Student & Faculty Research Networking Panel
3:00 pm-4:00 pm
MSC Bethancourt Ballroom (2300 E)
#1 James Fluckey

**Muscle Biology Laboratory**
James D. Fluckey, PhD, Professor
Health and Kinesiology
College of Education and Human Development

**Graduate Students of the MBL**
Jessica Cardin, MS
J. William Deaver, MS
Chelsea Goodenough, MS
Colleen O’Reilly, MS
Matt Bird, BS

**What we study:**
Skeletal Muscle is one of the largest and most influential organs in the body

Muscle Growth: A delicate balance of signaling cascades influences hypertrophy and atrophy of skeletal muscle

**Understanding how it works:**
- Insulin
- Growth Factors
  - mTOR
  - AKT
  - AMPK
  - ERK
  - S6K
  - S6

**Where we look:**
- Cell Culture
- Animal Model
- Human Model
- Human Application in Health and Disease

**Exercise**
- Space
- Cancer
- Diabetes

**ATROPHY**
- Muscle Fiber
- Nucleus
- Myonuclear Loss
- Myofibrillar Proteins
- Myofiber CSA

**HYPERTROPHY**
- Myonuclear Additions
- Myofibrillar Proteins
- Myofiber CSA

![Muscle Diagram](image-url)
Dr. Katherine Unterman, History Department History-TAMU School of Law-LAUNCH:UGR partnership

Research Focus: Legal History

2017-18 Project: “Litigating Women: The Path to Intermediate Scrutiny in American Law” (with Claye Epperson ‘18)
Christopher M. Quick, Ph.D.
Veterinary Physiology and Pharmacology
My research area: Cardiovascular Physiology

My research focusses on mathematically modeling the cardiovascular system in healthy and disease states. There are multiple research opportunities working with me or other faculty within three programs:

**Aggie Research Scholars Program**

aggieresearch.tamu.edu

**Certificate Program**

Certificate in Biomedical Research

ATM

BiomedicalResearchCertificate@tamu.edu

- Research is performed in teams
- All majors welcome
- No GPA requirement

**UG Summer Program**

ricu.tamu.edu
Undergraduate Research in the Department of Biology

www.bio.tamu.edu
Undergraduate Research
Dr. Malini Natarajarathinam

- Department of Engineering Technology and Industrial Distribution
- Research areas – Improving processes
  - Operational engineering and management science
  - Challenges and Opportunities in Industrial Distribution
  - Optimizing the value of learning methodologies
- Current UGR
  - Aquaponics for Space Exploration: Evaluation of Resource Requirements
  - Challenges Inhibiting Malaria Aid in the Democratic Republic of the Congo
  - Motivating STEM Participation through a "Making as Micro-Manufacturing" Model.
Dr. Jinsil Hwaryoung Seo
Soft Interaction Lab
Department of Visualization

- **Research Focus:**
  - Interactive Art/Design focusing embodied interaction in mixed reality

- **Research Opportunity**
  - Developing creative technologies for children or older adults
  - Intergenerational Relationship through Interactive Art Creation
  - Mixed Reality Learning Tool for Science Education
  - Interactive Performance
Opportunities with…
The Network for New Media, Religion & Digital Culture Studies
http://digitalreligion.tamu.edu

Heidi A Campbell
Department of Communication
Looking for Research Assistants with an Interest in Digital Media & religion

Network Assistant- Writing & Editing for Online Resource Center

Project 1 Assistant- Translating Media Theory For Religious Audiences/Theologians (Visual Podcasting Experience Required)

Project 2 Assistant- How Popular ideas of Religion Are Framed WITHIN INTERNET MEMES
Research in the Department of Psychology focuses on understanding the role of biological, social and psychological factors in how we behave.

We offer a number of research opportunities to undergrads including participation in 485/491 directed studies.

For more information you can contact Psychology advising at 979-845-7146.
Focused on how proteins come together to assemble the Nuclear Pore Complex:
  How is assembly ordered?
  How is assembly restricted to the correct membrane?
  What factors regulated the process?

