

2017 UNDERGRADUATE RESEARCH DAY



Thursday, October 12, 2017 4:00 p.m.

Elizabeth D. Rockwell Pavilion, The Honors College, & 2nd Floor, M.D. Anderson Library



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- Events on and off campus

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SAVE THE DATE

PURS
Spring 2018
Application Deadline:
Wednesday, November 29, 2017

Faculty
Mentoring
Awards
Application Deadline:
Monday, February 5, 2018

SURF
Summer 2018
Application Deadline:
Friday, March 23, 2018

HERE
Summer 2018
Application Deadline:
Friday, March 23, 2018

2017 UNDERGRADUATE RESEARCH DAY

October 12, 2017

Elizabeth D. Rockwell Pavilion
2nd floor, M.D. Anderson Library
The Honors College

3:30-4:00 p.m. | Welcome and Opening Remarks to Presenters

Location: Elizabeth D. Rockwell Pavilion

Paula Myrick Short, Ph.D.

Senior Vice Chancellor for Academic Affairs, University of Houston System
Senior Vice President for Academic Affairs and Provost, University of Houston

Amr Elnashai, FREng

Vice Chancellor for Research and Technology Transfer, University of Houston System
Vice President for Research and Technology Transfer, University of Houston

Stuart A. Long, Ph.D.

Associate Dean of Undergraduate Research and the Honors College,
University of Houston

4:00-6:00 p.m. | Viewing of Student Posters

*Location: Elizabeth D. Rockwell Pavilion, M.D. Anderson Library,
and the Honors College*

5:00-6:15 p.m. | Oral Presentations

*Location: The Honors College
Rooms 212J, 212L, and 212S*

Thank you to the **Office of the Provost**, the **Division of Research**,
the **Honors College**, and the **Cullen College of Engineering** for their
generous support of the Office of Undergraduate Research.

And special thanks to the **Gerald D. Hines College of Architecture**
for printing the posters for the event.

WELCOME

Welcome to the 13th annual UH Undergraduate Research Day.

Our stellar undergraduate presenters are eager and ready to share their research experiences with you at this event. The presenters here today comprise our 81 Summer Undergraduate Research Fellowship (SURF) participants as well as over 170 undergraduates who have conducted substantive research projects within the past year. Undergraduate Research Day grows in size and scope each year—and this year is no exception! The event today is 10 times the size than when it first began over a decade ago. We are very proud of our undergraduate researchers, and appreciate our guests attending the event.

During the 2016-2017 academic year, the Office of Undergraduate Research sponsored nearly 250 students from across the University in faculty mentored research programs, and provided support to hundreds more through informational sessions and online resources. The programs offered through the Office of Undergraduate Research would not be possible without the support of the Office of the Provost, Division of Research, and the Honors College. Their support has been integral in allowing the Office to continue to develop new programs and enhance existing offerings to students across the University.

In addition, we are grateful to the Cullen College of Engineering for supporting over 40 engineering students this year through the Engineering Undergraduate Research Scholarship program. We also thank the numerous colleges, departments, centers, programs, and donors who have provided financial support. This additional funding enables many more undergraduates to conduct research and form strong mentor relationships with faculty (see page 12 for listing of supporters).

Two new team members have joined the Office of Undergraduate Research this year. Director of National Fellowships and Major Awards Ben Rayder has recently arrived on campus from Philadelphia. Dr. Rayder is available to provide guidance to students applying for external scholarship and research opportunities. If you are participating in undergraduate research,

consider reviewing the various competitive opportunities on the Office of Undergraduate's website, and contact Dr. Rayder should you wish to learn more information.

Program Manager of Co-Curricular Programs Adrian Castillo is also a new member of the Office. He has served at the University for a number of years in support of co-curricular programs offered through the Honors College, and earlier within Student Affairs. For those planning to apply for a research program, you will have the pleasure of working with Adrian.

The Office strives to offer innovative, high-impact, co-curricular programs to students. In light of this, the University of Houston received a \$500,000 grant from the Andrew W. Mellon Foundation to establish an undergraduate research program in the humanities. This three-year program, beginning in spring 2018, includes faculty-led seminars and a monthly discussion series, an intensive preparatory graduate school workshop, and a full-time summer mentored research experience leading into a thesis or capstone course to be completed during the senior year. Please visit the Mellon Research Scholars website for more information.

For the last two years, over 50 freshman and sophomore students have reaped the benefits of participating in the Houston Early Research Experience—one of our newest and most exciting programs. In order to familiarize students with the fundamentals of conducting research, this two-week, intensive seminar pairs early undergraduates with faculty seminar leaders. The 2018 deadline is Friday, March 23, 2018.

We hope you enjoy learning about the wide range of research projects our undergraduates have conducted over the past year. Thank you for attending this year's celebration day for undergraduate research, and we look forward to seeing you at future events offered by the Office of Undergraduate Research and the Honors College.



Stuart A. Long



Karen Weber



Jennifer Asmussen



Adrian F. Castillo



Ben Rayder

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UNIVERSITY of HOUSTON

OFFICE OF UNDERGRADUATE RESEARCH

Undergraduate Research Day

October 12, 2017

4:00 – 6:00 p.m. Poster Presentations

5:00 – 6:15 p.m. Oral Presentations

Elizabeth D. Rockwell Pavilion

M.D. Anderson Library

The Honors College

The Office of Undergraduate Research

The Honors College

University of Houston

M.D. Anderson Library

4333 University Drive, Room 212

Houston, TX 77204-2001

(713) 743-6433

undergrad-research@uh.edu

UndergraduateResearch.uh.edu

Booklet created by

Julia Brown,

Design and Presentation Development

The Honors College

All the research posters featured here
today will be archived in the
UH Library's digital repository.

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National Fellowships and Major Awards

OFFICE OF UNDERGRADUATE RESEARCH



OUR PROGRAMS

THE PROVOST'S UNDERGRADUATE RESEARCH SCHOLARSHIP (PURS) is a part-time semester research program for juniors and seniors, and awards a \$1,000 scholarship for students to work one-to-one with a faculty mentor. This scholarship is open to students from all colleges and disciplines. Candidates must have at least a 3.0 grade point average to apply. For more information, visit the PURS website at UndergraduateResearch.uh.edu/purs.

THE SUMMER UNDERGRADUATE RESEARCH FELLOWSHIP (SURF) program is a full-time, ten-week summer research program, open to all continuing students, and provides a \$4000 scholarship for students to conduct research under the mentorship of a UH faculty member. Students from all disciplines with at least a 3.0 GPA are encouraged to apply. For more information, visit the SURF website at UndergraduateResearch.uh.edu/surf.

THE HOUSTON EARLY RESEARCH EXPERIENCE (HERE) program is a summer research program intended to orient rising sophomore and junior undergraduates to the fundamentals of conducting research. For more information, visit the HERE website at uh.edu/hereprogram.

THE SENIOR HONORS THESIS is a capstone program for a student's undergraduate career in research. Student participants enroll in 3399H and 4399H, a total of six hours of coursework, which is typically applied toward their major degree requirements during their senior year. For more information, visit the thesis website at UndergraduateResearch.uh.edu/thesis_guidelines.

HOW TO GET STARTED IN RESEARCH

- Peruse your department's website to find out about the research faculty within your discipline are conducting.
- Talk to current and past professors (during their office hours) from courses you have excelled in and have enjoyed. Even if the professor is not currently seeking an undergraduate researcher, he or she may know of a colleague who is seeking an undergraduate research assistant.
- Consult an academic advisor from your department to inquire about faculty members currently conducting research in your discipline.
- Check OUR web page of faculty members currently seeking undergraduate researchers, UndergraduateResearch.uh.edu/facultyresearch.
- Join the UH Undergraduate Research Facebook page and/or the Office of Undergraduate Research's list serve. You will receive postings on available research positions and scholarships for undergraduates.

