



2021 UNDERGRADUATE RESEARCH DAY

Thursday, April 1, 2021
www.uh.edu/urday

CONNECT

Connect with the Office of Undergraduate Research and Major Awards

Email undergrad-research@uh.edu with your full name and email address to receive information about events and deadlines related to undergraduate research and nationally competitive fellowships and major awards.

Follow @UHOORMA on Instagram, Twitter, and Facebook.



DEADLINES

Senior Honors Thesis

To enroll in the **Senior Honors Thesis** for Fall 2021, students must submit their Verification of Eligibility form and General Petition by **May 1, 2021**.

Students continuing in the thesis program must register for 4399 (or department equivalent) for Fall 2021.

PURS

The Fall 2021 **Provost's Undergraduate Research Scholarship** application deadline is **Friday, April 9, 2021**.

Visit uh.edu/purs for more information.

ARC

Action Research in Communities provides a \$1,500 scholarship and allows students to focus on research stemming from past or current service projects in any field.

Learn more and apply at www.uh.edu/arc by **May 1, 2021**.

2021 UNDERGRADUATE RESEARCH DAY

Thursday, April 1, 2021

www.uh.edu/urday

10 a.m. | Viewing of Student Posters

Welcome and Remarks to Presenters

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, FEng

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

Brittini MacLeod, Ph.D.

Associate Director, Office of Undergraduate Research and Major Awards,
University of Houston

Thank you to the [Office of the Provost](#), the [Division of Research](#), the [Honors College](#), the [Cullen College of Engineering](#), and the [College of Liberal Arts and Social Sciences](#) for their generous support of the Office of Undergraduate Research and Major Awards.

WELCOME

Welcome to Undergraduate Research Day.

This year marks the 16th anniversary of Undergraduate Research Day at the University of Houston. Like so many others in the face of the pandemic, we have shifted all of our operations online to continue supporting the efforts of undergraduate researchers and their faculty mentors. We are grateful to have access once again to the ForagerOne Symposium platform to bring you the most engaging event possible, wherever you may be at this time. Through the 2021 Undergraduate Research Day, we aspire to connect undergraduate researchers to other students, faculty, staff, and professionals in industry to showcase their work. We encourage you to comment or reach out to individual presenters with any questions about their work.

Undergraduate Research Day is a collaborative effort between the Office of Undergraduate Research and Major Awards and the Honors College that highlights the diverse range of research projects carried out by University of Houston undergraduate students. The 2021 presenters include students from the Summer Undergraduate Research Fellowship (SURF), Mellon Research Scholars Program, and many others who conducted research under the guidance of University of Houston faculty in the past year. We are proud of our students and their accomplishments and they are eager to share their projects with you.

To say that the past year has been challenging would be a vast understatement. Our campus community has always shown resilience in the face of adversity, and this has continued to be evident in the undergraduate research community as well. Students have pressed onward with projects, faculty have created remote research opportunities, and our office has incorporated remote contingency planning into application processes to smooth the transition for students who need to shift their work methods. Despite the obstacles presented in the past year, the Office of Undergraduate Research and Major Awards has supported students from various departments at the University of Houston through faculty-mentored research programs. The 2020 SURF Program had over 140 participants and 48 students were introduced to research in the Houston Early Research Experience. Over 90 students have been awarded the Provost's Undergraduate Research Scholarship between January 2020 and January 2021, with most projects occurring remotely. The Mellon Research Scholars Program, now in its fourth year, received a new \$500,000 grant from The Andrew W. Mellon Foundation to continue its work preparing students to contribute to their respective fields in the Humanities.

Our presenters have collaborated with faculty mentors from a dozen colleges and over 30 departments on campus. Faculty at the University of Houston are dedicated to mentoring students in the pursuit of advancing knowledge in their fields and are always looking for ways to advocate for students' success. Students involved with faculty-mentored research in programs such as Mellon Research Scholars, SURF, or PURS have unique opportunities to develop skills through problem solving, communication, leadership, and critical thinking.

Despite the challenges of the pandemic, University of Houston students continue to demonstrate a high level of achievement with their applications for national fellowships and major awards. For the third year in a row, a record number of

candidates applied for the Fulbright U.S. Student Program (46) and UH earned its highest number of semi-finalists (25). UH achieved a similar mark for the Critical Language Scholarship. Nine students were named CLS recipients, which is the most in UH history. Thirteen UH students were also admitted to the DAAD RISE and DAAD RISE PRO programs in order to conduct research in Germany. UH fellowship candidates are increasingly competitive for some of the most prestigious awards as well. After earning its first Truman Scholar in 36 years last April, UH matched this success with its first ever Gates Cambridge Scholar. University of Houston students have also been named finalists for the Marshall Scholarship and Knight-Hennessy Scholars Program.

The Office of Undergraduate Research and Major Awards welcomed two new student staff members in 2020. Nimra Zubair joined as the Graduate Advisor and provides guidance and support to students who wish to apply for competitive fellowships and major awards. She has applied to awards such as the Boren Awards, Fulbright Program, and was awarded the Critical Language Scholarship to study Punjabi. Nimra works closely with students to match them with various opportunities and assists the Office with social media outreach. Nimra holds a Bachelor of Political Science and a Certificate of Entrepreneurship from the University of Houston and is currently pursuing a Master's degree in Public Administration. Students interested in applying to major awards or connecting with research opportunities should contact Nimra for more information.

Paulina Ezquerra joined as a student worker in the Office of Undergraduate Research and Major Awards and supports Dr. Rikki Bettinger with the Mellon Research Scholars Program, the Houston Early Research Experience, and additional special projects for the Office. A member of the Honors College, Paulina is double-majoring in Philosophy and Political Science. A Mellon Research Scholar, FrameWorks Fellow, and former HERE participant, Ezquerra knows firsthand the difference co-curricular programs can make for young researchers. She plans to continue researching the cultivation of moral and intellectual virtues by pursuing a PhD in philosophy.

The Office of Undergraduate Research and Major Awards would like to thank the Office of the Provost, the Division of Research, the Honors College, the Cullen College of Engineering, the College of Liberal Arts and Social Sciences, the Cougar Initiative to Engage, and the many other colleges and departments on campus for their support of undergraduate research programs at the University of Houston. The programs featured here today would not be possible without the support of our campus partners (please see page 4 for listing of supporters).

Thank you for joining us for this year's virtual celebration of undergraduate research at the University of Houston. As you engage with the presenters online, we hope you find opportunities to connect across disciplines and ask questions about how we can address some of today's most pressing questions together. Now, more than ever, we acknowledge and appreciate the need for a cohesive global research community. We believe that is the type of community you will see modeled by our presenters today.



Stuart Long



Ben Rayder



Brittini MacLeod



Rikki Bettinger



Nimra Zubair



Paulina Ezquerra

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April 1, 2021

10 a.m. Poster Presentations

Online

www.uh.edu/urday

The Office of Undergraduate Research and Major Awards

The Honors College

University of Houston

M.D. Anderson Library

4333 University Drive, Room 212W

Houston, TX 77204-2001

(713) 743-6433

UndergraduateResearch.uh.edu

undergrad-research@uh.edu

Booklet created by

Julia Brown,

Communications Coordinator,

The Honors College

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OFFICE OF UNDERGRADUATE RESEARCH AND MAJOR AWARDS



OUR MA 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 with at least a 3.5 GPA. 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-long research program for juniors and seniors and awards a \$1,000 scholarship for students to work one-on-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 3399 and 4399, 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.

THE ACTION RESEARCH IN COMMUNITIES (ARC) PROGRAM at the University of Houston is a collaborative effort supported by the Cougar Initiative to Engage and the Office of Undergraduate Research and Major Awards. ARC is a one-year research program that awards a \$1,500 scholarship and offers exceptional undergraduates with opportunities to conduct faculty-mentored action research based on service projects in the Greater Houston Community. The goal of action research is continuous improvement, reflection, and growth. Students from all majors with at least a 3.0 GPA are encouraged to apply. uh.edu/arc

Need more info? Email:

undergrad-research@uh.edu

A special thanks to our campus and community partners for their support of the Office of Undergraduate Research and Major Awards over our 16 years of serving undergraduate researchers:

- Office of the Provost
- Division of Research
- College of Liberal Arts and Social Sciences
- Cullen College of Engineering
- The Honors College
- Andrew W. Mellon Foundation
- Biology & Biochemistry
- Biology of Behavior Institute (BoBI)
- Biomedical Engineering
- Chemical & Biomolecular Engineering
- Chemistry
- Cougar Initiative to Engage
- Civil & Environmental Engineering
- College of Education
- 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 Center for Superconductivity (TcSUH)
- Texas Obesity Research Center (TORC)
- The Writing Center
- 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. The Honors College also offers seven interdisciplinary minors. 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 brightest 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 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:
The Honors College
Office for Student Recruitment
(713) 743-1766
honorsadmissions@uh.edu

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 1, 2021

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 1, 2021

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: Feb 2022

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: Mid-Nov 2021

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: Mid-Oct 2021

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 31, 2021



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 and Major Awards or contact Ben Rayder (btrayder@uh.edu).

FULBRIGHT GRANTS FOR TEACHING ASSISTANTSHIPS OR STUDY/RESEARCH ABROAD



Layla Kratovic
Fulbright Study/Research Grantee
Bosnia and Herzegovina



Chelsea Sanchez
Fulbright English Teaching Assistant
South Korea

The Fulbright U.S. Student Program provides grants for individually designed Study/Research projects or for English Teaching Assistant Programs. During their grants, Fulbrighters meet, work, live with, and learn from the people of the host country to foster mutual understanding. Fulbright is one of the largest academic exchanges in the world, providing approximately 2,200 grants annually in more than 140 participating countries.



Crystal Tran
Fulbright English Teaching Assistant
Taiwan



Johnny Zapata
Fulbright English Teaching Assistant
Turkey

2021 CAMPUS DEADLINE:

August 31, 2021

FOR MORE INFORMATION, CONTACT:

Benjamin Rayder

Director, Office of Undergraduate Research and Major Awards

btrayder@uh.edu

www.us.fulbrightonline.org



DONALD KOURI TRIBUTE



Professor Donald J. Kouri passed away on February 9, 2021. He was 82.

Professor Kouri taught at the University of Houston for over 53 years in the Departments of Physics, Mathematics, and Mechanical Engineering. Over the course of his career, he was awarded the Alfred P. Sloan Foundation Fellowship (1972), the Humboldt Award (1973), the Esther Farfel Outstanding Faculty Award (1982), the NSF Special Creativity Award (1992), the Cullen Distinguished Chair (1996), the UH Outstanding Research Award (1997), and the UH Undergraduate Research Mentoring Award (2020). Professor Kouri was also a fellow of the American Physical Society and of the Weizmann Institute of Sciences.

Professor Kouri became interested in mentoring undergraduate students during his time as a faculty mentor for the UH-Rice Quark-Net Program and personally mentored 21 undergraduate students in the past 17 years at UH. He mentored the best and brightest that UH has to offer, with multiple students receiving NSF Graduate Research Fellowships and the prestigious Barry M. Goldwater Scholarship. Students mentored by Professor Kouri have gone on to study and become faculty at some of the top universities in the world, including the University of Cambridge, Harvard, MIT, UCLA, Michigan State University, Indiana University, and New York University.

Professor Kouri exemplified the mentor role and his passing is a tremendous loss for the University of Houston and its undergraduate research community.

STUDENT TESTIMONIALS

"I'm incredibly fortunate for the time that I spent in Professor Kouri's lab. More than just a brilliant scientist, Professor Kouri was a kind, curious, and generous man. He truly lived these values every day, and taught me how to be the scientist and mentor that I am today. He will be missed."

Thomas Markovich

"Although Dr. Kouri has passed on from the physical world, a part of him is still with us due to the profound impact he had on my life and the lives of other students. Dr. Kouri offered me a paid research assistantship and my own private office, a luxury I have yet to garner in my professional career, while I was still an undergraduate at UH. Because of his mentorship, I was able to publish a peer-reviewed paper and learn the fundamentals of quantum physics. This experience Dr. Kouri provided for me is directly responsible for my ending up at MIT to pursue a PhD in mathematics; an opportunity I never dreamed would become a reality. And my experience is not unique. Dr. Kouri mentored many other students, some of whom became my best friends, that went on to work at the cutting edge of scientific research and industrial technology. I do not know who will be hired to fill the space he leaves behind in the physics department at UH. Whoever they are, and whatever their scientific credentials may be, I hope they can aspire to be half the human being Dr. Kouri was in my life."

Mason Biamonte

"Dr. Kouri was a brilliant and gracious mentor. I was a student in his research group for all four years I attended the University of Houston, and he was an integral part of my undergraduate career. He supported me early on, when I was a high school student and before I had even committed to attending the University. During research group meetings and our one-on-one conversations his decades of wisdom and brilliance were put on full display, and even now, after he has passed on, the words of his mentorship guide my research and career decisions from halfway across the country. The University of Houston has lost a great mind and a kind soul in losing Dr. Kouri, and my greatest hope is that all of us can honor his memory by carrying out the academic and life lessons he taught us by example."

Brian Vu

UNDERGRADUATE RESEARCH MENTOR AWARDS

The Office of Undergraduate Research and Major Awards congratulates the 2021 Undergraduate Research Mentor Award recipients: **Haleh Ardebili**, **Rosenda Murillo**, and **Pranav Parikh**.