Accept students enrolling in either BIOL 291 or BIOL 491
Researchers: Dr. Gabriela C. Zapata (Hispanic Studies, gzapata@tamu.edu), Dr. Jyotsna Vaid (Psychology), and Dr. Patrick Bolger (Psychology and Hispanic Studies), co-directors of the Applied Psycholinguistics and Cognition Lab (Academic 203)

Research Focus: Bilingualism (language processing in early and late bilinguals)

Research opportunity: A psycholinguistic investigation of Spanish-English bilinguals’ language competence using the visual world eyetracking approach: This project relies on the use of the visual world eyetracking paradigm to investigate the linguistic and social/pragmatic cues on which Spanish bilinguals rely in order to interpret meaning in social interactions to perform language functions. We focus on early and late bilinguals, exploring the relationship between social context of acquisition and pragmatic competence. This opportunity involves training in the use of an eyetracker and the visual world paradigm with linguistic data, including specifics related to data collection and analysis.
#11 David Threadgill

**Genetics**
- Island conservation
- Disease vectors

**Gastrointestinal Diseases**
- Colon cancer
- Irritable bowel syndrome
- Colitis
- Microflora

**Environmental Exposure**
- Diet
- Toxicants
- Drugs
- Infectious diseases

**Signaling Pathways**
- EGFR
- ERBB3
- PTEN
- CTNNB

**Resource Development**
- Knockout models
- Collaborative Cross
- Induced pluripotent stem cells

*Threadgill Lab*
[www.mouselab.org](http://www.mouselab.org)
Tatevik Sekhposyan
Department of Economics
EUROP - Economics Undergraduate Research Opportunities Program

• A flexible, part-time program with a Department of Economics faculty member assisting student-led research.
• Participation in Econ 491 courses in Fall and Spring semesters (6 hours total of upper-level ECON elective credit—counts toward residency).
• Culminates in a paper suitable for submission to an undergraduate research conference or a peer-reviewed economics journal.
• For more information, please consult https://econ.tamu.edu/europ/
Robert M. Capraro
Teaching Learning and Culture

Research Focus: STEM Teaching and Learning in Formal and Informal Settings

Research Opportunity: STEMulating Instructional and Assessment Strategies: Co-constructing Solutions in K-12 settings.

Research team members will work collaboratively to explore how learning to design and structure, learning activities to improve interest, motivation, and success in mathematics.

Meet the
Faculty: Drs. Luciana Barroso, Lynn Burlbaw, Mary Margaret Capraro
Graduate Students: Danielle Bevan, Eliel Hinijosa, Rachel Martin, Katherine Vela
#14 Samuel Merriweather

LSAMP
LOUIS STOKES ALLIANCES FOR MINORITY PARTICIPATION

GRADUATE INTEREST GROUP (GIG)
GRADUATE SCHOOL
GIG BENEFITS

WWW.TAMUSLSAMP.ORG/GIG

SEMINARS • SYMPOSIUMS • WORKSHOPS • AND MORE

PRESENTED BY:
DR. SAMUEL MERRIWEATHER
S_MERRIWEATHER@TAMU.EDU
(979) 862-1070
The Profits of Distrust

Corporate drinking water kiosks in the United States

- Geo-spatial data collection & analysis
- Qualitative field research
- Policy implications

Manny Teodoro & Samantha Zuhlke
Political Science
Environmental Policy & Politics
Research Experiences for Undergraduates

The program seeks to attract a diverse pool of talented students into careers in science and engineering and to help ensure that they receive the best education possible.

690 Sites
NSF Programmatic Areas
All 50 states, DC, Puerto Rico, some international programs

- Typically 8 – 10 week summer programs
- Students get stipends + usually assistance with housing and travel
- Must be US Citizen or permanent resident
- Specific research project; work with faculty mentor
- Usually about 10 students per site
- Apply individually to different programs

Applications
typically due Feb-March (international programs have earlier deadlines)
Transcript, personal statement, letters of recommendation

Holly C. Gaede; Department of Chemistry
Goal: Provide research opportunities that cross barriers of majors / classifications / semesters

Team Approach:
- Multidisciplinary teams
- Seniors to freshman teams
- Faculty / graduate student mentors

Benefits to Students:
- Gain valuable knowledge and skills
- Gain experience in working on multidisciplinary teams
- Work closely with faculty and graduate students
- Work on exciting research projects
- Eligible to participate in NSF I Corps Sites program
- Earn course credit

Participant Data:
- 1,795 registrations, since 2012
- 212 participants for 2017 fall
- 40% seniors, 32% juniors
- 21% sophomores, 7% freshman
The purpose of these studies is the discovery of nutrients and nutritional patterns associated with high level cognitive performance in context of fitness exercise and elite sport performance.