Contact Information:

Jennifer Asmussen, *Director*: jkgajan@uh.edu



THE HONORS COLLEGE

THE HONORS COLLEGE PHILOSOPHY

The Honors College at the University of Houston serves the intellectual needs of gifted undergraduates in more than 100 fields of study. We provide the careful guidance, flexibility, and personal instruction that nurture excellence. We offer the university's finest students *the best of both worlds*—the community and advantages of a small college together with the resources and rich diversity of a large research university. Our faculty and staff believe that a university education should offer more than the acquisition of skills for the workplace. The Honors College challenges students to develop the attributes of mind and character that enhance all facets of life.

HONORS CURRICULUM

Our curriculum is designed to coordinate with all majors and degree plans offered at the University of Houston. You will fulfill many of your university core requirements through Honors courses that take the place of regular required classes. One key sequence of courses, The Human Situation, is team-taught by Honors faculty and is designed to ensure that you are introduced to the great books of the Western tradition. For many Honors students, the Senior Honors Thesis represents the exciting culmination of a bachelor's degree. A thesis provides an excellent opportunity for you to work under the direction of faculty in your chosen field of study, applying your skills and knowledge toward the completion of a scholarly or creative project.



THE HONORS COLLEGE COMMUNITY

Special Classes and Course Selection

We draw on the talents of the finest faculty members within the University to provide a wide range of special courses with limited enrollment. Honors courses encourage student participation, interaction, and discussion.

Membership in a Community

You will enjoy special privileges, including Honors College scholarships, priority course registration, computer facilities, reserved lounge and study areas, study abroad opportunities, and special housing in The Honors College residence halls. Many intangible benefits also come with participation in the Honors community—the friendships that develop in the classroom carry over into other areas of student life. We foster an atmosphere of collegiality and a spirit of camaraderie through informal gatherings, social activities, and on- and off-campus cultural events.

Talented Classmates

When admitted to The Honors College, you will enter the company of the most academically talented undergraduates at the university. Members bring a variety of interests, aptitudes, and ambitions to their studies. Through daily association with other Honors students, you will discover the broad range of academic programs at the University.

Apply Now at www.TheHonorsCollege.com/apply

Contact Information:

Sarah Bhojani, *Director, Admissions:*
sabhhojani@uh.edu

UNDERGRADUATE RESEARCH MENTOR AWARDS

The Office of Undergraduate Research congratulates the 2017 Undergraduate Research Mentor Award recipients: **Edgar Bering III**, **Timothy Cooper**, and **Megan Robertson**.



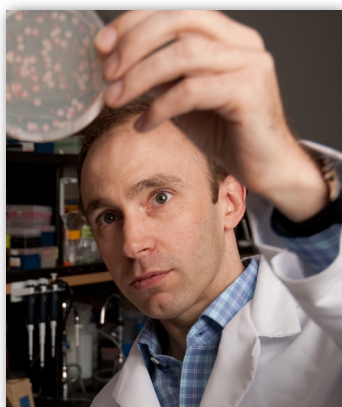
EDGAR BERING III

Dr. Bering has been inspiring undergraduate students at UH for more than 40 years. A Professor of Physics and Electrical and Computer Engineering, his work has earned numerous awards. He has published 134 refereed papers, 77 technical reports, 96 invited talks, and 376 other abstracts. In 2000, he was a member of the VASIMR team that won the Rotary National Award for Space Achievement, Stellar Award, Team Category. In 2004, he received the AIAA Best Paper of the Year award in Plasmadynamics and Lasers. In 2005, he received a Special Service Award from AIAA for his work on the Mars Rover Model Competition outreach program, one of less than 20 given out nationally. Dr. Bering is involved in the development of the Variable Specific Impulse Magnetoplasma Rocket (VASIMR)

at the Ad Astra Rocket Company. He is also working on the analysis and interpretation of data from his recent Antarctic balloon campaigns, emphasizing studies of the role of ULF waves in the transport, energization and precipitation of radiation belt particles. Dr. Bering was the UH representative on the Houston Organizing Committee of the World Space Congress. This effort has led to the creation of a legacy event, the annual city-wide Mars Rover model competition for budding engineers in grades 3-8. Dr. Bering is actively working with AIAA to extend the scope of the Mars Rover program to a national audience.

Working with Undergraduate Researchers

Dr. Bering's primary goal as a professor is to provide his students with the professional tools required to compete successfully with the best scientists and engineers in the world. He feels enormously privileged to lead the Undergraduate Student Instrument Project at the University of Houston; the first class of a dozen students has been very productive in publishing their data and acquiring national reputations. In his rigorous approach to the USIP team, Dr. Bering requires each student to publish his or her results and to attend at least one conference. In the world of work, he says, if students don't learn how to write a good report, their career options will remain limited. Teaching students to write good technical essays will provide them with crucial career skills. In doing so, they will also acquire a much deeper understanding of the work they have done. The benefits of conference attendance go far beyond the obvious benefits of exposure and experience. The talks and exhibits will serve to reinforce the inspiration he hopes his project has provided. Dr. Bering believes that students learn best when they are carefully, actively taught, using a judicious combination of direct instruction and mentored practical application tailored to each individual.



TIMOTHY COOPER

Associate professor Timothy Cooper is a leader in the emerging field of experimental evolution; his research uses bacteria to investigate fundamental properties of organismal evolution. Since joining the Department of Biology and Biochemistry in 2007, he has authored 43 publications and has attained numerous awards, including an NSF CAREER award and a Teaching Excellence award in 2012. Dr. Cooper's approach to mentoring undergraduate research is marked by a commitment to developing students as emerging scientists. His undergraduates are rapidly given their own independent projects, and they are expected to present their work at regular intervals. Dr. Cooper goes far beyond departmental expectations regarding undergraduate research mentoring prac-

UNDERGRADUATE RESEARCH MENTOR AWARDS

tices, providing his students with a depth of experience that can have a profound impact on their goals and their perceptions of their own potential.

Working with Undergraduate Researchers

Dr. Cooper describes his goals in mentoring undergraduate students as very simple: first, he wants to keep his students excited about science, and second, he wants them to learn how to do it—the nuts and bolts of experimental techniques and, more important, how to use the scientific method. After a trial period of working with established lab members, Tim always helps new students to develop their own, independent projects. He does this so that students can develop a real sense of ownership of the science they are doing. Undergraduate students are, in his view, peer scientists, and he wants them to realize that the papers they read and the facts they know are the result of work done by people just like them. He holds all students to a high standard of experimental care and recording, and expects them to engage as much as they can in the lab environment. And his approach is clearly working: his students have received four SURF awards, nine PURS awards, two Society for Molecular Biology and Evolution competitive travel/presentation awards, one National Conference on Undergraduate Research competitive travel/presentation award, and one Society for Study of Evolution Undergraduate Research student travel/presentation award.



MEGAN ROBERTSON

Associate professor Megan Robertson joined the Department of Chemical and Biomolecular Engineering at UH in the fall of 2010, and her research and classroom commitment have distinguished her as an outstanding scholar, teacher, and polymer scientist. Her research is both timely and progressive, focusing on new polymer designs that provide desirable properties with an emphasis on the use of sustainable feedstocks, a core area of the chemical engineering field and a strategic growth area of the Cullen College of Engineering and of the overall university. Her accomplishments are too numerous to itemize, but some notable examples are the prestigious NSF CAREER award, which, together with NSF, state, and industry grants, have generated more than \$2.2 million in funding, the “Polymeric Materials: Science and Engineering Division Young

Investigator” Award from the ACS, and the Texas NHARP Early Career Award. Moreover, she was named a Kavli Fellow in 2015. Dr. Robertson’s success is contagious: since beginning her tenure track position, she has served as a research mentor for 23 undergraduate students and 10 graduate students, and they have published 18 papers in a variety of top soft matter and polymer journals.

