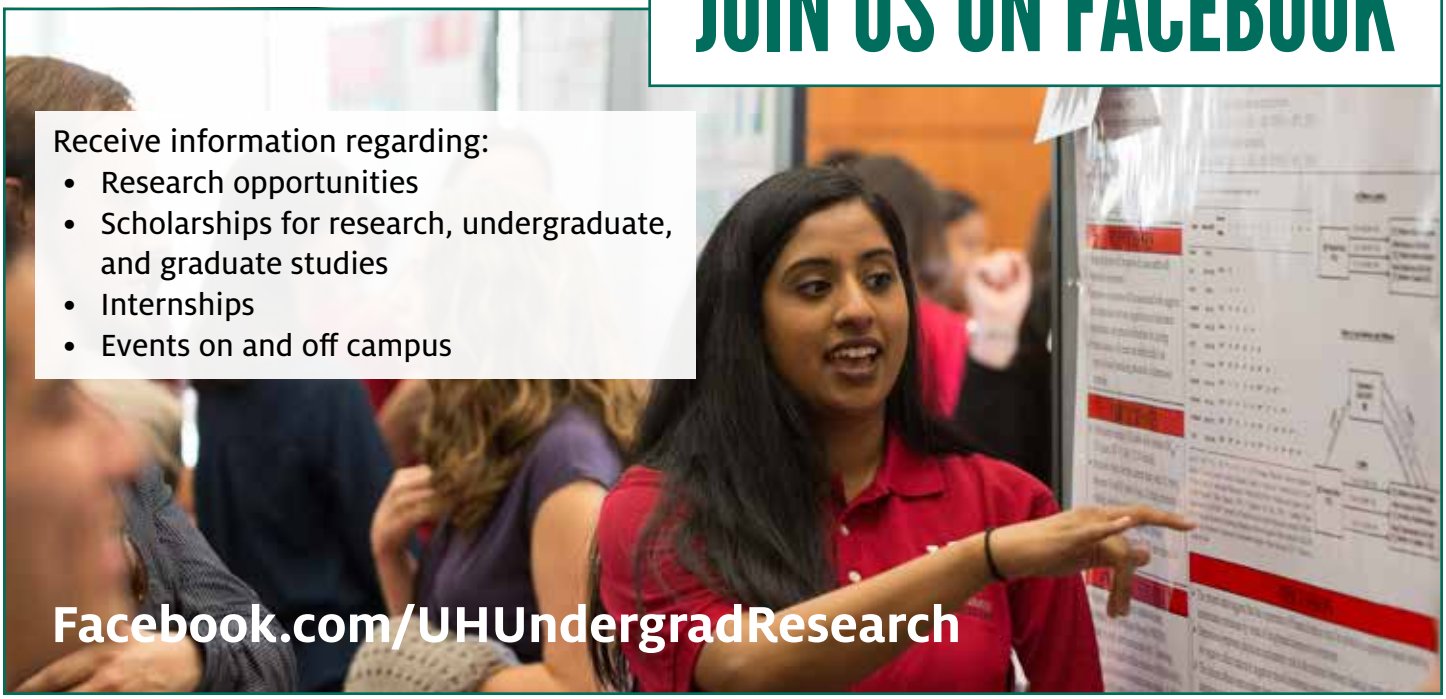
2018 UNDERGRADUATE RESEARCH DAY

Thursday, October 18, 2018 4:00 p.m.

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

JOIN US ON FACEBOOK



SAVE THE DATE

PURS
Spring 2019
Application Deadline:
Wednesday, November 28, 2018

Faculty Mentoring Awards
Application Deadline:
Monday, February 4, 2019

SURF
Summer 2019
Application Deadline:
Friday, March 22, 2019

HERE
Summer 2019
Application Deadline:
Friday, March 22, 2019

2018 UNDERGRADUATE RESEARCH DAY

October 18, 2018

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

3:30-4 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

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

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

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 and Design for printing the posters for the event.

WELCOME

Welcome to Undergraduate Research Day.

This year marks the 14th anniversary of Undergraduate Research Day, an event that showcases the diverse range of research projects completed by University of Houston undergraduate students throughout the last year. Presenters include students from the 2018 Summer Undergraduate Research Fellowship (SURF) program, as well as students who conducted research under the guidance of a University of Houston faculty mentor during the fall 2017, spring 2018, and summer 2018 terms. Our undergraduate researchers are eager to share their research projects and experiences with you, so be prepared for an afternoon of engaging presentations and discussions.

This summer, staff and faculty from the Office of Undergraduate Research met with each of the over 100 students participating in the 2018 SURF program. These students worked with faculty mentors from 11 colleges and 33 departments on campus, whose efforts contribute to the broad range of research projects on display here today. Students who participate in faculty-mentored research programs such as SURF have an opportunity to develop critical thinking, problem solving, and oral and written communication skills. They also hone their ability to think independently and work effectively within a team. These skills were made apparent to the Office of Undergraduate Research team members when conversing with the students.

The SURF 2018 program was comprised of several different student cohorts. This includes 81 SURF students, 18 Mellon Research Scholars, five Pharis Fellows, and five University of Houston/MD Anderson Cancer Center (UHAND) Scholars. The Pharis Fellows and UHAND Scholars are among the exciting additions to the undergraduate research programming at the University of Houston. For example, the 2018 Pharis Fellows used computational models to analyze community health outcomes under the mentorship of Drs. Dan Price and Peggy Lindner. These dynamic and interactive digital presentations are featured today in the Estess Library of the Honors College. The 2018 UHAND Scholars, led by Dr. Lorraine Reitzel from the University of Houston and Dr. Lorna McNeill from MD Anderson Cancer Center, conducted cancer disparities research, learned about social determinants of health, and participated in service learning activities under a new collaboration between the two institutions. The Office of Undergraduate Research team looks forward to working with and learning from these scholars again next summer.

The inaugural class of 18 Mellon Research Scholars are also presenting their summer research accomplishments at today's event. Supported by a grant from the Andrew W. Mellon Foundation, the Mellon Research Scholars program provides faculty-mentored research opportunities and academic development programming to undergraduate students interested in pursuing a research career in the humanities. The first cohort of Mellon Research Scholars participated in a faculty research seminar series in spring 2018, completed a two-week graduate school preparatory program, and spent the summer conducting faculty-mentored research. All Mellon Research Scholars research posters will have a star attached to their poster to indicate participation in this program.

To assist in the coordination of the Mellon Research Scholars program, the Office of Undergraduate Research recently welcomed a new staff member, Daniel Mendiola, as the Mellon Research Scholars program coordinator. Dr. Mendiola is an alumnus of the University of Houston and the Honors College, and he recently completed his dissertation in history examining Spanish-indigenous relations in Central America and the Caribbean. Additionally, Dr. Mendiola was awarded a 2017-2018 Fulbright U.S. Student Program Study/Research grant to Costa Rica.

In fall 2017, the University of Houston announced the topic for the institution's current Quality Enhancement Plan, officially titled the Cougar Initiative to Engage (CITE). This is a campus wide initiative to bolster co-curricular activities in a real-world setting. To support CITE, the Office of Undergraduate Research has worked to develop an assessment model for future experiential learning programs on campus. The 2018 Houston Early Research Experience (HERE) and SURF participants were part of the CITE pilot program, as are the Fall 2018 Provost's Undergraduate Research Scholarship recipients.

The Office of Undergraduate Research would like to thank the Office of the Provost, the Division of Research, the Honors College, the Cullen College of Engineering, and the many other colleges and departments on campus that support undergraduate research programming at the University of Houston. The programs featured here today would not be possible without the support of our campus partners.

