise paths in video diffusion models	Yilun Du <i>Assistant Professor of Computer Science, Harvard University</i> Sarah Liaw <i>Graduate Student in Computer Science, Harvard University</i> Ruojin Cai <i>Kempner Research Fellow in Computer Science, Cornell University</i> Georgia Gkioxari <i>Assistant Professor of Computing and Mathematical Sciences and Electrical Engineering; William H. Hurt Scholar</i>
G - Computer Science 127 Baxter 2:50 - 3:10 PM	Arimitsu Horikawa-Strakovsky	Learning exact exchange for Kohn-Sham density functional theory	Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i> Maurice Hanisch <i>Graduate Student in Computing and Mathematical Sciences</i> Danish Khan <i>Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences</i>

L - Mechanical Engineering 104 Watson 2:50 - 3:10 PM	Yiling Hou <i>DaRin Butz SURF Fellow</i>	Improving object permanence under occlusion in latent video prediction for robot manipulation	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering, Control and Dynamical Systems, and Aerospace</i>
D - Chemistry 147 Noyes 1:20 - 1:40 PM	Chloe I. Hu Pesh <i>John Stauffer SURF Fellow</i>	Developing a charged palladium catalyst to synthesize photodegradable polyethylene	Theodor Agapie <i>John Stauffer Professor of Chemistry</i> Jocelyn Y. Zhang <i>Graduate Student in Chemistry</i>
K - Mechanical Engineering 153 Noyes 1:40 - 2:00 PM	Annie M. Hu <i>Carl F. Braun SURF Fellow</i>	An iodine-referenced laser stabilization system for high-precision cavity ringdown spectroscopy of electron-enhanced atomic layer processes (EE-ALP)	Austin J. Minnich <i>Professor of Mechanical Engineering and Applied Physics</i> Emily Shi <i>Graduate Student in Chemistry</i>
T - Physics 109 Jorgensen 1:40 - 2:00 PM	Jonathan X. Hu <i>Nellie Bergen and Adrian Foster Tillotson SURF Fellow</i>	Characterization and optimization of Kinetic Inductance Phonon-Mediated (KIPM) detectors for low-threshold dark matter direct detection	Sunil Golwala <i>Professor of Physics</i>
K - Mechanical Engineering 153 Noyes 2:30 - 2:50 PM	Evan T. Huang	SINDy-LLM: Large language model-augmented framework for the sparse identification of nonlinear dynamics	Steven Brunton <i>Professor of Mechanical Engineering, University of Washington</i> Michael Garcia <i>Graduate Student, University of Washington</i> Adam C. Wierman <i>Carl F Braun Professor of Computing and Mathematical Sciences</i>
H - Computer Science 133 Guggenheim 3:10 - 3:30 PM	Gio Huh <i>Mark Reinecke SURF Fellow</i>	HomeBody: A humanoid that explores, remembers, and acts on its own	Karen Liu <i>Professor of Computer Science, Stanford University</i> Guy Tevet <i>Postdoctoral Scholar in Computer Science, Stanford University</i> Takara Truong <i>Graduate Student in Computer Science, Stanford University</i> Georgia Gkioxari <i>Assistant Professor of Computing and Mathematical Sciences and Electrical Engineering; William H. Hurt Scholar</i>

B - Bioengineering and
Biology
142 Keck Laboratory
3:30 - 3:50 PM

Gene G. Huntley
Øistein and Rita A. Skjellum
SURF Fellow

Investigating self-replicating
droplets

Erik Winfree
*Professor of Computer
Science, Computation and
Neural Systems, and
Bioengineering*
Cameron Chalk
*Postdoctoral Scholar
Research Associate in
Biology and Biological
Engineering*
Yancheng Du
*Postdoctoral Scholar
Research Associate in
Biology and Biological
Engineering*

E - Chemical Engineering
269 Lauritsen
1:20 - 1:40 PM

Noor E. Ibrahim

Nanobody-mediated
stabilization of human
effectors enables antigen-
dependent cell selection

Katie Galloway
*Associate Professor of
Chemical Engineering,
Massachusetts Institute of
Technology*
Rob B. Phillips
*Fred and Nancy Morris
Professor of Biophysics,
Biology, and Physics*

L - Mechanical Engineering
104 Watson
1:20 - 1:40 PM

Max R. Ismagilov
Howell N. Tyson, Sr.,
SURF Fellow

Impact of turbulent inflow
treatment on detonation-
turbulence interaction

Guillaume Blanquart
*Professor of Mechanical
Engineering*
Benjamin R. Breer
*Graduate Student in
Mechanical Engineering*

U - Physics
101 Schlinger
10:50 - 11:10 AM

**Thuwaragesh
Jayachandran**

Cooling a many-body spin
system in diamond using
optically reset NV centers

Norman Yao
*Professor of Physics,
Harvard University*
Haopu Yang
*Graduate Student in
Physics, Harvard University*
Che Liu
*Graduate Student in
Physics, Harvard University*
Andrei Faraon
*William L. Valentine
Professor of Applied Physics
and Electrical Engineering*

A - Biology
125 Baxter
2:50 - 3:10 PM

David L. Jin
*Ms. Miaomiao Liu and
Mr. Lei Feng SURF Fellow*

Quantifying the information
bottleneck in radiogenomics

Lior S. Pachter
*Bren Professor of
Computational Biology and
Computing and
Mathematical Sciences*
Joseph M. Rich
Graduate Student in Biology

K - Mechanical Engineering 153 Noyes 3:30 - 3:50 PM	Carolina L. Jones <i>W.E.F.K. SURF Fellow</i>	Developing a reusable, low-cost microfluidic device to investigate freezing fluid infiltration in porous media	Xiaojing Fu <i>Assistant Professor of Mechanical and Civil Engineering; William H. Hurt Scholar</i> Aman Eujayl <i>Graduate Student in Mechanical Engineering</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	William Jouayed	Investigating the role of photoreceptor-derived extracellular vesicles in early diabetic retinopathy using the TIGER mouse	Emma Lessieur <i>Principal Investigator, Doheny Eye Institute</i> Melany L. Hunt <i>Dotty and Dick Hayman Professor of Mechanical Engineering</i>
O - Humanities and Social Sciences B119 Baxter 2:00 - 2:20 PM	Jason M. Kamau	Evaluation and analysis of the classroom experience of the Digital Kenyan Grade 10 CBC digital textbook	Franca Hoffmann <i>Assistant Professor of Computing and Mathematical Sciences; William H. Hurt Scholar</i> Jasmine R. Bryant <i>Director, Center for Teaching, Learning, and Outreach</i> Joe Champion <i>Professor of Mathematics, Boise State University</i>
O - Humanities and Social Sciences B119 Baxter 10:30 - 10:50 AM	Shyna A. Kashi <i>J. Kent Clark SURF Fellow</i>	Affective polarization across states and time: A Bayesian analysis of ANES surveys, 1964 - 2024	R. Michael Alvarez <i>Flintridge Foundation Professor of Political and Computational Social Science</i> Raquel Centeno <i>Postdoctoral Scholar Teaching Fellow in Science, Society, and Policy</i>
C - Chemistry 151 Crellin 1:20 - 1:40 PM	Isabella G. Kedikian <i>Sung-Hsien Chen Shih SURF Fellow</i>	Biochemical reconstitution and structural characterization of the <i>Alvinella pompejana</i> inner ring complex of the nuclear pore complex	André Hoelz <i>Mary and Charles Ferkel Professor of Chemistry and Biochemistry; Investigator, Howard Hughes Medical Institute</i> Dayeon D. Kang <i>Graduate Student in Chemistry</i>
F - Aeronautics B122 Gates Annex 3:30 - 3:50 PM	Dami Kim <i>Frederick W. Drury, Jr., SURF Fellow</i>	Neural operator trajectory prediction for multi-car autonomous racing	Soon-Jo Chung <i>Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL</i> Gilchrist X. Johnson <i>Graduate Student in Control and Dynamical Systems</i>

Q - Mathematics 103 Downs 3:10 - 3:30 PM	Matthias K. Kim <i>Nilo A. and Phylis F. Niccolai SURF Fellow</i>	Mod-2 negligible cohomology of groups of order 16	Matthew M. Gherman <i>Hearst Postdoctoral Scholar Teaching Fellow in Mathematics</i>
E - Chemical Engineering 269 Lauritsen 3:50 - 4:10 PM	Myu Kim <i>DaRin Butz SURF Fellow</i>	Development of a biomimetic intervertebral disc implant using digital light processing 3D printing and wet-spinning	Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i> Julia A. Kornfield <i>Warren and Katharine Schlinger Professor of Chemical Engineering</i> Caroline Dial <i>Graduate Student in Medical Engineering</i> Jingtong Zhao <i>Graduate Student in Medical Engineering</i>
T - Physics 109 Jorgensen 1:20 - 1:40 PM	Marcus N. King <i>Edward C. Stone Voyager SURF Fellow</i>	Characterizing thermohaline convection in polluted white dwarfs using 3D hydrodynamical simulations	James W. Fuller <i>Professor of Theoretical Astrophysics</i> Jose Rafael Fuentes <i>Postdoctoral Scholar Research Associate in Theoretical Astrophysics</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Elianna G. Kondylis	Using reaction network structure to recover metabolic rates from carbon labeling measurements	Gregory Stephanopoulos <i>Professor of Chemical Engineering, Massachusetts Institute of Technology</i> Rustem F. Ismagilov <i>Ethel Wilson Bowles and Robert Bowles Professor of Chemistry and Chemical Engineering; Merkin Institute Professor</i>
D - Chemistry 147 Noyes 2:30 - 2:50 PM	Fanhao Kong <i>John Stauffer SURF Fellow</i>	Engineering cpSRP43 for enhanced chaperone activity against amyloid aggregation through directed evolution	Shu-ou Shan <i>Altair Professor of Chemistry</i> Bryce Yeazell <i>Graduate Student in Chemistry</i>
A - Biology 125 Baxter 2:00 - 2:20 PM	Aleen A. Koujakian <i>Richard T. Jones SURF Fellow</i>	Investigating how gene- environment interaction causes heart defects	Duncan Sparrow <i>Professor of Cardiovascular Developmental Biology, University of Oxford</i> Victoria Rashbrook <i>Postdoctoral Research Scientist, University of Oxford</i> Marianne Bronner <i>Edward B. Lewis Professor of Biology</i>