HALEH ARDEBILI

Professor Haleh Ardebili, the Bill D. Cook Professor of Mechanical Engineering at UH, is the winner of the celebrated NSF CAREER award and is currently a PI or co-PI on several federally funded projects, including the UH REU award. Since joining the University of Houston in 2010, Dr. Ardebili has mentored over twenty undergraduate students in her research laboratory, four of whom are co-authors in prestigious peer-reviewed journals and one of whom was an honorable mention for the Barry Goldwater Scholarship award. Even at this relatively early stage in her career, Dr. Ardebili has established a nationally prominent and competitive research program. Her goal as a mentor is to inspire passion in students. “I try to transfer this passion to my research students,” writes Dr. Ardebili, “to help them become life-long researchers, learners, and inventors.”



ROSENDA MURILLO

Associate Professor Rosenda Murillo has published 29 original research publications since joining UH in 2014, 17 of which were first-authored or senior-authored. She has also successfully obtained two internal research grants, a prestigious Robert Wood Johnson Foundation grant, and a National Institutes of Health Administrative Supplement grant, among others. In addition to her strong record of scholarship, Dr. Murillo has mentored 13 UH undergraduate students who have been included in 6 recent peer-reviewed publications and 29 presentations as coauthors or lead authors under her mentorship; her mentees have been listed a total of 47 times on presentations, with more than three quarters led by undergraduates. “My mentorship philosophy is centered on providing students with opportunities that help them gain knowledge, promote critical thinking, and develop research competence,” writes Dr. Murillo.



PRANAV PARIKH

Assistant Professor Pranav Parikh has mentored over twenty undergraduate students since joining the Health and Human Performance Department at UH in 2015, several of whom have received SURF and PURS awards and NSF REU funding to conduct research in health science. Several of his students have also been included as coauthors on his many peer-reviewed publications. One of Dr. Parikh’s undergraduate mentees recently won third prize for a project which was presented virtually at the Kentucky Academy of Science and which has been accepted for presentation at the National Council on Undergraduate Research, following a rigorous review by experts in the field. “My overall goal as a teacher is to create and maintain a positive learning environment,” writes Dr. Parikh. “We, as a team, strive to address research questions of high societal importance. I feel proud when my research trainees accomplish a milestone in their careers.”

OUTSTANDING FACULTY MENTORSHIP AWARDS

The Undergraduate Scholars and Major Awards Celebration was held virtually on October 20, 2020 and hosted by the Office of Undergraduate Research and Major Awards (OURMA). The University of Houston Outstanding Faculty Mentorship Awards were featured at the Celebration and awarded to Michael Fares, assistant professor in the Department of Modern and Classical Languages, and David Rainbow, instructional assistant professor in the Honors College.

Professors Fares and Rainbow were recognized for excelling in faculty mentorship by stimulating developmental growth through advice, feedback and guidance on research activities, and honing skills essential to current and prospective careers. They have been instrumental in the development and stability of the Fulbright U.S. Student Program, Critical Language Scholarship, and the Boren Awards as well, seeking opportunities and providing support for students to do research and study abroad.

The passion of Professors Fares and Rainbow reflects an innate desire for excellence. Cultivating research abilities and a successful work-life balance, they challenge and innovate, creating unique opportunities for students and faculty to thrive and excel. Congratulations to both faculty members on their awards!



MICHAEL FARES

Michael Fares campaigns for students to apply to national fellowships and has repeatedly produced national prize winners in language study and students enrolled in top graduate programs. He teaches beginning and intermediate level Arabic courses strengthened by experience in the Arabic Flagship Program and the Arabic Summer Institute at The University of Texas at Austin.

“Since joining the UH faculty in 2012, Michael Fares has been an exemplary educator, winning university-wide teaching awards and garnering the praise and adoration of students and colleagues alike,” Emran El-Badawi, program director and associate professor of Middle Eastern Studies said. “Thanks to his sacrifice, hard work, and unprecedented commitment to the students, our Arabic language program is one of the best in Texas.”



DAVID RAINBOW

David Rainbow is a professor at the University of Houston Honors College, teaching European and Russian intellectual history, the history of energy in Eurasia, and the Human Situation sequence. He advises students on opportunities to study abroad, and his research has been supported by fellowships from Columbia University, New York University, the Hoover Institution at Stanford University, and the Jordan Center for the Advanced Study of Russia.

“David Rainbow makes extraordinary contributions both inside and outside the classroom,” said William Monroe, dean of the Honors College. “He has been recognized with the Wong Faculty Engagement Award, the Lerner Faculty Fellowship, the Provost’s Teaching Excellence Award, and now the Outstanding Faculty Mentorship Award – all well deserved.”

(UGR@UH) WEBINAR SERIES



FALL 2020 SCHEDULE

SEPTEMBER 18, 2020

Ethics in Research

Jeremy May
Professor, Department of Chemistry

SEPTEMBER 25, 2020

IRB for Undergraduate Researchers

Nettie Martinez
Research Compliance Specialist, IRB Office

OCTOBER 9, 2020

Crafting a Research Proposal

J. Leigh Leasure
Professor, Department of Psychology

OCTOBER 23, 2020

Equity, Diversity, and Inclusion in Research

Panel led by Ericka Henderson, *Associate Provost for Faculty Recruitment, Retention, Equity, and Diversity*; panelists included Debora Rodrigues, *Ezequiel Cullen Professor, Department of Civil and Environmental Engineering* and Byron Freelon, *Assistant Professor, Department of Physics*

NOVEMBER 13, 2020

Literature Reviews: Synthesizing and Organizing Your Sources

Brittni MacLeod
Associate Director, Office of Undergraduate Research and Major Awards

DECEMBER 4, 2020

Winter Reset

Brittni MacLeod
Associate Director, Office of Undergraduate Research and Major Awards

SPRING 2021 SCHEDULE

JANUARY 26, FEBRUARY 9, AND FEBRUARY 19, 2021

Creating Research Posters Webinars

Brittni MacLeod
Associate Director, Office of Undergraduate Research and Major Awards

JANUARY 29, 2021

Ethics in Research

Stuart Long
Moore's Professor, Department of Electrical and Computer Engineering and Associate Dean of Undergraduate Research and the Honors College

FEBRUARY 12, 2021

Crafting Research Proposals

Brittni MacLeod
Associate Director, Office of Undergraduate Research and Major Awards

FEBRUARY 19, 2021

Writing Literature Reviews

Brittni MacLeod
Associate Director, Office of Undergraduate Research and Major Awards

APRIL 23, 2021

Time Management in Graduate School

UH Alumni Panel

APRIL 30, 2021

Presenting and Publishing Your Research

UH Libraries

Senior Honors Thesis

The Senior Honors Thesis is a capstone research experience under the guidance of a faculty mentor. Students of all majors can participate—membership in the Honors College is not required. The Office of Undergraduate Research and Major Awards collaborates with The Honors College and the College of the student's major to oversee the thesis process and approval.

Get Started!

Participants must have:

- a 3.25 cumulative GPA
- a 3.5 major GPA
- departmental approval
- Honors College approval

Step 1:

Ask your professors about their research interests to see if they align with yours. Don't be afraid to ask for advice!

Step 2:

Talk to students currently enrolled in the Senior Honors Thesis program about their experiences with research.

Step 3:

Ask a faculty member to serve as your thesis advisor.

Step 4:

Complete the Verification of Eligibility Form and a General Petition Form (<http://www.uh.edu/academics/forms/>).

Step 5:

Enroll in 3399 (or equivalent) Senior Honors Thesis course.

Step 6:

Write your prospectus and identify a second reader for your committee. Then, submit the Prospectus Approval Form to the Office of Undergraduate Research and Major Awards.

Step 7:

Review and submit the Senior Honors Thesis Checklist to the Office of Undergraduate Research and Major Awards.

Step 8:

Create goals for writing and communicate regularly with your readers (and visit <http://www.uh.edu/seniorhonorsthesis>).

Graduate!

For more information, contact:

Rikki Bettinger, Ph.D.

Office of Undergraduate Research and Major Awards

rrbettin@central.uh.edu

Successfully complete and defend your thesis, and graduate with an Honors designation on your transcript!

UNIVERSITY of HOUSTON

OFFICE OF UNDERGRADUATE RESEARCH AND MAJOR AWARDS

UNIVERSITY OF HOUSTON LIBRARIES



The University of Houston Libraries form a community nurtured by curiosity and creativity that drives lifelong learning and scholarship. With access to more than 3.2 million physical and digital volumes, over 159,000 journals and serial subscriptions, and over 400 databases, the UH Libraries makes research possible!

You can find past works of undergraduate research in the UH Institutional Repository. The UHIR collects, preserves, and distributes scholarly output and creative works produced by the University of Houston community. Collections include “Undergraduate Research Day Projects” and “Senior Honors Theses.”

Contact your Subject Librarian today who can assist you with all of your research needs. They are available by appointment, virtually, or in person: <https://libraries.uh.edu/experts/>

Thank you to the UH Libraries for supporting Undergraduate Research at the University of Houston.

THE WRITING CENTER

Writing is thinking. It is an indispensable activity for every discipline conducting research within a university setting and an essential component of a university education. Ongoing instruction in writing helps to initiate students into the changing intellectual demands of university life and introduces them to the complexities of their chosen disciplines and professions. Because writing provides the tools to discover and articulate solutions to intellectual problems, improved writing remains a continual goal of university education.

To address these concerns, the mission of the **University of Houston Writing Center** includes Assessment, Writing Instruction, Curricular Innovation, Community Outreach, Professional Development, and Research in the Teaching of Writing. Website: writingcenter.uh.edu



Thank you to the Writing Center for supporting Undergraduate Research at the University of Houston.



Language Acquisition for Spanish Heritage Students

Dr. X. González-Najera, Hispanic Studies

Heritage Speakers at UH

BLP & UH

UNIVERSITY OF HOUSTON

72

Intersectionalities
Latinx American
Laura Quintón, Dr. Guillermo

Placement Exam- Results

we identified the factors which most
placement:
which have a total of 19 questions, only
age History' in three of it's questions,
relations towards placement
came from Q2 and Q6.
did you start to feel comfortable using
CS, significant at the 0.01 level



UNDERGRADUATE RESEARCH PROGRAMS AND PRESENTERS

Methodology

Undergraduate Research Day showcases the work of hundreds of students pursuing research in their disciplines from all across the University of Houston. Programs offered by the Office of Undergraduate Research and Major Awards and other faculty-mentored research opportunities provide academic and financial support for these students. Students who conduct research with UH faculty amplify their education and gain crucial skills that will serve them beyond their undergraduate career. Whatever your research interests are, the Office of Undergraduate Research and Major Awards can get you connected and starting your research project today!



Three books from different genres - Me
to analyze the different
periences with
books were p
the Latino(a)
resources we
spanic civil
out how its s
offers from to
so noted.
migrant - Jo
Henriquez
through - Francisco Jiménez
Latino Literacy - Frank DeVarona
The Greenwood Encyclopedia of Latino Litera

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 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.

HERE 2020

August 3-14, 2020

Forty-eight students representing six UH colleges participated in the 2020 HERE program. Students conducted research and proposed solutions to challenges posed by urbanization in Houston.

HERE Faculty Mentors:

Charlie Becker	Amin Kiaghadi
Christiana Chang	Rita Sirrieh
Marc Hanke	Marina Trninic
Kelly Hopkins	



HERE 2021

The 2021 theme for HERE will be inequality in Houston, and we look forward to welcoming our next cohort! For more information on future HERE programming, contact Rikki Bettinger at rbettinger@uh.edu or visit uh.edu/here.

ACTION RESEARCH IN COMMUNITIES PROGRAM

The Office of Undergraduate Research and Major Awards, in partnership with the Cougar Initiative to Engage (CITE), offers the **Action Research in Communities (ARC) Program**. ARC provides selected students with a \$1,500 scholarship to pursue a year-long, faculty-mentored action research project focused on a past or current service project the student has participated in. The goal of action research is continuous improvement, reflection, and growth.

ARC participants will develop research questions around issues observed in the community and gain a better understanding of why these issues exist. They will then use that knowledge, coupled with their own service experiences and reflections, to develop an action plan to improve outcomes within the Greater Houston Community. Toward the end of their year in ARC, students will be given the opportunity to present their service-based research projects and apply for an implementation grant of up to \$750 to support turning their action plans into reality. Faculty mentors of ARC recipients also receive a \$300 stipend. Students can contact Brittni MacLeod for more information (bsmaclod@uh.edu).



Zain Akbar
Biology Major

ARC Project: My project works with a group of Syrian Refugee children from a local Houston Program known as IMPACT. We hope to study the effects of these children's upbringing on their educational and social standing. Through my project I also hope to be able to implement

an after school tutoring program during which I can provide these children with extra help in subjects they may be struggling with and additionally during through this program we hope to allow an opportunity for children to build relationships with one another through fun activities such as movie nights and game nights.



Sharon Siby
Biology Major

ARC Project: Through this ARC project, I hope to improve the service conducted by WISE (Writing to Inspire Successful Education) mentors to better help the mentees we serve. The project drives to eliminate any negative side effects that our mentorship can have on the mentees due to the lack of understanding of education theory.