Thank you for attending this year's celebration of undergraduate research at the University of Houston. As you engage with the over 300 presenters here today, we hope you learn something new and make a friend along the way.


Stuart Long


Karen Weber


Jennifer Asmussen


Adrian Castillo


Ben Rayder


Daniel Mendiola

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UNIVERSITY of HOUSTON
OFFICE OF UNDERGRADUATE RESEARCH

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Elizabeth D. Rockwell Pavilion
M.D. Anderson Library
The Honors College

The Office of Undergraduate Research
University of Houston
The Honors College
M.D. Anderson Library
4333 University Drive, Room 212
Houston, TX 77204-2001
(713) 743-6433
UndergraduateResearch.uh.edu

Booklet created by
Julia Brown,
Design and Presentation,
The Honors College

OFFICE OF UNDERGRADUATE RESEARCH

OUR PROGRAMS

The Houston Early Research Experience (HERE) is a two-week research program in May intended to orient rising sophomore and junior undergraduates to the fundamentals of conducting research. HERE awards $1,000 scholarships to students. uh.edu/hereprogram

The Summer Undergraduate Research Fellowship (SURF) is a full-time, ten-week summer research program for students and provides a $4,000 scholarship 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. uh.edu/surf

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. uh.edu/purs

The Mellon Research Scholars Program is for underrepresented juniors interested in conducting research and attending graduate studies in the humanities. Mellon Scholars participate in a faculty-led seminar series to learn more about research opportunities in the humanities, receive $1,100 to participate in a two-week camp on applying to graduate school, earn $3,900 to conduct a full-time summer research project under the mentorship of a University of Houston faculty mentor, and conclude the program by either completing an independent study or senior honors thesis during their senior year. uh.edu/mellonscholars

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 uh.edu/seniorhonorsthesis

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

A special thanks to our campus and community partners for their support of the Office of Undergraduate Research over our 14 years of serving undergraduate researchers:

- **Office of the Provost**
- **Division of Research**
- **Cullen College of Engineering**
- **Honors College**
- **Andrew W. Mellon Foundation**
- Biology & Biochemistry
- Biology of Behavior Institute (BoBI)
- Biomedical Engineering
- Chemical & Biomolecular Engineering
- Chemistry
- 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 Technology
- Gerald D. Hines College of Architecture and Design
- Health & Human Performance
- Hobby School of Public Affairs
- Industrial Engineering
- Mathematics
- Mechanical Engineering
- Medicine & Society Program
- Physics
- Political Science
- Psychology
- Texas Obesity Research Center (TORC)
- University of Houston/MD Anderson Cancer Program

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:
Honors College
Office for Student Recruitment
(713) 743-1766:
honorsadmissions@uh.edu

HOUSTON EARLY RESEARCH EXPERIENCE

The **Houston Early Research Experience (HERE)** program recognizes freshman and sophomore students who excel both inside and outside the classroom. This two-week May seminar series engages students from all majors in various research methodologies through faculty-led small group discussions and research presentations. Students receive a $1,000 scholarship for participating in HERE. Forty-eight students participated in the 2018 HERE Program, which focused on sustainability in the city of Houston.

The 2019 theme for HERE will be flooding and storms in Houston. The application deadline is March 22, 2019. For more information, contact Adrian Castillo at afcastillo@uh.edu.

HOUSTON SCHOLARS

Supported by the Office of the Provost and the Honors College, the **Houston Scholars** program is for high-achieving freshmen and sophomores to receive mentorship and scholarship funding to pursue research, internships, and other distinctive experiential learning opportunities. Through targeted programming, participants benefit from honing their academic and professional skills, developing connections with faculty, engaging in scholarly endeavors, and preparing to apply for nationally competitive scholarships and top graduate school programs.

Houston Scholars are encouraged to participate in self-reflection, critical thinking, passionate inquiry, and the application of theory and research to real-world problems. During the course of the academic year, Houston Scholars will have the opportunity to engage with current events through research, seminar series lectures, and debate activities.

For additional information about the Houston Scholars, please contact Dr. Ben Rayder at btrayder@uh.edu in the Office of Undergraduate Research.

NATIONALLY COMPETITIVE SCHOLARSHIPS

Consider applying for one of these opportunities.

BARRY GOLDWATER SCHOLARSHIP

For sophomores and juniors who demonstrate academic excellence and intend to pursue research careers in mathematics, the natural sciences, or engineering. This competitive scholarship covers eligible expenses for undergraduate tuition, fees, books, and room and board, up to a maximum of $7,500 annually.

Campus Deadline: Nov 30, 2018

HARRY S. TRUMAN SCHOLARSHIP

For college juniors with exceptional leadership potential who are committed to careers as change agents in government, the nonprofit or advocacy sectors, education, or elsewhere in public service. Each Truman Scholar receives up to $30,000 for graduate study.

Campus Deadline: Nov 30, 2018

MORRIS K. UDALL & STEWART L. UDALL SCHOLARSHIP

For sophomore and junior level students committed to careers related to the environment, tribal public policy or tribal health care. Awards of up to $7,000 and access to the Udall Alumni Network.

Campus Deadline: Nov 30, 2018

CRITICAL LANGUAGE SCHOLARSHIP

Language immersion program for undergraduates from all academic disciplines. Sponsored by the U.S. Department of State, this summer program allows students to study one of 15 critical languages abroad, including Arabic, Chinese, Korean, and Russian.

National Deadline: Nov 2018 (TBA)

NSF GRADUATE RESEARCH FELLOWSHIP

For graduating seniors who intend to pursue a research-based master's or doctoral degree in the natural sciences, engineering, mathematics, or STEM education. The award includes a $34,000 living stipend and $12,000 cost-of-education allowance.

National Deadline: Oct 22-26, 2018

FULBRIGHT U.S. STUDENT PROGRAM

For graduating seniors, current graduate students, and alumni. Students may apply to teach English, enroll in a graduate degree program, or conduct research for one year in more than 140 countries. Recipients are awarded a living stipend, travel accommodations, and basic health insurance.

Campus Deadline: Aug 30, 2019

Application for these awards requires a strong academic, leadership, and service record. In some instances, you must be nominated to apply. For more information, visit the Office of Undergraduate Research or contact Dr. Ben Rayder (btrayder@uh.edu).

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?
- Talk to current and past professors (during their office hours) from courses you have excelled in and have enjoyed.
- Check OUR website for faculty members currently seeking undergraduate researchers: UndergraduateResearch.uh.edu/facultyresearch.
- Join the UH Undergraduate Research Facebook page and the Office of Undergraduate Research's listserv.

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 or 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.
- Will it be qualitative or quantitative? What methodology and design will you choose? What methods, techniques, and tools will you use to collect, analyze, and interpret your data?

5. Carry Out the Research

- Now you can finally conduct your 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 and that the research is conducted ethically.

6. Interpret Your Results

- Once your experiment has concluded and data have been collected, it is time to analyze the data using methods determined by your research methodology and design. Next, you must interpret the results.
- 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.
- Consider presenting at Undergraduate Research Day.

8. Repeat

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

UNDERGRADUATE RESEARCH MENTOR AWARDS

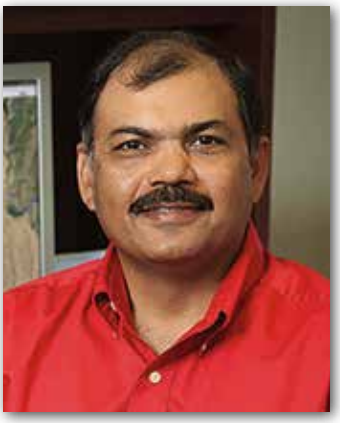
The Office of Undergraduate Research congratulates the 2018 Undergraduate Research Mentor Award recipients: **Lorraine R. Reitzel**, **Jose L. Contreras-Vidal**, and **Shuhab D. Khan**.