We are looking for undergraduates who want conduct human research in a dynamic, team based effort that requires leadership and initiative. Students may receive 491 credit and we encourage participating in Undergraduate Research Scholars program and presenting at conferences.
#19 Roozbeh Jafari
#20 Joelle Muenich

Early Graduate Admissions Program

- Apply early for graduate school at Texas A&M
- Admission decision by fall semester of senior year
- Open only to USRG or REU students
Mark Holtzapple
Department of Chemical Engineering
m-holtzapple@tamu.edu

Research Focus: Sustainability
Research Opportunity: Carboxylate platform for producing fuels and chemicals
Prof. Jorge L. Alvarado
Department of Engineering Technology and Industrial Distribution (ETID)

Research Focus: Enhanced condensation for heat transfer applications

Research Opportunity: Enhanced Dropwise Condensation Using Soundwaves

Description: Student will conduct condensation experiments using an already-instrumented condensation cell. The condensation cell consists of a Peltier cooling cell, sound speaker, and heat transfer and acoustic instrumentation. Student will explore the effects of first resonance modes on droplet shedding and condensation rate on hydrophilic and hydrophobic surfaces.
#23 Melissa Grunlan

Prof. Melissa Grunlan
Polymeric Biomaterials

**Self-Fitting Shape Memory Polymer Foams to Heal CMF Bone Defects**
Alternative to autografting and bone substitutes to treat cranio-maxillofacial bone defects


**Regenerative and Replacement Osteochondral Plugs**
Alternative to autograft strategies to treat defects in joints.


**Anti-fouling Coatings**
Surface modifying additive to reduce biological adhesion processes on medical devices and marine structures.


**Self-Cleaning Membranes for Implanted Glucose Biosensors**
Reducing membrane biofouling to increase lifetime of implanted continuous glucose monitors.


Melissa A. Grunlan, Ph.D.
Phone: 979-845-2406
mgrunlan@tamu.edu
grunlanlab.tamu.edu
#24 Svetlana Sukhishvili

Professor Svetlana Sukhishvili
Department of Materials Science and Engineering

Project Advisors: Victoria Albright, Hanna Hlushko and Victor Selin

Research Opportunities in Layer-by-Layer Coatings:

Studies:
- Self-Assembly
- Adsorption
- Adhesion
- Wettability

In application to:
- Antibacterial Films (Victoria Albright)
  - Controlled drug release studies
  - Coating stability in biological fluids
- Anticorrosion Coatings (Hanna Hlushko)
  - Antioxidant performance
  - Mechanism of corrosion
- Fundamental studies of hydrogen-bonded films (Victor Selin)
Q fever: Host-Parasite Interaction

James Samuel, Professor and Head
Microbial Pathogenesis and Immunology
College of Medicine

**Research Opportunities**

How is *C. burnetii* replication in infected host contained? **Vaccine development:** Assist current vaccine candidate analysis.

What adaptations has *C. burnetii* evolved to allow replication in the parasitophorous vacuole (PV) and cause disease? **High throughput genetic screens, T4SS effector mechanisms of action.**

What are pathogenic strategies/determinants leading to differences in acute and chronic disease in humans? **Innate sensing and macrophage polarization.**

Pathogen Model: Stealth pathogen by avoiding innate killing mechanisms

**Experimental tools to address these questions**
- Animal models of disease
- New genetics and extracellular culture tools
- Biochemical analysis/cell biology
- Comparative genomics/proteomics/microarray
Dr. Daniel W. Goldberg
- Assistant Professor
- Texas A&M Department of Geography
- Texas A&M Department of Computer Science & Engineering

Dr. Tracy A. Hammond
- Professor
- Texas A&M Department of Computer Science & Engineering