Working with Undergraduate Researchers

Dr. Robertson does more than merely teach undergraduate students—they are central to her research program, as evidenced by six journal publications with undergraduate co-authors (two of which were first authors), two senior theses, one patent co-inventorship, and 16 undergraduate presentations. She has acknowledged undergraduate contributors in an additional four publications and 45 presentations. In many cases, undergraduate projects in her laboratory have focused on new lines of research, which are high risk and high reward activities, and which have nonetheless met with enormous success, receiving multiple student awards, including thesis and poster awards, and multiple student honors, including six PURS and two SURF scholarships. In addition, Dr. Robertson integrates undergraduate research into existing Ph.D. projects, and she has recently begun assembling and facilitating undergraduate teams in order to offer students collaborative experiences in research. In the lab, Dr. Robertson provides dedicated and focused mentorship to all of her students. In return, her students give award-winning presentations and publish work in top-tier journals in their field.

HOUSTON EARLY RESEARCH EXPERIENCE



The **Houston Early Research Experience (HERE) Program** recognizes freshmen and sophomore students who excel academically and serve the campus and local community. This two-week May seminar series engages students from all majors in various research methodologies through faculty-led small group discussions and research presentations. Thirty students participated in the 2017 HERE Program, which focused on issues related to the city of Houston, including floods, hurricane preparedness, pollution, and public health. Field trips to the Houston Ship Channel and Project Row Houses complemented the research-focused curriculum.

HOUSTON SCHOLARS PROGRAM

Supported by the Office of the Provost and the Honors College, the **Houston Scholars Program** seeks to empower students to be scholars in their fields, ethical leaders, and active contributors to society. The program includes faculty mentoring, the development of a research proposal related to future academic and professional goals, and attendance at a discussion series led by University of Houston faculty across campus. Houston Scholars are encouraged to engage in self-reflection, critical thinking, passionate inquiry, and the application of theory and research to real world problems. Proposals may include opportunities to conduct research, undertake a service project or internship, attend or present at a professional conference, or study abroad. Houston Scholars defend their proposals to a faculty committee for potential funding.



MELLON RESEARCH SCHOLARS PROGRAM

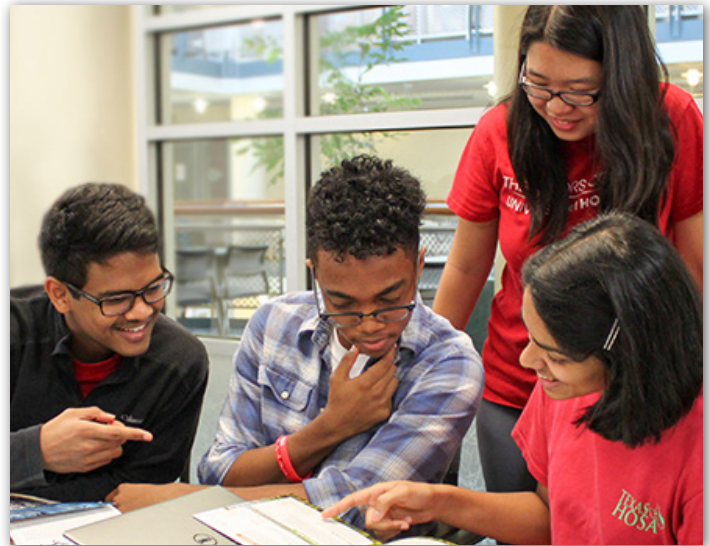
The Mellon Research Scholars Program at the University of Houston supports underrepresented students and other undergraduates with a demonstrated commitment to the goal of building a diverse academy in the humanities. Scholars work with UH faculty mentors to conduct independent research projects during their final two years of academic study.

PARTICIPANTS

Students graduating in fall 2018 and spring 2019 interested in conducting research and attending graduate school in the humanities.

PROGRAMS

- Faculty-led seminar series
- Boot camp on preparing for graduate school
- Full-time summer research experience
- Senior honors thesis or independent study senior year



FUNDING

\$1100 for boot camp

\$3900 for summer research experience

DEADLINE

Monday, November 13, 2017

www.thehonorscollege.com/mellon



CONDUCTING RESEARCH

1. Define the Problem



- Identifying a compelling research question is the first step to a successful research project. What issue, problem, or topic are you interested in exploring?
- Secure a faculty mentor that can guide you in your research project.

2. Review the Literature



- The purpose of conducting research is to fill in the gaps of our knowledge about a particular field or subject, to identify a new problem, or to test a new solution or recommendation for an existing issue or phenomenon.
- To frame your research project, and to ensure that your research question has not already been examined, you should conduct a literature review.

3. Formulate a Hypothesis or a Problem Statement



- Depending on your research question and methodology, you will be required to formulate a research hypothesis OR a problem statement based on your research question.
- A research hypothesis is an educated prediction that provides an explanation for an observable (measurable) event or condition. A problem statement is both a reiteration of the problem that the study will address and the justification for studying the problem.

4. Select a Research Design



- Deciding what you will research will help to determine how you will design your research project.
- What methodology and design will you choose? What methods, techniques, and tools will you use to collect, analyze, and interpret your data? Will it be qualitative, quantitative, or mixed methods?

5. Carry Out the Research



- For many, this is the most enjoyable part of the process; but it's also the step that requires the greatest attention to detail to ensure that your research design and methods are followed accurately—to generate good data—and that the research is conducted ethically.

6. Interpret Your Results



- Once your experiment has concluded and/or data have been collected, it is time to analyze the data using methods determined by your research methodology and design.
- It is important that the evidence supports your interpretation. Avoid spurious conclusions of causality or correlation.

7. Report the Research Findings



- The purpose of research is to share knowledge.
- Once your research has concluded, it is important to share your results. You might write an article for publication, prepare a white paper, or present your research at a conference either as part of a panel discussion or a poster presentation.

8. Repeat



- Research is an iterative process.
- New knowledge leads to more questions, further research, and the generation of more new knowledge.
- Return to Step 1 and enjoy a new research experience.

2017 SURF BROWN BAG LECTURE SERIES

Each summer, as part of the SURF program, the Office of Undergraduate Research offers a Brown Bag Lecture Series in which UH faculty present a wide range of interdisciplinary topics, such as research ethics, and applying to graduate and professional school. The Office of Undergraduate Research thanks our 2017 presenters for their participation in this year's lecture series.

WEEK 1

Exploring Research Ethics

Drs. Donald Foss, Therese Kosten, Jeremy May, and Len Trombetta

WEEK 2

Roundtable Chats:

Applying to Graduate and Professional School

Faculty from across the disciplines

WEEK 3

Roundtable Chats:

Preparing for the Workforce

Professionals from diverse occupations

WEEK 4

Research Tours

Dr. Aaron Becker:

Electrical and Computer Engineering

Dr. Elizabeth Ostrowski:

Biology and Biochemistry

Dr. Jeffrey Rimer:

Chemical and Biomolecular Engineering

Special Collections in the UH Library:

M.D. Anderson Library

WEEK 5

Applying to Nationally Competitive Scholarships

Dr. Jennifer Asmussen

WEEK 6

Developing an Effective Resume

*Caitlin MacNeil and Lauren Berryhill,
University Career Services*

WEEK 7

Applying to and Presenting at Conferences

*Drs. Stuart A. Long, David Rainbow, Mehmet Sen,
and Hanako Yoshida*

WEEK 8

Research Tours

Dr. Yandi Hu:

Civil and Environmental Engineering

Dr. Alexander Statsyuk:

Pharmacological and Pharmaceutical Sciences

Dr. Anka Vujanovic:

Psychology

Special Collections at the UH Library:

