

KAREN E. WETTERHAHN SCIENCE SYMPOSIUM



**A Celebration of Undergraduate
Research in the Sciences**

Wednesday, May 22, 2024

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SCHEDULE

12-3:30 PM

**Christopher G. Reed Science Competition,
ECSC B10 and B11**

Students presenting their senior honors thesis work will be assigned presentation times prior to the event

4-5 PM

Cook Auditorium, Irving Institute for Energy & Society

“How Human-Centered Engineers Can Save Us from Climate Change”
Alexis Abramson, Dean of Thayer School of Engineering, is a mechanical engineer and a leader in the field of sustainable energy. Her research focuses on developing nanomaterials for alternative energy technologies and solving energy efficiency problems.

5-5:25 PM

Student Award Ceremony, Cook Auditorium

A brief ceremony to recognize undergraduates receiving awards (Christopher Reed Competition and the WISP Sophomore Scholarships) will follow the keynote address.

5:30-7:00 PM

**Student Poster Session, ECSC garden & ground level
atriums, classrooms, & design rooms**

Students will be assigned their easel numbers upon check-in.

7:00-7:30 PM

Student presenters assist with poster removal

Return clips, name tags, and poster number to the box at the registration table. Posters left behind will be discarded.

HISTORY OF THE SYMPOSIUM

The symposium is named in memory of the late Karen Wetterhahn (1948-1997), Professor of Chemistry, Associate Dean for the Sciences, and co-founder of the Women in Science Project (WISP). Karen's love of science and desire to see more undergraduates have early research experiences led to the idea of a symposium.

In the poster session, students present work in a broad range of disciplines in the sciences and engineering. The symposium offers them the opportunity to present their research to peers, faculty members, graduate students, postdoctoral scholars, and other guests, to network and converse with working scientists, and to celebrate their scholarly achievements.



Karen E. Wetterhahn

KEYNOTE ADDRESS

This year's keynote speaker is Alexis Abramson, Dean of Thayer School of Engineering. A mechanical engineer and a leader in the field of sustainable energy, Dean Abramson's research has focused on developing nanomaterials for alternative energy technologies and solving energy efficiency problems. She is co-founder of a virtual energy audit start-up, Edifice Analytics.

During the Obama administration, she served as chief scientist and manager of the Emerging Technologies Division at the Department of Energy's Building Technologies Office. And she serves as a technical advisor for various venture firms investing in companies developing solutions to mitigate climate change.



“Our human-centered approach to engineering puts people first. This means our faculty and students tackle some of our world's most complex problems not only through the lens of science and engineering, but also with deep appreciation for and understanding of human behavior, community and society, and the potential for unintended consequences to develop tools and technology that truly serve humanity and better our world.”

-Dean Alexis Abramson

STUDENT AWARDS

Christopher G. Reed Science Competition

Named in memory of the late Professor of Biology and Sigma Xi chapter officer Christopher Reed, the competition is open to all senior honors thesis students majoring in science, math and engineering who present a poster at the Wetterhahn Symposium. Presenters are evaluated on the quality of their research and the effectiveness of their presentation by a panel of Sigma Xi members.

Presented by: Dean Wilcox, Professor of Chemistry and Chair of Dartmouth Chapter of Sigma Xi.

WISP Sophomore Scholarships

Awards that allow highly motivated and deserving Dartmouth WISP interns to continue their research and mentoring experience during their sophomore year.

The **Barbara E. Crute Memorial Internship** honors the memory of biologist Barbara E. Crute, PhD, who epitomized an ideal research scientist. Known for her generosity, scholarly aptitude, and strong work ethic, Dr. Crute was a role model and mentor to numerous WISP interns, graduate students, and postdoctoral fellows throughout her Dartmouth research career.

The **Carol Folt Research Scholarship Award** honors the dedication and significant contributions of Carol Folt, PhD., to the Women in Science Project at Dartmouth. One of the original faculty mentors in the WISP research internship program, Dr. Folt is an environmental scientist and award-winning educator. In addition to her support of young women in the sciences, she served the Dartmouth community as Dean of Graduate Studies, Dean of Faculty, Provost, and Interim President of Dartmouth College.

Presented by: Morgan Hamilton, Director of the Women in Science Project

KEY TO STUDENT POSTERS

Note: The location of each poster will be listed at the sign-in desk on the ground floor of the ECSC.