Nabeela Siddeeqe
Biochemistry Major

ARC Project: Women who exit the incarceration system are at high risk of being forced into homelessness due to societal barriers that fail to address their unique mental health needs. If appropriate steps are not taken to address the needs of these

women, they could be pushed further into substance abuse and prostitution with no other way to exit this cycle. I am interested in learning about experiences of those women who have had hardships with the Criminal Justice System and Incarceration, as well as their barriers in returning to life outside of the system. My current goal is to collect plausible stories and second-hand oral histories without any personal identifiers that capture shared experiences and use those stories to identify points where intervention could influence a positive impact in the community. I would like to identify things in peoples' lives that impact their trajectories and outcomes regarding things such as housing, employment, or health. By doing this, I can advocate for appropriate interventions that may ameliorate some of these shared troubles.



Sara-Grace Chan
Biology Major

ARC Project: This project investigates the link between food insecurity and health disparities (such as obesity, hypertension, diabetes, and cancer) in Houston's Fifth Ward. Data will be collected by performing anonymous surveys at food pantries that cater to the Greater Fifth

Ward that asks questions relating to food insecurity, costs, lifestyle choices, and health conditions. After the data is collected, the second stage will consist of tabulating and analyzing the data to identify the relationship between food insecurity and health disparities within the surveyed population. During both stages, educational materials will be created on topics such as what is healthy, how to eat nutritionally on a budget, managing health disparities, and how to apply to SNAP.



Sondos Moursy
Psychology Major

ARC Project: My research objective is to pinpoint the needs of incarcerated women, factors that lead them to be incarcerated, and the possible points of intervention to avoid them following unfavorable trajectories. This research effort will use data analysis of the demographics of incarcerated women supplemented by their stories to reveal their challenges and provide them with educational and career services.



PROVOST'S UNDERGRADUATE RESEARCH SCHOLARSHIP

The **Provost's Undergraduate Research Scholarship (PURS)** program provides talented University of Houston juniors and seniors with the opportunity to participate in a semester long research project under the guidance of a UH faculty mentor. Students from all disciplines are encouraged to apply. PURS recipients receive a \$1,000 scholarship to conduct a one semester research project with their faculty mentors. For more information, contact Brittini MacLeod at bsmacleod@uh.edu.



FALL 2020 PURS RECIPIENTS

Roba Abousaway

Mentored by Frank McKeon
Biochemical and Biophysical Sciences

Wafeeq Ahmad

Mentored by Tomika Greer
Technology Leadership & Innovation
Management

Suzanne Contreras

Mentored by Abdeldjelil Belarbi
Civil Engineering

Joanna Elhaj

Mentored by Melissa Zastrow
Human Nutrition & Foods

Connor Gaul

Mentored by Steven Pennings
Biology

Niell Gorman

Mentored by Jeff Feng
Industrial Design

Michael Halamicek

Mentored by Thomas Teets
Chemistry

John Jalufka

Mentored by Chad Wilson
Mechanical Engineering

Tanya Kumar

Mentored by Meghana Trivedi
Honors Biomedical Sciences

Kyle Le

Mentored by Jae-Hyun Ryou
Mechanical Engineering

Oscar Leon

Mentored by Stacey Louie
Civil Engineering

Sofia Martin

Mentored by Taewoo Lee
Industrial Engineering

Aileen Martinez-Escobar

Mentored by Jakoah Brgoch
Chemistry

Karen Mejia

Mentored by Daphne Hernandez
Public Health

Khuong Nguyen

Mentored by Ioannis Kakadiaris
Computer Science

Pierce Popson

Mentored by J. Leigh Leasure
Biochemical & Biophysical Sciences

Stephanie Rendon

Mentored by Christopher Arellano
Electrical Engineering

Carl Suerte

Mentored by Brigitte Dauwalder
Biology

Paola Velasco

Mentored by Vanessa Patrick
Marketing & Finance



PROVOST'S UNDERGRADUATE RESEARCH SCHOLARSHIP

SPRING 2021 PURS RECIPIENTS

Ismail Ali

Mentored by Mostafa Momen
Mechanical Engineering,

Syed Ali Hamza Abidi

Mentored by Andreas Mang
Computer Engineering

Nabeeha Asim

Mentored by Carla Sharp
Psychology

Brian Chung

Mentored by Emily Lavoy
Exercise Science

Kaleb Clark

Mentored by Margot Backus
English Literature

Ashley Cruz

Mentored by Bradley McConnell
Biology

Krishna Sarvani Desabhotla

Mentored by Jose Luis Contreras-Vidal
Biomedical Engineering

David Edquilang

Mentored by Jeff Feng
Industrial Design

Kevin Fleming

Mentored by Praveen Bollini
Chemical & Biomolecular Engineering

Nikki Hammond

Mentored by Lars Grabow
Chemical Engineering

Omar Harb

Mentored by Melika Shirmohammadi
Mathematical Biology

Tammy Lam

Mentored by William Ott
Mathematics – Data Science

Leandro Ledesma

Mentored by Elena Grigorenko
Psychology

Damaris Martinez

Mentored by Anny Castilla-Earls
Communication Sciences & Disorders

Maia Mendoza

Mentored by Terry Hallmark*
Political Science & Strategic
Communication – Public Relations

Kota Nagase

Mentored by Vanessa Patrick
Biology

Hoang Nguyen

Mentored by Shailendra Joshi
Mechanical Engineering

Anh Nguyen

Mentored by Sujata Sirsat*
Hotel & Restaurant Management

Vijay Nitturi

Mentored by Lorraine Reitzel
Biochemical & Biophysical Sciences

Chinasa Nwachukwu

Mentored by Stacey Louie
Mechanical Engineering

Denis Nyarwaya

Mentored by Cunjiang Yu
Mechanical Engineering

Kaylie O'Connell

Mathematics
Mentored by William Ott

Daniel Palacios

Mentored by Pavan Hosur
Physics & Mathematics

Utienyin-Oritseju Pemu

Mentored by Stacey Louie
Mechanical Engineering

Kala Pham

Mentored by Kimberly Pilkinton
Biology

Camila Pombo Perez

Mentored by Natalia Zhivan*
Economics

Beatriz Rivera

Mentored by Willa Friedman
Economics & Mathematics

Jerardo Salgado

Mentored by Mehmet Orman
Chemical Engineering

Ritu Sampige

Mentored by Leslie Frankel
Honors Biomedical Sciences

Matthew Smith

Mentored by Nathan Jarvis*
Hotel & Restaurant Management

Steven Soriano

Mentored by Rodolfo Ostilla
Mechanical Engineering

Damon Spencer

Mentored by Daniel Onofrei
Computer Engineering

Neha Sunkara

Mentored by Michelle Belco*
Biochemistry

Yaseen Syed

Mentored by Andreas Mang
Mathematics

Varshini Vakulabharanam

Mentored by Brigitte Dauwalder
Public Health

Anh Vo

Mentored by Kerri Crawford*
Biochemistry

Sharon Zachariah

Mentored by Qin Feng
Psychology

*Students with an asterisk were selected to develop research pertaining to food sustainability and security and will present their work at the 2021 Conference on Food Sustainability and Security.



GEORGE PHARIS FELLOWS PROGRAM

The **Pharis Fellows** program is supported by the Humana Integrated Health Systems Sciences Institute and Hewlett Packard Enterprise Data Science Institute through its Engaged Data Science program.

Each summer, Data & Society offers a full-time, paid research fellowship program open to all undergraduate students. Fellows work collaboratively, with support from faculty mentors, to conduct 10-week projects focused on the application of data science to topics in healthcare, community development, education, COVID-19 response, and environmental health. Building on a model developed by the UH Community Health Worker Initiative, these projects are unified around a commitment to responsive engagement with community and show the many ways that new approaches to data science can avoid the pitfalls of top-down models for decision-making.



2020 FELLOWS



Row One: Ariel Abudu, Kayla Baham, Rishi Chitturi, Joshua Garcia, Maham Gardezi, Cameron Green, Anjali James, Claire Juhas
Row Two: C. Griffin Litwin, Sakina Mandviwala, Sondos Moursy, Saloni Patel, Madhumitha Periyasamy, Daniel Phu, Salar Sanati, Nabeela Siddeeqe
Row Three: Sameer Siddiq, Gundeep Singh, Elaine Tran, Pichvyda Tuy, Manushi Vatani, Brandon Warner
Not Pictured: Ashley Jimenez

UHAND SCHOLARS

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, community outreach events, and ethics trainings) focused on topics designed to enhance their preparation for future careers in cancer disparities related fields. Please visit UHANDpartnership.com for more information.

2020 SCHOLARS



Stephanie Ramirez








Karina Serrano



Matthew Taing



OVERALL IMPACT OF UHAND			
SCHOLARS TRAINED 	FUNDED RESEARCH STUDIES 	ASSOCIATED FACULTY 	ADVISORY BOARD MEMBERS 
16	6	26	26
COMMUNITY ORGANIZATIONS SERVED	9	COMMUNITY MEMBERS REACHED	
SERVICE LEARNING HOURS COMPLETED BY SCHOLARS	368		
COMMUNITY OUTREACH EVENTS	141	14,537	



MELLON RESEARCH SCHOLARS PROGRAM

The **Mellon Research Scholars** Program at the University of Houston seeks to contribute to the mission of creating a diverse academy in the humanities. Funded by a grant from The Andrew W. Mellon Foundation, the program supports undergraduate students from backgrounds underrepresented in the academy and others with a demonstrated commitment to the goal of building a diverse academy. Mellon Research Scholars participate in an intensive two-week graduate school preparation program in May and a full-time, faculty-mentored summer research experience. The scholars also participate in faculty-led seminars and receive holistic mentorship throughout the year-long program. All students have the opportunity to develop research projects that appeal to their scholarly interests in their field of study.

Each fall, approximately 20 humanities students are selected for participation in the Mellon Research Scholars Program which begins in January of their junior year. Each participant receives a total of \$5,000 for conducting their summer research project and participating in developmental academic and mentorship activities. For more information, contact Rikki Bettinger at rbettinger@uh.edu or visit the webpage: uh.edu/mellonscholars

Eligibility for 2022 Cohort:

- UH main student in the humanities with an expected graduation of Fall 2022 or Spring 2023
- Students highly motivated to conduct research and attend graduate school in the humanities
- Students from backgrounds underrepresented in the academy and others with a demonstrated commitment to the goal of building a diverse academy in the humanities

Application Deadline:

Friday, November 12, 2021



MELLON RESEARCH SCHOLARS PROGRAM

During Summer 2020, the following 22 University of Houston **Mellon Research Scholars** participated in a full-time faculty-mentored summer research experience.



Ranyah Atwan

Mentored by Tshepo Masango Chéry
State of Defiance: Women's Role in the Moroccan Liberation Movement

Freisha Burke

Mentored by Wei Wang
Between Languages: A Sociolinguistic Analysis of Code-Switching in Bilingual Communication

Kaleb Clark

Mentored by William Monroe
Tolkienian Fantasy in the Modern Era: The Role of Traditional Literature in the Twenty-First Century

Daniela Contreras

Mentored by J. Bryan Cole
Religiosity, Partisanship, and Race: The Effect of History on Contemporary American Voting Patterns

Antonio Enriquez

Mentored by Norah Gharala
La Gran Chichimeca: Chichimecan Place in New Spanish Society

Paulina Ezquerro

Mentored by Iain Morrison
The Intellectual and Moral Virtues: Against a Consequentialist Account

Paulina Fernandez

Mentored by Johanna Luttrell
Environmental Justice in Houston: A Virtue Ethics Approach

Marco Garcia

Mentored by Johanna Luttrell
The Conception of Freedom in the Green New Deal

Maya Garza

Mentored by Lorraine K. Stock
Giants, Incubi, and Monstrous Sisters: Ethnocentrism and Sexism in the British Legends of Albion

Karla Grado

Mentored by Jason Casellas
The Creation of the Latine Voter Through Political Advertisement in Traditional Media: What Does the Latine Voter Really Want? A Literary Analysis

Stefanie Guzman

Mentored by Richard Mizelle
Why Don't You Matter: Missing White Women, Black Women's Sexuality

Nicole Hart

Mentored by A. Gary Dworkin
Racial Disparities in Black-White Education: A Sociological Conflict Theory Explanation

Alyssa Holt

Mentored by Maurice Wilson
Grammar and Power: The Role of the Student Consultant in the Writing Center

Mỹtràng Huỳnh

Mentored by Christy Mag Uidhir
On the Moral and Aesthetic Evaluations of Artists and Their Artworks

Nancy Katz

Mentored by Mark Goldberg
The Memory of Being Hidden: Crypto-Jews in the 20th Century

Rana Mohamad

Mentored by Hosam Aboul-Ela
Black, Arab, Other: The Sudanese Migrant Woman's Articulation of Identity

Kat Newman

Mentored by Guillermo De Los Reyes
The Cisnormative Wall: Distinguishing Gazes & Transgender Representations in POSE and Dallas Buyers Club

Veronica Ordonez

Mentored by Steven Long and Teresa Chapman
When Words Fail: Narrative and Dance in Post-traumatic Stress

Pishoi Rafaile

Mentored by Tshepo Masango Chéry
Let Us Speak! South African Women as Activists and Revolutionaries in the Anti-Apartheid Movement

Jaden Urdiales

Mentored by Andrew Pegoda
Twitterstorians: An Examination of History as It Is Portrayed on Social Media

Jaelynn Walls

Mentored by Natilee Harren
Contemporary Black Portraiture and the Vitality of Self-Making

Naomi Zidon

Mentored by Robert Cremins
Agnes Varda and the Reinvention of the Flaneuse: The Movement Through Paris

2021 Mellon Research Scholars

Congratulations to the following students selected for the 2021 Mellon Research Scholars program. These students will conduct full-time, faculty-mentored research in the humanities during summer 2021.