Dr. Jennifer Horney
- Department Head
- Texas A&M Department of Epidemiology & Biostatistics

http://cyberhealthgis.tamu.edu
Faculty:
daniel.goldberg@tamu.edu
thammond@tamu.edu
horney@sph.tamu.edu

Looking for students from:
- Geography/GIS/Mapping
- Computer Science
- Pre-Med, Public Health, Bio

You will:
- Work in interdisciplinary teams
- Be guided by interdisciplinary faculty
- Complete a research project

Why us:
- Learn interdisciplinary research and practice
- Work on important & hard problems affecting people
Ranjeet Dongaonkar

Department of Vet Physiology & Pharmacology

**Research focus**-
- We study the lymphatic system, composed of lymphatic vessels, nodes and organs, required for regulation of tissue perfusion and homeostasis, and transport of immune cells and lipids.
- We use multidisciplinary approaches to understand principles of lymphatic transport and its contribution to organ function under normal and diseased conditions.

**Name of the opportunity**: Michael E. DeBakey Undergraduate Research Program

**Description**-
- One of the earliest undergraduate research programs with special emphasis on production of publishable research in physiology
- Opportunity to work on an original research project in a team led by an experienced undergraduate, graduate or postdoctoral team leader
- Participate in every aspect of experimental research including designing experiments, developing protocols, performing experiments using isolated vessels, collecting and analyzing data
- Expected to present research findings at regional/national conferences and annual meetings
#28 Amorette Young

Sociology of Law, Community, Food Sustainability
T. Amorette Young, MA & Dr. Sarah Gatson, PhD
Sociology Department

Everybody Eats

Urban Re-Rural: Community Food Security in the Brazos Valley: A Participatory Action Ethnography

http://everybodyeats.tamu.edu/category/research/
Beverly J. Irby, College of Education and Human Development

Research Focus
- Women in Educational and STEM Leadership (National and International)
- Women and Girls International Educational Issues
- Bilingual/Dual Language Curricular and Administrative Issues
- Literacy-infused Science for English Learners and Economically Challenged Students
- Mentoring in Education, National and International
- Massive Open Online Professional Individualized, Independent Learning

Any of the above are research opportunities
Hsiao-Hsuan “Rose” Wang

- **Ecological Systems Laboratory, Department of Wildlife and Fisheries Sciences**
- **Research focus:** Developing analytical techniques for characterizing the resulting patterns over a range of spatial and temporal scales as a means of identifying critical, pattern-forming ecological processes. The topics range from endangered species management to management of invasive species to management of vectors of emerging diseases.
- **Name of your research opportunity:** WFSC 291/491 Research
- **Description of your research opportunity:** The Undergraduate Research Program in the Ecological Systems Laboratory aims to demonstrate the advantages of collaborative research. In this program, undergraduate students participate in ecological research with an emphasis on enhancing their quantitative and computational skills through hands-on experience collecting, organizing, analyzing and interpreting ecological data. The overall goal is to enhance their ability to develop as researchers in ecology and related fields.
#32 Michael Withers

- **Name**: Michael Withers
- **Department**: Department of Management, Mays Business School
- **Research focus**: Strategic Management and Entrepreneurship
- **Name of research opportunity**: Individual Entrepreneurial Propensity
- **Description of your research opportunity**: We are conducting a multiphase research project exploring entrepreneurial activity and new venture creation. In part, we are examining the research question: What drives individuals to become entrepreneurs?
Mary Campbell
Sociology
Racial/Ethnic Inequality
Undergraduate Research Fellow for the Texas Diversity Survey

Using the 2015 Texas Diversity Survey and Census data, examine patterns of Latinx identification and inequality in different regions of Texas.
Students will look to expand the possibilities of immersive user interfaces and human activity recognition algorithms to advance education and health. Students will look at more sophisticated ways to interpret sensor data and provide users with better insight into their daily lives.
**Cory Arcak**
Director, MSC L.T. Jordan Institute for International Awareness

**MSC L.T. Jordan Fellows Undergraduate Research Program**

Selected undergraduate Jordan Fellows will work in partnership with the Texas A&M Honors Undergraduate Research Program in a two-year international research program. The first year of the program consists of the completion of the L.T. Jordan Fellows program, including the international research and post-trip reflection, and the second year working with a faculty mentor to write an undergraduate thesis through the Undergraduate Research Program.
#36 Brett Mitchell