M.D. Anderson Library

WEEK 9

SURF Buffet Luncheon

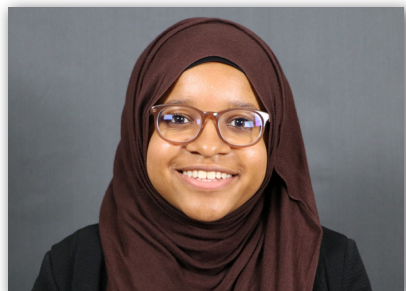
SURF Students and Faculty Mentors

WEEK 10

Creating a Research Poster

Drs. Stuart A. Long and Karen Weber

2017 BoBI PARTICIPANT



Baiyinah Abdullah

Mentored by Elizabeth Ostrowski
Biology & Biochemistry

Everything is Everywhere: Determining
Population Structure of Northeastern
Dictyostelium discoideum

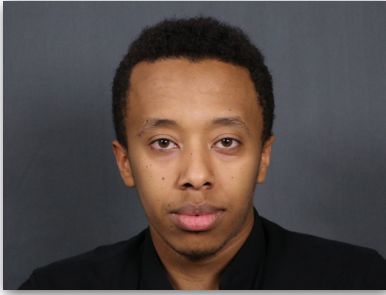
The **Biology of Behavior Institute (BoBI)** promotes research directed at understanding animal behavior from four different perspectives: 1. The molecular, neural, and endocrine mechanisms of behavior, 2. The acquisition or development of the behavior within the organism, 3. The function of the behavior for the organism, and 4. The evolution of the behavior within and among species.

Faster progress and a more complete understanding of the biology of a behavior can only be achieved through the application of all four perspectives. Each perspective informs the other three, and together they provide deep and intellectually satisfying insights into animal behavior. BoBI provides support for undergraduates to conduct full-time summer research experiences with faculty affiliated with the Institute.

A special thanks to our campus and community partners for their support of the Office of Undergraduate Research over our 13 years of serving undergraduate researchers:

- Office of the Provost
- Division of Research
- Cullen College of Engineering
- Honors College
- Heidi Alderman
- BASF Corporation
- Jeff Beauchamp
- Biology & Biochemistry
- Biology of Behavior Institute (BoBI)
- Biomedical Engineering
- Chemical & Biomolecular Engineering
- Civil & Environmental Engineering
- College of Education
- College of Liberal Arts and Social Sciences
- College of Natural Sciences and Mathematics
- College of Pharmacy
- College of Technology
- Computer Science
- Construction Management
- Data Analytics in Student Hands (DASH) and Honors in Community Health (HICH)
- Earth & Atmospheric Sciences
- Electrical & Computer Engineering
- Engineering Leadership Board
- Engineering Technology
- Gerald D. Hines College of Architecture
- Health & Human Performance
- Susan Henning and Vikram Rao
- Hobby Center for Public Policy
- Industrial Engineering
- Mathematics
- Mechanical Engineering
- Medicine & Society Program
- Physics
- Political Science
- Psychology
- Texas Obesity Research Center (TORC)

2017 SURF PARTICIPANTS



Yilhak Abebe

Mentored by Dimitrios Hatzignatiou
Petroleum Engineering

Addressing Unwanted Water
Production using DPR



Maryam Akbari

Mentored by Dimitrios Hatzignatiou
Petroleum Engineering

PVT Analysis on Unconventional
Reservoirs



May Ali Al Ameri

Mentored by Kevin Garey
Pharmacy Practice & Translational
Research

What's In Your Soil: Investigation of
Pathogenic Strains of Clostridium
Difficile in the Environment



Abdullah Al-Bayati

Mentored by Hadi Ghasemi
Mechanical Engineering

Anti-Icing Surface



Munir Aljijakli

Mentored by Yandi Hu
Civil & Environmental Engineering

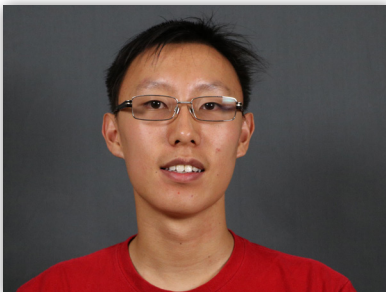
Aggregation of Lead Phosphate
Nanoparticles: Implications for Lead
Immobilization in Soil and Pipes



Sukaina Alkhalifah

Mentored by Sheereen Majd
Biomedical Engineering

Encapsulation of an Anti-tumor Drug
in Nano-Scale Particles



Daniel Bao

Mentored by Aaron Becker
Electrical & Computer Engineering

Exploration and Mapping with
a Particle Swarm Controlled by
Uniform Inputs on a Magnetic Setup



Alberto Beiza

Mentored by Sujata Sirsat
Hotel Hotel and Restaurant
Management

Investigating Food Safety
Intervention Tools in Houston Area
Restaurants



Sebastian Bidegain

Mentored by Anna Newman,
Dr. Karl-Dimiter Bissig
Biology & Biochemistry,
Baylor College of Medicine

Reduction of Cholesterol in
Humanized Mice using CRISPR/Cas9



Vinh Bui

Mentored by Bhavin Sheth
Electrical & Computer Engineering

Circle of Willis: Accessing the
Possibility of Ruptured Aneurysm



Steven Canales

Mentored by Daphne Hernandez
Health & Human Performance

Links among Individual &
Neighborhood Risks & Maternal
Weight



Edgar Contreras

Mentored by Jonathan Snow
Earth & Atmospheric Sciences

Deep In The Heart of Texas...
Volcanoes



Aubrey Cowley

Mentored by Ann Christensen
English

"Here Enters Murder": Producing
a Student-Friendly Edition of the
Renaissance Domestic Tragedy
"A Warning for Fair Women"



Jackson Crawford

Mentored by Kei-Mu Yi
Economics

Value-added Taxes in the 21st
Century



Poria Doral

Mentored by Daniel Burleson
Office of the Dean, Engineering

Measuring the Impact of Utilizing
Undergraduate Teaching Assistants
in the Classroom on Student Success
in a First-Year Engineering Course



Brian Evans

Mentored by Sally Vaughn
History

Viking Royal Power in Tenth Century
Denmark



Patrick Farahvashi

Mentored by Elizabeth Ostrowski
Biology & Biochemistry

Verification of Chromosomal
Inversions along the *tgrB1* and *tgrC1*
loci in *Dictyostelium discoideum*



Jacob Furrh

Mentored by Hanadi Rifai
Civil & Environmental Engineering

Corrosion in Produced Water
Desalination and Treatment Facilities


Michelle Gale

Mentored by Jose Luis Contreras-Vidal
Electrical & Computer Engineering

Your Brain on Art – Neural Basis of Creativity in Typically Developing Children


Rosendo Garcia

Mentored by Jeffrey Rimer
Chemical & Biomolecular Engineering

Exploring Novel Methods to Tailor the Crystal Morphology of ZSM-11 Catalysts


Javier Garcia Gonzalez

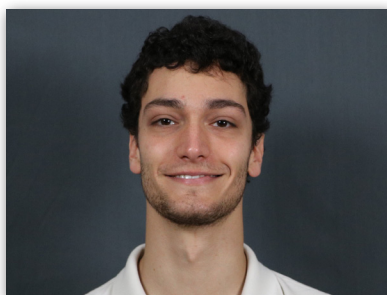
Mentored by Aaron Becker
Electrical & Computer Engineering

Modification of an Underwater Robot for Ocean Big Data Ferrying


Megan Goh

Mentored by Kirill Larin
Biomedical Engineering

Evaluating Brain Stiffness in Rodent Models


Diego Guala

Mentored by Jeffrey Rimer
Chemical & Biomolecular Engineering

Dynamics of Pathological Crystallization: A Microfluidic Study


Anam Haque

Mentored by Chandra Mohan
Biomedical Engineering

Novel Protein Biomarkers in Serum for Lupus Nephritis in Adult Patients


Shruti Hariyani

Mentored by Jakoah Brgoch
Chemistry

Synthesis and Optical Properties of a Novel Blue Borate: Ba₃Y₂B₆O₁₅: Ce³⁺


Evan Haryadi

Mentored by Dong Liu
Mechanical Engineering

Dielectrowetting


Aisha Hasan

Mentored by Katerina Kourentzi
Chemical & Biomolecular Engineering

Antibody-Functionalized Nanophosphor Particles for Use as Reporters in Lateral Flow Assays



Tyler Hayward

Mentored by Natalia Zhivan
Economics

Minority-Owned Businesses and the
Great Recession



Jonathan Henning

Mentored by Donna Kacmar,
Celeste Woodfill
Architecture, Materials Research
Collaborative

The Life and Work of Victor Lundy



Tan Huynh

Mentored by Lori Hathon
Petroleum Engineering

Change in Surface Relaxivity



Ceroncia Johnson-Jessie

Mentored by Teresa Chapman
Theatre & Dance

I Am Dance...