B - Bioengineering and
Biology
142 Keck Laboratory
10:50 - 11:10 AM

Aurelia H. Kuester

Toward a mechanistic
understanding of Daple
regulation by cytoplasmic
dynein-1

Aga Kendrick
*Assistant Professor of
Biology, Salk Institute for
Biological Studies*
Alvaro de la Gandara
*Postdoctoral Researcher,
The Salk Institute for
Biological Studies*
Isaac Fianu
*Assistant Professor of
Biochemistry; William H.
Hurt Scholar*

G - Computer Science
127 Baxter
1:00 - 1:20 PM

Alya Kurt

GPU-accelerated multicoil
Bloch simulations for
nonlinear inversion in MRI
reconstruction and
quantitative mapping

Shreyas S. Vasanawala
*Professor of Radiology;
Director of MRI, Stanford
Children's Hospital*
Carlos A. Castillo Passi
*Postdoctoral Scholar in
Radiological Sciences,
Stanford University*
Daniel Ennis
*Professor of Radiology and
Bioengineering, Stanford
University*
Andres Collazo
*Director of Biological
Imaging Facility*

R - Mathematics
107 Downs
3:30 - 3:50 PM

Colin H. La

Twisted CSS codes

Andrew Lucas
*Associate Professor of
Physics, University of
Colorado Boulder*
Xie Chen
*Eddleman Professor of
Theoretical Physics*

H - Computer Science
133 Guggenheim
3:50 - 4:10 PM

Jadon T. Lam
*Bob and Carole Chapman
SURF Fellow*

What to reward and where to
start: Guiding robots that
learn by trial and error

Pietro Perona
*Allen E. Puckett Professor of
Electrical Engineering*
Ilona Demler
*Graduate Student in
Computing and
Mathematical Sciences*

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Henry B. Lane
Holo Family SURF Fellow

A GPU-native complex
auxiliary-space Maxwell solver
and high-order finite-element
solver for scalable 3D
magnetotelluric forward
modeling

Paul D. Asimow
*Eleanor and John R.
McMillan Professor of
Geology and Geochemistry*
Carl Swindle
*Postdoctoral Scholar
Research Associate in
Geology*

A - Biology 125 Baxter 3:30 - 3:50 PM	Erik R. Ledvina <i>Laurence J. Stuppy SURF Fellow</i>	Phenotypic screening and amplicon-seq genotyping of multiplex CRISPR mutants affecting <i>Arabidopsis</i> root development	Trevor M. Nolan <i>Assistant Professor of Biology and Biological Engineering</i> Xiaohui Li <i>Postdoctoral Scholar</i> Research Associate in Biology and Biological Engineering
F - Aeronautics B122 Gates Annex 10:30 - 10:50 AM	Jeylin E. Lee <i>Flintridge Foundation SURF Fellow</i>	Electronics design and sensor calibration of the magnetosonic transient plasma analyzer for characterizing hypervelocity impact plasmas on a lunar mission	Sigrid Elschot <i>Professor of Aeronautics and Astronautics, Stanford University</i> Neilabjo Maitra <i>Graduate Student in Aeronautics and Astronautics, Stanford University</i> Glen A. George <i>Teaching Professor of Electrical Engineering</i>
F - Aeronautics B122 Gates Annex 1:40 - 2:00 PM	Zoe Lee <i>Dr. Judith Goodstein SURF Fellow</i>	Inverse kinematics derivation and mechanism development for thrust vector control on a self-lander	Mory Gharib <i>Hans W. Liepmann Professor of Aeronautics and Medical Engineering</i> Jack N. Caldwell <i>Graduate Student in Aerospace</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Fengmi Li <i>The Chinese University of Hong Kong, Shenzhen VURP Fellow</i>	Revisiting the hyperfine structure and Bell's theorem via co-quantum dynamics (CQD)	Lihong Wang <i>Bren Professor of Medical Engineering and Electrical Engineering</i>
I - Computer Science 100 Powell-Booth 1:20 - 1:40 PM	Joan Li	Biomechanically driven forward neural encoding: Synthetic EEG generation	Yanan Sui <i>Associate Professor of Computer Science, Tsinghua University</i> Glen A. George <i>Teaching Professor of Electrical Engineering</i>
J - Electrical Engineering B125 Baxter 1:20 - 1:40 PM	Richard Y. Li <i>William Hassenzahl Family SURF Fellow</i>	Advancing monolithic integration of vacuum tubes on CMOS	Ali Hajimiri <i>Bren Professor of Electrical Engineering and Medical Engineering</i> David A. Baum <i>Graduate Student in Electrical Engineering</i>
S - Physics B133 Baxter 1:00 - 1:20 PM	Haitong Lian	How do rattlesnake rattles make sound?	Chiara Daraio <i>G. Bradford Jones Professor of Mechanical Engineering and Applied Physics; Investigator, Heritage Medical Research Institute</i> Xiaoxiao Xiong <i>Graduate Student in Physics</i>

L - Mechanical Engineering
104 Watson
11:10 - 11:30 AM

Yixuan Lin

Python port and evaluation of
immersed boundary
projection method

Steven Brunton
*Professor of Mechanical
Engineering, University of
Washington*
Ana Larrañaga
*Acting Assistant Professor of
Mechanical Engineering,
University of Washington*
Patricia Garcia Caspueñas
*Graduate Student in
Mechanical Engineering,
University of Washington*
Soon-Jo Chung
*Bren Professor of Control
and Dynamical Systems;
Senior Research Scientist,
JPL*

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Alexis N. Lindenfelser

Investigating oxygen vacancy
formation in MnFeCoNiCuO_x
high entropy spinel oxides
using density functional
theory

Bryan Goldsmith
*Assistant Professor of
Chemical Engineering,
University of Michigan Ann
Arbor*
Yu-Chuan Lin
*Professor of Chemical
Engineering, National Cheng
Kung University*
Sila Donmez
*Graduate Student in
Chemical Engineering,
University of Michigan*
Jimmy Wen
*Graduate Student in
Chemical Engineering,
National Cheng Kung
University*
Kara D. Fong
*Assistant Professor of
Chemical Engineering;
William H. Hurt Scholar*

A - Biology
125 Baxter
2:30 - 2:50 PM

Anthony K. Lindo
Harry B. Gray SURF Fellow

Design of novel nanobodies
targeting newly identified
conserved regions of HIV
gp120 and gp41 glycoproteins

Stephen L. Mayo
*Bren Professor of Biology
and Chemistry; Merkin
Institute Professor*
Andres Orta
*Graduate Student in
Biochemistry and Molecular
Biophysics*

N - Geological and Planetary
Sciences
128 Baxter
11:30 - 11:50 AM

Amber G. Liu
Mary Vodopia SURF Fellow

Recovering settling velocity
distributions of mud and flocs
from light sensor data

Michael P. Lamb
Professor of Geology
Kimberly L. Miller
*Laboratory Manager in
Geology and Geochemistry*