Department Abbreviations

ANTH	Anthropology
BIOL	Biological Sciences
CHEM	Chemistry
COSC	Computer Science
EARS	Earth Sciences
ENGS	Thayer School of Engineering
ENVS	Environmental Studies
GEOG	Geography
LING	Linguistics
MATH	Mathematics
MED	Geisel School of Medicine
PHYS	Physics & Astronomy
PBS	Psychological & Brain Sciences
QSS	Quantitative Social Science

Student Presenters, Alphabetical

Asterisk (*) denotes students co-presenting a poster

Jivan Achar '25

Presidential Scholar
Poster #: 18

Advisor: Alan Budney & Cara Struble (MED)
Patient-provider interactions regarding cannabis for therapeutic purposes

Amoli Agarwal '27*

WISP intern
Poster #: 24

Advisor: Margaret Ackerman & Chinmay Vaidya (ENGS)
Seurat objects and dandelion

Ayushya Ajmani '24*

Independent study
Poster #: 33

Advisor: Catherine Stanger & Enzo Plaitano (MED)
Healthcare utilization associated with mental health symptoms in young adults with type 1 diabetes

Jeremy Alkire '24

URAD
Poster #: 44

Advisor: Catherine Stanger & Enzo Plaitano (MED)
Predictors of diabetes distress among young adults with type 1 diabetes

Emily Allison '27

WISP intern
Poster #: 47

Advisor: Doug van Citters & Shawna Pratt (ENGS)
3D micropattern generation to study bacterial surface sensing

Priyanshu Alluri '26

Class of 1974 Health
Poster #: 41

Advisor: Wesley Marrero (ENGS)
Socially fair K-means clustering of student mental health profiles

Tyler Amell-Angst '26*

URAD
Poster #: 65

Advisor: Arti Gaur & George Zanazzi (Other)
Transcriptomic and proteomic characterization of glioblastoma tumors with Digital Spatial Profiling

Jaziel Aquino '27*

Thayer School First
Poster #: 51

Advisor: Peter Chin & Emma Graham (ENGS)
Game-theoretic reinforcement learning for cybersecurity

Sachi Badola '26*

URAD
Poster #: 65

Advisor: Arti Gaur & George Zanazzi (MED)
Transcriptomic and proteomic characterization of glioblastoma tumors with Digital Spatial Profiling

Julia Banuelos '27*

WISP intern
Poster #: 100

Advisor: Kiara Sanchez (PSYC)
Exploring conversational dynamics through video processing, AI, and physiological data

Evan P Barrett '24

Senior honors thesis
Poster #: 82

Advisor: Bob Hawley (EARS)
Spatial and temporal variations of the snow surface at Summit, Greenland

Willa Bednarz '27*

WISP intern
Poster #: 30

Advisor: Peter Chin (ENGS)
Hyperbolic embeddings for faster graph routing

Maddie Benello '26

Leave term research
Poster #: 87

Advisor: Erich Osterberg & Lilly Tipton (EARS)
Investigating the cause of the Antarctic dust increase over the last 1000 years

Peter Blatchford '23

Senior honors thesis
Poster #: 27

Advisor: Marisa Palucis (EARS)
Thermal erosion and lava tube sinuosity

Alex Breslav '25

Leave term research
Poster #: 90

Advisor: Xiaofeng Wang & Andrew McCray (MED)
Elucidating the functions of the major SWI/SNF subcomplexes

Chloe Buschman '26*

WISP intern
Poster #: 73

Advisor: Elizabeth Murnane & Hannah Dorris (ENGS)
Patient narratives and interactive technology for behavioral assessment and intervention

Swabir M Bwana '27

Thayer School First
Poster #: 109

Advisor: Alexander Boys (ENGS)
A holder for precision surgery and bioelectronic integration in rodent models

Mason E Capone '27

WISP intern
Poster #: 135

Advisor: Jonathan Chipman (GEOG)
Unveiling mysteries of slope parallel ridges: periglacial landforms in the northeast USA

Ava E Carr '27

WISP intern
Poster #: 66

Advisor: Magdalena Bezanilla (BIOL)
Investigating peptide signaling during development

Daniel L. Carstensen '24

Senior honors thesis
Poster #: 40

Advisor: Jeremy Manning (PSYC) & Peter Mucha (MATH)
Translating neurophysiological recordings into dynamic estimates of conceptual knowledge and learning

Eleanor Chase '25

URAD
Poster #: 85

Advisor: Katherine Mirica & Emma Ambroggi (CHEM)
Effective methods of hydrothermal deposition of Ni₂(HHTP)₃ MOF on Ag-coated threads

Paul Cherian '27*

Thayer School First
Poster #: 1

Advisor: Peter Chin & Ngoc Minh Bui (ENGS)
Revealing speech samples in federated learning with gradient descent

Seoyoon Evelyn Choi '27

WISP intern
Poster #: 126

Advisor: Alireza Soltani & Michael Chong Wang (PSYC)
Computational modeling of human sequential decision making in high-dimensional environments

Tasnim Choudhury '27*

WISP intern
Poster #: 89

Advisor: Lorie Loeb & Maria Cristoforo (COSC)
The DPlan Sharing Site

Emma Y Cool '24

Senior honors thesis
Poster #: 10

Advisor: Ekaterina Pletneva & Jia Yang (CHEM)
Characterization of evolutionary changes in the redox properties of cytochrome c4 proteins

Elsa Coulam '27

WISP intern
Poster #: 15

Advisor: Rufus Boyack (PHYS)
Singular bound states in the 1D pseudoharmonic oscillator

Amit Das '25

Leave term research
Poster #: 35

Advisor: Saeed Hassanpour (MED)
Prediction of P53 status from H&E stained whole slide histological images of Barrett's Esophagus

João F de Araujo Junior '27*

Thayer School First
Poster #: 132

Advisor: Emily Monroe (ENGS)
Gastroenterology environmental impact assessment.