LORRAINE R. REITZEL

Associate Professor Lorraine R. Reitzel serves as chair of the Department of Psychological, Health, and Learning Sciences in the College of Education at UH. She also directs the Social Determinants and Health Disparities Lab, co-directs the HEALTH Research Institute, and is chair of the Institutional Review Board committee at the University. Her research, which has garnered $4 million as principal investigator from external grants, focuses on better understanding the social determinants of health. In her five years at UH, she has mentored 12 students and is a co-principal investigator for a new research grant focusing on cancer disparities, which will provide mentorship to more than 20 students. Reitzel forms a collaborative relationship with each student and works with individuals to create a realistic pathway to meet their goals. She writes, "The opportunity to mentor undergraduate students is what I truly enjoy about my job. It is work that can forever alter a mentee's career path and carries with it the joy of seeing a scholar develop and grow."

JOSE L. CONTRERAS-VIDAL

Professor Jose L. Contreras-Vidal directs the Noninvasive Brain-Machine Interface Systems Lab and currently serves as director of the NSF UH BRAIN Center in the Cullen College of Engineering's Department of Electrical and Computer Engineering. He directs a neural and rehabilitation engineering research program focusing on non-invasive brain-machine interface systems and neuroprosthetics. With approximately $6 million received in grants, Contreras-Vidal's research efforts have been supported by the National Institutes of Health, the National Science Foundation, the Veterans Administration, and others. Since being at UH, he has participated in training and mentoring more than 50 undergraduate students. His mentoring approach is inclusive and aims to create "rich, rigorous, and creative work opportunities" for his mentees. In addition, he says students "receive a wide variety of training, including interaction with human subjects, communication skills, manuscript preparation, ethics, engineering tools, public speaking and Science, Technology, Engineering, Arts and Math (STEAM) outreach, good engineering practices and standards, and hands-on training on our technology."



SHUHAB D. KHAN

Professor Shuhab D. Khan works closely with his students in the Department of Earth and Atmospheric Sciences in the College of Natural Sciences and Mathematics. He was awarded a Teaching Excellence Award at UH in 2014 and was elected Fellow of the Geological Society of America in 2016. Khan has received more than $3.7 million in external grants from the National Sciences Foundation and other sources since his arrival at UH in 2003. He has developed web-based Virtual Field Trips to bring active learning exercises to undergraduate core courses. During his time at the University, 26 students have conducted formal research with him. "I consider student mentoring to be an integral part of good teaching and research," writes Khan. "I have endeavored to impress on students that learning is fundamentally a curiosity-driven activity, albeit monitored by instructors, in the framework of a carefully prepared curriculum."

2018 SURF BROWN BAG LECTURE SERIES

Students participating in the SURF program come together each week to learn from UH faculty and staff who present on a wide range of issues, including topics such as research ethics, applying to graduate and professional school, and developing an effective research poster. The Office of Undergraduate Research thanks our 2018 presenters for their participation in this year's Brown Bag Lecture Series.

WEEK 1

Exploring Research Ethics
Lorraine Reitzel
Psychological Health and Learning Services

Shiv Halasyamani
Chemistry

WEEK 2

Research Tours

Jeffrey Rimer
Chemical and Biomolecular Engineering

Peggy Lindner
UH Data Center

Chandra Mohan
Biomedical Engineering

Bradley McConnell
Pharmacy

Sujata Sirsat
Hotel and Restaurant Management

Thomas Teets
Chemistry

Christian Kelleher and Lisa Cruces
Special Collections, M.D. Anderson Library

WEEK 3

Roundtable Chats:
Applying to Graduate and Professional School
Faculty from a wide range of disciplines

WEEK 4

Faculty Research Chat: Bioengineering of Neuroscience
Jose Luis Contreras-Vidal
Electrical and Computer Engineering

WEEK 5

Fourth of July Holiday
No Brown Bag Lecture

WEEK 6

Developing an Effective Résumé
Caitlin MacNeil and Megan Akogyeram
University Career Services

WEEK 7

Responsible Conduct of Research
Penny Maher and Laura Gutierrez
Research Integrity and Oversight Office, Division of Research

WEEK 8

Applying for Nationally Competitive Scholarships and Fellowships
Ben Rayder
Office of Undergraduate Research

WEEK 9

Creating a Research Poster
Stuart Long and Jenn Asmussen
Office of Undergraduate Research

WEEK 10

SURF Buffet Luncheon
SURF Students and Faculty Mentors

2018 SURF PARTICIPANTS

Roba Abousaway
Mentored by Frank McKeon
Biology & Biochemistry

Stem Cell Heterogeneity as a Driver of Cystic Fibrosis

Christopher Acosta
Mentored by Dimitrios Hatzignatiou
Petroleum Engineering

Water Coning: A Mitigation Investigation

Syed Faran Ahmad
Mentored by Sanghyuk Chung
Biology & Biochemistry

The Inhibition of Cervical Carcinogenesis Through Medroxyprogesteroneacetate Treatment

Marie Aka
Mentored by Debora Rodrigues
Civil & Environmental Engineering

Removal of Pharmaceutical Contaminants from Water Using MoO_3 Nanomaterials

Jo Alanis
Mentored by Christiane Spitzmueller
Psychology

Race as a Moderator of the Relationship Between Personality Factors and Supervisor-Instigated Incivility

Maite Albarran
Mentored by Elebeoba May
Biomedical Engineering

M. smegmatis Growth Study with H_2O_2 Spiking

Zainab Arif
Mentored by Hanako Yoshida
Psychology

Parental Gestures and Their Role During Social Interactions with Deaf, Autistic, and Typically Developing Children

Jaime Badillo
Mentored by Jose Contreras-Vidal
Electrical & Computer Engineering

Locating the Leg Joints Using Magneto-Inertial Sensors for Adjusting the Segmental Lengths of a Lower-Limb Exoskeleton

Sarang Bidwai
Mentored by Di Yang
Mechanical Engineering

Development of Computational Fluid Dynamic Model of a Vertical Axis Wind Turbine Using the ALM Approach

Britnee Chuor
Mentored by Justin Kirkland, Elizabeth Simas
Political Science

Asian-American Political Participation: The Consequences of Social Invisibility

Mohammed Dairywala
Mentored by Mehmet Sen
Biology & Biochemistry

Structural Characterization of Leukocyte Integrin αM I-Domain

Arnold Emeh
Mentored by Fatima Merchant
Computer Engineering Technology

Mesenchymal Stem Cells Aggregation on Silicon-Titanium Diboride Micropatterned Platforms

Houtan Faridi
Mentored by Rakesh Verma
Computer Science

Evaluation of Features and Clustering Algorithms for Malware

Salman Farooqui
Mentored by Elizabeth A. Fletcher
Decision & Information Sciences

Using Supply Chain Management Principles to Improve the Organ Donation Process

Malena Fassnacht
Mentored by Lawrence Pinsky
Physics

Development of a Timepix-Based Radiation Monitor for Analyzing Cosmic Radiation on Commercial Aircraft

Justin Gallagher
Mentored by Mina Dawood
Civil & Environmental Engineering

Repairing Steel & Concrete Structures Using Smart Materials Including Fiber Reinforced Polymers & Shape Memory Alloys

Marco Galvan
Mentored by Sheila Katz
Sociology

Understanding the Experiences of Low-Income Students Meeting Their Basic Needs: A Qualitative Study of Food Insecurity While Pursuing Higher Education