I - Computer Science 100 Powell-Booth 2:00 - 2:20 PM	Chengyi Liu <i>Class of '52 60th Reunion</i> SURF Fellow	Sparse predict and demote: Optimal scheduling with minimal size advice	Adam C. Wierman <i>Carl F Braun Professor of</i> <i>Computing and</i> <i>Mathematical Sciences</i> Tinashe Handina <i>Graduate Student in</i> <i>Computing and</i> <i>Mathematical Sciences</i>
G - Computer Science 127 Baxter 3:10 - 3:30 PM	Hudson Liu <i>Class of '52 70th Reunion</i> SURF Fellow	Physics-informed 3D shape generation using Laplacian preconditioned guidance	Anima Anandkumar <i>Bren Professor of Computing</i> <i>and Mathematical Sciences</i> Xinyi Li <i>Graduate Student in</i> <i>Computing and</i> <i>Mathematical Sciences</i>
O - Humanities and Social Sciences B119 Baxter 11:10 - 11:30 AM	Marcel Z. Liu <i>Citadel Global Fixed Income</i> SURF Fellow	Depressive symptoms and momentary mood relate to decision-making under uncertainty	Robb B. Rutledge <i>Assistant Professor of</i> <i>Psychology, Yale University</i> John P. O'Doherty <i>Fletcher Jones Professor of</i> <i>Decision Neuroscience</i>
G - Computer Science 127 Baxter 3:30 - 3:50 PM	Siqi Liu	Walk-on-Boundary supervision for linear elasticity neural operators	Anima Anandkumar <i>Bren Professor of Computing</i> <i>and Mathematical Sciences</i> Xi Deng <i>Postdoctoral Scholar</i> <i>Research Associate in</i> <i>Computing and</i> <i>Mathematical Sciences</i>
B - Bioengineering and Biology 142 Keck Laboratory 1:20 - 1:40 PM	Isabella T. Lo <i>Ray Owen SURF Fellow</i>	Determining the differential progression of specific aneuploidies at the onset of gastrulation	Magdalena Zernicka-Goetz <i>Bren Professor of Biology</i> <i>and Biological Engineering</i> Ayse Damla Durmaz <i>Graduate Student in Biology</i>
O - Humanities and Social Sciences B119 Baxter 1:00 - 1:20 PM	Vivian Loh <i>Citadel Global Fixed Income</i> SURF Fellow	Vertices of the convex polytope consisting of all monotonic stochastic choice functions	Kota Saito <i>Professor of Economics</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Eric Y. Lu <i>Ernest R. Roberts</i> SURF Fellow	Continuous best-response learning for direct exploitability descent	Tony Yue Yu <i>Professor of Mathematics</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Xingchuan Ma <i>Susan S. Murakami</i> SURF Fellow	Biosynthesis and cellular effects of phenylacetyl- carnitine, a gut microbiota- derived metabolite linked to Alzheimer's disease	Sarkis K. Mazmanian <i>Luis B. and Nelly Soux</i> <i>Professor of Microbiology;</i> <i>Merkin Institute Professor</i> Daniel Dumitrescu <i>Postdoctoral Scholar</i> <i>Research Associate in</i> <i>Biology and Biological</i> <i>Engineering</i>

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Yingying Ma
*Carole and Sidney Meltzner
SURF Fellow*

Building native-resolution
maps and interactive
visualization for Enceladus's
south polar terrain

Mark Simons
*John W. and Herberta M.
Miles Professor of
Geophysics*

D - Chemistry
147 Noyes
3:10 - 3:30 PM

Sarah E. Madden
John Stauffer SURF Fellow

[4+2] Cycloaddition on
 β -ketoester with tethered
alkene and siloxane tether

Brian M. Stoltz
*Victor and Elizabeth Atkins
Professor of Chemistry;
Investigator, Heritage
Medical Research Institute*
Sara Siddiqui
*Graduate Student in
Chemistry*

T - Physics
109 Jorgensen
3:10 - 3:30 PM

Samikshya Mahapatra
*Hugh F. and Audy Lou
Colvin SURF Fellow*

Development of a standalone
scintillation detector kit for
muon and gamma detection

Ryan B. Patterson
Professor of Physics

E - Chemical Engineering
269 Lauritsen
10:30 - 10:50 AM

Maryan Y. Malkosh
John Stauffer SURF Fellow

Vision-guided precision
targeting for spatially
controlled biolistic corneal
delivery

Julia A. Kornfield
*Warren and Katharine
Schlinger Professor of
Chemical Engineering*
Dennis L. Ko
*Executive Director, Rosen
Center; Staff Scientist in
Chemical Engineering*

E - Chemical Engineering
269 Lauritsen
1:40 - 2:00 PM

Neev Mangal

Expanding the antigen
repertoire and characterizing
localization dependence of
programmable nanobody
circuits for selection

Katie Galloway
*Associate Professor of
Chemical Engineering,
Massachusetts Institute of
Technology*
Mary Ehmann
*Graduate Student in
Chemical Engineering,
Massachusetts Institute of
Technology*
Rustem F. Ismagilov
*Ethel Wilson Bowles and
Robert Bowles Professor of
Chemistry and Chemical
Engineering; Merkin
Institute Professor*

R - Mathematics
107 Downs
1:00 - 1:40 PM
(joint presentation)

Marclus M. Marite

Assessing impact of math
camp active-learning activities
on students' confidence and
perceptions towards STEM

Franca Hoffmann
*Assistant Professor of
Computing and
Mathematical Sciences;
William H. Hurt Scholar*
Jasmine R. Bryant
*Director, Center for
Teaching, Learning, and
Outreach*
Joe Champion
*Professor of Mathematics,
Boise State University*

F - Aeronautics B122 Gates Annex 2:50 - 3:10 PM	Mahak Mathur <i>Brenda and Louis J. Alpinieri SURF Fellow</i>	Design and integration of deployment mechanisms for ultralight rollable booms and an elastically-foldable structure	Sergio Pellegrino <i>Joyce and Kent Kresa Professor of Aerospace and Civil Engineering; Senior Research Scientist, JPL</i> Flavia Palmeri <i>Postdoctoral Scholar Research Associate in Aerospace</i>
H - Computer Science 133 Guggenheim 2:50 - 3:10 PM	Ayushi Mehrotra	What heads are you really finding? Single-token vs. free-form localization	Dylan Hadfield-Menell <i>Associate Professor of Electrical Engineering and Computer Science, Massachusetts Institute of Technology</i> Aruna Sankaranarayanan <i>Graduate Student in Electrical Engineering and Computer Science, Massachusetts Institute of Technology</i> Adam C. Wierman <i>Carl F Braun Professor of Computing and Mathematical Sciences</i>
G - Computer Science 127 Baxter 2:00 - 2:20 PM	Divan I. Mejia Gonzalez	Enhancing predictive generative policies with learned rewards	Yilun Du <i>Assistant Professor of Computer Science, Harvard University</i> Haldun Balim <i>Graduate Student in Electrical Engineering, Harvard University</i> Adam C. Wierman <i>Carl F Braun Professor of Computing and Mathematical Sciences</i>
H - Computer Science 133 Guggenheim 10:30 - 10:50 AM	Annabelle Miin <i>Samuel P. and Frances Krown SURF Fellow</i>	Masked autoencoder pretraining for stable PDE rollouts	Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i> Robert Joseph George <i>Graduate Student in Computing and Mathematical Sciences</i>
Q - Mathematics 103 Downs 1:40 - 2:00 PM	Arpit Mittal <i>Timothy Ryan SURF Fellow</i>	Colored Jones tails, stability series, and the Gukov- Manolescu series	Sergei G. Gukov <i>John D. MacArthur Professor of Theoretical Physics and Mathematics</i> Josef Svoboda <i>Simons Collaboration Postdoctoral Scholar Teaching Fellow in Mathematics</i> Lara San Martin <i>Graduate Student in Mathematics</i>

O - Humanities and Social Sciences B119 Baxter 1:40 - 2:00 PM	<i>Sophie A. Mobley</i> <i>Citadel Global Fixed Income SURF Fellow</i>	Fixed points for models of dynamic decision making	Luciano Pomatto <i>Professor of Economics</i>
K - Mechanical Engineering 153 Noyes 11:10 - 11:30 AM	<i>Piash Mondol</i> <i>Larson Scholar</i>	Categorical Lyapunov theory for nondeterministic dynamical systems	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering, Control and Dynamical Systems, and Aerospace</i> Joe Moeller <i>Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering</i>
U - Physics 101 Schlinger 3:10 - 3:30 PM	<i>Madeline H. Mooney</i>	Holography in the parafermion SYK	Maria Spiropulu <i>Shang-Yi Ch'en Professor of Physics</i> Joseph D. Lykken <i>Distinguished Scientist, Fermilab Quantum Institute, Fermi National Accelerator Laboratory</i>
F - Aeronautics B122 Gates Annex 3:10 - 3:30 PM	<i>Blake T. Morris</i> <i>Dr. Chandler C. Ross SURF Fellow</i>	Novel method for the in-space assembly of membrane structures with a stationary robot	Sergio Pellegrino <i>Joyce and Kent Kresa Professor of Aerospace and Civil Engineering; Senior Research Scientist, JPL</i> Tara Venkatadri <i>Graduate Student in Aerospace</i>
Q - Mathematics 103 Downs 1:00 - 1:20 PM	<i>Samuel J. Moss</i> <i>Ryser SURF Fellow</i>	Synthetic noncommutative motives for algebraic K-theory	Denis-Charles Cisinski <i>Professor of Pure Mathematics, University of Regensburg</i> Matthias Flach <i>Professor of Mathematics</i>
N - Geological and Planetary Sciences 128 Baxter 3:30 - 3:50 PM	<i>Isabella H. Mueller</i> <i>Dr. Yuk L. Yung Memorial SURF Fellow</i>	Independent orbit determination for Jupiter Trojans from Gaia astrometry as a foundation for a distant-perturber search	Michael E. Brown <i>Richard and Barbara Rosenberg Professor of Planetary Astronomy</i>
T - Physics 109 Jorgensen 2:50 - 3:10 PM	<i>Shuhul Mujoo</i>	Spectator-error-free two-qubit gates for fluxonium qubits using a dual-mode coupler	William D. Oliver <i>Professor of Physics, Massachusetts Institute of Technology</i> Miguel Moreira <i>Graduate Student in Engineering Quantum Systems, Massachusetts Institute of Technology</i> David Hsieh <i>Donald A. Glaser Professor of Physics</i>