Aniket Dey '27*

Thayer School First
Poster #: 1

Advisor: Peter Chin & Ngoc Minh Bui (ENGS)
Revealing speech samples in federated learning with gradient descent

Arshdeep Dhanoa '24

Senior Fellow
Poster #: 95

Advisor: Ekaterina Pletneva (CHEM)
Role of the heme protein cytochrome c5 in respiration of Pseudomonas bacteria

Jennifer Do-Dai '25

Presidential Scholar
Poster #: 107

Advisor: Maria Pellegrini & Kelly Tiernan (CHEM)
Towards Inhibition of the NF-KB Pathway: Characterization of the NEMO-IKBa Interaction

Harrison T Dougherty '27

Thayer School First
Poster #: 60

Advisor: Alex Boys (ENGS)
Designing mechanical bioreactors for the construction of hybrid tissue engineered bioelectronics

Tiana Thao Duong '27

WISP intern
Poster #: 115

Advisor: Mark Thornton & Lindsey Tepfer (PSYC)
Interpersonal conflict impression and narration: How people talk about their own interpersonal confl

Alexandra B Farnell '24

Senior honors thesis
Poster #: 62

Advisor: Meredith Kelly & Justin Stroup (EARS)
Costa Rica under ice: The timing of the last glaciation in Cerro Chirripó National Park

Noelle Fedor '27*

WISP intern
Poster #: 83

Advisor: Jeremiah Brown (MED)
Implementation science: Creating a masters program

Corinne Fischer '26

URAD
Poster #: 123

Advisor: Catherine Stanger & Enzo Plaitano (MED)
Incentives for self management predict intervention engagement in young adults with type 1 diabetes

Sydney Fortner '24

Senior honors thesis
Poster #: 127

Advisor: Bradley Duchaine (PSYC) & Antonio Mello ()
The first comprehensive case of developmental prosopometamorphopsia

Isabella Beatriz Fox '24

Senior honors thesis
Poster #: 23

Advisor: Matthew Havrda (MED) & Elisa Carloni (Other)
Determining the role of monocytes in Parkinson's disease-related neuroinflammation

Ellie Gaaserud '27

WISP intern
Poster #: 20

Advisor: Mahima Sneha (CHEM)
Understanding photophysical behavior of donor acceptor complexes

Reva Gandhi '27*

WISP intern
Poster #: 7

Advisor: Sarah Slotznick & Laurie Zielinski (EARS)
Magnetostratigraphy of the Mesoproterozoic Belt Supergroup in Montana

Shreya Gandhi '26

URAD
Poster #: 88

Advisor: Kristina Lynch & Magdalena Moses (PHYS)
Analyzing the aurora: Key insights in LAMP data

Yanyel Garcia '25

URAD
Poster #: 32

Advisor: Bing He & Yanyel Garcia (BIOL)
Optogenetic investigation of the role of the phospholipid PI4P in Drosophila embryogenesis

Daniela Garrod '24

Senior honors thesis
Poster #: 118

Advisor: Kyle Smith & Erica Townsend (PSYC)
Understanding the relationship between dopaminergic signaling in the NAc and differences in sign-tracking responses

Ethan Gearey '24

Lovelace Research
Poster #: 78

Advisor: Soroush Vosoughi & Weicheng Ma (COSC)
Dissecting values in language models: A comparative analysis of stereotyping behaviors and their implications in LLMs

Vismaya Gopalan '27*

WISP intern
Poster #: 83

Advisor: Jeremiah Brown (MED)
Implementation science: Creating a masters program

Julia L. Gordon '27

WISP intern
Poster #: 28

Advisor: Mary Lou Guerinot & Suna Kim (BIOL)
Integrating iron deficiency signaling with light signaling in Arabidopsis thaliana

Piedra A Goss '24

Senior honors thesis
Poster #: 12

Advisor: Vivien Taylor (EARS)
Sources and accumulation of mercury in the Missisquoi River Delta, Vermont

Dejanae Green '27*

WISP intern
Poster #: 77

Advisor: Elizabeth Newton & William Waalkes (PHYS)
Investigating exoplanet transits through differential photometry

Rowan M Gregoire '23

Senior honors thesis
Poster #: 63

Advisor: Brenhin Keller (EARS)