- Ashley Acuña
- Alejandro Aguilar
- Carla Bullock
- Citlali Chavana
- Joshua Cornelius
- Laura Delgado-Guzman
- Ariel Durham
- Queen Epomba
- Susette Flores
- Allie Funk
- Tara Georgeson
- Diego Lopez
- Jack Morillo
- Jimmy Nguyen
- Sydney Nutter
- Andreina Ruiz
- Morgan Thomas
- Daniela Trejo
- Sandra Tzul
- Victoria White

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 Ben Rayder at btrayder@uh.edu in the Office of Undergraduate Research and Major Awards.



HOUSTON SCHOLARS



The Houston Scholars theme for the 2020-2021 academic year is “Inequality: Creating A More Equitable Houston.” In this context, Houston Scholars explored the challenges and opportunities associated with the rapid changes affecting our city. Students identified and researched contemporary problems such as income disparity, poor infrastructure, lack of access to affordable healthcare, racial discrimination, and many other subjects. Cohort members will present their research findings and policy proposals to a panel of experts on Undergraduate Research Day. We hope that you will join us to learn more about their findings and potential solutions to some of Houston’s most important issues.

Houston Scholars Participants:

Kathryn Aing
Amaris Bobbio-Tarco
Zaina Boriek
Abhaya Chopra
Cade Coligan
Ricardo Del Rio
Carlos Fuentes
Dima Ghazala
Joaquin Gonzalez

Jennifer Gray
Nikki Hammond
Mark Hanna
Kristen Harris
David Paul Hilton
Baycha Isik
Neha Joshi
Amber Jozwiak
Kiran Khan

Daniel Lee
Or-El Meir
Sondos Moursy
Carlos Patterson
Jordan Pemberton
Kala Pham
Jocelyn Ramos
Sarah Randall
Jamie Rose

Salar Sanati
Patrick Sanchez
Sabah Shaikh
Amritha Siby
Abdullah Syed
Hemish Thakkar
DeBorah Thomas



FRAMEWORKS

FrameWorks is a co-curricular program that offers sophomores and juniors a supportive community of peers and faculty mentors as they conceive, research, write, present, and ultimately publish critical essays that draw on the interdisciplinary humanities. The program will culminate every spring with the FrameWorks Symposium at which FrameWorks Fellows will publicly present their work. Essays that meet editorial standards will be included in the *FrameWorks Journal*, which will be published around Convocation every fall. The best essay will be awarded the FrameWorks Prize for Excellence in Undergraduate Research in the Interdisciplinary Humanities. The 2020-2021 FrameWorks Fellows were asked to interpret the theme of “Unknown.”

2020-2021 FELLOWS



Amber Ayub

Representations of doctors in Raymond Carver's poems and short stories



Rana Mohamad

Sudanese immigrant narratives



Vincent Taylor

Symbolist art at the fin de siècle



Maya Garza

Milton's characterization of Eve in *Paradise Lost*



Sarah Mwhaki Nganga

The history and culture of misogyny in American Healthcare



Morgan Thomas

Oral narratives of the 1963 Birmingham Children's Crusades



Anna Mayzenberg

Deep-sea mining and the philosophy of environmental sustainability



Rani Nune

The Immortal Life of Henrietta Lacks and racial disparity in American healthcare



Leonard Wang

Covid-19 as a sociocultural phenomenon



Austin Mitchell

Judges 19-21 and the carceral state



Lauren Rochelle

Popular appropriation and exploitation of Vodou religious practices



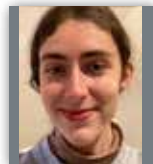
Giulia Zaffaroni

Theological and scientific approaches to “mystery”



Cameron Mitchell

Literary and philosophical intersections of Eastern and Western Antiquities



Erin Satterwhite

Philosophical approaches to environmental aesthetics



Newly Released: The *FrameWorks Journal*, Issue 1

Having their articles published in *FrameWorks* makes the inaugural cohort of *FrameWorks Fellows* contributors to the interdisciplinary humanities. Their work now plays a role in the incremental evolution of the best possible perspectives by which to know ourselves and each other. Just as importantly, their work has set the standard for future *FrameWorks Fellows*. That standard may one day be exceeded, but what is built in the future has its foundations between these covers. **Max Rayneard, Journal Editor**

Digital edition available at thehonorscollege.com/frameworks

FRAMEWORKS

2021 Digital Symposium
Saturday, April 10, 2021

Please join the 2020-2021 FrameWorks Fellows as they present their research in the interdisciplinary humanities, broadly interpreting the theme *Unknown*. You will encounter unexplored depths, untold stories, uncertain futures, the limits of possibility, and the talented FrameWorks Fellows who took them on.

Session 1: 10 a.m.- 12 p.m. (CT)

Session 2: 12:30 p.m. - 2:30 p.m.

Zoom.us

Meeting ID: 819 8374 9231

Passcode: FW2021

For more information email Max Rayneard at mjrayneard@uh.edu, or visit the website: thehonorscollege.com/frameworks

FrameWorks 2021 Call for Applications

Deadline: June 18, 2021

Do you want to be a FrameWorks Fellow? Applications for 2021-2022 are now open.

- Take part in a year-long mentorship and peer support program—think and write about the ideas that matter to you.
- FrameWorks guides you through the process of conceiving, researching, drafting, rewriting, refining, and presenting your article, for possible publication in *FrameWorks: A Journal of Undergraduate Research in the Interdisciplinary Humanities*.
- Rising sophomores and juniors of all majors with a GPA of 3.5 or higher are invited to apply.

2021-2022 Theme: Immunity

Visit the website: thehonorscollege.com/frameworks/apply

UNIVERSITY of **HOUSTON** | THE HONORS COLLEGE



PCCSM SUMMER RESEARCH PROGRAM

The **Partnership for Careers in Cancer Science and Medicine** summer program with national cancer researchers is hosted annually by The University of Texas MD Anderson Cancer Center. Nominated for exemplifying compassion and an aptitude for research in the medical field, four Honors College students will collaborate and work alongside worldwide cancer experts for 10 weeks in summer 2021.

The Partnership for Careers in Cancer Science and Medicine teaches and encourages passionate medical leaders through hands-on research training, weekly seminars, and workshops. At the end of the program, the trainees will present the results of their research as scientific posters, along with trainees from other summer programs, at the virtual MD Anderson Summer Experience Final Event as well as participate in an Elevator Speech contest, a fun, practical way to practice succinctly introducing their field of study and research to others.

MD Anderson is one of the world's premier cancer centers focused on cancer patient care, research, education and prevention. Students interested in learning about undergraduate research programs and opportunities for competitive fellowships should contact the Office of Undergraduate Research and Major Awards at undergrad-research@uh.edu.

2021 PCCSM RESEARCHERS



Kristen Harris

"I'm looking forward to gaining an inside perspective on the expectations and rigor of a career as a physician scientist. I am confident that this experience will not only develop my expertise in biomedical research, but also prepare me for the challenges of a career in medicine."



Amenda Khoei

"I applied to this program because I not only want to learn about and partake in cancer research, but I also want to gain valuable insight about oncology and overall medicine. With a background in primarily community health, I want to expand my experiences into clinical health."



Rael Memnon

"I believe this program will provide me with the necessary research skills needed to bridge medicine and research together. I believe I will attain mentors that can guide me on how to incorporate my passions of global health, neuroscience, cancer pharmacological research, and medicine to become the best physician possible for my future patients."



Jordan Pemberton

"The connections I will gain during this program to current, world-class physicians and the other competitive, bright minded pre-med students like myself will put me into circles with the best of the best. This internship will also elevate the quality of my own future practice."

2020 SURF



Despite the challenges presented by COVID-19, the 2020 **Summer Undergraduate Research Fellowship (SURF)** program launched in June with 87 SURF recipients. When submitting their applications last spring, students were asked to provide remote research and communication plans in the event that social distancing measures continued into the summer months. The students

came together on Zoom each week for the virtual lecture series and learned about data science and management, how to seek out and apply to competitive fellowships and graduate programs, and how to develop posters and present their work.

2020 SURF BROWN BAG LECTURE SERIES

WEEK 1

Responsible Conduct of Research

Laura Gutierrez and Penny Maher
Division of Research

WEEK 2

Data Science Across the Disciplines

Lars Grabow
Chemical and Biomolecular Engineering

Claude Willan
University of Houston Libraries

Lorena Gauthereau
Arte Público Press

Dan Price
Honors College

WEEK 3

University of Houston Library Resources

Wenli Gao, Andrea Malone, Irene Ke, Edward Gloor, Erica Lopez, and Mea Warren
University of Houston Libraries

WEEK 4

Building an Effective CV and Résumé

Tanya Farirayi and Adalia Espinosa
University Career Services

WEEK 5

July 4th Holiday

WEEK 6

Applying for Fellowships and Major Awards

Ben Rayder
Office of Undergraduate Research and Major Awards

WEEK 7

Applying to Graduate School

Faculty from Various Fields of Study

WEEK 8

Expectations and Challenges in Research

Lorraine Reitzel
Psychological, Health, and Learning Sciences

WEEK 8

Expectations and Challenges in Research (continued)

Xinli Liu
College of Pharmacy

Marc Hanke
Honors College

Saman Essa
Counseling Psychology

WEEK 9

Developing an Effective Poster and Presentation Etiquette

Stuart Long, Brittni MacLeod, and Ben Rayder
Office of Undergraduate Research and Major Awards

WEEK 10

Virtual Fellowship Celebration

2020 SURF PARTICIPANTS

Ariel Abudu

Mentored by Peggy Lindner
Data Science

Analyzing Counselor Usage in Texas Elementary Schools

Bolatito Adeyeri

Mentored by Christopher Arellano
Health and Human Performance

Quantifying the Net Cost of Transport Curve During Human Walking: How Much Time Is Required?

Dania Amarneh

Mentored by Anka Vujanovic
Psychology

The Role of Anxiety Sensitivity in the Relationship Between Childhood Maltreatment and Sleep Disturbance

Sarah Attia

Mentored by Jen Vardeman
Communication

Understanding the Perceptions Surrounding Pelvic Floor Disorders within Arab American Communities

Rabin Bhattarai

Mentored by Rodolfo Monico
Mechanical Engineering

Blood Flow Simulation through a Rat's Aortic Arch

Anna Bibikova

Mentored by Jeff Feng
Industrial Design

Adjustable Smart Limb Socket

Drew Boagni

Mentored by Shaun Zhang
Center for Nuclear Receptors and Cell Signaling

Utilizing Neoantigens to Reinforce the Immune Response in Cancer

Luay Boulahouache

Mentored by Bradley McConnell
Pharmacological and Pharmaceutical Sciences

Biased Agonist Modulation of Carvedilol & Metoprolol in β -arrestin Pathway

Linh Bui

Mentored by Michihisa Umetani
Biology and Biochemistry

Impact of 27-Hydrocholesterol on Brown Adipost Tissue at the Single Cell Level

Nathan Cao

Mentored by Oomman Varghese
Physics

Machine Learning for Metal Oxide Gas Sensor Analysis

Josiah Cherian

Mentored by Ognjen Miljanic
Department of Chemistry

Energy and Sustainability

Jared Davis

Mentored by Jerrod Henderson
First Year Engineering Experience

Increasing the Number of Black Male Engineering Graduate Students

Krishna Sarvani Desabhotla

Mentored by Jose Contreras-Vidal
Electrical and Computer Engineering

Automation Process of 3D Scan Based Brace Design

Benjamin Diaz Villa

Mentored by Ralph Metcalfe
Mechanical Engineering

Numerical Study of Wing Morphing Aerodynamic Properties in Low Reynolds Number Flow

Ariel Durham

Mentored by Irene Guenther
History

Restructuring Elementary School Social Studies Curriculum to Include Black Female Activists

Cristobella Durette

Mentored by Max Rayneard
Honors

Zombies, Werewolves, and Vampires, Oh My!: The History of Horror in Comics

Joanna Elhaj

Mentored by Melissa Zastrow
Chemistry Department

Effects of Metals on Probiotic Lactobacillus

Shereen Enan

Mentored by Chandra Mohan
Biomedical Engineering

Urine Protein Biomarkers of Bladder Cancer Arising from Aptamer-based Screening of 1300 Proteins

Monica Enriquez

Mentored by Kerri Crawford
Biology and Biochemistry

Effects of Microplastics and Soil Microbes on Dune Grass Performance

Queen Epomba

Mentored by Melody Li
Modern and Classical Languages

The Color of COVID-19: Analyzing Racism During the COVID-19 Outbreak

2020 SURF PARTICIPANTS

Aisha Farooque

Mentored by Nouhad Rizk
Computer Science

Using K-Nearest Neighbors to Classify Undergraduate
Female Self-Efficacy in Computer Science

Kevin Fleming

Mentored by Praveen Bollini
Chemical and Biomolecular Engineering

MIL-100(Cr): A Novel Adsorbent for CO₂ Capture

Christopher Franclemont

Mentored by Rohith Reddy
Electrical and Computer Engineering

Design of a Full-Field Optical Coherence Tomography
(OCT) 3D-Scene Imaging Setup

Nadia Garcia Marroquin

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Health & Human Performance

Childhood, Adulthood, and Cumulative Traumatic
Experiences as a Predictor of Deportation Fears

Antonella Gargurevich Espinoza

Mentored by Jaye Derrick
Department of Psychology – Social Psychology

Can Familiar Fictional Worlds Promote Health Through
Buffering Belongingness Threats?