TAMHSC COLLEGE OF MEDICINE
SUMMER UNDERGRADUATE RESEARCH PROGRAM

Director: Brett Mitchell, PhD
Dept. of Medical Physiology

Pick a Mentor to work with in the field of your interest

Cancer, Cardiovascular, Clinical Science Research, Immunology,
Medical Microbiology, Molecular Medicine, Neuroscience

$4,000 stipend for the 10 week program if selected
#37 Jennifer Marshall

Dr. Jennifer Marshall

- The Munnerlyn Astronomical Instrumentation Lab designs and builds scientific instruments for professional telescopes around the world
- We love to work with undergraduates of all majors!
#38 Luiza Aparecido

2018 Costa Rica Summer REU
(Research Experience for Undergrads)

PI: Dr. Georgianne Moore → Dpt of Ecosystem Science and Management
Co-PI: Dr. Kelly Brumbelow → Dpt of Civil Engineering
For more information, visit: http://costaricareu.tamu.edu/

- Research focus: Earth or Environmental sciences → Ecology, Hydrology and Climatology

- Opportunity:
  - 10-week international experience for undergrads in a montane forest in Costa Rica and at Texas A&M (College Station)

- Program Goals:
  - Improve skills in critical thinking, problem solving, communication and collaboration through participation in basic and applied field-based research;
  - Increase awareness of the interconnection between forests, water and people, and the impacts of forest and water management;
  - Provide students with cultural experience → “Enter the community”
Research opportunities in the Department of English
ENGL 481 Senior Seminar
Capstone course in which students pursue individual research projects

Honors program
2 semester program in which students do research under the supervision of English faculty and submit an honors thesis

Independent study
Students mentored by faculty

English Dept Study Abroad Research Scholarship
Provide the opportunity for English undergraduates engaged in an undergraduate research project to travel abroad for archival research, summer courses or workshops, and humanities oriented internships that will support their research project. Available annually to all English majors of high achievement (> 3.0 GPR) who are engaged in undergraduate research.

• Linda H. and Paul A. Parrish Endowed Scholarship for International Study
  - Supports English majors studying or carrying out a research project outside of the United States.
#40 Bruce Gooch
Dr. Daniel Alge  
Department of Biomedical Engineering  
dalge@tamu.edu  
Opportunities available through AggiE_Challenge (ENGR 491)

**Hydrogel Microspheres to Guide Tissue Regeneration**

- Tunable, modular building blocks
- Microporous structure
- Can engineer cell-microgel interactions

Other Opportunities in Biomedical Engineering:

- Work in labs developing point-of-care devices, non-invasive biosensors, organs-on-a-chip technology, shape-memory polymer foams, tissue printers, microscopes and imaging systems, and more
- More AggiE_Challenge projects (ENGR 491)

[PATHS-UP](https://engineering.tamu.edu/biomedical)  
Precise Advanced Technologies and Health Systems for Underserved Populations
#42 Camille Peres

Dr. S. Camille Peres peres@tamu.edu
Environmental & Occupational Health
Research on the Interface between Humans and Machines

Emergency Incident Management: Teams, Resilience, & Technology

CAUTION
WARNING
NOTICE

Predicting Procedural Adherence

Driller Situation Awareness

TASKS:
- Data entry
- Data processing
- Data analysis
- Writing
- Data collection

Human Factors & Offshore Safety
The Human Centered Design Research Lab at its core is an interdisciplinary, STEAM based, creative and project-led research environment.

We actively engage in promoting visual communication values as key components for scientific research and research dissemination.

For more information please contact Anatol Bologan
Email: abologan@tamu.edu
TAMU Race, Identity, & Social Equity (RISE) Conference and Fellowship

TAMU Race Identity and Social Equity (RISE) Initiative, formally known as the Student Diversity Summit, is a yearlong program that provides students with a better understanding of race, identity and social equity in higher education.

The inaugural TAMU RISE Conference will take place on Friday, February 2, 2018. For more information, contact TAMURISE@tamu.edu

Apply by November 1.
Click to add your credits

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