Interactions between the surface continental crust and biosphere over geologic time

Maria Grozeva '24

Senior honors thesis
Poster #: 113

Advisor: Meredith Kelly & Justin Stroup (EARS)

Synchronicity of the middle-Holocene eastern hemlock decline across New England

Aditi Gupta '27

WISP intern
Poster #: 108

Advisor: Amanda Amodeo (BIOL) & Eric Alpert ()

Exploring the impact of histone 3 tail overexpression on cell proliferation in drosophila

Dawson Haddox '25

Presidential Scholar
Poster #: 61

Advisor: Thalia Wheatley & Emma Templeton (PSYC)

Detecting insider language in natural conversation

Thomas N Hohmann '26

URAD
Poster #: 121

Advisor: Kyle Smith & Jon Cavanaugh (PSYC)

The hunger for social interaction: How does isolation affect motivation in rats?

Ribhu Hooja '27*

Thayer School First
Poster #: 30

Advisor: Peter Chin (ENGS)

Hyperbolic embeddings for faster graph routing

Ellison Huang '27*

WISP intern
Poster #: 89

Advisor: Lorie Loeb & Maria Cristoforo (COSC)

The DPlan Sharing Site

Yasmeen Hussein '26*

WISP intern
Poster #: 19

Advisor: Sarah Preum (COSC)
Contextualizing information seeking in online health community

Bansharee Ireen '24

Lovelace Research
Poster #: 70

Advisor: Elizabeth Murnane & Dylan Moore (ENGS)
Augmenting memory care practices through multimodal machine learning

Adithi Jayaraman '24

Senior honors thesis
Poster #: 37

Advisor: Caroline Robertson & Anna Mynick (PSYC)
Examining the interplay of memory and navigational affordance on perceptual awareness in scenes

Matthew Connor Jenkins '27

Thayer School First
Poster #: 122

Advisor: Bishal Dev Sharma & Daniel Olson (ENGS)
Effect of oxygen on alcohol tolerance of E. coli to improve cellulosic biofuel production

Joey Jerva '27

WISP intern
Poster #: 105

Advisor: Katherine Mirica & Priyanshu Chandra (CHEM)
Growing transition metal 2D conductive MOFs on textile via layer by layer deposition for gas sensing

Katherine Jia '27

WISP intern
Poster #: 111

Advisor: Mark Thornton & Landry Bulls (PSYC)
Working with group conversation data: Data collection, storage, and analysis

Elaine Liyun Jiao '27

WISP intern
Poster #: 71

Advisor: Wenlin Zhang & Anderson Duraes (CHEM)
Cellular membranes and their interactions with nanoplastics

Parker D Jones '24

Senior honors thesis
Poster #: 64

Advisor: Justin Strauss & Luis Torres (EARS)
The metamorphic history of the Seven Hundred Acre Island Formation in Penobscot Bay

Ujvala Jupalli '25*

URAD
Poster #: 33

Advisor: Catherine Stanger & Enzo Plaitano (MED)
Healthcare utilization associated with mental health symptoms in young adults with type 1 diabetes

Casey Kahl '24

Research Assistant
Poster #: 101

Advisor: Benjamin Ross (MED) & Paul Hernandez ()
Novel integrative conjugative element mobilizes protective element against T6SS to bacteroides

Abby K Kambhampaty '25

Leave term research
Poster #: 53

Advisor: Jay Buckey & Chris Niemczak (MED)
The effect of second language acquisition on central auditory processing abilities

Peyton C Kanaly '26

URAD
Poster #: 134

Advisor: Katherine Mirica (CHEM) & Evan Cline ()
Chemical sensor arrays based on metal-organic frameworks

Aksheta Kanuganti '24

Senior honors thesis
Poster #: 84

Advisor: Katherine Hixon & Levi Olevsky (ENGS)
Ultrasound stimulation of Furan Diels-Alder cryogels for controlled elution of 5-aminolevulinic acid as a potential osteosarcoma cancer treatment

Sreekar V Kasturi '24

Senior honors thesis
Poster #: 75

Advisor: Tor Wager & Michael Sun (PSYC)
Within-network effects for understanding the brain's functional organization in pain processing

Anne M. Katula '24

Senior honors thesis
Poster #: 14

Advisor: Bala Chaudhary (ENVS) & Matthew Ayres (BIOL)
Using machine vision to assess global change impacts on arbuscular mycorrhizal fungal traits

Lauren Kayari '25*

Presidential Scholar
Poster #: 62

Advisor: Meredith Kelly (EARS)
How cold was the Indo-Pacific during the Last Ice Age? High-altitude cooling records from New Guinea

Caeden Kim '27*

WISP intern
Poster #: 3

Advisor: Tucker Burgin (ENGS)
Engineering the chemistry of life with simulations and machine learning