Jon Genty

Mentored by Rose Faghieh
Electrical and Computer Engineering

Identifying High-Frequency Artifacts and Deconvolving
Electrodermal Activity Data

Kristen Harris

Mentored by Debora Rodrigues
Civil and Environmental Engineering Department

A Comparative Study of PET Microplastic Degradation by
Controlled Microbial and Photocatalytic, MoO₃, Exposure

Mohammad Hasan

Mentored by Kehe Ruan
Medicinal Chemistry and Pharmacology

How Does SARS-CoV-2 Vaccine Work in Ending COVID-19
Pandemic?

Benjamin Haverty

Mentored by Frank McKeon
Biology and Biochemistry

Protein Based Modeling of SARS-CoV-2

Jeremy Hilfiger

Mentored by Jonathan Wu
Geology

Fault Growth Analysis of the Gaoqing-Pingnan Fault,
Bohai Bay, China

Cole Hudson

Mentored by Vincent Tam
Pharmaceutics

Measuring Hydrolytic Activity of Carbapenemase-
Producing Klebsiella Pneumoniae Isolates

Katherine Kabel

Mentored by Anka Vujanovic
Psychology

Alcohol Use among Trauma-Exposed College Students:
Associations with Sleep and Distress Tolerance

Salvi Kumar

Mentored by Bradley McConnell
Pharmacology

Biased Antagonist Modulation Mechanism Effectiveness
of Carvedilol and Metoprolol

Tammy Lam

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Mathematics

Is Chaos Predictable? Learning to Predict Chaotic Systems

Tahimiy Landestoy Acosta

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Gene Expression Data Analysis of Persister Cancer Cells

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Mechanical Engineering

Development of a Flow Visualization Model Using the
Transport Tube Method for Application in Vertical Axis
Wind Turbine Analysis

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Biology and Biochemistry

Structural and Functional Decomposition of Universal
Stress Protein A from *M. luteus*

Uzma Maknojia

Mentored by Frank McKeon
Biology and Biochemistry

Using CRISPR-Cas9 Applications for ACE2 Knockout in
Liver Epithelial Stem Cells and Impact on SARS-CoV-2

Andre Martinez

Mentored by Greg Cuny
Pharmacological and Pharmaceutical Sciences

Azaporhines: Creating a Novel Subclass of Aporphine Alkaloid Derivatives

Rael Memnon

Mentored by Bin Guo
Pharmaceutics

The Delivery of siRNA Using Exosomes to Treat Different Types of Cancers

Deep Modi

Mentored by Kevin Garey
Pharmacy Practice and Translational Research

Literature Review of External Influences on the Oral Microbiome

Shailee Modi

Mentored by Marc Hanke
Honors

The Effects of Hurricane Harvey on Oyster Restoration

Nhung Nguyen

Mentored by Konstantinos Kostarelos
Department of Petroleum Engineering

Two Different Methods to Treat Unwanted Associated Gas - Reasons to Consider Zero Gas Flaring Future in the Permian Basin

Nicholas Nguyen

Mentored by Robert Comito
Department of Chemistry

How Phenolic Based Compounds Can Increase Productivity in the Pharmaceutical Industry

Emily Nham

Mentored by Michael Newman
Department of Accountancy & Taxation

Demographic Differences in Professional Ethical Behavior

Vijay Nitturi

Mentored by Lorraine Reitzel
Psychological, Health, and Learning Sciences

Anxiety Sensitivity and Fast-Food Ordering Habits Among African-American Adults

Vinay Nuka

Mentored by Alamgir Karim
Chemical and Biomolecular Engineering

Shearing of Islands and Holes in Block Copolymer Thin Films

Kaylie O'Connell

Mentored by William Ott
Mathematics

Modeling Pedestrian Dynamics and Panic Scenarios using Kinetic Theory

Arafat Oladipo

Mentored by Megan Robertson
Chemical Engineering

Morphology Evolution During Curing of Thermoset Blends

Dwija Parikh

Mentored by Tamar Solorio
Computer Science

Analyzing Errors of Neural Models in Named Entity Recognition

Jo-Anne Pham

Mentored by Hanako Yoshida
Psychology

Contextual Effect on Parent-Infant Interactions During Object Play

Hiba Rabieh

Mentored by Pranav Parikh
Department of Health and Human Performance

Impairment in Leg Muscle Activity During a Balance Task Following a Stroke

Laura Rossodivita

Mentored by Mehmet Orman
Chemical and Biomolecular Engineering

Analysis of CRP-Mediated Persister Cell Metabolism in Bacteria

Urvi Sakhuja

Mentored by Hanako Yoshida
Psychology

Attentional Behaviors During Social Interaction in Children with Autism

Ritu Sampige

Mentored by Leslie Frankel
Psychological, Health, and Learning Sciences

The Relationship Between Parent Anxiety Symptomatology and Feeding Behaviors

Sheel Shah

Mentored by Pranav Parikh
Health and Human Performance

Contribution of Weight Asymmetry to Balance Control in Stroke

Damon Spencer

Mentored by Daniel Onofrei
Mathematics

On Passive Backscatter Cloaking in One-Dimensional Oscillation Phenomena

Nicholas Summerfield

Mentored by Anthony Timmins
Department of Physics

Viscosity of the Quark Gluon Plasma – Nature's Most Perfect Fluid

Conlan Taylor

Mentored by Aaron Becker
Electrical Engineering

Sensor Implementation in Autonomous Narrative-Capturing Robot

Jessica Tran

Mentored by Sanghyuk Chung
Biology and Biochemistry

HDAC Inhibitor TSA Induces Cell Death and Morphological Changes in Cervical Cancer Cells

Olivia Tran

Mentored by Gomika Udugamasooriya
Pharmacological and Pharmaceutical Sciences

Optimizing Dimer Linker Length of an Anti-Cancer Peptoid Drug-Lead

Phuongthy Tran

Mentored by Chandra Mohan
Department of Biomedical Engineering

The Role of Genetics and the Environment in Systemic Lupus Erythematosus Pathogenesis: A Review of the Past Decade

Ryan Tran

Mentored by Islam Rizvanoglu
Economics

A Model to Compare Market Intervention vs. Information to Address Climate Change Using Substitute Goods

Varshini Vakulabharanam

Mentored by Russell Larsen
Chemistry

Seasonal Temperature and COVID Mortality

Paul Vaughan

Mentored by Steven Craig
Economics

Against Many Tides: The Impact of the Great Recession, Gig Work & COVID-19 on the Millennial Workforce

Veera Venkata Ramprajwal Vempatti

Mentored by Lars Grabow
Chemical and Biomolecular Engineering

Passive NO_x Adsorption – Pd/ZSM-5

Tung Vu

Mentored by Bhavin Sheth
Electrical and Computer Engineering

Exploration of the Relationship Between Rapid Eye Movement Sleep and Slow Wave Sleep through Electroencephalogram Data

Josiah Willingham

Mentored by Alexander Statsyuk
Medicinal Chemistry

Using Multi-step Chemical Synthesis to Form Covalent Protease Inhibitors

2021 POSTER PRESENTATIONS

Undergraduate Research Day celebrates the achievements of all University of Houston undergraduates pursuing faculty-mentored research. Congratulations to the following students.

Ariel Abudu

Mentored by Peggy Lindner
Data Science

Analyzing Counselor Usage in Texas Elementary Schools

Hana Aden

Mentored by Marcel de Dios
Psychological, Health, and Learning Sciences

Religious Identity and the use of Alcohol and Marijuana in a Sample of diverse Young Adults

Bolatito Adeyeri

Mentored by Christopher Arellano
Health and Human Performance

Quantifying the Net Cost of Transport Curve During Human Walking: How Much Time Is Required?

Zain Akbar

Mentored by Johanna Bick
Psychology

Providing Enrichment for Syrian Refugee Adolescents in the Greater Houston Area

Michael Allison

Mentored by Greg Morrison
Physics

AWSEM Studies of Cyclophilin A Evolving Pseudogenes

Mariam Alshaikhly

Mentored by Kehe Ruan
Department of Pharmacological and Pharmaceutical Sciences

Integration of SPC-insulin plasmid into E. coli BL21 expression system to develop a long-lasting effect of insulin and reducing dosages in a cost-effective manner

Dania Amarneh

Mentored by Anka Vujanovic
Psychology

The Role of Anxiety Sensitivity in the Relationship Between Childhood Maltreatment and Sleep Disturbance

Bryan Armbruster

Mentored by Bradley Smith
Psychological, Health, and Learning Sciences

The Correlation Between Individuals Returning to Food Pantries, Age and Income

Nabeeha Asim

Mentored by Carla Sharp
Psychology

Shame and Borderline Personality Features in Inpatient Adolescents: The Moderating Role of Adverse Experiences

Nabeeha Asim

Mentored by Carla Sharp
Psychology

Dating Violence in Adolescents with and without Borderline Personality Disorder

Sarah Attia

Mentored by Jennifer Vardeman
Communication

Understanding the Perceptions Surrounding Pelvic Floor Disorders within Arab American Communities

Ranyah Atwan

Mentored by Tshepo Masango Chéry
History

State of Defiance: Women's Role In the Moroccan Liberation Movement

Kayla Baham

Mentored by Andrew Kapral
Engaged Data Science

Analyzing the Effectiveness of Houston's Complete Communities Initiative

Olivia Baker

Mentored by Pinky Shani
Nursing

Does Spirituality Play a Vital Role in the Recovery of Patients with Cancer?

Isaac Benedict

Mentored by Bradley Smith
Psychological, Health, and Learning Sciences

The Correlation Between Individuals Returning to Food Pantries, Age and Income

Karina Bhattacharya

Mentored by Mark Kimbrough
Industrial Design

Reducing Disorientation in Teleportation: Improving Navigation in Virtual Reality

2021 POSTER PRESENTATIONS

Rabin Bhattarai

Mentored by Rodolfo Monico
Mechanical Engineering

Blood Flow Simulation through a Rat's Aortic Arch

Anna Bibikova

Mentored by Jeff Feng
Industrial Design

Adjustable Smart Limb Socket

Drew Boagni

Mentored by Shaun Zhang
Center for Nuclear Receptors and Cell Signaling

Utilizing Neoantigens to Reinforce the Immune Response in Cancer

Zaina Boriek

Mentored by Marc Hanke
Honors College

Improving Healthcare Access via Community Ties in Houston's Third Ward

Luay Boulahouache

Mentored by Bradley McConnell
Pharmacological and Pharmaceutical Sciences

Investigating Real-Time Internalization of Membrane Proteins using a Novel Technology Based on Bioluminescence

Kareema Broussard

Mentored by Anita Schulte
Nursing

The Effect of Video Direct Observation Therapy on Medication Compliance on Tuberculosis Patients

Linh Bui

Mentored by Michihisa Umetani
Biology and Biochemistry

Impact of 27-Hydrocholesterol on Brown Adipose Tissue at the Single Cell Level

Freisha Burke

Mentored by Wei Wang
Modern and Classical Languages

African-American Vernacular English: The Portrayal of AAVE in Mainstream Media & Its Relationship to Code-Switching Amongst African-American Individuals

Joy Cabador

Mentored by Michael Cottingham
Health and Human Performance

COVID-19's Effects on Paralympians

Nathan Cao

Mentored by Oomman Varghese
Physics

Machine Learning for Metal Oxide Gas Sensor Analysis

Leanna Castaneda

Mentored by Pinky Shani
Nursing

Does Spirituality Play a Vital Role in the Recovery of Patients with Cancer?