U - Physics 101 Schlinger 2:50 - 3:10 PM	Damian R. Musk <i>Robert L. Blinkenberg</i> SURF Fellow	Observer phases in dS ₃ quantum gravity	Joseph D. Lykken <i>Distinguished Scientist,</i> <i>Fermilab Quantum Institute,</i> <i>Fermi National Accelerator</i> <i>Laboratory</i> Maria Spiropulu <i>Shang-Yi Ch'en Professor of</i> <i>Physics</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Prince Mutegets <i>Carol Carmichael</i> SURF Fellow	Detecting forest tipping points: Adapting a Landsat data pipeline for wildfire analysis in California	Christian Frankenberg <i>Chandler Family Professor of</i> <i>Environmental Science and</i> <i>Engineering; Senior</i> <i>Research Scientist, JPL</i> Eva-Marie Metz <i>Postdoctoral Scholar</i> <i>Research Associate in</i> <i>Environmental Science and</i> <i>Engineering</i>
K - Mechanical Engineering 153 Noyes 3:10 - 3:30 PM	Audrey Y. Na	Sparse sensing of fluid- structure interaction dynamics using neural operators	Steven Brunton <i>Professor of Mechanical</i> <i>Engineering, University of</i> <i>Washington</i> Mario Sinani <i>Graduate Student in</i> <i>Mechanical Engineering,</i> <i>University of Washington</i> Melany L. Hunt <i>Dotty and Dick Hayman</i> <i>Professor of Mechanical</i> <i>Engineering</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Rachel E. Nazareth <i>Alain Porter Memorial</i> SURF Fellow	Spectroscopic validation of candidate giant exoplanets around M-dwarf stars (GEMS)	Dimitri P. Mawet <i>David Morrisroe Professor of</i> <i>Astronomy; Senior Research</i> <i>Scientist, JPL</i> Andrea Lin <i>Postdoctoral Scholar</i> <i>Research Associate in</i> <i>Astronomy</i>
N - Geological and Planetary Sciences 128 Baxter 2:30 - 2:50 PM	Abubakr S. Nazriev	GPU-accelerated radiative transfer forward model for aerosol-aware greenhouse gas retrievals	Christian Frankenberg <i>Chandler Family Professor of</i> <i>Environmental Science and</i> <i>Engineering; Senior</i> <i>Research Scientist, JPL</i>
I - Computer Science 100 Powell-Booth 1:40 - 2:00 PM	Tobjorn L. Nelson <i>Arjun Bansal ('05) and</i> <i>Ria Langheim SURF Fellow</i>	Utilizing full memory: An exploration of techniques in catalytic space	Chris M. Umans <i>Professor of Computer</i> <i>Science</i>
C - Chemistry 151 Crellin 2:30 - 2:50 PM	Tuyet N. Ngo <i>John Stauffer SURF Fellow</i>	Activating cobaltocenes for electrocatalytic CO ₂ reduction to formate at low overpotential by proton- coupled electron transfer mediators	Jonas C. Peters <i>Bren Professor of Chemistry</i> David Lu <i>Graduate Student in</i> <i>Chemistry</i>

G - Computer Science 127 Baxter 3:50 - 4:10 PM	Tuyen T. Nguyen	Faster electron density prediction with Fourier neural operator	Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i> Maurice Hanisch <i>Graduate Student in Computing and Mathematical Sciences</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Jia-Xin Nien <i>John Stauffer SURF Fellow</i>	Structural analysis and reconstitution of RNA polymerase II ubiquitination	Isaac Fianu <i>Assistant Professor of Biochemistry; William H. Hurt Scholar</i> Anjali Mirmira <i>Graduate Student in Chemistry</i>
P - Astronomy 106 Spalding Lab 1:40 - 2:00 PM	Saina Nikmehr <i>Stephen Adelman Memorial SURF Fellow</i>	Searching for rare transients from complementary views: A multi representation normalizing-flow framework for astronomical surveys	Mansi M. Kasliwal <i>Professor of Astronomy</i> Ashish Mahabal <i>Deputy Director, Caltech Center for Data-Driven Discovery</i> Michael Coughlin <i>Associate Professor of Physics and Astronomy, University of Minnesota</i> Argyro Sasli <i>Postdoctoral Researcher in Astrophysics, University of Minnesota</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Cleatus R. Oakes	Critical mineral recovery via electrosorption across zeolite films	Pavel A. Kots <i>Assistant Professor of Chemical Engineering, New York University</i> Mark E. Davis <i>Warren and Katharine Schlinger Professor of Chemical Engineering, Emeritus</i>
S - Physics B133 Baxter 10:30 - 10:50 AM	Esme R. Offner	Supernova classification and host subtraction for DESI spectra	Antonella Palmese <i>Assistant Professor of Physics, Carnegie Mellon University</i> Xander Hall <i>Graduate Student in Physics, Carnegie Mellon University</i> Mansi M. Kasliwal <i>Professor of Astronomy</i>

E - Chemical Engineering 269 Lauritsen 10:50 - 11:10 AM	Ismail B. Orak	Optimization of next generation lithium ion batteries with silicon graphite carbon nanotube composite as active material	Sibani L. Biswal <i>Assistant Professor, Department of Chemical and Biomolecular Engineering, Rice University</i> Kewei Wu <i>Graduate Student in Chemical Engineering, Rice University</i> Ratnika Gupta <i>Graduate Student in Chemical and Biomolecular Engineering, Rice University</i> Michael A. Vicić <i>Teaching Professor of Chemical Engineering</i>
H - Computer Science 133 Guggenheim 1:00 - 1:20 PM	Benjamin L. Ostrovsky <i>Taylor Lawrence SURF Research Fellow</i>	How to revoke users in encryption schemes anonymously	Sanjam Garg <i>Associate Professor of Computer Science, University of California, Berkeley</i> Leonard J. Schulman <i>Professor of Computer Science</i>
D - Chemistry 147 Noyes 10:50 - 11:10 AM	Grace H. Otos <i>Richard H. Cox SURF Fellow</i>	Removal of C55-P-P-GlcNAc-ManNAcA from MjAglH for improved structural analysis	William M. Clemons <i>Arthur and Marian Hanisch Memorial Professor of Biochemistry</i> Jacob Kirsh <i>Postdoctoral Scholar Research Associate in Chemistry</i>
D - Chemistry 147 Noyes 11:10 - 11:30 AM	Nihira Padidam <i>Donald Voet and Jerome Vinograd SURF Fellow</i>	Identifying cellular targets of phage-encoded single gene lysis proteins in <i>Escherichia coli</i>	William M. Clemons <i>Arthur and Marian Hanisch Memorial Professor of Biochemistry</i> Roujon Nowzari <i>Graduate Student in Biochemistry and Molecular Biophysics</i>
S - Physics B133 Baxter 1:20 - 1:40 PM	Sainiket Panyam	Chirality-induced effects on magnetism in helical nanowires and torus knots	Charudatta Phatak <i>Division Director, Argonne National Laboratory</i> John Fullerton <i>Postdoctoral Researcher, Argonne National Laboratory</i> Julia R. Greer <i>Ruben F. and Donna Mettler Professor of Materials Science, Mechanics, and Medical Engineering</i>

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Maria T. Papazoglu

Evaluating the accuracy and
stability of automatic
differentiation of eigenvalue
computations

Michael Overton
*Silver Professor of Computer
Science and Mathematics,
New York University*
Tim Mitchell
*Associate Professor of
Computer Science, Queens
College*
Joel A. Tropp
*Steele Family Professor of
Applied and Computational
Mathematics*

R - Mathematics
107 Downs
2:30 - 2:50 PM

Jin Park

Invariant measure of the
half-space polynuclear
growth model

Xincheng Zhang
*Olga Taussky and John Todd
Postdoctoral Scholar*
*Teaching Fellow in
Mathematics*

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Kyra T. Phaychanpheng

Wave attenuation and
hydrodynamic analysis of
artificial rocky reefs

Christine M. Baker
*Assistant Professor of Civil
and Environmental
Engineering, Stanford
University*
John O. Dabiri
*Centennial Professor of
Aeronautics and Mechanical
Engineering*

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Ethan Pichon
*Robert T. Herzog
SURF Fellow*

Creating benchmarks for
robust space robotics decision
making with reinforcement
learning

Benjamin Riviere
*Assistant Professor of
Mechanical and Aerospace
Engineering, New York
University*
Gunter Niemeyer
*Teaching Professor of
Mechanical and Civil
Engineering*

B - Bioengineering and
Biology
142 Keck Laboratory
1:40 - 2:00 PM

Manasvi Pinnaka
*Taylor Lawrence SURF
Research Fellow*

Understanding the
mechanisms behind sex-
biased trophectoderm
advantage in preimplantation
development using stem cell-
based embryo models

Magdalena Zernicka-Goetz
*Bren Professor of Biology
and Biological Engineering*
Sergi Junyent
Postdoctoral Scholar
*Research Associate in
Biology and Biological
Engineering*

J - Electrical Engineering
B125 Baxter
3:10 - 3:30 PM

Alexander P. Plekhanov

Scaling full-3D inverse
design to large-area
photonic systems

Kiyoul Yang
*Assistant Professor of
Electrical Engineering,
Harvard University*
Kerry J. Vahala
*Ted and Ginger Jenkins
Professor of Information
Science and Technology and
Professor of Applied Physics*