Rachel Kim '27

WISP intern
Poster #: 43

Advisor: Hui Fang & Wendy Qi (ENGS)
PDMS layer optimization and neural signal data analysis

Audrey Y Kim '27

WISP intern
Poster #: 52

Advisor: Viola Stoermer & Kevin Ortego (PSYC)
Is it easier to ignore common distractions? Effects of unconscious learning on attention

Caroline Kim '26*

WISP intern
Poster #: 98

Advisor: Ryan Halter (ENGS) & Mimi Lan ()
Electrical impedance spectroscopy study of cell viability using U251 and MG63

Irene H Ko '27

WISP intern
Poster #: 17

Advisor: Jonathan Chipman (GEOG)
Satellite remote sensing of vegetation change in the northern Appalachian alpine zone

Betul Koc '25

Presidential Scholar
Poster #: 13

Advisor: Hermes Yeh (MED)
Immunohistochemical demonstration of Cannabinoid 1 receptor expression in the embryonic mouse cortex

Dorian E Kolis '27*

Thayer School First
Poster #: 98

Advisor: Ryan Halter & Mimi Lan (ENGS)
Electrical impedance spectroscopy study of cell viability using U251 and MG63

Anfisa Kryvtsun '27

WISP intern
Poster #: 131

Advisor: Feng Fu (MATH)
Game theory in military strategy: Colonel Blotto simulation study

Hadiye Nisa Kuvvet '24

Senior honors thesis
Poster #: 133

Advisor: Alexander Rimberg (PHYS)
Noise reduction in quantum systems through a Kalman filter

Ella Laurent '25

Leave term research
Poster #: 68

Advisor: Mary Lou Guerinot & Suna Kim (BIOL)
Phosphorylation sites of URI, in Arabidopsis thaliana, have modular responses to sucrose and light

Roy Leibovitz '27*

Thayer School First
Poster #: 51

Advisor: Peter Chin & Emma Graham (ENGS)
Game-theoretic reinforcement learning for cybersecurity

Cara A Lewis '26

URAD
Poster #: 34

Advisor: Jennifer Hong (MED)
Whole-body imaging of gene therapy delivery using hyperspectral fluorescence cryo-imaging

Jamie Lim '27*

WISP intern
Poster #: 69

Advisor: Alireza Soltani & Atlas Shahamati (PSYC)

The research on reward-based learning, decision making, and attention.

Dawn Lim '24

Senior honors thesis
Poster #: 93

Advisor: Magdalena Bezanilla (BIOL)

Balancing of actin polymerizing and depolymerizing factors required for normal growth

Colby Rand Lish '25

Presidential Scholar
Poster #: 8

Advisor: Christopher Sandford (CHEM)

Chiral teleinduction of poly phenylacetylene helices using a conformationally active amide switch

Yicheng Liu '27*

WISP intern
Poster #: 100

Advisor: Kiara Sanchez (PSYC)

Exploring conversational dynamics through video processing, AI, and physiological data

Elizabeth Liu '27

WISP intern
Poster #: 129

Advisor: Ethan Murphy & Sophie Lloyd (ENGS)

Development of a 3D multimodal oral cavity cancer phantom

Caleb Liu '24

Presidential Scholar
Poster #: 130

Advisor: Wenlin Zhang & Anderson D. S Duraes (CHEM)

Interfaces and soft confinement promote crystallization in polymer nanodroplets

Mirna Pilar Lopez Acosta '27*

WISP intern
Poster #: 100

Advisor: Kiara Sanchez (PSYC)

Exploring conversational dynamics through video processing, AI, and physiological data

Martin Ma `27

Thayer School First
Poster #: 30

Advisor: Peter Chin (ENGS)
Hyperbolic embeddings for faster graph routing

Yingzi Ma '24

Senior honors thesis
Poster #: 125

Advisor: Xin Qi (CHEM)
Optimizing nanostructured platinum catalysts for polymer upcycling

Mirelle M Mah'moud '25

POWERED: Program for
Poster #: 128

Advisor: Arti Gaur (MED)
An MRI protocol for volumetric analysis of patient derived intracranial Glioblastoma xenografts

Zoe Manning '27*

WISP intern
Poster #: 49

Advisor: Peter Tse & Eunhye Choe (PSYC)
Attentional surround suppression in high-order representational space

Brigid Mccarron '27*

WISP intern
Poster #: 19

Advisor: Sarah Preum (COSC)
Contextualizing information seeking in online health community

Bridget L. McNally '24

Independent study
Poster #: 110

Advisor: Kyle Smith & Jon Cavanaugh (PSYC)
Feast or friendship: How does the brain control decision making for food & social rewards?