Brenda Gonzalez
Mentored by Andreas Mang
Mathematics

Fast and Stable Algorithms for Deep Learning

Mario Gonzalez
Mentored by Randall Lee
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Synthesis and Study of Symmetric Olefin-Bridged Bidentate Adsorbates and Their Monolayers on Gold

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Kathryn Haynes
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The Shotgun House: Past, Present, & Future

Shu Ning Hiew
Mentored by Lars C. Grabow
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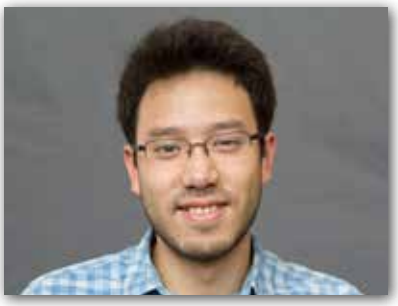
Atomistic Simulations of Hydrogen Production Kinetics at Novel Fuel Cell Electrodes

Paige Hill
Mentored by Kenneth Brown
Comparative Cultural Studies

The Archaeology of Spatial Patterning: A Test Case from the Magnolia Quarters in Natchitoches, Louisiana



Vinh Hoang
Mentored by Cedric Tolliver
English

"Transcendent Exiles:" The Cultures of American Fiction

John Hodges
Mentored by Sujata Sirsat, Minwoo Lee
Hotel & Restaurant Management

Identifying Foodborne Illness and Sanitation Frequencies from Customer-Generated Reviews Using Business Analytics

Huy Hua
Mentored by Rose Faghih
Electrical & Computer Engineering

A State-Space Investigation of Cortisol Alterations in Chronic Fatigue Syndrome

Rhema Ike
Mentored by Saleh Kalantari, Architecture
Aaron Becker, Electrical & Computer Engineering

Building Structures with a Swarm of Robots

Haelim Jeong
Mentored by Leslie Frankel
Psychological Health & Learning Sciences

The Relationship Between Social Support, Personal Distress, and Engagement in Feeding

Isaiah Johnson
Mentored by Jennifer Clark
Political Science

Measuring Constituent Attitudes on Immigration and its Effects on Legislative Behavior

John Kass
Mentored by Pranav Parikh
Health & Human Performance

Effects of Brain Stimulation on Cortical Excitability in Healthy Adults: A Validation Study

Liam Lauckner
Mentored by Alan Brandon
Earth & Atmospheric Sciences

An Investigation of Cerium Anomalies in the Cretaceous Western Interior Seaway

Khoa Le
Mentored by Melissa Zastrow
Chemistry

Cofactor-Based Fluorescent Protein for New Oxygen-Independent Metal Sensors

Nga Le
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Chemical & Biomolecular Engineering

Bacterial Persistence

Triet Le
Mentored by Kirill Larin
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Joshua Lewis
Mentored by Shereen Majd
Biomedical Engineering

Preparation of Biomolecular Gradients on Patterned Hydrogel Surfaces

Elliot Maceda
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Following the Crowd: How Herding May Affect Binary Decisions

Jeana Magallon
Mentored by Robert Shimko
School of Theatre and Dance

Dramaturgical Research

Sarah Mai
Mentored by Tony Frankino
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An Investigation into Patterns of Scaling Among Morphological Traits

Mason Malone
Mentored by Willa Friedman
Economics

Effects of Tort Reforms on Health Outcomes, Spending, and Procedure Choice

Nancy Marmolejo Bustamante
Mentored by Tianfu Wu
Biomedical Engineering

Identifying Novel Antigens in Renal Allograft Failure

Valentina Maza
Mentored by Lorraine Reitzel
Psychological Health & Learning Sciences

Associations of Subjective Social Status and Mindfulness on Readiness to Quit Smoking in Homeless Smokers

Maria Medina
Mentored by Jose Contreras-Vidal
Electrical & Computer Engineering

Towards the Development and Characterization of a Torque Sensor for Volitional Control of a Pediatric Exoskeleton

Priel Meir
Mentored by Candice Alfano
Psychology

Association Between Chronotype, Blue-Light Emitting Media Use, and Sleep in Adolescents

Chirag Mistry
Mentored by Richard Bond
Pharmacological & Pharmaceutical Sciences

Detection of the Beta-2 Adrenergic Receptor in Cultured Human Embryonic Kidney Cells

David Momtaz
Mentored by Thomas Teets
Chemistry

Synthesis of Formazanate Complexes with Iridium and Analysis of Their Spectroscopic and Electrochemical Properties

Victoria Mousa
Mentored by Tasneem Bawa-Khalfe
Biology & Biochemistry

The Role of Androgen Receptor Modification in the Development of Drug-Resistant Breast Cancer

Debora Mroczek
Mentored by Eric Bittner
Chemistry

Data Compression and Machine Learning in the Analysis of the Entropy of Photodissociation in Organic Donor-Acceptor Interfaces

Shabir Muhammad
Mentored by Erin Kelleher
Biology & Biochemistry

Evolution of P-Element Copy Number in *Drosophila melanogaster*

Amy Nguyen
Mentored by Jeffrey Rimer
Chemical & Biomolecular Engineering

Designing Chemical Treatments for Mineral Scale Using Microfluidics

Boi-Lien Nguyen
Mentored by Thomas Teets
Chemistry

The Efficiency of Red or Near-Infrared Emissions of Iridium Complexes

Kevin Nguyen
Mentored by Muayyad Al-Ubaidi
Biomedical Engineering

Reducing Oxidative Stress in Retinitis Pigmentosa Mouse Model P23H

Thao Vy Nguyen
Mentored by Mehmet Orman
Chemical & Biomolecular Engineering

Identifying Chemical Compounds Targeting Persister Cells' Related Mechanisms in Bacteria

Thong Nguyen
Mentored by David Mayerich
Electrical & Computer Engineering

Stochastic Electrotransport Device for Tissue-Clearing Application

Andrea Ochoa Lopez
Mentored by Paul Cirino
Psychology

Language Correlates of Achievement in Children with Math Difficulties

Adi Pasic
Mentored by Aaron Becker
Electrical & Computer Engineering

Mapping with Uniformly Controlled Stochastic Swarms

Daniel Perez
Mentored by Scott Clifford
Political Science

Openness & Latinos' Attitudes

Praboda Perikala
Mentored by Jeremy Bailey
Political Science

Deception in Democracies

Khoa Pham
Mentored by Lars C. Grabow
Chemical & Biomolecular Engineering

Identification of Stable Near-Surface Alloy Systems Using Density Functional Theory and Data Science

Oscar Recinos
Mentored by George Wong
Petroleum Engineering

Screen Flow Velocity Through a Cased Hole Gravel Pack Completion

Brook Runyon
Mentored by Jonny Wu
Earth & Atmospheric Sciences

Origin and Early Evolution of the Pacific Plate

Avi Shah
Mentored by Natalia Piqueira
Finance

Inter-Similarities and Differences of Banking Systems

Sashank Shorey
Mentored by Bradley McConnell
Pharmacological & Pharmaceutical Sciences

Targeting AKAP12/Gravin Using Cloud-Computing for Drug Discovery and Molecular Simulation

Christopher Smith
Mentored by Kirill Larin
Biomedical Engineering

Biomechanical Effects of Custom Corneal Cross-Linking Using Optical Coherence Elastography

Jacob Snook
Mentored by Mohammad Reza Abidian
Biomedical Engineering

Hydrogel-Mediated Direct Writing of Conducting Polymer Films

Jessica Spiehler
Mentored by Richard Garner
Honors

The Bioethical Implications of the Orphan Drug Act on Healthcare in the United States