Shahzad Kalloo

Mentored by William Ott
Mathematics

Homological Criteria for Coverage in
Sensor Networks



Rebecca Keim

Mentored by Tony Frankino
Biology & Biochemistry

The Cryptic Morphological Scaling
Relationships of Mosquitoes



Skylar Koelbel

Mentored by Mehmet Sen
Biology & Biochemistry

Optimization of ROCK1 Protein
Through Insect Cells



Priscille Koutouan

Mentored by Taewoo Lee
Industrial Engineering

Data-Driven Parameter Selection
in Radiation Therapy Treatment
Planning



Akshat Kumar

Mentored by Benjamin Tamber-
Rosenau
Psychology

Relationship between Cognitive-
Cognitive and Cognitive-Motor
Dual-Task Interference

**Laura Lay**

Mentored by Hanako Yoshida
Psychology

Effect of Maternal Mental Health on
Mechanism of Child Word Learning

**Trevor Le**

Mentored by Mehmet Sen
Biology & Biochemistry

Thermofluor of Integrin AlphaXBeta2

**Andelien Lee**

Mentored by Michael Newman
Accounting

Stakeholder Relationships in
Comparison to Success and
Profitability in Non-Profit vs. for-
Profit Companies

**William Little**

Mentored by Dustin Gish
Political Science

Understanding Democracy

**Margaret Lynch**

Mentored by Jennifer Clark
Political Science

Explaining State Policies Providing
Undocumented Immigrants with
Access to Higher Education: A Policy
Diffusion Analysis

**Erin Miller**

Mentored by Marc Hanke
Honors, Biology

Oyster Restoration in Galveston Bay:
Can Citizen Scientists Help Monitor
Spat Recruitment?

**Ruth Montesinos**

Mentored by Konrad Krakowiak
Civil & Environmental Engineering

Self-Healing Concrete

**Nicholas Moorman**

Mentored by Andrew Torok
Mathematics

Determining Coherent Sets in 2D
Fluid Flows by Transfer Operator
Methods

**Mandana Naviafar**

Mentored by David Mikics
English

Realism and Stream of
Consciousness in Woolf's Mrs.
Dalloway



Alyssa Nguyen

Mentored by Alexander Statsyuk
Pharmacological & Pharmaceutical
Sciences

Virtual Docking to Target Covalent
Fragments as Competitive Enzyme
Inhibitors



Chau Nguyen

Mentored by Lori Hathon
Petroleum Engineering

Representative Particle Size
Distribution Analysis on Thin Section
Images of Unconsolidated Sands



Jennifer Nguyen

Mentored by Kirill Larin
Biomedical Engineering

Assessing the Vasculature Changes
in Murine Fetal Brain Upon Alcohol
Exposure



Yen Nguyen

Mentored by Loi Do
Chemistry

Progress Toward Development
of Bimetallic Catalysts for Olefin
Copolymerization



Danielle Niangar

Mentored by Patrick Shea
Political Science

Validity of the International Court
Systems and its Effects on Human
Rights



Faith Nomamiukor

Mentored by Anka Vujanovic
Psychology

Script-Driven Trauma- and Drug-
Related Cue Reactivity: Examining
Correlates of Script Content among
Inner-City Adults with Post-traumatic
Stress and Substance Use Disorders



Steven Oliver

Mentored by Andrew Renshaw
Physics

SORA: Stratospheric Organisms and
Radiation Analyzer



Nikhil Pandya

Mentored by Donald Kouri
Physics

Integral Transforms, Anomalous
Diffusion, and the Central Limit
Theorem



Ty Pederson

Mentored by David Mazella
English

Formalization of Novel Nomenclature

**Ben Perez**

Mentored by Jacinta Conrad
Chemical & Biomolecular
Engineering

Analyzing Nanoparticle Dynamics
in Complex Fluids using Microscopy
Techniques

**Alexander Pham**

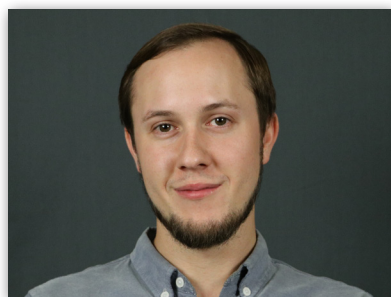
Mentored by Shaun Zhang
Biology & Biochemistry

Genomic Engineering: Developing
Doxycycline-inducible CRISPR-Cas9
Stable Cell Lines to Knock Out
CAMKK2 in Prostate Cancer

**Christopher Pham**

Mentored by Yandi Hu
Civil & Environmental Engineering

Ferrihydrite Nanoparticle
Aggregation

**Cana Quave**

Mentored by Therese Kosten
Psychology

Sex differences in Anhedonic and
Anxiety-like Behavioral Responses to
Predator Odor-Exposure in Toll-like
Receptor 4 (TLR4) Gene Knockout
and Wild Type Rats

**Zara Rahman**

Mentored by Vanessa Patrick-
Ralhan
Marketing

Studying Luxury Brands in Marketing

**Ivan Rodriguez**

Mentored by Vaughn Climenhaga
Mathematics

Using Numerical Integration to
Further Understand Dynamical
Systems

**Jacob Rose**

Mentored by Andrew Renshaw
Physics

HUNTER: A Sterile Neutrino Search

**Giulia Schirripa**

Mentored by Francesca Behr
Modern & Classical Languages

Artemisia and Lucretia:
How They Met

**Kyle Schuller**

Mentored by Jennifer Leasure
Psychology

The Post-Synaptic Compensatory
Effects of Decreased Glutamate
Transmission and its Effects on Rate
of Learning



Tim Seiter

Mentored by Susan Kellogg
History

The Karankawa Indians of Texas:
Fictions and Facts



Devanshi Singh

Mentored by Amy Sater
Biology & Biochemistry

Response of Astrocytes to Pressure



Ryan Smith

Mentored by Bhavin Sheth
Electrical & Computer Engineering

How to Increase Confidence Without
Improving Performance



Steban Soto

Mentored by Miao Pan
Electrical & Computer Engineering

Tunnel Detection and Border
Monitoring Using Magnetic
Induction Based Communications
and Tomography



Tiehao Sun

Mentored by Dong Liu
Mechanical Engineering

Two-Phase Instabilities in a
Microchannel Heat Sink



Yilei Tian

Mentored by Nouhad Rizk
Computer Science

Increasing Student Retention in the
Course of Data Structure though the
Implementation of Data Mining



Eric Todd

Mentored by Jose Luis Contreras-
Vidal
Electrical & Computer Engineering

Self Conscience: An immersive,
Kinetic Art Installation Driven by
Real-Time User-Input EEG Data



Carlo Torres

Mentored by Tianfu Wu
Biomedical Engineering

Testing of PLK1 Signaling In Lupus



Phuc Truong

Mentored by Zachary Zwald
Political Science

How Chinese Soft Power Works

**Andres Vazquez**

Mentored by Anadeli Bencomo
Hispanic Studies

Oral and Colloquial Prose in Juan
Rulfo's *El llano en llamas*: A Digital
Approach