Alannah McShine '25

Leave term research
Poster #: 124

Advisor: Robert Cramer & Katie Quinn (MED)
Fungal microbiology: Carbon catabolite repression regulation in hypoxia fit isolates

Milenka Men '27

WISP intern
Poster #: 117

Advisor: Katherine Hixon & Amritha Anup (ENGS)
Characterization of silk cryogels for bone-tendon multi-fabrication methods

Grace E Mendolia '24

Senior honors thesis
Poster #: 39

Advisor: Meredith Kelly & Bob Hawley (EARS)
Hanover Underground: Mapping the subsurface of Dartmouth's campus

Sonia E Meytin '26

URAD
Poster #: 50

Advisor: Britt Goods (ENGS)
Single-cell RNA sequencing analysis of gene expression in ovarian mouse models

Colleen Moore '25*

URAD
Poster #: 36

Advisor: Patrick Dolph (BIOL)
The role of endocytosis in Toll protein function

Matthew Morales '27

Research Assistant
Poster #: 21

Advisor: Xianling Li & Shibo Liu (MED)
Advanced manufacturing of stretchable bioelectronics for wearable

Arshdeep K Nagra '23

URAD
Poster #: 9

Advisor: Bing He (BIOL)
Fast imaging and optogenetic manipulation of intracellular trafficking in *Drosophila* embryogenesis

Catherine D O'Halloran '25

Independent study
Poster #: 92

Advisor: Kathy Cottingham & Quin Shingai (BIOL)
Investigating growth response of green algae and cyanobacteria under salinity concentrations

Astrid Olsen '27

WISP intern
Poster #: 55

Advisor: Caitlin Hicks Pries & Joanna Ridgeway (BIOL)
Effects of midwinter snowmelt on soil carbon and nitrogen

Sarah Parigela '27*

WISP intern
Poster #: 91

Advisor: Viola Störmer & Kevin Ortego (PSYC)
Beyond average: The active processing of information in ensemble perception

Ria Parikh '27*

WISP intern
Poster #: 91

Advisor: Viola Stoermer & Kevin Ortego (PSYC)
Beyond average: The active processing of information in ensemble perception

Seo Yoon Park '27*

WISP intern
Poster #: 69

Advisor: Alireza Soltani & Atlas Shahamati (PSYC)
The research on reward-based learning, decision making, and attention.

Sophie Park '27*

WISP intern
Poster #: 89

Advisor: Lorie Loeb & Maria Cristoforo (COSC)
The DPlan Sharing Site

Julia Patterson '24

Senior honors thesis
Poster #: 102

Advisor: Henry Higgs & Sukrut Kamerkar (MED)
In pursuit of understanding the physiological mechanism of the novel tumor suppressor LactB

Adwiteeya Paul '27

WISP intern
Poster #: 94

Advisor: Vasanta Lakshmi Kommineni (COSC)
Adaptive coding tutorial using generative AI

Cate Pittman '27*

Thayer School First
Poster #: 132

Advisor: Emily Monroe (ENGS)
Gastroenterology environmental impact assessment

Nina Prakash '25*

URAD
Poster #: 36

Advisor: Patrick Dolph (BIOL)
The role of endocytosis in Toll protein function

Ada Praun-Petrovic '27*

WISP intern
Poster #: 58

Advisor: Chandrasekhar Ramanathan (PHYS)
Building an experimental setup for optically detected magnetic resonance with NV centers in diamond

Rujuta Purohit '24

Senior honors thesis
Poster #: 46

Advisor: Ryan Hickox & Grayson Petter (PHYS)
AGNs in dwarf galaxies

Reagan Victoria Quinn '27

WISP intern
Poster #: 45

Advisor: Katherine Nautiyal & Sixtine Fleury (PSYC)
The serotonin 1B receptor is necessary for some of the behavioral and neural effects of psilocybin

Claire Isabella Radin '27

Thayer School First
Poster #: 26

Advisor: Douglas Van Citters & Peder Solberg (ENGS)
Toward smart implants: Microstructural electrical changes in strained polymer composites

Anya Ramrakhiani '27*

Thayer School First
Poster #: 132

Advisor: Emily Monroe (ENGS) & Heiko Pohl (Other)
Gastroenterology environmental impact assessment

Owen Hugo Richardson '24

Senior honors thesis
Poster #: 72

Advisor: Carl Renshaw (EARS) & Francis Magilligan (GEOG)
Spatial variation of changes in extreme discharge seasonality across the
Northeastern United States

Sophia D'Agostino Rubens '24

Senior honors thesis
Poster #: 29

Advisor: John Thorstensen (PHYS) & Dongjin Kim (Other)
Understanding the gravitationally lensed blazar PKS 1830-211

Mae Rusconi '27

WISP intern
Poster #: 96

Advisor: Bala Chaudhary & Sarah Cuprewich (ENVS)
High throughput sequencing of aerial arbuscular mycorrhizal fungi at a continental
scale

Ufuk Sahmeran '27*

Thayer School First
Poster #: 51

Advisor: Peter Chin & Emma Graham (ENGS)
Game-theoretic reinforcement learning for cybersecurity