Alexander Spike
Mentored by Robert Talbot
Earth & Atmospheric Sciences

How Precipitation Dynamics are Changing in the Houston Area Under a Warming Climate

Amul Surelia
Mentored by Bhavin Sheth
Electrical & Computer Engineering

Identifying Neural Signatures of Satisfaction of Sleep Need

Haley Thomas
Mentored by Qi Fu
Earth & Atmospheric Sciences

Tracking the Development of Hydrocarbons on the Surface of Magnetite

Taylor Tippitt
Mentored by Gangbing Song
Mechanical Engineering

Structural Control Performance of a Pendulum Damper with Viscoelastic Pounding Effects

Rahul Arvind Vanchinathan
Mentored by Richard Meisel
Biology & Biochemistry

Determining Functions of Gene Duplications from Drosophila X Chromosomes to Autosomes

Jayson Varughese
Mentored by Miao Pan
Electrical & Computer Engineering

Flood Level Monitoring System Using Magnetic Induction Antennas

Daisey Vega
Mentored by Christopher Arellano
Health & Human Performance

Reducing Metabolic Cost of Walking by Exploiting Arm Swing to Drive Leg Swing

Natalia Villarreal
Mentored by Sergey Shevkoplyas
Biomedical Engineering

Deep Learning Enables High-Precision Classification of Morphology of Stored Red Blood Cells

Brian-Tinh Vu
Mentored by Donald Kouri
Physics

Hermite-Gauss Quadrature for Generalized Hermite Weight Functions and Polynomials

Charles Wang
Mentored by Chandra Mohan
Biomedical Engineering

Identifying Novel Biomarkers for Idiopathic Pulmonary Fibrosis

Emily Watlington
Mentored by C. Raymond Knee
Psychology

Rapport's Impact on Need Satisfaction for Lonely Individuals

Victor Zeng
Mentored by Nouhad Rizk
Computer Science

A Question Selection Strategy for Early Warning Systems

2018 BOBI PARTICIPANTS

Rene Zimmerer
Mentored by William Widger
Biology & Biochemistry

Pigment Mutation Allows Competition Experiments to Assess Fitness in Micrococcus luteus

Laura Pareja
Mentored by Brigitte Dauwalder
Biology & Biochemistry

Monitoring Calcium Levels in the Drosophila Brain Blood Barrier

Carl Suerte
Mentored by Brigitte Dauwalder
Biology & Biochemistry

Monitoring Calcium Activity in the Blood Brain Barrier using GCaMP6 in *Drosophila melanogaster*

MELLON RESEARCH SCHOLARS PROGRAM

In summer 2018, the following 18 University of Houston Mellon Research Scholars participated in a full-time faculty-mentored summer research experience.

Gabriel Aguilar
Mentored by Terry Hallmark
Tocqueville, Civil Religion, and the Consequences of Irreligious Democracy

Kelli Anderson
Mentored by Sally Vaughn
Tracing the Origins of Medieval Castle Architecture: Were the Normans Innovators or Influenced by Others?

Abdulwausay Ansari
Mentored by Iain Morrisson
Value and Reason: An Anti-Desire Theory of Motivation

Livia Garza
Mentored by Debbie Harwell
Park Trails and Oil Wells: The Quest to Drill in Memorial Park

Alexis Gutierrez
Mentored by Margot Backus
Woolf, Eliot, Antigone, and the New Theresa: Progress and Parallels

Phillip Kieval
Mentored by Johanna Luttrell
The Epistemic Harm of Normative Masculinity

George Petagrew
Mentored by Kristina Neumann
Cannae to Tsushima: A Look at Imperialism Across Time

Phillip Pinell
Mentored by Dustin Gish
Making Little Ciceros: Cicero on the Education of Just Statesmen

Gricelda Posada
Mentored by Christian Eberhart
Examining the Relationship Between Compassion and Trauma to Heal PTSD

Laura Quinton
Mentored by Guillermo de los Reyes
Intersectionalities in Contemporary Latinx American Literature

Abigale Ramos
Mentored by Elizabeth Gregory
Moore & Modernist Transcription

Tim Seiter
Mentored by David Rainbow
Karankawa Cannibalism: Fact or Fiction? You Decide

Yazia Silva
Mentored by Elizabeth Goodin-Mayeda
Language Acquisition for Spanish Heritage Speakers

Yesenia Solano
Mentored by Anadeli Bencomo
Avant-garde Literature in Latin America: Roberto Arlt's "Aguafuertes"

Mireya Soledad Jamal
Mentored by Mabel Cuesta
Elena Poniatowska and her Seven Cabritas within the Mexican National Imaginary

Hailey Taylor
Mentored by Lauren Zentz
Casual Discussions: Queerness and Isolation in Language and Culture

Mia Valdez
Mentored by Cedric Tolliver
Fleeing South: African Slavery in 19th Century Texas

Elmer Villalobos
Mentored by Anadeli Bencomo
The Travel Writings of Egon Kisch

GEORGE PHARIS FELLOWS PROGRAM

Students from the Honors Biomedical Sciences joined Pharis Fellows working with Drs. Peggy Lindner and Dan Price to create community health models that showed the effects of diverse community health interventions at an individual level and across the city. They learned how to construct mathematical models using the computer program R and applied them to a simulated Houston called Sam City, and showed how each intervention would affect individuals within the city. The modeling is the first step in a multi-year project that will enable the visualization of health as a hypergraph—connected individuals acting in community and embedded in the city's multifaceted social and physical reality.

UH Undergraduates: Chelsea Cheung, Garrett Gowe, Aditya Mankare, Akash Ramesh
Not pictured: Manale Henini

UHAND SCHOLARS

UH Undergraduates: Shreya Desai, Basant Gamal, Paulina Linares Abrego, Sean Reuven, Christine Smith

UHAND (University of Houston/MD Anderson) Scholars are paired with faculty members from the University of Houston and the University of Texas MD Anderson Cancer Center. Mentors engage scholars in their research projects focused on cancer risk, social determinants of health, clinical, and population cancer research in minority populations. Scholars also participate in various learning experiences (e.g., career and leadership conversations, cancer disparity seminars, and ethics trainings) focused on topics designed to enhance their preparation for future careers in cancer disparities related fields.

2018 POSTER PRESENTATIONS

Baiyinah Abdullah
Mentored by Alison Leland, Political Science
Autumn-Lynn Harrison, Migratory Bird Center, Smithsonian Conservation Biology Institute

Promoting Community Engagement in Migratory Bird Journeys through Story Maps

Deshan Abeysingha
Mentored by Ziad Qureshi
Interior Architecture

Logistical Reclamation: Molding the Future to Solve the Plastic Crisis

Eden Absar
Mentored by Marcel de Dios
Psychological, Health & Learning Sciences

A Culturally-Tailored Smoking Cessation Intervention for Latinos

Pooja Agrawal
Mentored by Rosenda Murillo
Psychological, Health & Learning Sciences

Higher Frequency of Seeing People Walk is Associated with Meeting Aerobic Physical Activity Guideline Among Latino Adults

Zynab Al-Helfi
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Brisbane, Australia

Magdi Alameen
Mentored by Stuart Long, Electrical & Computer Engineering
Zachary C. Cordero, Materials Science and NanoEngineering, Rice University

Improving the Dimensional Accuracy of Binder Jet Printed Parts by Using a Material Infiltration Method

Anthony Alanis
Mentored by Ann Cheek
Biology & Biochemistry

Factors that Influence Population Density of Galapagos Damselfish

Nooruldeen Aldulaimi
Mentored by Stuart Long, Electrical & Computer Engineering
Caleb Bashor, Bioengineering, Rice University

Understanding Rules for Engineering Large Genomically Integrated Mammalian Gene Circuits

Safa Ali
Mentored by John Craft
Biology & Biochemistry

Biophysical and Mechanistic Insights into Novel Allosteric Inhibitor of Spleen Tyrosine Kinase

Mohammad Almatrood
Mentored by Paul Mann
Earth & Atmospheric Sciences

Compilation of Radiometric Age Dates from the Great Arc of the Caribbean: Evidence for an In Situ or Pacific-derived Caribbean Plate?