Luis Cavazos

Mentored by John Craft
Biology and Biochemistry

Trajectories and Comparative Analysis of Compounds that Bind $\alpha_4\beta_1$ and $\alpha_4\beta_7$

Olga Cerda

Mentored by Michael Zvolensky
Psychology

The Explanatory Role of Insomnia in the Relationship between Pain Intensity and Posttraumatic Stress Symptom Severity among Trauma Exposed Latinos in a Federally Qualified Health Center

Sara-Grace Chan

Mentored by Michelle Belco
Honors College

The Study of Food Insecurity and Health Disparities in Houston Food Distribution Organizations

Sampada Chaudhari

Mentored by Pranav Parikh
Center for Neuromotor and Biomechanics Research, Health and Human Performance

Sensorimotor Control of Balance After Stroke

Josiah Cherian

Mentored by Ognjen Miljanic
Department of Chemistry

Energy and Sustainability

Njideka Chidoka

Mentored by Anita Schulte
Nursing

The Effects of Tight Perioperative Control on Surgical Site Infections

Abhaya Chopra

Mentored by Emese Felvegi
Decision and Information Sciences

Open Educational Resources Opinions and Academic Confidence

Brian Chung

Mentored by Emily LaVoy
Health and Human Performance

The Effects of Including a Pre-Exercise Warm-up on Mood and Affect After Exercise

Kaleb Clark

Mentored by William Monroe
Honors

Tolkienian Fantasy in the Modern Era: The Role of Traditional Literature in the Twenty-First Century

Daniela Contreras

Mentored by J. Bryan Cole
Political Science

Religiosity, Partisanship, and Race: The Effect of History on Contemporary African American Voting Patterns

Lena Craven

Mentored by Alison Leland
Honors

Analyzing Credibility Percentages of Online Sources

Ashley Cruz

Mentored by John Craft
Biology and Biochemistry

Computational Analysis of 1XTC and Mutant 1XTC D229E

Jared Davis

Mentored by Jerrod Henderson
First Year Engineering Experience

Increasing the Number of Black Male Engineering Graduate Students

Ricardo Del Rio

Mentored by Gabriela Jaramillo
Mathematics

The Effects of Nonlocal Interactions in a Simple Cellular Automata Model for Neural Tissue

Krishna Sarvani Desabhotla

Mentored by Jose Contreras-Vidal
Electrical and Computer Engineering

Automation Process of 3D Scan Based Brace Design

Sakethram Desabhotla

Mentored by Alison Leland
Honors

Legal and Legislative Remedies Against the Chinese Government for Its Handling of COVID-19

Shreya Desai

Mentored by Rosenda Murillo
Psychological, Health, and Learning Sciences

Work-related Exertion and Standing/Walking are Associated with Leisure-time Physical Activity in Latinos

Dominique Dore

Mentored by Bradley Smith
Psychological, Health, and Learning Sciences

The Effects of a Writing Tutoring Program on 5th-Grade Academic Performance at a Low-Income Elementary School in HISD

Marie Douge

Mentored by Johanna Bick
Psychology

Associations Between Objective and Subjective Socioeconomic Status, Perception of Family Resources, and Child Psychopathology Symptoms in Preschool Years

Ariel Durham

Mentored by Irene Guenther
History

Restructuring Elementary School Social Studies Curriculum to Include Black Female Activists

Cristobella Durette

Mentored by Benjamin Rayder
Honors

Components of Comics: From Sketches to Finished Product

Cristobella Durette

Mentored by Laura Bland
Honors

Panels and Gutters: Empathy, Comics Journalism, and Joe Sacco's Footnotes in Gaza

Cristobella Durette

Mentored by Alison Leland
Honors

The Impact of Microloan Programs on the Lives of Palestinian Women in the Gaza Strip

Cristobella Durette

Mentored by Alison Leland
Honors

The Role of Communication in Museum Security Operations

Cristobella Durette

Mentored by Max Rayneard
Honors

Zombies, Werewolves, and Vampires, Oh My!: The History of Horror in Comics

Joanna Elhaj

Mentored by Melissa Zastrow
Chemistry

Proteomic Analysis of Lactobacillus species

Shereen Enan

Mentored by Chandra Mohan
Biomedical Engineering

Urine Protein Biomarkers of Bladder Cancer arising from Aptamer-based Screening of 1300 proteins

Antonio Enriquez

Mentored by Norah Gharala
History

La Gran Chichimeca

Monica Enriquez

Mentored by Kerri Crawford
Biology and Biochemistry

Effects of Microplastics and Soil Microbes on Dune Grass Performance

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Modern and Classical Languages

The Color of COVID-19: Analyzing Racism During the COVID-19 Outbreak

Paulina Ezquerro

Mentored by Iain Morrison
Philosophy

The Intellectual and Moral Virtues: Against a Consequentialist Account

Aisha Farooque

Mentored by Nouhad Rizk
Computer Science

Using K-Nearest Neighbors to Classify Undergraduate Female Self-Efficacy in Computer Science

Paulina Fernandez

Mentored by Johanna Luttrell
Honors

Environmental Justice in Houston: A Virtue Ethics Approach

Alex Ferrer

Mentored by Daphne Hernandez
Health and Human Performance

The Impact of Undergraduate Research Training on Students' Perceived level of Skills

Kevin Fleming

Mentored by Praveen Bollini
Chemical and Biomolecular Engineering

MIL-100(Cr): A Novel Adsorbent for CO₂ Capture

Vanessa Flores

Mentored by Michelle Belco
Honors College

How President Biden Addresses the Nation's Problems in the First 100 Days - President Biden and his Unilateral Directives - Going Forward While Looking Backward

Christopher Franclemont

Mentored by Rohith Reddy
Electrical and Computer Engineering

Design of a Full-Field Optical Coherence Tomography (OCT) 3D-Scene Imaging Setup

Cynthia Galdamez

Mentored by Cheryl Brohard
Nursing

Types of Contraceptives and Risk for Blood Clot Development

Joshua Garcia

Mentored by Jonathan Schwartz
Psychological, Health & Learning Sciences

Barriers to Health and Housing in Houston Communities

Marco Garcia

Mentored by Johanna Luttrell
Honors

The Conception of Freedom in the Green New Deal

Nadia Garcia Marroquin

Mentored by Daphne Hernandez
Health & Human Performance

Childhood, Adulthood, and Cumulative Traumatic Experiences as a Predictor of Deportation Fears

Maham Gardezi

Mentored by Bhavin Sheth
Electrical and Computer Engineering

The effect of nicotine vapor from e-cigarettes on cue-induced motivation

Antonella Gargurevich Espinoza

Mentored by Jaye Derrick
Department of Psychology - Social Psychology

Can Familiar Fictional Worlds Promote Health Through Buffering Belongingness Threats?

Maya Garza

Mentored by Lorraine Stock
English

Giants, Incubi, and Monstrous Sisters: Ethnocentrism and Sexism in the British Legends of Albion

Monica Gebrehiwot

Mentored by Elizabeth Simas
Political Science

Primary Runoff Elections in the United States

Jon Genty

Mentored by Rose Faghih
Electrical and Computer Engineering

Identifying High-Frequency Artifacts and Deconvolving Electrodermal Activity Data

Shalini Ghurye

Mentored by Luis Medina
Psychology

Preferred Music Listening Intervention Can Be Used to Address Behavioral and Psychological Symptoms of Dementia: A Scoping Review of the Literature

Nikita Gidh

Mentored by Hanako Yoshida
Psychology

Infant's Visual Complexity in Parent-Child Play: Clutter Analysis

Niell Gorman

Mentored by Jeff Feng
Industrial Design

Modification and Fitting of a 3D-Printed Prosthetic Hand

Janhavi Govande

Mentored by Herb Agan
Psychology

Comparison of Outcomes of Preterm Infants Who Received Human Milk-Based vs. Bovine-Milk Based Human Milk Fortifier

Karla Grado

Mentored by Jason Casellas
Political Science

The Creation of the Latine voter through political advertisement in traditional media: What does the Latine voter really want? A Literary Analysis

Maybelline Granados

Mentored by Donají Stelzig
Honors College

The Impact of COVID-19 on the Mental Health of Frontline Healthcare Workers Across Texas and Their Communication With the Community

Sai Gudapati

Mentored by Dale Rude
Management and Leadership

The Management and Impact of Losses

Stefanie Guzman

Mentored by Richard Mizelle
History

Why You Don't Matter: Missing White Woman Syndrome, the Media, and Black Women's Sexuality

Michael Halamicsek

Mentored by Thomas Teets
Chemistry

Iridium-Coumarin Ratiometric Oxygen Sensors

Nikki Hammond

Mentored by Ben Rayder
Honors College

How Childcare Can Bridge the Gender Gap In STEM

Omar Harb

Mentored by Melika Shirmohammadi
Human Resource Development

Understanding Disparities in Well-being Among Immigrant Employees

Shana Hardin

Mentored by Ling Zhu
Political Science

Factors That Determine Women's Electoral Success in Running for Congress

Kristen Harris

Mentored by Debora Rodrigues
Civil and Environmental Engineering

A Comparative Study of PET Microplastic Degradation by Controlled Microbial & Photocatalytic, MoO₃, Exposure

Kristin Harris

Mentored by Marc Hanke
Honors College

Improving Healthcare Access via Community Ties in Houston's Third Ward

Nicole Hart

Mentored by A. Gary Dworkin
Sociology

Racial Disparities in Black-White Education: A Sociological Conflict Theory Explanation

Mohammad Hasan

Mentored by Kehe Ruan
Medicinal Chemistry & Pharmacology

How does SARS-CoV-2 vaccine work in ending COVID-19 pandemic?

Benjamin Haverty

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Psychological, Health, and Learning Sciences

Conducting a College Prep Program During Covid-19 Analysis on Austin Test Prep (ATP) at Austin High School

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Biology and Biochemistry

Protein Based Modeling of SARS-CoV-2

Rebecca Hentges

Mentored by Alison Leland
Honors

Smithsonian Internships

Jeremy Hilfiger

Mentored by Jonathan Wu
Geology

Fault growth analysis of the Gaoqing-Pingnan fault, Bohai Bay, China

Kennard Hitchcock

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Psychological, Health, and Learning Sciences

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Trinh Hoang

Mentored by Anita Schulte
Nursing

The Effects of Tight Perioperative Control on Surgical Site Infections

Alyssa Holt

Mentored by Maurice Wilson
Writing Center

Grammar and Power: The Role of the Student Consultant in the Writing Center

Natalie Hosseini

Mentored by Johanna Bick
Psychology

Associations Between Objective and Subjective Socioeconomic Status, Perception of Family Resources, and Child Psychopathology Symptoms in Preschool Years

Taylor Howard

Mentored by Maria Burns
Supply Chain and Logistics Technology

DHS Strategy: A Study On Combating Cyber Crimes

Allen Huang

Mentored by Michelle Belco
Honors College

An Investigation of the Food Insecurity Status and Health Disparities of Houston Food Distribution Organization Clientele

Cole Hudson

Mentored by Vincent Tam
Pharmaceutics

Measuring hydrolytic activity of carbapenemase-producing *Klebsiella pneumoniae* isolates

Mỹtrang Huỳnh

Mentored by Christy Mag Uidhir
Philosophy

On the Moral and Aesthetic Evaluations Of Artists and Their Artworks

Brittany Ikner

Mentored by Kevin Hoff
Psychology

Automation in the Workplace: Can we trust its use in Human Resources?

Baycha Isik

Mentored by Ben Rayder
Honors College

How Childcare Can Bridge the Gender Gap In STEM

Sanjana Jacob

Mentored by Vivien Coulson-Thomas
Optometry

Hyaluronan Supports Corneal Limbal Stem Cells

Muhammad Jamal

Mentored by Alison Leland
Honors

Internet of Things: Pepper's Privacy Risks

Abigail Janvier

Mentored by Sheereen Majd
Biomedical Engineering

Electrical Resistance Measurements in a Blood-Brain-Barrier Microdevice

Ashley Jimenez

Mentored by Daniel Price
Honors

An Investigation into the Correlation between PM 2.5 and Low Birth Weight Rates in Texas

Kishon Joseph

Mentored by Daniel Price
Honors

Understanding Preeclampsia, Through Community Outreach, to Suggest Possible Interventions

Claire Juhas

Mentored by Daniel Price
Honors

An Investigation into the Correlation between PM 2.5 and Low Birth Weight Rates in Texas

Katherine Kabel

Mentored by Anka Vujanovic
Psychology

Alcohol Use among Trauma-Exposed College Students: Associations with Sleep and Distress Tolerance

Shourya Kashyap

Mentored by Daniel Price
Honors College

Unfolding the Reality of the Pandemic: A Comparative Study of Changes in Mental Health Before and During the Pandemic

Nancy Katz

Mentored by Mark Goldberg
History

The Memory of Being Hidden: Crypto-Jews in the 20th Century

Ali Raza Khan

Mentored by J. Leigh Leasure
Developmental, Cognitive, and Behavioral Neuroscience

Influence of Sex and Stress on Perineuronal Nets in the Prefrontal Cortex

Kiran Khan

Mentored by Ben Rayder
Honors College

How Childcare Can Bridge the Gender Gap In STEM

Sajid Khan

Mentored by Miao Pan
Electrical and Computer Engineering

Applications of Magnetic Induction and Localization to an Autonomous Underwater Vehicle

Tanya Kumar

Mentored by Meghana Trivedi
Pharmacy Practice and Translational Research

Design, Optimization, and Validation of Multiplex Immunofluorescence Assay for Detecting Biomarker Expression on Circulating Tumor Cells in Breast Cancer

Tanya Kumar

Mentored by Meghana Trivedi
Pharmacy Practice and Translational Research

Developing an Immunofluorescence Assay for Detecting Rb and phospho-Rb on Circulating Tumor Cells in Breast Cancer