Rabia Saikhu '27*

WISP intern
Poster #: 19

Advisor: Sarah Preum (COSC)
Contextualizing information seeking in online health community

Malini Sampath '27

WISP intern
Poster #: 11

Advisor: Wei-Lih Lee (BIOL)
Identifying candidate PIP2 binding sites on Num1 PH domain

Madeleine Saraisky '26

URAD
Poster #: 116

Advisor: Burcin Mutlu-Pakdil (PHYS)
Generating masks for low surface brightness galaxies

Mrithula Saravanan '27*

WISP intern
Poster #: 58

Advisor: Chandrasekhar Ramanathan (PHYS)
Building an experimental setup for optically detected magnetic resonance with NV centers in diamond

Kate A Schwendemann '27*

WISP intern
Poster #: 77

Advisor: Elizabeth Newton & William Waalkes (PHYS)
Investigating exoplanet transits through differential photometry

Owen Seiner '24

Senior honors thesis
Poster #: 97

Advisor: Helene Seroussi (Other)
A synthesis of the basal thermal state of the Antarctic ice sheet

Rachel Senn '27

WISP intern
Poster #: 120

Advisor: Ryan Halter & Yuan Shi (ENGS)
Development of a Suspension System for Transoral Robotic Surgery

Fatmata Amirah Sesay '27*

Thayer School First
Poster #: 132

Advisor: Emily Monroe (ENGS)
Gastroenterology environmental impact assessment

Angela Shang '27*

WISP intern
Poster #: 114

Advisor: Kyle Smith & Erica Townsend (PSYC)
Investigating the neural circuitry of motivation in food and social rewards

Aidan L Silvestro '27*

URAD
Poster #: 7

Advisor: Sarah Slotznick & Olivia Moehl (EARS)
Magnetostratigraphy of the Mesoproterozoic Belt Supergroup in Montana

Ian A Smith '24

Senior honors thesis
Poster #: 5

Advisor: Eric Schaller (BIOL)
Plant hormone signaling: Control of cell expansion in Arabidopsis thaliana

Adam Frank Sobel '27*

Thayer School First
Poster #: 132

Advisor: Emily Monroe (ENGS)
Gastroenterology environmental impact assessment

Peipei Soeung '27

WISP intern
Poster #: 25

Advisor: Soroush Vosoughi (COSC)
Khmer language model

Eli Orion Sorenti-Burns '24

Research Assistant
Poster #: 76

Advisor: William Scheideler & Saifur Rahman (ENGS)
Novel topology for a stretchable LC filter utilizing PDMS and eGaln

Molly Stevens '25*

URAD
Poster #: 54

Advisor: Carl Renshaw (EARS)
Exploring sources of suspended sediment: A step towards citizen science

Maia Louise Stewart '25*

Leave term research
Poster #: 54

Advisor: Carl Renshaw & Joshua Landis (EARS)
Exploring sources of suspended sediment: A step towards citizen science

Cameron W Stewart '24

Senior honors thesis
Poster #: 80

Advisor: Marisa Palucis (EARS)
Evidence of glacial landforms near Gale Crater: Implications for early Martian climate

Caitlin S Stukel '23

Senior honors thesis
Poster #: 106

Advisor: Justin Strauss (EARS)
Stratigraphy and provenance of the Beaucoup Formation in the Alaskan Brooks Range

Talia Sultan '24

Senior honors thesis
Poster #: 59

Advisor: Brian Jackson & Ramsey Steiner (EARS)
Characterization of Au and Ash Nanoparticles using splCP-TOF-MS and splCP-QMS

Anna Beth Swain '24

Senior honors thesis
Poster #: 99

Advisor: Arti Gaur (MED)
Age and sex-specific systemic inflammation regulates disease progression in Alzheimer's mouse model

Katharine R Tang '27*

WISP intern
Poster #: 49

Advisor: Peter Tse & Eunhye Choe (PSYC)
Attentional surround suppression in high-order representational space

Vedant N Tapiavala '26

Neukom Scholar
Poster #: 103

Advisor: Arti Gaur (MED)
Sex-, age-, and region-specific network genomics analyses for Alzheimer's Disease

Asli Tavasli '27*

WISP intern
Poster #: 24

Advisor: Margaret Ackerman & Chinmay Vaidya (ENGS)
Seurat objects and dandelion

Whitney Thomas '24

Senior honors thesis
Poster #: 67

Advisor: Deborah Hogan & Stacie Stuu (MED)
Citrate cross-feeding and its impact on the competitive fitness of *P. aeruginosa*

Anisia Gabriela Tiplea '24

Senior honors thesis
Poster #: 48

Advisor: Katherine Hixon & Yan Li (ENGS)
Design and computational modeling of 3D-printed lattice frameworks for
craniofacial tissue engineering