Q - Mathematics 103 Downs 1:20 - 1:40 PM	Peter B. Powell <i>Samuel P. and Frances Krown SURF Fellow</i>	Magnitude of metric spaces and spectral action models of gravity	Matilde Marcolli <i>Robert F. Christy Professor of Mathematics and Computing and Mathematical Sciences</i>
L - Mechanical Engineering 104 Watson 10:50 - 11:10 AM	Atharv Prabhutendolkar	Sparse identification of nonlinear dynamics via Large Language Models (SINDy- LLM)	Steven Brunton <i>Professor of Mechanical Engineering, University of Washington</i> Nick R. Hutzler <i>Professor of Physics</i>
K - Mechanical Engineering 153 Noyes 11:30 - 11:50 AM	Raymond A. Provost <i>M.A.Q. Lutful Haq SURF Fellow</i>	Bandwidth-aware collaborative mapping between a humanoid and an aerial robot	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering, Control and Dynamical Systems, and Aerospace</i> Ryan M. Bena <i>Postdoctoral Scholar Research Associate in Mechanical and Civil Engineering</i> Erina Yamaguchi <i>Graduate Student in Aerospace</i>
D - Chemistry 147 Noyes 3:30 - 3:50 PM	William R. Putzer <i>Reed and Ruth Brantley SURF Fellow</i>	Approaching the total synthesis of Phorbasonone A	Brian M. Stoltz <i>Victor and Elizabeth Atkins Professor of Chemistry; Investigator, Heritage Medical Research Institute</i> Sean Corman <i>Graduate Student in Chemistry</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Oleksandra Pyshna	Transition from inspiral to plunge for eccentric EMRIs with spinning secondary	Katerina Chatzioannou <i>Professor of Physics; William H. Hurt Scholar</i> Lucy M. Thomas <i>Postdoctoral Scholar Research Associate in Physics</i> Lisa V. Drummond <i>Sherman Fairchild Postdoctoral Scholar Research Associate in Physics</i>
N - Geological and Planetary Sciences 128 Baxter 2:50 - 3:10 PM	Ellin J. Qiao <i>Carl F. Braun SURF Fellow</i>	Aerosol corrected methane retrievals from slant viewing geometries	Christian Frankenberg <i>Chandler Family Professor of Environmental Science and Engineering; Senior Research Scientist, JPL</i> Jiani Yang <i>Graduate Student in Environmental Science and Engineering</i>

K - Mechanical Engineering 153 Noyes 10:30 - 10:50 AM	Hannah V. Ramsperger	Combustion in porous media burners: Computational and experimental investigation of thermo-structural material response to predict burner fracture locations	Matthias Ihme <i>Professor of Mechanical Engineering, Stanford University</i> Michael Mello <i>Teaching Professor of Mechanical and Civil Engineering</i>
T - Physics 109 Jorgensen 1:00 - 1:20 PM	Alexander M. Recce	Optimization of patterned gold-assisted exfoliation for monolayer transition metal dichalcogenides	James Hone <i>Wang Fong-Jen Professor of Mechanical Engineering, Columbia University</i> Simon Yoon <i>Graduate Student in Mechanical Engineering, Columbia University</i> Keith C. Schwab <i>Professor of Applied Physics</i>
R - Mathematics 107 Downs 2:50 - 3:10 PM	Phoebe A. Richter <i>Doris Everhart SURF Fellow</i>	Poisson coloring in the hyperbolic plane	Yassine El Maazouz <i>Harry Bateman Postdoctoral Scholar Teaching Fellow in Mathematics</i>
J - Electrical Engineering B125 Baxter 1:40 - 2:00 PM	Katherine C. Robertson <i>Anne and Ray Destabelle SURF Fellow</i>	Highly scalable atomic force microscope on an unmodified CMOS chip	Ali Hajimiri <i>Bren Professor of Electrical Engineering and Medical Engineering</i> Jatin Mathur <i>Graduate Student in Electrical Engineering</i> David A. Baum <i>Graduate Student in Electrical Engineering</i>
A - Biology 125 Baxter 1:20 - 1:40 PM	Amarri Z. Robinson <i>Eric T. Fung and Julie A. Buckley SURF Fellow</i>	Investigation of Fis1-mediated regulation of mitochondrial function via proteometabolic profiling	David C. Chan <i>Harold and Violet Alvarez Professor of Biology</i> Sangeeta Bhattacharjee <i>Postdoctoral Scholar Research Associate in Biology and Biological Engineering</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Ryan M. Rodrigue	Directional Gaussian smoothing for gradient descent	Federico Pasqualotto <i>Assistant Professor of Mathematics, University of California, San Diego</i> R. Michael Alvarez <i>Flintridge Foundation Professor of Political and Computational Social Science</i>

E - Chemical Engineering 269 Lauritsen 2:50 - 3:10 PM	Varun E. Rodrigues <i>John and Barbara Gee SURF Fellow</i>	Limitations of EC-labeled contrastive learning for reaction-enzyme retrieval	Frances H. Arnold <i>Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry</i> Sonia Yuan <i>Graduate Student in Biochemistry and Molecular Biophysics</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Brittany M. Rosario <i>Heather and Paul Haaga SURF Fellow</i>	High-quality motion capture for mocap-to-simulation pipeline for powered prosthesis	Aaron D. Ames <i>Bren Professor of Mechanical and Civil Engineering, Control and Dynamical Systems, and Aerospace</i>
L - Mechanical Engineering 104 Watson 1:40 - 2:00 PM	Brendan J. Rudberg <i>Caltech-University of Iceland Exchange</i>	Physics-based versus learned state-space models for building envelope thermal dynamics under passive excitation	Ólafur P. Pálsson <i>Professor of Mechanical Engineering, University of Iceland</i> Dependra Gautam <i>Researcher in Mechanical Engineering, University of Iceland</i>
F - Aeronautics B122 Gates Annex 3:50 - 4:10 PM	Ryan M. Rudes <i>Marcella Bonsall SURF Fellow</i>	Long-range, multi-view smartphone demonstrations for robot policy learning	Soon-Jo Chung <i>Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL</i> Fengze Xie <i>Graduate Student in Computing and Mathematical Sciences</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Trisha A. Sabadra	Adapting high-resolution spectroscopy pipelines for IGRINS-2: Studying WASP- 189b's atmosphere	Fei Dai <i>Assistant Professor of Astronomy, University of Hawaii</i> Jingyi Zhang <i>Graduate Student in Astronomy, University of Hawaii</i> Katherine L. Bouman <i>Professor of Computing and Mathematical Sciences, Electrical Engineering, and Astronomy; Rosenberg Scholar; Investigator, Heritage Medical Research Institute</i>
A - Biology 125 Baxter 1:40 - 2:00 PM	Katelyn A. Sadorf	Temporal acuity and its perceptual consequences in human intracortical microstimulation	Charles Greenspon <i>Assistant Professor of Neurological Surgery, University of Chicago</i> Ueli Rutishauser <i>Faculty Associate in Biology and Biological Engineering</i>

E - Chemical Engineering
269 Lauritsen
2:30 - 2:50 PM

Amelia Saffron

Engineering carotenoid
production in *Yarrowia*
lipolytica

Gregory Stephanopoulos
*Professor of Chemical
Engineering, Massachusetts
Institute of Technology*
Michael J. Ream
*Postdoctoral Associate in
Chemical Engineering,
Massachusetts Institute of
Technology*
Rustem F. Ismagilov
*Ethel Wilson Bowles and
Robert Bowles Professor of
Chemistry and Chemical
Engineering; Merkin
Institute Professor*

R - Mathematics
107 Downs
1:40 - 2:00 PM

Jan Pavel P. Safrata
Ian Agol SURF Fellow

Improving zero-shot
coordination through
test-time search over
partner models

Tony Yue Yu
Professor of Mathematics

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Efe Sakarya

Radial curriculum learning for
implicit neural representation-
based reconstruction of
non-Cartesian dynamic MRI

Shreyas S. Vasanawala
*Professor of Radiology;
Director of MRI, Stanford
Children's Hospital*
Ali Syed
*Medical Director of Pediatric
MRI, Stanford University*
Terrence Jao
*Clinical Assistant Professor
of Radiology, Stanford
University*
Yisong Yue
*Professor of Computing and
Mathematical Sciences*

P - Astronomy
106 Spalding Lab
3:50 - 4:10 PM

Maria J. Sanchez Rincon
*David L. Glackin Memorial
SURF Fellow*

Searching for successes and
failures of the latest high-
redshift galaxy models

Charles L. Steinhardt
*Assistant Professor of
Physics, University of
Missouri*
Dimitri P. Mawet
*David Morrisroe Professor of
Astronomy; Senior Research
Scientist, JPL*

B - Bioengineering and
Biology
142 Keck Laboratory
2:50 - 3:10 PM

Louise R. Scriven

Microfluidic approaches to
modeling the placenta-brain
axis utilizing human organoids

Rowan Karvas
*Assistant Professor of
Obstetrics and Gynecology,
University of Colorado
Anschutz*
Christopher Moraes
*Associate Professor of
Chemical Engineering,
University of British
Columbia*
Marianne Bronner
*Edward B. Lewis Professor
of Biology*