Michelle Ky

Mentored by Anita Schulte
Nursing

The Effects of Tight Perioperative Control on Surgical Site Infections

Malik Ladki

Mentored by Marc Hanke
Biology and Biochemistry

Unraveling The Immune Metabolic Epigenetic Axis To Improve Tuberculosis Therapy

Benita Lalani

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Honors

Internet of Things: Pepper’s Privacy Risks

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Tammy Lam

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Mathematics

Is Chaos Predictable? Learning To Predict Chaotic Systems

Tahimy Landestoy Acosta

Mentored by Mehmet Orman
Chemical and Biomolecular Engineering

Gene Expression Data Analysis of Persister Cancer Cells

Kyle Lare

Mentored by Greg Morrison
Physics

Chromosome Tethering to the Lamina Increases Chromosome Compartmentalization

Vincent Laroche

Mentored by Di Yang
Mechanical Engineering

Development of a flow visualization model using the transport tube method for application in vertical axis wind turbine analysis

Zayd Latheef

Mentored by Bradley Smith
Psychological, Health, and Learning Sciences

Using a Science Mentorship Program to Alleviate Education Inequality

Gabrielle Le

Mentored by Charles Morrison
Osgood Center for International Studies

Approaching COVID19 in East and Southeast Asia

Leandro Ledesma

Mentored by Elena Grigorenko
Psychology

Frequency Bands and Coherence in Resting-state EEG in Juvenile Delinquents in Response to Reading Intervention

Verónica Ledezma

Mentored by Bradley Smith
Psychological, Health, and Learning Sciences

Using a Science Mentorship Program to Alleviate Education Inequality

Hannah Leggett

Mentored by Anita Schulte
Nursing

The Effect of Video Direct Observation Therapy on Medication Compliance on Tuberculosis Patients

Oscar Leon

Mentored by Stacey Louie
Civil and Environmental Engineering

Determining the Binding Affinity of Pesticides and Dissolved Organic Matter

Valerie Lerma

Mentored by Cheryl Brohard
Nursing

Types of Contraceptives and Risk for Blood Clot Development

Alyssa Lezcano

Mentored by Christiane Spitzmueller
Psychology

The Trickle-Down Effect of Academic Mentoring

Daniel Lim

Mentored by Sen Mehmet
Biology & Biochemistry

Structural and Functional Decomposition of Universal Stress Protein A from *M. luteus*

C Griffin Litwin

Mentored by Ioannis Konstantinidis
Computer Science

Comorbidities as Drivers of Patient Healthcare Utilization Patterns: Uses of Administrative Data in Modeling Disease-Mediated Interactions

Barbara Lomeli

Mentored by Clayton Neighbors
Psychology

Associations Between Acculturative Stress and Drinking Among Hispanic/Latino Immigrant Undergraduates Moderated by Drinking to Cope and Social Norms

Stefan Loos

Mentored by Kristina Neumann
History

The Emperor Elagabalus and the Construction of Anti-Syrian Stereotypes in Roman Historiography

Mariana Lopez Martinolich

Mentored by Yingchun Zhang
Biomedical Engineering

Stroke training assessment using fNIRS-informed EEG source localization strategy

Antionette Louw

Mentored by Jeff Feng
Industrial Design

High Fidelity and Objectivity in Balance Assessment

Megan Mai

Mentored by Shaun Zhang
Center for Nuclear Receptors and Cell Signaling

Utilizing Neoantigens to Reinforce the Immune Response in Cancer

Uzma Maknojia

Mentored by Frank McKeon
Biology and Biochemistry

Using CRISPR-Cas9 Applications for ACE2 Knockout in Liver Epithelial Stem Cells and Impact on SARS-CoV-2

Natasha Maloney

Mentored by Roya Plauché
Architecture and Design

Salvinia Sorbent Floating Unit

Sakina Mandviwala

Mentored by Daniel Price
Honors

An Investigation into the Correlation between PM 2.5 and Low Birth Weight Rates in Texas

Andre Martinez

Mentored by Greg Cuny
Pharmacological and Pharmaceutical Sciences

Azaaporphines: Creating A Novel Subclass of Aporphine Alkaloid Derivatives

Damaris Martinez

Mentored by Anny Castilla-Earls
Communication Sciences and Disorders

The Impact of COVID-19 School Closures and Home Language on the Spanish and English Receptive Vocabulary Trajectories in Bilingual Children

Lisa Martinez

Mentored by Cheryl Brohard
Nursing

Types of Contraceptives and Risk for Blood Clot Development

Lydia Martinez

Mentored by Cheryl Brohard
Nursing

Types of Contraceptives and Risk for Blood Clot Development

Lindsey McCaleb

Mentored by Anita Schulte
Nursing

The Effect of Video Direct Observation Therapy on Medication Compliance on Tuberculosis Patients

Ayush Mehta

Mentored by Marc Hanke
Honors College

Improving Healthcare Access via Community Ties in Houston's Third Ward

Neha Mehta

Mentored by Pranav Parikh
Center for Neuromotor and Biomechanics Research, Health and Human Performance

Sensorimotor Control of Balance After Stroke

Rael Memnon

Mentored by Bin Guo
Pharmaceutics

The Delivery of siRNA Using Exosomes to Treat Different Types of Cancers

Mathew Mendoza

Mentored by Michael Cottingham
Health and Human Performance

COVID-19's Effects on Paralympians

Elizabeth Merlinsky

Mentored by John Craft
Biology and Biochemistry

Cloud Computing for Drug Discovery: Implementation and Workflow in Targeting Spleen Tyrosine Kinase/SYK

Deep Modi

Mentored by Kevin Garey
Department of Pharmacy Practice and Translational Research

Literature Review of External Influences on the Oral Microbiome

Shailee Modi

Mentored by Marc Hanke
Honors College

The Effects of Hurricane Harvey on Oyster Restoration

Rana Mohamad

Mentored by Hosam Aboul-Ela
English

Black, Arab, Other: The Sudanese Migrant Woman's
Articulation of Identity

Angelica Monroy

Mentored by William Truitt
Architecture

Casablanca - Colonial & Post-colonial Urbanism

Sondos Moursy

Mentored by Daniel Price
Honors

Disparities in Educational Funding

Sondos Moursy

Mentored by Andrew Kapral
Hewlett Packard Enterprise Data Science Institute

Slavery's Legacy: Mass incarceration

Nabeel Muhammedy

Mentored by Lori Hathon
Petroleum Engineering

Using Multivariate Linear Regression to Estimate
Permeability from Thin Section Image Analysis

Shelbie Muskiet

Mentored by Pinky Shani
Nursing

Does Spirituality Play a Vital Role in the Recovery of
Patients with Cancer?

Anam Naik

Mentored by Daphne Hernandez
Health and Human Performance

The Impact of Undergraduate Research Training on
Students' Post Graduation Plans

Vishnu Narayana

Mentored by Alison Leland
Honors

Exploring Fellowships at the Smithsonian Institution

Kat Newman

Mentored by Guillermo De Los Reyes
Hispanic Studies

The Cisnormative Wall: Distinguishing Gaze's &
Transgender Representations in POSE and Dallas Buyers
Club

Khoa Ngo

Mentored by Margaret Cheung
Physics

Improving the Thermostability of Enzymes Using
Bioinformatics and Electrostatics Analysis

Anh Nguyen

Mentored by Sujata Sirsat
Hotel and Restaurant Management

Consumer's Food Safety Knowledge, Perception, and
Attitudes of Microgreens

Isabelle Nguyen

Mentored by Donají Stelzig
Honors College

The Impact of COVID-19 on the Mental Health of
Frontline Healthcare Workers Across Texas and Their
Communication With the Community

Kim Nguyen

Mentored by Anita Schulte
Nursing

The Effect of Video Direct Observation Therapy on
Medication Compliance on Tuberculosis Patients

Nhung Nguyen

Mentored by Konstantinos Kostarelos
Petroleum Engineering

The Effect of Iron Bearing Minerals on Anionic
Surfactant Retention in Chemical Enhanced Oil Recovery
Applications

Nicholas Nguyen

Mentored by Robert Comito
Department of Chemistry

How Phenolic Based Compounds can be increase
productivity in the Pharmaceutical Industry

Emily Nham

Mentored by Michael Newman
Department of Accountancy & Taxation

Demographic Differences in Professional Ethical Behavior

Simon Nichols

Mentored by Michelle Belco
Honors College

How President Biden Addresses the Nation's Problems
in the First 100 Days - President Biden and his Unilateral
Directives - Going Forward While Looking Backward

Vijay Nitturi

Mentored by Lorraine Reitzel
Psychological, Health, and Learning Sciences

Anxiety Sensitivity and Fast-Food Ordering Habits Among
African-American Adults

Vinay Nuka

Mentored by Alamgir Karim
Chemical and Biomolecular Engineering

Study of dewetting in thin polymer films

Kaylie O'Connell

Mentored by William Ott
Mathematics

Modeling Pedestrian Dynamics and Panic Scenarios using
Kinetic Theory

Anushka Oak

Mentored by Benjamin Tamber-Rosenau
Psychology

Searching for Gait Markers of Cognitive-Motor Dual-task Interference using Machine Learning

Emmanuel Oketunmbi

Mentored by Johanna Bick
Psychology

Effects of prenatal maternal stress on childhood development at 6 months old

Arafat Oladipo

Mentored by Megan Roberston
Chemical Engineering

Morphology Evolution During Curing of Therosest Blends

Verónica Ordóñez

Mentored by Steven Long
English

When Words Fail: Narrative & Dance in Posttraumatic Stress

Daniel Palacios

Mentored by Pavan Hosur
Physics

Supercurrent without a spatially varying phase or a vector potential from time-reversal and inversion symmetries breaking in superconductors

Dwija Parikh

Mentored by Thamar Solorio
Computer Science

Analyzing Errors of Neural Models in Named Entity Recognition

Madison Parker

Mentored by Audrius Brazdeikis
TcSUH and Physics

Combining Biological and Physical Approaches to Cancer Treatment

Dhriti Patel

Mentored by Sheereen Majd
Biomedical Engineering

Preparation of Alginate Encapsulating Nanoliposomes for Drug Delivery

Diya Patel

Mentored by Bradley Smith
Psychological, Health, and Learning Sciences

Evaluating ImpACT in KIPP Charter Schools

Saloni Patel

Mentored by Andrew Kapral
Engaged Data Science

Evaluating the Effectiveness of Dual Language Programs for English Learners in Texas Secondary Schools

Madhumitha Periyasamy

Mentored by Daniel Price
Honors

CDI Patient Mortality Pathways

Hannah Perkins

Mentored by Pinky Shani
Nursing

Does Spirituality Play a Vital Role in the Recovery of Patients with Cancer?

Jo-Anne Pham

Mentored by Hanako Yoshida
Psychology

Contextual Effect on Parent-Infant Interactions During Object Play

Kala Pham

Mentored by Kimberly Pilkinton
Clinical Science, College of Medicine

Assessing and Expanding Gynecological Knowledge in Houston Communities: A Project in Female Empowerment

Katherine Pham

Mentored by Jinsook Roh
Biomedical Engineering

Generalizability of Muscle Synergies during Isometric Reaching in the Human Arm Workspace

Daniel Phu

Mentored by Daniel Price
Honors

Houston Bus Ridership Highlights Socioeconomic Disparities in COVID-19 Outcomes

Pierce Popson

Mentored by J. Leigh Leasure
Psychology

Combined Effects of Binge Alcohol and Exercise on Intensity of Perineuronal Nets

Hiba Rabieh

Mentored by Pranav Parikh
Center for Neuromotor and Biomechanics Research, Health and Human Performance

Sensorimotor Control of Balance After Stroke

Pishoi Rafaile

Mentored by Tshepo Masango Chéry
History

Let Us Speak! South African Women as Activists and Revolutionaries in the Anti-Apartheid Movement

Jahnvi Rajput

Mentored by Yu Liu
Biology and Biochemistry

Cardiomyopathy progression due to overexpression of miRNA- 322/503

Stephanie Ramirez

Mentored by Chiara Acquati
Graduate College of Social Work

Young Women with Breast Cancer: Preliminary Results from A Cross-Sectional Study of Unmet Needs

Catherine Ramos

Mentored by Johanna Bick
Psychology

The relationship between poverty and dorsolateral prefrontal activation

Jocelyn Ramos

Mentored by Julien Leclerc
Electrical and Computer Engineering

Simulation Pipeline of Milli-scale Magnetic Robots for Blood Clot Removal

Shreyas Ranganath

Mentored by Bradley McConnell
Pharmacological and Pharmaceutical Sciences

Cardiac AKAP12 Signalosome Overexpression Exacerbates Effects of Induced Heart Failure via Decreased SERCA2 Expression

Isabella Raschke

Mentored by Sujata Sirsat
Hotel and Restaurant Management

FoSTT- Food Safety Training Toolkit for Novice Food service Workers

Daniel Rivas

Mentored by Carlos Rincon
Computer Science

Entropy-based scheduling performance in real-time multiprocessor systems

Haley Rosso

Mentored by Andreas Mang
Mathematics

Regularization Schemes for Linear Inverse Problems

Laura Rossodivita

Mentored by Mehmet Orman
Chemical and Biomolecular Engineering

Analysis of CRP-Mediated Persister Cell Metabolism in Bacteria

Lorissa Saiz

Mentored by Erin Kelleher
Biology and Biochemistry

Bruno and P-element transposition: Positive regulator or cellular responder?