Eduardo Anzures
Mentored by Norma Olvera
Psychological, Health & Learning Sciences

Kitchen Detective: What is in Your kitchen?

Keana Asadifar
Mentored by Rosenda Murillo
Psychological, Health & Learning Sciences

The Association of Perceived Cancer Risk with Aerobic Physical Activity in U.S. Adults

Tommy Au
Mentored by Mequanint Moges
Engineering Technology

EZ MEDS

Lucas Babel
Mentored by Margaret Cheung
Physics

Protein Crowding and Charge Dictates Protein Stability

Katy Barger
Mentored by Andres Viana
Psychology

Distress Tolerance Moderates the Relationship Between PTSD and Substance Use in a Sample of Inpatient Adolescents

Mohammad Binzahid
Mentored by Mequanint Moges
Engineering Technology

Substrate Made Simple

Nikola Bjelica
Mentored by Paul Mann
Earth & Atmospheric Sciences

Compilation of Widespread, Cretaceous OAE2 Black Shale Horizons Documented in Wells from the Gulf of Mexico, Caribbean, and Atlantic Passive Margins

Maria Borjas
Mentored by Caitlin Porter, Psychology
Vanessa Diaz, Psychology Department, Virginia Tech

Examining the Relationship Between Language Proficiency and Executive Function in Monolingual and Bilingual Children

2018 POSTER PRESENTATIONS

Kristen Brown
Mentored by Cheryl Brohard
Nursing

Effects of Eliminating Distractions During Medication Administration

Madison Brown
Mentored by Daphne Hernandez
Health & Human Performance

The Impact of Barriers and Facilitators of Physical Activity on Quality of Life in Low Income Hispanic Adolescents

Khoi Bui
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Paris, France

Aparna Calindi
Mentored by Tai-Yen Chen
Chemistry

Glimpse into the Dimerization, Distribution and Interaction Dynamics of ATP7A using Super Resolution Imaging

Christopher Carr
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Melbourne, Australia

Albert Castillo
Mentored by Mequanint Moges
Engineering Technology

Zippy Bot

Edwin Castillo
Mentored by Mequanint Moges
Engineering Technology

Substrate Made Simple

Claudia Chabokrow
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Vienna, Austria

Natalia C. Chacon
Mentored by Norma Olvera
Psychological, Health & Learning Sciences

Glycemic Index and Eating Practices of Hispanic and African American Children

Nathaniel Champion
Mentored by Lenora McWilliams
Nursing

Suicide Prevention Screenings to Decrease Suicide Rates in University-Aged Individuals

Emily Chang
Mentored by Mequanint Moges
Engineering Technology

Substrate Made Simple

JeanFelix Chavez
Mentored by Michael J. Zvolensky
Psychology

Assessing the Efficacy of an App-Delivered Intervention Amongst Daily Smokers

Chelsea Cheung
Mentored by Daniel Price, Peggy Lindner
Honors in Community Health

Modeling Community Health in a Simulated City

Montgomery Cloud
Mentored by Ziad Qureshi
Interior Architecture

Soft-Where: The Digital Decentralization of Entertainment

Sergio Cortina-Sanchez
Mentored by Mequanint Moges
Engineering Technology

Total Electron Content Analysis

Dontray Crump
Mentored by Chakema Carmack
Psychological, Health & Learning Sciences

Promoting Safer Sexual Behavior on the HBCU Campus Through a Focus on Ethnic Identity

Ariana Cuvelier
Mentored by Vera Adams
Architecture

Parks + Park Systems: St. Louis

Heather Dach
Mentored by Lenora McWilliams
Nursing

Music Therapy: Its Effects on Patient Anxiety Intraoperatively

Neha Daga
Mentored by Richard Knapp, Biology & Biochemistry
Seyed Moghaddam, Pulmonary Medicine, MD Anderson Cancer Center

Synergistic Effect of Cigarette Smoke and Bacterial Induced Chronic Obstructive Pulmonary Disease Type Airway Inflammation on Promotion of K-ras Mutant Lung Cancer

Kevin Dang
Mentored by Hanako Yoshida
Psychology

Visual Clutter and Attention in Relation to Visual-Learning Experiences Across Populations

Clark Dean
Mentored by Lenora McWilliams
Nursing

Suicide Prevention Screenings to Decrease Suicide Rates in University-Aged Individuals

Michael Dean
Mentored by Margaret Cheung, Physics
Aram Davtyan, Center for Theoretical Biological Physics, Rice University

Sampling the Conformational Space of the Parkinson's Disease Associated Protein Alpha-Synuclen

Shreya Desai
Mentored by Rosenda Murillo
Psychological, Health & Learning Sciences

Neighborhood Social Cohesion Partially Mediates the Association Between Seeing People Walk and Leisure-time Walking in Latino Adults

The Association of Perceived Cancer Risk with Aerobic Physical Activity in US Adults

Yash Desai
Mentored by Harry Le
Electrical & Computer Engineering

Smart Irrigation System

Alex DesJarlais
Mentored by Yu Liu
Biology & Biochemistry

Assessing the Function and Control of miR-322(424)/503 on Skeletal Muscle

Maria Diaz
Mentored by Vera Adams
Architecture

Parks + Park Systems: New York City

Valentina Diaz
Mentored by Ann Cheek
Biology & Biochemistry

Factors that Influence Population Density of Galapagos Damselfish

Thao Doan
Mentored by Marc Hanke, Biology & Biochemistry
David Huston, Texas A&M College of Medicine/Clinical Science & Translational Research Institute

Comparing Mas-Related G-Protein Coupled Receptor Member X2 (MRGPRX2) in Human Basophils and Mast Cells

Kian Ebrahim-zadeh
Mentored by Allison Leland, Political Science
Nancy Knowlton, Smithsonian National Museum of Natural History

Scaling of Marine Biodiversity in Bocas del Toro, Panama

Aristotle Economon
Mentored by Alison Leland
Political Science

Science for Global Goals, The LASER Model and The Future of Science Education

Oreva Eleyae
Mentored by Cheryl Brohard
Nursing

Medication Compliance in African American and Hispanic Men

Abraham Elizarraras
Mentored by Mequanint Moges
Engineering Technology

Total Electron Content Analysis

Laura Elizondo
Mentored by Kerri Crawford
Biology & Biochemistry

Mitigation of Salt's Adverse Effects on Panicum Amarum by Rhizobacteria and Arbuscular Mycorrhizal Fungi

Hania Elzarka
Mentored by Ziad Qureshi
Interior Architecture

Retail Futures; Artificial Intelligence, Human Experience, and the Enabled Future of Pop-up Retail

Almundena Esponda
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Edinburgh, Scotland

Saman Essa
Mentored by Emran El-Badawi
Middle Eastern Studies

Don Quixote: A Clash or Unity of Cultures, an Examination of *Don Quixote* through a Cross-Cultural Lens

Mentored by Anjali Kanojia
Modern & Classical Languages

The Effects of Acculturation and Generational Status on Mental Health Perceptions Among South Asian Women in the Greater-Houston Area

Michael Freeny
Mentored by Russel Gundrum
Engineering Technology

Eldetect Fall Detection

Basant Gamal
Mentored by Lorraine Reitzel, Psychological, Health & Learning Sciences
Karen Basen-Engquist, Behavioral Science, MD Anderson Cancer Center

Vibrant Lives—A Weight Loss Program for Employees of the Pasadena Independent School District

Isaac Gaona
Mentored by Mequanint Moges
Engineering Technology

SLIC Biometric Lock

Jocelyne Garcia
Mentored by Nicole Andrews
Curriculum & Instruction

Family Home Providers Change in Observations as a Result of Professional Development Classes

Juan Garcia
Mentored by Vera Adams
Architecture

Parks + Park Systems: Boston

Maham Gardezi
Mentored by Bhavin Sheth
Electrical & Computer Engineering

What Sustains Viewer Interest in Natural Scenes?