**Gayatri Viswanathan**

Mentored by Jakoah Brgoch
Chemistry

Solving Novel Gold-Containing
Intermetallic Compounds Using
Automated Structure Refinement
Tool

**DeMointé Wesley**

Mentored by Sarah Ehlers
English

In Search of The Clearing: Blackness
and Being in Toni Morrison's *Beloved*

**Karine Wilson**

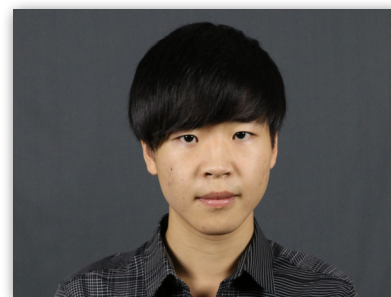
Mentored by Luca Pollonini
Engineering Technology

Automated Method for Reliable
Detection of Corrupted fNIRS Signals

**Sebastian Yazigi**

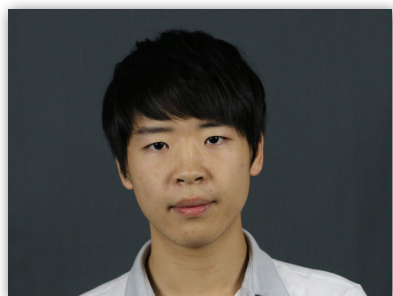
Mentored by Li Sun
Mechanical Engineering

Finite Element Analysis of Fracking
Plug Component

**Zhihe Zhao**

Mentored by Yingchun Zhang
Biomedical Engineering

Investigation of the Neural Pathways
from Visual Stimulus to a Willed
Motor Response — an EEG Study

**Zhizhong Zhao**

Mentored by Qianmei Feng
Industrial Engineering

Real-time Monitoring in Drilling:
Current Practice and Data Analysis

2017 ORAL PRESENTATION SCHEDULE

Oral Presentation Session 1

The Honors College, Room 212J

Moderator: Amber Lim

5:00 p.m.

Sawan Dalal

Mentored by Sergio Santa Maria, Helen Valier

Space Biosciences Division,
NASA Ames Research Center,
Medicine & Society

BioSentinel: Improving Desiccation
Tolerance of Yeast Biosensors for Deep-
Space Missions

5:15 p.m.

Sahar Baig

Mentored by Chandra Mohan
Biomedical Engineering

Cardiovascular Disease Biomarkers in
Lupus Patients

5:30 p.m.

Chaoxian Qi

Mentored by Rose Faghih
Electrical & Computer Engineering

Detection of Autonomic Sympathetic
Arousal from Electrodermal Activity

5:45 p.m.

May Ali Al Ameri

Mentored by Kevin Garey
Pharmacy Practice & Translational Research

What's In Your Soil: Investigation of
Pathogenic CDI in Soil

6:00 p.m.

Jacob Rose

Mentored by Claudia Ratti
Physics

Properties of Strongly Interacting Matter

Oral Presentation Session 2

The Honors College, Room 212L

Moderator: Fariha Jawed

5:00 p.m.

Phillip Pinell

Mentored by Richard Armstrong
Classical Studies

The Evolution of C.S. Lewis's Concept of
'Joy'

5:15 p.m.

Mason Malone

Mentored by Iain Morrisson
Philosophy

Which Rights are Right: Understanding
Constitutional Rights through Analysis of
Obergefell's Right to Marry

5:30 p.m.

Douglas Van

Mentored by Jeremy Bailey
Political Science

Robert Penn Warren and the Schism
Between Fact and Idea

5:45 p.m.

Eden Absar

Mentored by Alison Leland, Eileen Graham,
Eric Woodard

Political Science,
Smithsonian Institution
Networking a Cure for HIV

6:00 p.m.

Melina Diaz

Mentored by Alison Leland
Political Science

A Month in Social Media

Oral Presentation Session 3

The Honors College, Room 212S

Moderator: TBD

5:00 p.m.

Marina Bassana

Mentored by Christiane Spitzmueller
Psychology

Antecedents of Supervisor Instigated
Workplace Incivility

5:15 p.m.

Kristina Infante

Mentored by Sujata Sirsat
Hotel and Restaurant Management

Food Deserts and Food Safety: An
Examination of the Microbial Profile of
Leafy Greens from the Houston Area
High-Income and Low-Income Grocery
Stores

5:30 p.m.

Taylor Lirette

Mentored by Loi Do
Chemistry

Toward Development of Triazole
Bridge Hetero-Bimetallics for Olefin
Polymerization

5:45 p.m.

Noam Harari

Mentored by Daniel Onofrei
Mathematics

Locating Defects in Spring-Mass Systems
through Laplace Domain and Function
Limit Analysis

6:00 p.m.

Yilei Tian

Mentored by Nouhad Rizk
Computer Science

Increasing Student Retention in the
Course of Data Structure through the
Implementation of Data Mining

2017 POSTER AND ORAL PRESENTATIONS

Eden Absar

Mentored by Alison Leland, Eileen Graham, Eric Woodard
Political Science,
Smithsonian Institution
Networking a Cure for HIV

Pooja Agrawal

Mentored by Rosenda Murillo
Psychological, Health & Learning Sciences
The Association of Neighborhood Social Cohesion with
Sleep Duration by Latino Subgroup

Oluwapelumi Akinwande

Mentored by Jennifer Asmussen, Sharon Plon
Honors, Biology & Biochemistry,
Molecular and Human Genetics,
Texas Children's Cancer Center
Cloning MicroRNAs with Somatic Mutations in Pediatric
Acute Lymphoblastic Leukemia (pRL-CMV-6X-CXCR4)

Samuel Akinwande

Mentored by Jose Luis Contreras-Vidal
Electrical & Computer Engineering
Joint Torque Instrumentation in an Exoskeleton

Gada Alhakeem

Mentored by Vera Adams
Architecture
D – Disaster

Afreen Ali

Mentored by Vera Adams
Architecture
D is for Disaster

May Ali Al Ameri

Mentored by Kevin Garey
Pharmacy Practice & Translational Research
What's in Your Soil: Investigation of Pathogenic CDI in Soil

Julio Alonso

Mentored by Xiaojing Yuan
Engineering Technology
SETS Customer Discovery and Data Trend Analytics

Abdul Aziz Alshayeb

Mentored by Vera Adams
Architecture
The Great Fire of Vancouver

Anthony Álvares

Mentored by Vera Adams
Architecture
The Bombardment of Brussels – 1695

Diana Aqil

Mentored by Jonathan Snow, Gelu Costin
Earth & Atmospheric Sciences
Lower Crust from Beneath the Arctic Ice

Mark Aranda

Mentored by Xiaojing Yuan
Engineering Technology
SETS Bike Share Cyber and Mobile Application
Development

Jeylen Arteaga

Mentored by Ziad Qureshi
Interior Architecture
From Pixel to Plate: Additive Manufacturing and the
Future of Restaurant Spaces

Asra Aslam

Mentored by John Craft, Jr.
Biology & Biochemistry
Computational Screening for Small Molecule Inhibitors of
Talin/B3 Integrin Tail Interactions

Hira Aslam

Mentored by Hanako Yoshida
Psychology
The Effect of Language Status on Sleep Spindle
Characteristics

Taleed Atieh

Mentored by Hanako Yoshida
Psychology
The Effect of Language Status on Sleep Spindle
Characteristics

Sahar Baig

Mentored by Chandra Mohan
Biomedical Engineering
Cardiovascular Disease Biomarkers in Lupus Patients

Cassandra Baker

Mentored by Jennifer Asmussen, Robyn Klein, Lauren Vollmer
Honors, Biology & Biochemistry,
Washington University in St. Louis
Pathology and Immunology
Causality of Sex-Driven Dimorphism in a Relapsing-
Remitting Murine Disease Model of Multiple Sclerosis