K - Mechanical Engineering 153 Noyes 2:00 - 2:20 PM	Rhea S. Senan <i>DaRin Butz SURF Fellow</i>	Monocular gate detection and localization vision pipeline for autonomous drone racing with adaptive and condition-aware perception	Joel W. Burdick <i>Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering and Bioengineering; Research Scientist, JPL</i> Jason Siu <i>Graduate Student in Aerospace</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Yourui Shao	Task-driven models for neural speech representations	Francis R. Willett <i>Assistant Professor of Neurosurgery, Stanford University</i> Yisong Yue <i>Professor of Computing and Mathematical Sciences</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Arjun Sharma <i>Larson Scholar</i>	Reflector-solver co-training for large language models	Yisong Yue <i>Professor of Computing and Mathematical Sciences</i> Atharva Sehgal <i>Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences</i>
S - Physics B133 Baxter 11:30 - 11:50 AM	Karen I. Shekyan <i>Dr. Bobbie Parwar and Dr. Babak Parwar SURF Fellow</i>	Calculation and analysis of reduced density matrices for quantum period-finding and integer factorization	Marco Bernardi <i>Professor of Applied Physics, Physics, and Materials Science</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Daniella E. Sherman <i>Edward W. Hughes SURF Fellow</i>	Computational modeling of nitrogen reduction intermediates on LaFeO_3 and LuFeO_3 perovskite oxide surfaces	William A. Goddard III <i>Charles and Mary Ferkel Professor of Chemistry, Materials Science, and Applied Physics</i> Sejun Kim <i>Postdoctoral Scholar Research Associate in Chemistry</i>
U - Physics 101 Schlinger 1:20 - 1:40 PM	Ahaan Shetty	Super-resolution for high pressure quantum sensing with NVs in round-table diamond anvil cells	Norman Yao <i>Professor of Physics, Harvard University</i> Srinivas Mandyam <i>Graduate Student in Physics, Harvard University</i> Thomas F. Rosenbaum <i>President Emeritus; William A. Fowler Professor of Physics, Emeritus</i>
T - Physics 109 Jorgensen 3:50 - 4:10 PM	Kensuke Shimojo <i>Bill Davis SURF Fellow</i>	Experimental characterization and simulation of nanopore ion beams for single-molecule mass spectrometry	Michael L. Roukes <i>Frank J. Roshek Professor of Physics, Applied Physics, and Bioengineering</i>

A - Biology
125 Baxter
1:00 - 1:20 PM

Alyssa H. Shin
*Mr. and Mrs. Robert C.
Loschke SURF Fellow*

A principled approach to
mouse motor behavior
analysis in Parkinson's
disease models

Sarkis K. Mazmanian
*Luis B. and Nelly Soux
Professor of Microbiology;
Merkin Institute Professor*
Justin S. Bois
*Teaching Professor of
Biology and Biological
Engineering*
Anastasiya Oguienko
Graduate Student in Biology

C - Chemistry
151 Crellin
1:40 - 2:00 PM

Katie Shou
Crook Family SURF Fellow

Elucidating the molecular
mechanisms of DDX19
nucleocytoplasmic trafficking

André Hoelz
*Mary and Charles Ferkel
Professor of Chemistry and
Biochemistry; Investigator,
Howard Hughes Medical
Institute*
Jahaun Azadmanesh
*Postdoctoral Scholar
Fellowship Trainee in
Chemistry*

Poster Session
Hameetman Multipurpose
Room
4:00 - 5:45 PM

Shreyas Singh
*Rita A. and Øistein Skjellum
SURF Fellow*

Sequential quantum circuits
mapping between symmetry-
protected gapless models

Xie Chen
*Eddleman Professor of
Theoretical Physics*
Vibhu Ravindran
Graduate Student in Physics

T - Physics
109 Jorgensen
3:30 - 3:50 PM

Ram Sivaraman
*Samuel P. and Frances
Krown SURF Fellow*

Modeling and design of
scalable qubits through a
novel semiclassical framework
for nondispersive fluxonium
readout

Gil Refael
*Taylor W. Lawrence
Professor of Theoretical
Physics*
Yinan Chen
Graduate Student in Physics
Nina del Ser
*DFG Postdoctoral Scholar
Fellowship Trainee in
Theoretical Physics*
Jacob Steiner
*Postdoctoral Scholar
Research Associate in
Theoretical Physics*

H - Computer Science
133 Guggenheim
1:40 - 2:00 PM

**Saanvi
Skanda Subramanian**

Structural-functional
integration for enhanced
detection of subtle
epileptogenic lesions:
A framework for a multimodal
EEG-MRI clinically-informed
approach

Shreyas S. Vasanawala
*Professor of Radiology;
Director of MRI, Stanford
Children's Hospital*
Bruno Pasetbon Soares
*Associate Professor of
Radiology, Stanford
University*
Mateus Aragao Esmeraldo
*Pediatric Radiology Fellow,
Stanford University*
Pietro Perona
*Allen E. Puckett Professor of
Electrical Engineering*

P - Astronomy 106 Spalding Lab 1:20 - 1:40 PM	Kristiano Sleiman University of California, Los Angeles	Interpreting AGN and star-formation diagnostics in 5MUSES: A sampling-aware comparison of PAH equivalent width and optical/infrared variability	George Helou <i>Research Professor of Physics</i> Thomas Lai <i>Staff Scientist in IPAC</i>
Q - Mathematics 103 Downs 3:50 - 4:10 PM	Gavin H. Slocum <i>The Associates SURF Fellow</i>	Optimal pebbling of wedge sums of cycles and kayak paddle graphs	Matthew M. Gherman <i>Hearst Postdoctoral Scholar Teaching Fellow in Mathematics</i>
K - Mechanical Engineering 153 Noyes 1:00 - 1:20 PM	Logan A. Smith-Perkins <i>Kiyo and Eiko Tomiyasu SURF Scholar</i>	Improving the modelling of cement carbonation and carbon uptake via Multiphysics software	Melany L. Hunt <i>Dotty and Dick Hayman Professor of Mechanical Engineering</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Joe F. Smith	Ruling out an intermediate mass progenitor donor in V404 Cygni	Kareem J. El-Badry <i>Associate Professor of Astronomy</i> Cheyanne Shariat <i>Graduate Student in Astrophysics</i>
F - Aeronautics B122 Gates Annex 2:00 - 2:20 PM	Emily M. Snyder <i>Larson Scholar</i>	A standardized CAN bus data acquisition system for a liquid rocket engine ground test stand	Mory Gharib <i>Hans W. Liepmann Professor of Aeronautics and Medical Engineering</i> Jack N. Caldwell <i>Graduate Student in Aerospace</i>
N - Geological and Planetary Sciences 128 Baxter 1:40 - 2:00 PM	Alan Song <i>Jack and Edith Roberts SURF Fellow</i>	Automated dark-field birefringence microscope for investigation of crystallization kinetics of chiral species on magnetized substrates	S. Furkan Ozturk <i>Assistant Professor of Geobiology and Geochemistry; William H. Hurt Scholar</i> Sean J. Chen <i>Graduate Student in Chemical Engineering</i>
J - Electrical Engineering B125 Baxter 11:30 - 11:50 AM	Aruesha Srivastava	A wireless, oxygen-generating macroencapsulation device for high-density islet trans- plantation in type 1 diabetes	Siddharth Krishnan <i>Assistant Professor of Electrical Engineering, Stanford University</i> Kecheng Wang <i>Postdoctoral Scholar in Electrical Engineering, Stanford University</i> Wei Gao <i>Professor of Medical Engineering; Investigator, Heritage Medical Research Institute</i>
T - Physics 109 Jorgensen 2:30 - 2:50 PM	John M. Sullivan <i>Robert L. Blinkenberg SURF Fellow</i>	Sub-cycle quantum control of Hubbard excitons in a Mott insulator	Matteo Mitrano <i>Assistant Professor of Physics, Harvard University</i> Nai-Chang Yeh <i>Thomas W. Hogan Professor of Physics</i>

F - Aeronautics B122 Gates Annex 11:10 - 11:30 AM	Priyanka Supraja Balaji	Learning to control: A differentiable optimization approach to robust trajectory generation	Zachary Manchester <i>Boeing Career Development Professor in Aeronautics and Astronautics, Massachusetts Institute of Technology</i> Soon-Jo Chung <i>Bren Professor of Control and Dynamical Systems; Senior Research Scientist, JPL</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Amina Tajammal	Effects of IFN γ signaling on Treg phenotype, transcriptional state, and suppressive function	Andrew Luster <i>Persis, Cyrus, and Marlow B. Harrison Professor of Medicine, Harvard University</i> Alexis Yero Diaz <i>Research Fellow in Medicine, Massachusetts General Hospital</i> Ellen Rothenberg <i>Edward B. Lewis Professor of Biology</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Katherine W. Tam <i>Carl F. Braun SURF Fellow</i>	Mitochondrial inheritance and fertilization-driven asymmetry in the early mouse embryo	Magdalena Zernicka-Goetz <i>Bren Professor of Biology and Biological Engineering</i> Breanna M. McMahon <i>Graduate Student in Biology</i>
P - Astronomy 106 Spalding Lab 1:00 - 1:20 PM	Lev Tartakovsky	Detecting short period transiting brown dwarfs in ZTF	Matthew J. Graham <i>Research Professor of Astronomy</i> Sam Whitebook <i>Graduate Student in Physics</i>
C - Chemistry 151 Crellin 3:10 - 3:30 PM	Lindsay N. Taylor <i>Ronan Armaan Mack SURF Fellow</i>	Tuning counteractions in molecular qubits to illuminate the effect of spin-phonon coupling and covalency on low temperature T ₁	Ryan G. Hadt <i>Professor of Chemistry</i> Jonathan Aalto <i>Graduate Student in Chemistry</i>
L - Mechanical Engineering 104 Watson 10:30 - 10:50 AM	Marissa Till	Multi-objective optimization for synthetic aviation turbine fuels	Steven Brunton <i>Professor of Mechanical Engineering, University of Washington</i> Ana Larrañaga <i>Acting Assistant Professor of Mechanical Engineering, University of Washington</i> Patricia Garcia Caspueñas <i>Graduate Student in Mechanical Engineering, University of Washington</i> John O. Dabiri <i>Centennial Professor of Aeronautics and Mechanical Engineering</i>