Urvi Sakhuja

Mentored by Hanako Yoshida
Psychology

Attentional Behaviors During Social Interaction in Children with Autism

Ritu Sampige

Mentored by Leslie Frankel
Psychological, Health, and Learning Sciences

The Relationship Between Parent Anxiety Symptomatology and Feeding Behaviors

Ritu Sampige

Mentored by Leslie Frankel
Psychological, Health, and Learning Sciences

Analyzing the Relationship Between Children's Schooling Modality and Parenting Stress During the COVID-19 Pandemic

Salar Sanati

Mentored by Daniel Price
Honors

An Investigation into the Correlation between PM 2.5 and Low Birth Weight Rates in Texas

Andres Sarmiento

Mentored by Maria Burns
Supply Chain and Logistics Technology

TSA & Airport Security: A case on weapons smuggling in the U.S.

Taegen Senawong

Mentored by Sheila Singh
Sociology

Perceptions of Comparative Mind-Body Interventions Among Pregnant Women in Texas

Karina Serrano

Mentored by Chakema Carmack
Psychological, Health, & Learning Sciences

Understanding How to Address Cervical Cancer Disparities in African American and Hispanic Populations

Sheel Shah

Mentored by Pranav Parikh
Health and Human Performance

Contribution of Weight Asymmetry to Balance Control in Stroke

Layla Shawareb

Mentored by Daniel Price
Honors

Using SAM to Model the Prevalence of Preeclampsia, its Risk Factors, and Mortality

Angela Shipman

Mentored by James Meen
Chemistry

Influence of Metals' Redox States on Lunar Evolution

Tuba Shiwani

Mentored by Alison Leland
Honors

Borneo Bird Sexing at the Smithsonian National Park

Tuba Shiwani

Mentored by Marcel de Dios

Psychological, Health, and Learning Sciences

Religious Identity and the use of Alcohol and Marijuana in a Sample of diverse Young Adults

Khushboo Shukla

Mentored by Daniel Price

Honors College

Unfolding the Reality of the Pandemic: A Comparative Study of Changes in Mental Health Before and During the Pandemic

Sharon Siby

Mentored by Jacqueline Hawkins

Educational Leadership and Policy Studies

Professional Development for Mentors: Increasing the Creativity and Critical Thinking Abilities of Mentees

Nabeela Siddeeqe

Mentored by Daniel Price, Andrew Kapral

Honors College

Detailing Re-Entry Challenges Faced By Formerly Incarcerated Women

Raima Siddiqui

Mentored by Shaefali Rodgers

Psychology

Topical Mast Cell Stabilizer Cromolyn Sodium Reduces Post-burn Hypertrophic Scars in the Female Red Duroc Pig

Sameer Sidiq

Mentored by Andrew Kapral

Engaged Data Science

Evaluating the Impact of Uncompensated Care Reimbursement on Texas' Rural Hospital Closures

Steven Soriano

Mentored by Rodolfo Ostilla-Monico

Mechanical Engineering

Direct Numerical Simulation of Normal Vortex-Blade Interaction

Damon Spencer

Mentored by Daniel Onofrei

Mathematics

On Passive Backscatter Cloaking In One Dimensional Oscillation Phenomena

Robert Stephen

Mentored by Michihisa Umetani

Biology and Biochemistry

Brown Adipose Tissue and 27-Hydroxycholesterol: An Energy Expenditure and Morphology Study of Brown Adipose Tissue

Elise Steward

Mentored by Maria Burns

Supply Chain and Logistics Technology

TSA & Airport Security: A case on weapons smuggling in the U.S.

Seth Stokes

Mentored by Art Smith

Global Energy Management Institute, Finance Department

Vaca Muerta's Role in the Energy Transition

Carl Suerte

Mentored by Brigitte Dauwalder

Biology and Biochemistry

Two prototype genetically encoded Ca²⁺ indicators**Irisha Suhaimi**

Mentored by Art Smith

Finance

"New Energy Era" – The Rise Of Sustainability Initiatives And Strategic Alternatives In The Oil & Gas Industry

Nicholas Summerfield

Mentored by Anthony Timmins

Department of Physics

Viscosity Of The Quark Gluon Plasma – Nature's Most Perfect Fluid

Neha Sunkara

Mentored by Michelle Belco

Honors College

An Investigation of the Food Insecurity Status and Health Disparities of Houston Food Distribution Organization Clientele

Ali Hamza Abidi Syed

Mentored by Andreas Mang

Mathematics

Optimization and Optimal Control in Machine Learning

Sara Syed

Mentored by Marcel de Dios

Psychological, Health, and Learning Sciences

Religious Identity and the use of Alcohol and Marijuana in a Sample of diverse Young Adults

Yaseen Syed

Mentored by Andreas Mang

Mathematics

Fast Evaluation of Kernel Distances

Matthew Taing

Mentored by Lorraine Reitzel

Psychological, Health, & Learning Sciences

Implementation of a Comprehensive Tobacco Free Workplace Program in Agencies Serving the Homeless and Vulnerably Housed

Conlan Taylor

Mentored by Aaron Becker

Electrical and Computer Engineering

Localizing an RF Transmitter using Received Signal Strength

Elaine Tran

Mentored by Daniel Price
Honors College

Estimating Health Education Instructional Time Within a Texas Public School District

Elaine Tran

Mentored by Andrew Kapral
Engaged Data Science

Estimating Health Education Instructional Time Within a Texas Public School District

Jessica Tran

Mentored by Sanghyuk Chung
Biology and Biochemistry

HDAC Inhibitor TSA Induces Cell Death and Morphological Changes in Cervical Cancer Cells

Olivia Tran

Mentored by Gomika Udugamasooriya
Pharmacological and Pharmaceutical Sciences

Optimizing Dimer Linker Length of an Anti-Cancer Peptoid Drug-Lead

Olivia Tran

Mentored by Marc Hanke
Honors College

Improving Healthcare Access via Community Ties in Houston's Third Ward

Phuongthy Tran

Mentored by Bradley Smith
Psychological, Health, and Learning Sciences

The Effects of a Writing Tutoring Program on 5th-Grade Academic Performance at a Low-Income Elementary School in HISD

Phuongthy Tran

Mentored by Chandra Mohan
Department of Biomedical Engineering

The role of genetics and the environment in systemic lupus erythematosus pathogenesis: A review of the past decade

Viet Trinh

Mentored by Jaspal Subhlok
Computer Science

Development of integrated search of VideoPoints

Mallika Tripathy

Mentored by Chandra Mohan
Biomedical Engineering

Inhibiting Fatty Acid Amide Hydrolase (FAAH) Induces Apoptosis in Breast Cancer Cells

Pichvyda Tuy

Mentored by Nouhad Rizk
Computer Science

Using Clustering Techniques to Classify Self-Efficacy of Women in Computer Science

Jaden Urdiales

Mentored by Andrew Pegoda
Women's, Gender, and Sexuality Studies

Twitterstorians: An Examination of History as it is Portrayed on Social Media

Patrick Uwaezuoke, Jr.

Mentored by Maria Burns
Supply Chain and Logistics Technology

TSA & Airport Security: A case on weapons smuggling in the U.S.

Ariatna Vaglienty Gonzalez

Mentored by Linda Garcia Merchant; Lorena Gauthereau
Arte Público Press; US Latino Digital Humanities

Digital Timeline of the League of United Latin American Citizens

Varshini Vakulabharanam

Mentored by Brigitte Dauwalder
Biology and Biochemistry

Juvenile Hormone in Male Courtship

Manushi Vatani

Mentored by Daniel Price
Honors

The Role of Language Barriers in Cancer Screening & Diagnosis

Paul Vaughan

Mentored by Steven Craig
Economics

Against Many Tides: The Impact of the Great Recession, Gig Work & COVID-19 on the Millennial Workforce

Paola Velasco

Mentored by Vanessa Patrick
Marketing

Breaching the Luxury Real Estate Market

Veera Venkata Ramprajwal Vempatti

Mentored by Lars Grabow
Chemical and Biomolecular Engineering

Passive NOx Adsorption - Pd/ZSM-5

Tung Vu

Mentored by Bhavin Sheth
Electrical & Computer Engineering

Exploration of The Relationship Between Rapid Eye Movement Sleep and Slow Wave Sleep through Electroencephalogram Data

Jaelynn Walls

Mentored by Natilee Harren
Art History

Contemporary Black Portraiture and the Vitality of Self-Making

Mallory Walters

Mentored by Kristen Capuozzo
Psychology

Examining the Relationship between Sleep Problems, Trauma, Anxiety and Executive Function in Youth during Inpatient Psychiatric Treatment

Brandon Warner

Mentored by Daniel Price
Honors

Race, Class, Gender and COVID-19: Identifying barriers along paths leading to equitable health outcomes

Josiah Willingham

Mentored by Alexander Statsyuk
Medicinal Chemistry

Using multi-step Chemical Synthesis to Form Covalent Protease Inhibitors

Olivia Wren

Mentored by Alan Brandon
Earth and Atmospheric Science

Nd & Sr isotopes from the Mid Cenomanian Event (MCE) derived from the Eagle Ford Group, West Texas

Michael Yannuzzi

Mentored by Aaron Becker
Electrical and Computer Engineering

Localizing an RF Transmitter using Received Signal Strength

Sharon Zachariah

Mentored by Jeff Feng
Industrial Design

The Role of ERG Gene in Prostate Cancer

Yusef Zaidi

Mentored by Tracey Ledoux
Health and Human Performance

Carotenoid Measurement in Infant Formula Using a Validated Analytical Method

Samiha Zaman

Mentored by Bradley Smith
Psychological, Health, and Learning Sciences

Evaluating ImpACT in KIPP Charter Schools

Naomi Zidon

Mentored by Robert Cremins
Honors

Agnes Varda and the Reinvention of the Flaneuse: The Movement through Paris

2021 HOUSTON SCHOLARS PRESENTATIONS

This year's 2020-2021 Houston Scholars theme is "Inequality: Creating a More Equitable Houston." Participants identified and researched contemporary problems ranging from income disparity, poor infrastructure, lack of access to affordable healthcare, racial discrimination, and many other subjects. During Undergraduate Research Day, Houston Scholars will present policy proposals to address such challenges during a series of virtual pitch parties.

Carlos Fuentes
Carlos Patterson
Sarah Randall

The Solution To Unaffordable Pharmaceuticals And Their Negative Impacts

Abby Chopra
Abdullah Syed
DeBorah Thomas

Dollars for Scholars

Mark Hanna
Jordan Pemberton

Addressing Generational Wealth Disparities and the Widening Wage Gap

Cade Coligan
Dima Ghazala
Katy Aing

Language Disparities among Houstonian Immigrants

Ricardo Del Rio
OrEl Meir
Salar Sanati

Community Based Emissions Testing in Fenceline Neighborhoods

Patrick Sanchez
Daniel Lee
Sabah Shaikh

Disparities Impeding Student Success within HISD

Hemish Thakkar
Amritha Siby
Amaris Barbio-Tarco

Addressing Affordable Housing

Jocelyn Ramos
Neha Joshi
Sondos Moursy

Career Development for Underprivileged Students

Jamie Rose
David Paul Hilton
Kala Pham

Providing Accessible Healthcare to Houston's Homeless Population

Nikki Hammond
Baycha Isik
Kiran Khan

How childcare can bridge the gender gap in STEM

Zaina Boriek
Amber Jozwiak

Improving Housing Deficiency for Low-Income Families via Environmentally Sustainable Methods

Joaquin Gonzalez
Jennifer Gray
Kristen Harris

Targeting Environmental Inequity: Water Quality



“Through this opportunity I was able not only to learn new skills but also apply what I have learned throughout my undergraduate career and cement a great relationship with my faculty mentor. I will use this opportunity to further build on my academic arsenal and take on more projects in the future.”

Omar Harb

Mathematical Biology Major
PURS Recipient




“I am extremely lucky to be able to get a head start on research. I am aiming to write something both informative and interesting. To all and anyone who wants to research, DO IT!”

Queen Epomba

Public Health and Chinese Studies Major
SURF, Mellon Research Scholar

THE OFFICE OF UNDERGRADUATE RESEARCH AND MAJOR AWARDS


Whatever your research interests are, the Office of Undergraduate Research and Major Awards can get you connected and starting your research project today.

A portrait of Pierce Popson, a young man with glasses and a red face mask, wearing a white shirt and a dark blue blazer. He is standing in front of a wooden wall.

“The chance to conduct research as an undergraduate does a great deal to prepare you for the life that awaits you after your undergraduate career. This opportunity has allowed me to see the many pathways after my degree, like Ph.D. and M.D. programs that will allow me to create the impact I want to see in the world.”

Pierce Popson

Biochemical and Biophysical Sciences Major
PURS Recipient

A portrait of Ariel Durham, a young woman with glasses and a red sweater, smiling. She has dark hair and is wearing a red crew-neck sweater.

“OURMA has allowed me the wonderful opportunity to discover what research looks like within the humanities. The process of conducting research has become more feasible and approachable. I have been able to make great connections with faculty and my peers.”

Ariel Durham

History Major
HERE, SURF, Mellon
Research Scholar

University of Houston
The Honors College
Office of Undergraduate Research and Major Awards
M.D. Anderson Library
4333 University Drive, Room 212
Houston, TX 77204-2001

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