Miguel Balleza

Mentored by Luca Pollonini
Engineering Technology
Optimal Wellness

Marina Bassana

Mentored by Christiane Spitzmueller
Psychology
Antecedents of Supervisor Instigated Workplace Incivility

Mayen Bautista-Aguilera

Mentored by Ziad Qureshi
Interior Architecture
The Heart of the Home: Television, Shared Experiences, and Space

Itzayana Benavides

Mentored by Ziad Qureshi
Interior Architecture
D.I.Y. Health: How Emerging Technology Empowers People via Preventative Health and the Future of Residential Interior Space

Shaili Bhavsar

Mentored by Lorraine Reitzel
Psychological, Health & Learning Sciences
Anxiety Sensitivity and Sleep Problems among Homeless Adults

Sheila Buoy

Mentored by Lorraine Reitzel
Psychological, Health & Learning Sciences
Tobacco Dependence Education for Staff and Clinicians at Behavioral Health Centers: Knowledge Gained and Lessons Learned by Delivery Modality

Raymond Burciaga

Mentored by Vera Adams
Architecture
Brisbane Disaster

Alexandra Burdett

Mentored by Ziad Qureshi
Interior Architecture
Solar at the Social Scale: Maintaining Community Environments when Energy Production and Consumption is Decentralized

Veronica Bustos

Mentored by Michael Cottingham
Health & Human Performance
Practitioners' Perspectives on Wheelchair Rugby Research

Nicholas Butler

Mentored by Ann Cheek, Marc Hanke
Honors, Biology & Biochemistry
Spatial Distribution in Two Species of Galapagos Damsel fish

Sara Chambless

Mentored by Vera Adams
Architecture
Paris: The Great Flood of 1910

Miguel Chapa

Mentored by Mequanint Moges
Engineering Technology
BeagleBone in Space

Stephanie Chavez

Mentored by Anjali Kanojia
Modern and Classical Languages
Yoga Research Trends In Caregiver Burnout Syndrome

Julian Chenin

Mentored by Michael Murphy
Earth & Atmospheric Sciences
Fault Development in the Madison Valley: Implications for Fault System Behavior & Passage of the Yellowstone Hotspot

Jessica Christian

Mentored by Daphne Hernandez, Jennette Moreno
Health & Human Performance,
Baylor College of Medicine
Children's Nutrition Research Center
Children's Sleep Patterns During the School Year and Summer Break

Isolde Klide Clarete

Mentored by Mequanint Moges
Engineering Technology
Firefighter Mask HUD Technology

Taylor Coleman

Mentored by Chakema Carmack
Psychological, Health & Learning Sciences
Refining STI Risk Prevention Messages that Yield Strong Intentions

Sawan Dalal

Mentored by Sergio Santa Maria, Lauren Liddell, Sharmila Bhattacharya, Helen Valier
Space Biosciences Division,
NASA Ames Research Center
BioSentinel: Improving Desiccation Tolerance of Yeast Biosensors for Deep-Space Missions

Caleb Daugherty

Mentored by Margaret S. Cheung
Physics
Investigation of the Effects of Macromolecular Crowding on the Folding of Phosphoglycerate Kinase

Andrea Di Girolamo

Mentored by Paul Mann
Earth & Atmospheric Sciences
Tectonic Setting of Paleozoic Rocks from the Araya-Paria Peninsula, Northeastern Venezuela Based on New Geochemical Data

Melina Diaz

Mentored by Alison Leland
Political Science
A Month in Social Media

Mangalaa Dinivahi

Mentored by Jeffrey Rimer

Chemical & Biomolecular Engineering

The Role of Small Molecules on the Prevention of Kidney Stone Disease

Austin Dodge

Mentored by Aaron Becker

Electrical & Computer Engineering

Marine Data-Ferrying Using Swarms of Autonomous Underwater Robots to Network Sensor Modules with a Surface Ship

Sarah Durham

Mentored by Ann Cheek, Marc Hanke

Honors, Biology & Biochemistry

Spatial Distribution in Two Species of Galapagos Damselfish

Tristan Durham

Mentored by Vera Adams

Architecture

D is for Disaster: Montreal

Ikenna Duru

Mentored by Margaret S. Cheung

Physics

Machine Learning Approach for Relating Conjugated Polymer Conformation to Location of the Exciton

Diego Elizalde

Mentored by Mequanint Moges, Justin Loop

Engineering Technology

Wireless All-in-One Small Programmable Data Logger

Abraham Elizarraras

Mentored by Xiaojing Yuan

Engineering Technology

SETS Customer Discovery and Data Trend Analytics

SETS Location Identification and Power Solution using Solar Panel

Saman Essa

Mentored by Rheeda Walker, David C. Talavera

Psychology

The Impact of Discrimination in Relation to Suicide Ideation among 1st and 2nd Generation Asian American Individuals: The Moderating Role of Religiosity

Amaryllis Fernandes

Mentored by Daphne Hernandez, Alexis Jamieson

Health & Human Performance,

Hotel and Restaurant Management

Hands on Learning: Designing a Vegetable Garden for the Hilton College of Hotel and Restaurant Management

Mentored by Norma Olvera

Psychological, Health & Learning Sciences

Summer Physical Activity Levels: Comparisons and Associations between Mothers, Fathers, and Daughters

Hosbaldo Ferrufino

Mentored by Mequanint Moges

Engineering Technology

Wireless All-in-One Small Programmable Data Logger

Humberto Garay

Mentored by Mequanint Moges

Engineering Technology

Wireless All-in-One Small Programmable Data Logger

Jean-Claude Gazzaneo

Mentored by Mequanint Moges

Engineering Technology

Firefighter Mask HUD Technology

Jacqueline Gonzalez Carmona

Mentored by Kayce Solari Williams, Guadalupe Palos

Psychological, Health & Learning Sciences,

MD Anderson Office of Cancer Survivorship

Purdue Gap Analysis: A Qualitative Approach to Survivorship Care

Andrew Gula

Mentored by John Craft, Jr.

Biology & Biochemistry

The Search for Allosteric Inhibitors for Rho Associated Kinases

Bryan Gunawan

Mentored by Edgar Bering

Physics

A New Approach on Sampling Microorganisms from Lower Stratosphere

Francisco Guzman

Mentored by Rosenda Murillo

Psychological, Health & Learning Sciences

The Association of Neighborhood Social Cohesion with Sleep Duration by Latino Subgroup

Dalibor Hajdek

Mentored by Mequanint Moges

Engineering Technology

BeagleBone in Space

Noam Harari

Mentored by Daniel Onofrei

Mathematics

Locating Defects in Spring-Mass Systems through Laplace Domain and Function Limit Analysis

Oluwatomi Hassan

Mentored by Richard Meisel

Biology & Biochemistry

The Effects of M factor Chromosomal Location on *Musca domestica* Mating Success

Tayler Hedtke

Mentored by Fritz Claydon, Christopher Bellona
Electrical & Computer Engineering,
Colorado School of Mines,
Civil and Environmental Engineering
Treatment of Per- and Polyfluoroalkyl Substances with
S-PAC and Ceramic Membranes

Tony Hoang

Mentored by Xiaojing Yuan
Engineering Technology
SETS Bike Share - Smart Lock Design
SETS Bike Share Cyber and Mobile Application
Development

Jordan Hoffner

Mentored by Mequanint Moges
Engineering Technology
Wireless All-in-One Small Programmable Data Logger

Mitchell Hong

Mentored by Mequanint Moges
Engineering Technology
CaliALI

Zina Housammy

Mentored by William Widger
Biology & Biochemistry
Micrococcus luteus crtE Plasmid

Tu Huynh

Mentored by Xiaojing Yuan
Engineering Technology
SETS Location Identification and Power Solution using
Solar Panel