Ivan Tochimani-Hernandez

Senior honors thesis
Poster #: 112

Advisor: Carl Renshaw (EARS)
Landslide susceptibility modeling on Google Earth Engine for the state of Vermont

Elise Tong '27

WISP intern
Poster #: 38

Advisor: Bing He (BIOL)
Regulation of lipid composition of the Golgi during tissue formation: Where does PI
4-kinase stand

Devin Tulio '25

Leave term research
Poster #: 16

Advisor: Magdalena Bezanilla & Shu-Zon Wu (BIOL)
Cell biological insights into the mechanism of growth inhibition mediated by
sulfated peptides

Marit A UyHam '27

WISP intern
Poster #: 81

Advisor: Jiajing Wang & Yiyi Tang (ANTH)
Biological anthropology: Microscopic analysis of ancient food residues

Kate Valentino '27

WISP intern
Poster #: 22

Advisor: Jacquelyne Read & Nirmala Mohanta (CHEM)
Synthesis of a phosphoric acid catalyst to test electrical effects for catalyst
optimization

Winnie brenda Wanjiru Waiya

WISP intern
Poster #: 73

Advisor: Elizabeth Murnane & Hannah Dorris (ENGS)
Patient narratives and interactive technology for behavioral assessment and
intervention

Ella Walsmith '27*

WISP intern
Poster #: 3

Advisor: Tucker Burgin (ENGS)
Engineering the chemistry of life with simulations and machine learning

Reece Walther-Porino '27

WISP intern
Poster #: 119

Advisor: Geoffrey Hautier & Zhenkun Yuan (ENGS)
Machine learning applications: Comparing MACE and DFT alloy calculations

Tristan Wells '25

Stamps Scholar
Poster #: 31

Advisor: Bala Chaudhary & Paul Metzler (ENVS)
Hitching a ride: Bison dispersal and community structuring of arbuscular mycorrhizal fungi

Katie Wilson '27

WISP intern
Poster #: 79

Advisor: Xin Qi (CHEM)
In silico protein chemistry: Predicting antibody structure using AI and MD simulations

Ravint Wongratanaphisan '27

WISP intern
Poster #: 86

Advisor: Katherine Mirica & Zhuoran Zhong (CHEM)
Smart textiles for gas sensing and detoxification

Mary Wood '27*

Thayer School First
Poster #: 1

Advisor: Peter Chin & Ngoc Minh Bui (ENGS)
Revealing speech samples in federated learning with gradient descent

Simone Elise Wuttke '27*

WISP intern
Poster #: 114

Advisor: Kyle Smith (PSYC) & Stuti Agrawal (Other)
Investigating the neural circuitry of motivation in food and social rewards

Harshith Yallampalli '26

URAD
Poster #: 6

Advisor: Catherine Stanger & Enzo Plaitano (MED)
Technology readiness and insulin pump use in young adults with type 1 diabetes

Nayeli Yanez '27

Thayer School First
Poster #: 42

Advisor: Douglas Van Citters (ENGS)
Electrospinning silk fibroin and polyhydroxybutyrate scaffolds for women's health applications

Casey Yang '27

Thayer School First
Poster #: 2

Advisor: Lee Lynd & Anthony Lanahan (ENGS)
Engineering C. therm. for screening expression of ferredoxin nicotinamide oxidoreductase genes

Lijia Yang '27*

WISP intern
Poster #: 30

Advisor: Peter Chin (ENGS)
Hyperbolic embeddings for faster graph routing

Shayan Yasir '27*

Thayer School First
Poster #: 51

Advisor: Peter Chin & Emma Graham (ENGS)
Game-theoretic reinforcement learning for cybersecurity

Crystal Ye '27*

WISP intern
Poster #: 114

Advisor: Kyle Smith (PSYC)
Investigating the neural circuitry of motivation in food and social rewards

Carolyn J Yee '25

Presidential Scholar
Poster #: 57

Advisor: Inas Khayal (MED)
Identifying cancer health equity improvements within U.S. hospitals' delivery of cancer care

Kendall H Yoon '27

WISP intern
Poster #: 104

Advisor: Hans Mueller (PHYS)

Interstellar helium voyages: Modeling and comparing theoretical and observed data

Jean C Yuan '25

Presidential Scholar
Poster #: 74

Advisor: Alan Budney & Cara Struble (MED)

Associations between cannabis use and psychotic-like experiences vary across racial identities

Mikayla Zedek '26

URAD
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Advisor: Hermes Hsiao-mei Yeh & Paola Montenegro (MED)

Prenatal alcohol exposure as an early life risk factor for the development of Alzheimer's disease

Mingyue Zha '27

Independent study
Poster #: 4

Advisor: Herbert Chang (QSS)

Quantifying synergy and gender inequality in online video game streaming

Joyce Zou '27*

WISP intern
Poster #: 89

Advisor: Lorie Loeb & Maria Cristoforo (COSC)

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