I - Computer Science 100 Powell-Booth 3:10 - 3:30 PM	Ernest W. Ting	Question and quiz analysis of open STACK questions: Validating diagnostics with real course data	Franca Hoffmann <i>Assistant Professor of Computing and Mathematical Sciences;</i> <i>William H. Hurt Scholar</i> Jasmine R. Bryant <i>Director, Center for Teaching, Learning, and Outreach</i> Juma Zevick Otieno <i>Professor of STEM Education, Universita Degli Studi Di Trieste</i>
N - Geological and Planetary Sciences 128 Baxter 10:50 - 11:10 AM	Madison Elle C. Tongco <i>Caltech-University of Iceland Exchange</i>	Genetic analysis of complete Arctic charr mitogenomes reveals colonization and differentiation patterns in four Arctic lakes	Arnar Pálsson <i>Professor of Bioinformatics, University of Iceland</i> Jonathan Kirshner <i>Graduate Student in Life and Environmental Sciences, University of Iceland</i>
D - Chemistry 147 Noyes 11:30 - 11:50 AM	Emily Tu <i>John Stauffer SURF Fellow</i>	Circulating microbial and vesicle-associated signatures as potential biomarkers of atherosclerotic plaque states	Rustem F. Ismagilov <i>Ethel Wilson Bowles and Robert Bowles Professor of Chemistry and Chemical Engineering; Merkin Institute Professor</i> Roey Lazarovits <i>Graduate Student in Medical Engineering</i>
E - Chemical Engineering 269 Lauritsen 11:10 - 11:30 AM	Tiffany T. Tu <i>John Stauffer SURF Fellow</i>	Optimizing <i>Azotobacter vinelandii</i> as a hydroponic biofertilizer	Gözde S. Demirer <i>Clare Booth Luce Assistant Professor of Chemical Engineering</i> Chiara Berruto <i>Graduate Student in Biology</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Idil A. Turasi	Self-driving imaging system for fetal brain magnetic resonance imaging (MRI)	Polina Golland <i>Sunlin (1966) and Priscilla Chou Professor of Electrical Engineering and Computer Science, Massachusetts Institute of Technology</i> Babak Hassibi <i>Mose and Lillian S. Bohn Professor of Electrical Engineering and Computing and Mathematical Sciences</i>
U - Physics 101 Schlinger 2:30 - 2:50 PM	Idil Doga Turkmen <i>Robert L. Blinkenberg SURF Fellow</i>	Symmetry-preserving reconstruction of Higgs boson pairs and a controlled test of pretrained jet representations	Harvey B. Newman <i>Professor of Physics</i>

P - Astronomy
106 Spalding Lab
3:30 - 3:50 PM

Mariana V. Vale Taveira
*Samuel P. and Frances
Krown SURF Fellow*

Spatially resolved star
formation histories of fast
radio burst host galaxies
using Keck Cosmic Web
Imager

Vikram Ravi
Professor of Astronomy
Stella K. Ocker
Brinson Postdoctoral Scholar
Fellowship Trainee in
Astronomy
Kritti Sharma
Graduate Student in
Astrophysics

U - Physics
101 Schlinger
1:40 - 2:00 PM

Amith Varambally

Quantum calorimetry:
NV-center-based AC
thermometry towards
megabar pressures

Norman Yao
Professor of Physics,
Harvard University
Srinivas Mandyam
Graduate Student in
Physics, Harvard University
David Hsieh
Donald A. Glaser Professor
of Physics

Q - Mathematics
103 Downs
2:00 - 2:20 PM

Ostap Vyshnevskiy
Jean J. Dixon SURF Fellow

Murasugi sum and the
constituent structure of
strongly quasipositive knots

Sergei G. Gukov
John D. MacArthur Professor
of Theoretical Physics and
Mathematics
Josef Svoboda
Simons Collaboration
Postdoctoral Scholar
Teaching Fellow in
Mathematics
Lara San Martin
Graduate Student in
Mathematics

B - Bioengineering and
Biology
142 Keck Laboratory
11:10 - 11:30 AM

Anthony H. Wang

Opposing regulation of
androgen receptor stability by
RNF113A and PSMD14

Jonathan Tsai
Assistant Professor of
Pathology, Brigham and
Women's Hospital
Wallace Wong
Researcher, Brigham and
Women's Hospital
Lea A. Goentoro
Professor of Biology

J - Electrical Engineering
B125 Baxter
2:00 - 2:20 PM

Chloe Wang

Development of thin-film
tactile sensors using PVDF
and P(VDF-TrFE-CFE)

Ioannis Kymissis
Kenneth Brayer Professor of
Electrical Engineering,
Columbia University
Peter Ballentine
Graduate Student in
Electrical and Computer
Engineering, Columbia
University
Eric Chang
Graduate Student in
Mechanical Engineering,
Columbia University
Wei Gao
Professor of Medical
Engineering; Investigator,
Heritage Medical Research
Institute

P - Astronomy 106 Spalding Lab 2:30 - 2:50 PM	Harold Wang <i>Northern California Associates SURF Fellow</i>	Distinguishing gap transients from Type Ia and II supernovae using photometric classification	Mansi M. Kasliwal <i>Professor of Astronomy</i> K-Ryan Hinds <i>Postdoctoral Scholar</i> <i>Research Associate in Astronomy</i>
A - Biology 125 Baxter 2:10 - 3:30 PM	Jenna Wang <i>Bristol-Myers SURF Fellow</i>	A framework for inference in spatial transcriptomics models	Lior S. Pachter <i>Bren Professor of Computational Biology and Computing and Mathematical Sciences</i> Kayla C. Jackson <i>Graduate Student in Biology</i>
D - Chemistry 147 Noyes 2:50 - 3:10 PM	Muping Wang <i>Carl F. Braun SURF Fellow</i>	Determining the chaperone activity and interaction interface of <i>Chlamydomonas reinhardtii</i> chloroplast signal recognition particle to its client proteins	Shu-ou Shan <i>Altair Professor of Chemistry</i> Yelim Yi <i>Postdoctoral Scholar</i> <i>Research Associate in Chemistry</i>
N - Geological and Planetary Sciences 128 Baxter 1:00 - 1:20 PM	Wendy Wang <i>Dr. George R. Rossman SURF Fellow</i>	Investigating the growth characteristics and extracellular polymeric substances (EPS) of methylophilic methanogens in AOM consortia	Victoria J. Orphan <i>James Irvine Professor of Environmental Science and Geobiology</i> Yurina Takahagi <i>Graduate Student in Geobiology</i>
I - Computer Science 100 Powell-Booth 2:30 - 2:50 PM	Zichang W. Wang <i>Guo/Zhao Family SURF Fellow</i>	FROST: Stochastic prediction- space adaptation for sim-to- real PDE forecasting	Yisong Yue <i>Professor of Computing and Mathematical Sciences</i>
C - Chemistry 151 Crellin 1:00 - 1:20 PM	David V. Welt	Nickel-catalyzed cross-electrophile coupling facilitated by a Co(II) co-catalyst	Nilay Hazari <i>John R. Huffman Professor of Chemistry, Yale University</i> Jasmine L. Chow <i>Graduate Student in Chemistry, Yale University</i> Theodor Agapie <i>John Stauffer Professor of Chemistry</i>
U - Physics 101 Schlinger 11:10 - 11:30 AM	Margaux H. Wong	SLAC ATLAS ITk pixel testing and beam-induced background in the FCC	Charles Young <i>Senior Scientist, SLAC National Accelerator Laboratory</i> Harvey B. Newman <i>Professor of Physics</i>
Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	William A. Wroldstad <i>Dr. Eduardo Repetto and Ms. Carla Figueroa SURF Fellow</i>	Learning-based methods for ground-effect estimation on thrust-vector-controlled rocket vehicles	Mory Gharib <i>Hans W. Liepmann Professor of Aeronautics and Medical Engineering</i> Jack N. Caldwell <i>Graduate Student in Aerospace</i>

U - Physics 101 Schlinger 11:30 - 11:50 AM	Emily J. Wu	ATLAS ITk pixel testing and laser characterization of the NAPA-p2 monolithic active pixel sensor	Charles Young <i>Senior Scientist, SLAC National Accelerator Laboratory</i> Caterina Vernieri <i>Assistant Professor of Particle Physics and Astrophysics, Stanford University</i> Harvey B. Newman <i>Professor of Physics</i>
R - Mathematics 107 Downs 2:00 - 2:20 PM	Yingshan Xiao <i>Ian Agol SURF Fellow</i>	Andrews-Gordon identities and cylindric partitions	Tony Yue Yu <i>Professor of Mathematics</i> Weihong Xu <i>Harry Bateman Postdoctoral Scholar Teaching Fellow in Mathematics</i> Yifeng Huang <i>Postdoctoral Research/ Training Fellow in Mathematics, Emory University</i>
H - Computer Science 133 Guggenheim 11:10 - 11:30 AM	Evan B. Xie	Linearithmic scaling density functional theory via Fourier neural operators	Anima Anandkumar <i>Bren Professor of Computing and Mathematical Sciences</i> Danish Khan <i>Postdoctoral Scholar Research Associate in Computing and Mathematical Sciences</i>
C - Chemistry 151 Crellin 2:00 - 2:20 PM	Alex S. Xu <i>Dr. and Mrs. Daniel C. Harris SURF Fellow</i>	Mechanistic and kinetic characterization of a vanadium deprotonation-metallacyclobutadiene catalyst for cyclic polyalkyne synthesis	Daniel Mindiola <i>Professor of Chemistry, University of Pennsylvania</i> Dylan Grigas <i>Graduate Student in Chemistry, University of Pennsylvania</i> Jonas C. Peters <i>Bren Professor of Chemistry</i>
T - Physics 109 Jorgensen 2:00 - 2:20 PM	Olivia J. Xu	Studying the quantum kinetic evolution of neutrinos	Chad Kishimoto <i>Associate Professor of Physics and Biophysics, University of San Diego</i> Ryan B. Patterson <i>Professor of Physics</i>
Q - Mathematics 103 Downs 2:50 - 3:10 PM	Owen J. Xu	Recurrence and transience of excited random walks on trees and lamplighter groups	Matthew M. Gherman <i>Hearst Postdoctoral Scholar Teaching Fellow in Mathematics</i> Tasmin Chu <i>Graduate Student in Mathematics</i>