Carina Garth
Mentored by Lenora McWilliams
Nursing

Preventing Adolescent Diabetes: Educating Families on Obesity

Manuela Garza
Mentored by Cheryl Brohard
Nursing

Effects of Eliminating Distractions During Medication Administration

Jon Genty
Mentored by Leonard Trombetta, Electrical & Computer Engineering
Tijana Milenkovic, Computer Science and Engineering, University of Notre Dame

Classifying Aging- and Non-Aging-Related Genes in a Dynamic Protein-Protein Interaction (PPI) Network

Melanie Getman-Villarreal
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Vancouver, Canada

Lydia Golightly
Mentored by Ricardo Azevedo
Biology & Biochemistry

Evolutionary Convergence and Divergence In A Model Fitness Landscape

Carlos Gomez
Mentored by Mequanint Moges
Engineering Technology

Total Electron Content Analysis

Eliana Gonzalez
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Sydney, Australia

Garrett Gowe
Mentored by Daniel Price, Peggy Lindner
Honors in Community Health

Modeling Community Health in a Simulated City

Bryan Gunawan
Mentored by Edgar Bering
Physics

Survival in Extreme Environment: Capturing and Exposing Microorganisms Under Lower Stratospheric Conditions

Cristian Guzman
Mentored by Mequanint Moges
Engineering Technology

SLIC Biometric Lock

Arya Haji Taheri
Mentored by Margaret Cheung, Physics
Jose Onuchic, Chemistry, Rice University

Cheap Map: Hi-C from ChIP-Seq Through Machine Learning

Natalia Henao
Mentored by Norma Olvera
Psychological, Health & Learning Sciences

Kitchen Detective: What is in Your Kitchen?

Glycemic Index and Eating Practices of Hispanic and African American Children

Manale Henini
Mentored by Daniel Price, Peggy Lindner
Honors in Community Health

Modeling Community Health in a Simulated City

Fernando Hernandez
Mentored by Lenora McWilliams
Nursing

Preventing Adolescent Diabetes: Educating Families on Obesity

Blake Herron
Mentored by Craig Johnston
Health & Human Performance

Food Insecurity and Weight Status Among Low Income, Ethnic Minority Adolescents

Brianna Hunter
Mentored by Cunjiang Yu
Mechanical Engineering

3D Printing Soft Electronics

Tu Huynh
Mentored by Mequanint Moges
Engineering Technology

EZ MEDS

Misbah Jilani
Mentored by Michael Cottingham
Health & Human Performance

Women's Perceptions on the Capabilities of Athletes with Disabilities

Lorena Jimenez-Viveros
Mentored by Jakoah Brgoch
Chemistry

Synthesis and Optical Properties of a Solid Solution between Boron and Aluminum in NaBa(B9-xAl1-x)O15: Eu2+

Sharon John
Mentored by Bhavin Sheth
Electrical & Computer Engineering

Reading Your Mind Through Your Eyes: Using Eye Scan Patterns and Machine Learning to Predict Number Choice

Keilan Johnson
Mentored by Chakema Carmack
Psychological, Health & Learning Sciences

Gender Variation Among Perceived Social Concomitants of Sexual Behavior in Emerging Adulthood

Rosa Johnson
Mentored by Lenora McWilliams
Nursing

Does Systemic Body Warming Impact Hospital-Acquired Infection Rates?

Jenna Jones
Mentored by Carla Sharp
Psychology

Experiential Avoidance Differences in Adolescents with Borderline Personality Disorder: Comparison with Psychiatric and Healthy Controls

Rafael Juarez
Mentored by Mequanint Moges
Engineering Technology

Substrate Made Simple

Sunkyung Jung
Mentored by Tai-Yen Chen
Chemistry

Syntheses of Ctr1-mCherry2 and Atox1-PAFGP Fusion Proteins Through Molecular Cloning

Josee Kahambwe
Mentored by Virmarie Correa-Fernandez
Psychological, Health & Learning Sciences

Association Between Sleep, Distress Tolerance and Mindfulness Among College Students: An Examination of Subscale Scores

Praneeth Kambhampati
Mentored by Michelle Belco
Political Science

Developing a Model for an Integrated Transplantation Network

Nancy Katz
Mentored by David Rainbow, History
Steven Prewitt, Lone Star College - Tomball Honors College

Freedom For All Faiths? What Was the Founding Father's Purpose in the Free Exercise Clause of the First Amendment?

Sereen Khalifeh
Mentored by Ziad Qureshi
Interior Architecture

Return to the Fold: 3D-Printed Apparel, Obsolete Production Spaces, and the Fashion of the Future

Isbah Khan
Mentored by Craig A. Johnson
Health & Human Performance

Impact of Fruit and Vegetable Consumption on Standardized Body Mass Index (zBMI) of Mexican-American Adolescents

Sana Khan
Mentored by Andrew Hamilton, Biology & Biochemistry
Carol Tamminga, UT Southwestern Department of Psychiatry

Redox Probing for Oxidative Stress in the Plasma Samples of Healthy vs. Schizophrenia Patients

Sehar Khan
Mentored by Cheryl Brohard
Nursing

Medication Compliance in African American and Hispanic Men

Barton King
Mentored by Edgar Bering
Physics

Total Electron Content Analysis

Layla Kratovic
Mentored by Anka Vujanovic
Psychology

PTSD Symptoms and Suicidality in College Students: The Role of Distress Tolerance

Dolly Lam
Mentored by Mequanint Moges
Engineering Technology

EZ MEDS

Robert Laroche
Mentored by Ricardo Azevedo, Biology & Biochemistry
Ben Titus, Department of Invertebrate Zoology, American Museum of Natural History

Phylogenetic Relationships among the Clownfish-Hosting Sea Anemones

Utopia Lastrap
Mentored by Vera Adams
Architecture

Parks + Park Systems: Brooklyn

Khanh Le
Mentored by Margaret Cheung
Physics

Investigating Explicit Coupling Between Local and Non-Local Interactions in Protein Folding Forcefields

Si Nguyen Le
Mentored by Mequanint Moges
Engineering Technology

SLIC Biometric Lock

David Leal
Mentored by Margaret Cheung, Physics
Qian Wang, Department of Physics, Rice University

Kinesin in a Cell-Like Environment

Francis Legra
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Basel, Switzerland

Hee Jung Lim
Mentored by Lorraine Reitzel
Psychological, Health & Learning Sciences

Characterization of Sleep Inadequacy and Association with Health Among Homeless Adults

Paulina Linares Abrego
Mentored by Lorraine Reitzel, Psychological, Health & Learning Sciences
Jason Robinson, Behavioral Science, MD Anderson Cancer Center

The Impact of Flavor and Nicotine Dose on Electronic Cigarette Use and Acceptability Among Cigarette Smokers

Richard Liu
Mentored by Vera Adams
Architecture

Parks + Park Systems: San Francisco

Arleen Longoria
Mentored by Daphne Hernandez
Health & Human Performance

The Impact of Hurricane Harvey on the Physical Activity Behaviors of Low Income, Ethnic Minority Adolescents

Diana Lopez
Mentored by Cheryl Brohard
Nursing

How Effective is Chlorhexidine Gluconate on Preventing Surgical Site Infections?