Kristina Infante

Mentored by Sujata Sirsat
Hotel and Restaurant Management
Food Deserts and Food Safety: An Examination of the
Microbial Profile of Leafy Greens from the Houston Area
High-Income and Low-Income Grocery Stores

Masaki Isago

Mentored by Xiaojing Yuan
Engineering Technology
SETS Bike Share - Smart Lock Design
SETS Customer Discovery and Data Trend Analytics

Lexiah Jacob

Mentored by Ken Ripperger-Suhler, Florian Muller
Psychological, Health & Learning Sciences,
MD Anderson Cancer Center - Cancer Systems Imaging
Tracking Tumor Regression in *ENO1*-Deleted Glioblastoma
via IVIS Imaging

Puja Javalagi

Mentored by Alison Leland
Political Science
Data Structure and Management Summer Internship at
the Smithsonian Gardens 2017

Jenna Jones

Mentored by Michael Zvolensky
Psychology
Anxiety Sensitivity and Smoking Behavior Among Trauma-
Exposed Daily Smokers: The Explanatory Role of Smoking-
Related Avoidance and Inflexibility

Jessica Juarez

Mentored by EunSook Kwon
Industrial Design
Dorsi: Posture Enhancing Adventures

Louie Kafka

Mentored by Luca Pollonini
Engineering Technology
Optimal Wellness

Tasneem Karimjee

Mentored by Ziad Qureshi
Interior Architecture
Reconstructed Instructor: the Future of Holograms in the
Learning Environment

Vivan Kothari

Mentored by Kevin Garey
Pharmacy Practice & Translational Research
The Clostridium difficile Epidemic and its Prevalence in
Two New Urban, International Environments

Kartik Kulkarni

Mentored by Ann Cheek, Nikhil Munshi
Biology & Biochemistry,
UT Southwestern Department of Internal Medicine Cardiology
Targeted Inhibition of Fibroblast Activation

Liam Lauckner

Mentored by Alan Brandon
Earth & Atmospheric Sciences
Osmium Isotope Chemostratigraphy of the Mid-
Cenomanian Event in the Western Interior Seaway

Katherine Lephuoc

Mentored by Leslie Frankel
Psychological, Health & Learning Sciences
Impact of Depression on Parent Feeding Practices

Shin Yun Lim

Mentored by Konstantinos Kostarelos
Petroleum Engineering
Anionic Surfactant Adsorption/Partitioning in an Iron-Rich
Environment

Tiffany Lim

Mentored by Dan Price
Honors, Community Health
Air Pollution and Diabetes: Modeling a Possible
Intervention Through Stove Top Replacement

Michael Lindemann

Mentored by Vera Adams

Architecture

Seattle, Washington – Disaster Profile

Taylor Lirette

Mentored by Loi Do

Chemistry

Toward Development of Triazole Bridge Hetero-Bimetallics for Olefin Polymerization

Ryan Liu-Pham

Mentored by Angela Laws

Biology & Biochemistry

How does Grasshopper Feeding Vary with Nutrient Additions?

Ligia Lobo

Mentored by Luca Pollonini

Engineering Technology

Optimal Wellness

Jarrett Lonsford

Mentored by Aaron Becker

Electrical & Computer Engineering

Deploying Sensor Modules with Remotely Operated Underwater Robots for Marine Data Collection

Karina Lopez

Mentored by Michael Zvolensky

Psychology

The Differential Role of Anxiety Sensitivity and its Components in the Relation between Emotional Nonacceptance and Anxiety and Depressive Symptoms and Disorders among Latinos in Primary Care

Avery Love

Mentored by Melissa Markofski

Health & Human Performance

A Comparison of Self Reported Physical Activity to ActiGraph Recorded Physical Activity Amongst Young Adults

Mauricio Lozano

Mentored by Kevin Garey

Pharmacy Practice & Translational Research

The Clostridium difficile Epidemic and its Prevalence in Two New Urban, International Environments

Bao Ly

Mentored by Xiaojing Yuan

Engineering Technology

SETS Bike Share Cyber and Mobile Application Development

Cindy Mai

Mentored by Lars Grabow

Chemical & Biomolecular Engineering

Exploring the Efficacy of Single-Atom Alloy Catalysts for the Haber-Bosch Process

Lee Mai

Mentored by Vera Adams

Architecture

New York City Disaster

Marco Maldonado

Mentored by Xiaojing Yuan

Engineering Technology

SETS Bike Share Cyber and Mobile Application Development

Mason Malone

Mentored by Iain Morrisson

Philosophy

Which Rights are Right: Understanding Constitutional Rights through Analysis of Obergefell's Right to Marry

Anthony Martinez

Mentored by Shuo Chen

Physics

Synthesis and Electrochemical Properties of Bi₂Te₃/C Nanocomposite Anode Materials for Na-ion Batteries**Raphael Mastrangelo**

Mentored by Lawrence Pinsky

Physics

TITLE

Jeffrey Mayo

Mentored by Timothy Cooper

Biology and Biochemistry

Effects of Compensatory Mutations on Evolved Strains of Antibiotic Resistant E.coli

Michel Medellin

Mentored by Edgar Bering

Physics

Gas Analysis using Auroral Spectroscopy

Talia Mergi

Mentored by Sascha Hein

Psychological, Health & Learning Sciences

The Development of a Psychometric Scoring Rubric for Assessing Role-taking Abilities in Children

Jose Molina

Mentored by Ziad Qureshi

Interior Architecture

Un/Plugging into Life: Activating Collective Identity Through the Spatial Autonomy of Headphones

Ramsha Momin

Mentored by Clayton Neighbors

Psychology

Sexual Health & Social Media

Nabihah Muhammedy

Mentored by Ziad Qureshi

Interior Architecture

Retail (UN) Reality: The Future of Augmented Reality

Amir Nazarian

Mentored by John Craft, Jr.

Biology & Biochemistry

Large Scale Docking of Chemical Compound Against CDK2o

Christian Nguyen

Mentored by Mequanint Moges

Engineering Technology

Wireless All-in-One Small Programmable Data Logger

David Nguyen

Mentored by Mequanint Moges

Engineering Technology

CaliALI

Nicholas Nguyen

Mentored by Dan Price

Honors, Community Health

Modeling Air Pollution's Effect on Residents Living Near Major Roads

Paul Nguyen

Mentored by Mequanint Moges

Engineering Technology

CaliALI

Thomas Nguyen

Mentored by Marc Hanke, Carol Colannino-Meeks

Honors, Biology & Biochemistry,

Southern Illinois University Edwardsville, Anthropology

Exploring the Anthropocene Through Multivariate Analysis of Diversity Metrics in Upper Mississippi River System Fish Communities

Tien Nguyen

Mentored by Xiaojing Yuan

Engineering Technology

SETS Bike Share - Smart Lock Design

Tu Van Nguyen

Mentored by Edgar Bering

Physics

Gravity Wave Detection through All-sky Imaging of Airglow

Carolyn Nielsen

Mentored by William Widger

Biology & Biochemistry

Resuscitation Promoting Factor from *Micrococcus luteus***Morris Olumba**

Mentored by Jeremy May

Chemistry

Intramolecular Oxidative Phenol Coupling and Hydrazone-Initiated C-H Bond Insertion in Stenodane Synthesis: A Reproduction of Work by Samir Chatterjee

Jhonathan Orozco Mendoza

Mentored by Daphne Hernandez, Teresia O'Conner

Health & Human Performance,

USDA/ARS Children's Nutrition Research Center,

Academic General Pediatrics,

Baylor College of Medicine

Cultural Adaption of 'Healthy Dads Healthy Kids' for Hispanic Families: Fundamental Movement Skills Play Cards Get a Cultural Face Lift

Lily Ortega

Mentored by Rosenda Murillo

Psychological, Health & Learning Sciences

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Campus Deadline: Dec 1, 2017

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