Poster Session Hameetman Multipurpose Room 4:00 - 5:45 PM	Charlie Q. Yang <i>Kiyo and Eiko Tomiyasu</i> SURF Scholar	What if we trained video models on Mars?	Pietro Perona <i>Allen E. Puckett Professor of Electrical Engineering</i> Raphaela H. Kang <i>Graduate Student in Computation and Neural Systems</i> Sevan Brodjian <i>Graduate Student in Computation and Neural Systems</i>
O - Humanities and Social Sciences B119 Baxter 10:50 - 11:10 AM	Danielle S. Yang <i>Citadel Global Fixed Income</i> SURF Fellow	Speaking to the audience: Mode of address as a partisan signal in U.S. political podcasts	R. Michael Alvarez <i>Flintridge Foundation</i> <i>Professor of Political and Computational Social Science</i>
S - Physics B133 Baxter 1:40 - 2:00 PM	Yi Wei Yang <i>Dr. Alan K. Marumoto</i> SURF Fellow	Fully-coupled oscillations of perturbed Kerr-Newman black holes	Yanbei Chen <i>Professor of Physics</i> Colin M. Weller <i>Graduate Student in Physics</i>
G - Computer Science 127 Baxter 1:20 - 1:40 PM	Clara Yu	Persona- and urgency-driven sycophancy in frontier LLMs	Ankit Sakhuja <i>Associate Professor of AI and Human Health, Icahn School of Medicine at Mount Sinai</i> Nimay Hazare <i>Associate Researcher, Icahn School of Medicine at Mount Sinai</i> Shinsuke Shimojo <i>Gertrude Baltimore</i> <i>Professor of Experimental Psychology</i>
O - Humanities and Social Sciences B119 Baxter 1:20 - 1:40 PM	Emily Q. Yu <i>Thompson-Bloomfield</i> SURF Fellow	Why do buyers discount flood- resistant homes? A housing choice experiment	Hannah Druckenmiller <i>Assistant Professor of Economics; William H. Hurt Scholar</i>
D - Chemistry 147 Noyes 3:50 - 4:10 PM	Jack S. Yu <i>William N. Lacey</i> SURF Fellow	Extending temperature control capabilities for Laser- driven Ultrafast Impedance Spectroscopy	Scott K. Cushing <i>Assistant Professor of Chemistry</i> Amy Lin <i>Graduate Student in Chemistry</i> Natan Spear <i>Graduate Student in Materials Science</i>

D - Chemistry 147 Noyes 2:00 - 2:20 PM	Ryan D. Yu	Identifying and steering with interpretable features in protein models using sparse autoencoders	Grant Rotskoff <i>Assistant Professor of Chemistry, Stanford University</i> Soojung Yang <i>Postdoctoral Researcher in Chemistry, Stanford University</i> Jason Liu <i>Postdoctoral Researcher in Chemical Engineering, Stanford University</i> Kara D. Fong <i>Assistant Professor of Chemical Engineering; William H. Hurt Scholar</i>
J - Electrical Engineering B125 Baxter 10:50 - 11:10 AM	Vivian C. Yue	A systematic evaluation of hardware and acquisition parameters for near-infrared imaging	Anuradha Godavarty <i>Professor of Biomedical Engineering, Virginia Commonwealth University</i> Lihong Wang <i>Bren Professor of Medical Engineering and Electrical Engineering</i>
L - Mechanical Engineering 104 Watson 11:30 - 11:50 AM	Eloise Zeng	AutoMF: Automated ensembles for multifidelity field prediction	Faez Ahmed <i>Associate Professor of Mechanical Engineering, Massachusetts Institute of Technology</i> Nicholas Sung <i>Graduate Student in Generative AI, Massachusetts Institute of Technology</i> Tony Yue Yu <i>Professor of Mathematics</i>
M - Applied Physics and Materials Science 125 Steele Laboratory 2:00 - 2:20 PM	Tara T. Zhan <i>Larson Scholar</i>	Thermal imaging with a temperature-sensitive polymer using electrical impedance tomography	Chiara Daraio <i>G. Bradford Jones Professor of Mechanical Engineering and Applied Physics; Investigator, Heritage Medical Research Institute</i> Brian Ahn <i>Graduate Student in Bioengineering</i>
D - Chemistry 147 Noyes 1:40 - 2:00 PM	Zhehao Zhang <i>John Stauffer SURF Fellow</i>	Towards a convergent fragment-coupling approach of grayanane diterpenoids via selective lithium-halogen exchange of a vinyl dibromide	Sarah E. Reisman <i>Bren Professor of Chemistry</i> Joshua Belfield <i>Graduate Student in Chemistry</i>
M - Applied Physics and Materials Science 125 Steele Laboratory 1:40 - 2:00 PM	Annie W. Zhao <i>Mary Atwater SURF Fellow</i>	Langmuir probe for Caltech Water-Ice Dusty Plasma Experiment	Paul M. Bellan <i>Professor of Applied Physics</i> Jessica C. Gonzalez <i>Graduate Student in Applied Physics</i>

H - Computer Science
133 Guggenheim
11:30 - 11:50 AM

Cindy Y. Zhao
*Samuel P. and Frances
Krown SURF Fellow*

Capturing membrane
dynamics and spike timing of
human neurons at scale using
neural operators

Anima Anandkumar
*Bren Professor of Computing
and Mathematical Sciences*
Valentin Duruisseaux
Postdoctoral Scholar
Research Associate in
Computing and
Mathematical Sciences

H - Computer Science
133 Guggenheim
2:00 - 2:20 PM

Xiaoli Zhao

Joint optimization of k-space
sampling and water-fat
separation for accelerated
dual-echo MRI

Shreyas S. Vasanawala
*Professor of Radiology;
Director of MRI, Stanford
Children's Hospital*
Yan Wu
*Research Scientist in
Radiology, Stanford
University*
Aiqi Sun
*Physical Science Research
Scientist, Stanford
University*
Houman Owhadi
*IBM Professor of Applied and
Computational Mathematics
and Control and Dynamical
Systems*

H - Computer Science
133 Guggenheim
10:50 - 11:10 AM

Aaron Zhou
*Samuel P. and Frances
Krown SURF Fellow*

Expanding past Miller-Schupp:
Generating new presentation
families for learning Andrews-
Curtis trivialization paths
using knot theory

Anima Anandkumar
*Bren Professor of Computing
and Mathematical Sciences*
Robert Joseph George
*Graduate Student in
Computing and
Mathematical Sciences*

I - Computer Science
100 Powell-Booth
1:00 - 1:20 PM

Joseph H. Zhou

Multi-subject neural decoding
from intracranial recordings

Yanan Sui
*Associate Professor of
Computer Science, Tsinghua
University*
Glen A. George
*Teaching Professor of
Electrical Engineering*

F - Aeronautics
B122 Gates Annex
2:30 - 2:50 PM

Claire Zhu

RAFT-XDIC: Deep learning-
based framework for DIC
measurement of mode II
shear fractures

Jin Yang
*Assistant Professor of
Aerospace Engineering and
Engineering Mechanics, The
University of Texas at Austin*
Zixiang Tong
*Graduate Student in
Engineering Mechanics, The
University of Texas at Austin*
Guruswami Ravichandran
*John E. Goode, Jr.,
Professor of Aerospace and
Mechanical Engineering*

H - Computer Science
133 Guggenheim
2:30 - 2:50 PM

Rayhan A. Zirvi
*Taylor Lawrence SURF
Research Fellow*

Learning anisotropic
prediction targets for flow
models

Leonidas Guibas
*Paul Pigott Professor of
Computer Science, Stanford
University*
Georgia Gkioxari
*Assistant Professor of
Computing and
Mathematical Sciences and
Electrical Engineering;
William H. Hurt Scholar*

P - Astronomy
106 Spalding Lab
3:10 - 3:30 PM

Alice Zou
*Hugh F. and Audy Lou
Colvin International
SURF Fellow*

Aluminum among the
meteors: Quantifying and
tracking the rising impact of
space debris reentries

Randy Pollock
*Chief Scientist/Engineer for
Space Research, Victoria
University of Wellington*
Paul D. Asimow
*Eleanor and John R.
McMillan Professor of
Geology and Geochemistry*