Lillian Lopez
Mentored by Cheryl Brohard
Nursing

How Effective is Chlorhexidine Gluconate on Preventing Surgical Site Infections?

Tayma Machkhas
Mentored by Lorraine Reitzel
Psychological, Health & Learning Sciences

Characterization of Physical Activity and its Association with Self-Rated Health among a Large Homeless Population

Zainub Mallick
Mentored by Hanako Yoshida
Psychology

Visual Clutter and Attention in Relation to Visual-Learning Experiences Across Populations

Natasha Malonaey
Mentored by Vera Adams
Architecture

Parks + Park Systems: Boston

Aditya Mankare
Mentored by Daniel Price, Peggy Lindner
Honors in Community Health

Modeling Community Health in a Simulated City

Marielle Manzano
Mentored by Norma Olvera
Psychological, Health & Learning Sciences

The Association Among Acculturation, Anxiety, Sleep Quality, and Weight Status in Latina Mothers

Nico Marioni
Mentored by Jeremy Palmer
Chemical & Biomolecular Engineering

The Effect of Polydispersity and Confinement on the Colloidal Glass Transition

Anthony Martinez
Mentored by Oomman Varghese
Physics

Study of Charge-Transfer Characteristics in Hybrid Polymer Solar Cells Using Intensity Modulated Spectroscopy

Carlos Martinez
Mentored by Mequanint Moges
Engineering Technology

Zippy Bot

Christina Martinez
Mentored by Mequanint Moges
Engineering Technology

Zippy Bot

Danielle Martinez
Mentored by Ziad Qureshi
Interior Architecture

Accelerated Odyssey: The Impact of the Camera Obscura on Perception, Reflection, and Environments; and How Contemplative Design Can Respond to a Thoughtful Life

Jennifer Mathew
Mentored by Mai-Ly Steers
Psychology

Self-Identification with Close Friends as a Moderator of the Relationship Between College Life Alcohol Salience Scale and Binge Drinking

Samantha Mathew
Mentored by Mai-Ly Steers
Psychology

Race as a Moderator of the Relationship Between Rejection Concern and Drinks Per Week

Aaron Maxwell
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Mumbai, India

Melanie May
Mentored by Cheryl Brohard
Nursing

How Effective is Chlorhexidine Gluconate on Preventing Surgical Site Infections?

Erick Mayorga
Mentored by Margaret Cheung, Thomas Allen
Physics, Rice University, BioScience Research Collaborative

Modeling of P3HT in Organic Solar Cells

Carson McKinney
Mentored by Vera Adams
Architecture

Opportunity + Appeal: Copenhagen, Denmark

Umaima Memon
Mentored by Rosenda Murillo
Psychological, Health & Learning Sciences

The Association of Perceived Cancer Risk with Aerobic Physical Activity in U.S. Adults

Margaret Merrill
Mentored by Ziad Qureshi
Interior Architecture

Terms & Conditions: An Investigation of Mental Health and Data Usage that Facilitates the Rise of Monster Data Companies via the Design of a Space of Awareness

Daniel Meza
Mentored by Harry Le
Electrical & Computer Engineering

Smart Irrigation System

Erin Miller
Mentored by William Dupre
Earth & Atmospheric Sciences

Stabilization Potential of Restored Oyster Reefs In Galveston Bay, Texas

Ramsha Momin
Mentored by Mai-Ly Steers
Psychology

Others' Posts as a Moderator of the Association Between Social Media Influence and Self Posts

Karissa Moore
Mentored by Cheryl Brohard
Nursing

Effects of Eliminating Distractions During Medication Administration

Logan Morris
Mentored by Mequaint Moges
Engineering Technology

SLIC Biometric Lock

Lena Musoka
Mentored by Virmarie Correa-Fernandez
Psychological, Health & Learning Sciences

Link Between Sleep Problems, General and Mental Health, and Happiness in an Ethnically Diverse Sample of College Students

Madhu Natarajan
Mentored by Jeffrey Rimer
Chemical & Biomolecular Engineering

Crystal Polymorphism and Phase Transformations in OSDA-free Zeolite Synthesis

Cody Nguyen
Mentored by Mequanint Moges
Engineering Technology

Smart Shoe System

Nhien Nguyen
Mentored by Chengzhi Cai
Chemistry

Development of a High-Throughput Flow Biofilm Reactor System for the Study of Bacteria Interference Against Uropathogenic Colonization on Silicone Urinary Catheters

Nicholas Nguyen
Mentored by Rita Sirrieh, Biology & Biochemistry
Darryl L. Hadsell, Childrens Nutrition Research Center, Baylor College of Medicine

Lactobacillus Reuteri as an Enhancer of Milk Production via the Hypothalamic-Pituitary Axis

Thao Nguyen
Mentored by Alison Leland, Political Science
Michael Power, Smithsonian Zoological Park and Conservation Biology Institute

Using the Smithsonian Milk Repository: Compositional Changes in Lactation

Cade Odom
Mentored by Mequanint Moges
Engineering Technology

EZ MEDS

Samuel Oedi
Mentored by Greg Morrison, Physics
David Fuentes, University of Texas MD Anderson Cancer Center

Mathematical Model Developments for Thermochemical Ablation

Andrew Ojeda
Mentored by Mequanint Moges
Engineering Technology

Eldetect Fall Detection

Daniella Olakpe
Mentored by Mesquanint Moges
Engineering Technology

Smart Shoe System

Edosa Osemwota
Mentored by Cheryl Brohard
Nursing

Medication Compliance in African American and Hispanic Men

Georgia Grace Osteen
Mentored by Lenora McWilliams
Nursing

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Women's Perceptions on the Capabilities of Athletes with Disabilities

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Honors in Community Health

Modeling Community Health in a Simulated City

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How African Politics Affect the Acquisition of African Art

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Comparing Diet, Body Mass Index and Perceived Cancer Risk in African American Men and Women

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Preventing Adolescent Diabetes: Educating Families on Obesity

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Gender Variation Among Perceived Social Concomitants of Sexual Behavior in Emerging Adulthood

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The Association Among Acculturation, Anxiety, Sleep Quality, and Weight Status in Latina Mothers

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Smart Shoe System

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Real-time Prosthesis Control Using PID Embedded Control System

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Elucidating the Role of Podocyte Angptl4 and Podocyte GR in Renal Fibrosis

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India's Approach to Women's Health

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Music Therapy: Its Effects on Patient Anxiety Intraoperatively

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Assessing the Function and Control of miR-322(424)/503 on Skeletal Muscle

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Aspects Affecting the Expression of Hypoxia-Inducible Factors in Cardiomyocytes

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Determining the Relationship Between Crystal Structure and Ionic Conductivity of Solid-State Electrolytes

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The Association Among Acculturation, Anxiety, Sleep Quality, and Weight Status in Latina Mothers

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The Association between Frequency of Seeing People Walk and Neighborhood Social Cohesion: Race/Ethnic Differences

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Gender Differences in Distress Tolerance Among a Psychiatric Inpatient Sample

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Autumn-Lynn Harrison, Migratory Bird Center, Smithsonian Conservation Biology Institute

Promoting Community Engagement in Migratory Bird Journeys through Story Maps

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