128th Annual Meeting

Feb 28 – Mar 1, 2025 Waco, Texas

TAS

Texas Academy of Science

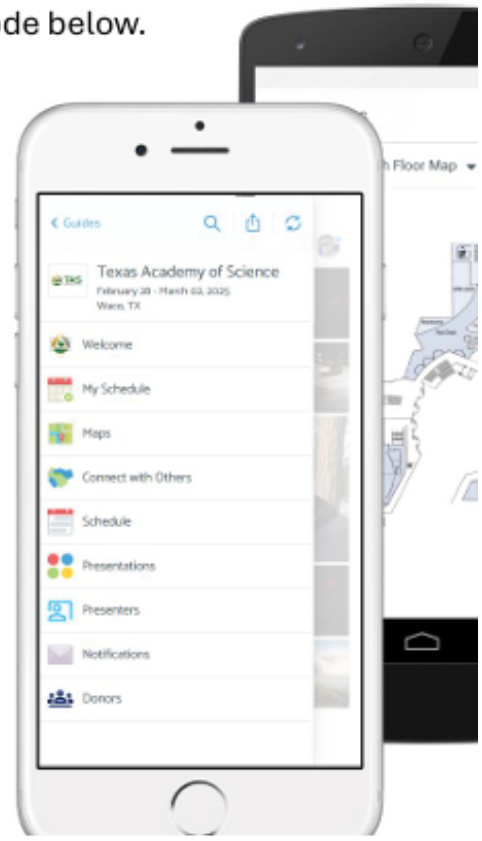
BAYLOR UNIVERSITY

McLENNAN COMMUNITY COLLEGE

Official Program

The Texas Academy of Science 128th Annual Meeting has gone mobile!

Download the free app using QR code below.



1. Tap “download the app” to access the guide on your iOS or Android device.
2. Open the app “Ex Ordo”
3. To load the guide, tap “search’.
4. At the bottom of the search screen, tap the button that says “Have a passphrase?”
5. Use the passphrase: **tas2025**
6. When prompted, choose download the guide.

If you have an Ex Ordo account (you submitted an abstract) you can login to the app using that account and password for increased personalization, however this is not required.

Welcome from the TAS President

I am excited to welcome everyone to Waco for the 2025 Annual Meeting of the Texas Academy of Science! Located in the heart of Texas, Waco is a dynamic and rapidly evolving community – if you haven't been here lately, you may be astonished by our growth.

While we are all here for the science, I believe that this meeting will also show off our city, with events being held on the beautiful campuses of both McLennan Community College and Baylor University. The awesome cooperation between these two institutions has made this meeting possible!

It is important to recognize the people who really put together this meeting. The local organizers – Professors Shannon Hill (MCC) and Christie Sayes (BU) – have been working non-stop to organize the venues and logistics that are so critical to the success of this meeting.

Alongside the local organizers, our President-Elect Maria Burns (UH) has done an awesome job organizing the meeting program – putting 334 submitted presentations together with two great award lectures and numerous other activities to fill your days in Waco to the brim. Numerous others have helped as well, with my personal thanks to the TAS 'Coordinator of IT' Professor Christopher Vitek (UTRGV) who always keeps the wheels on the bus...

Have a GREAT meeting – I am looking forward to seeing the great science that everyone is bringing to share in WACO!

Sincerely,

Robert R. "Bob" Kane, Ph.D.
President, Texas Academy of Science
Department of Chemistry and Biochemistry,
Baylor University

CITY OF WACO

Jim Holmes
Mayor
PO Box 2570
Waco, Texas 76702-2570

T: (254) 750 5750
waco-texas.com

17 February 2025

Greetings,

On behalf of the City of Waco, I am pleased to welcome you to our vibrant city. We are glad that you traveled to Waco for the Texas Academy of Science Annual Meeting, taking place February 28 through March 1, 2025.

It is my hope that you will have a memorable time, and visit some of the attractions, try out our restaurants, and enjoy the shopping that Waco has to offer. The area around downtown and the Silo District continues to grow and thrive, with new shops and restaurants opening each week.

Waco provides many options for entertainment and fun. While you're here, be sure to check out some of Waco's most interesting attractions: Waco Mammoth National Monument, Texas Ranger Hall of Fame & Museum, Dr Pepper Museum, Texas Sports Hall of Fame, Cameron Park, and Cameron Park Zoo, as well as all the other great attractions that make Waco so unique. Our downtown is one of the most walkable in the state, with shopping, restaurants, and entertainment just steps away from our downtown suspension bridge.

The City of Waco is honored to host you while you share your exciting scientific discoveries with your colleagues and network with this great group of Texas scientists. Again, we are pleased to have you as our guests and wish you and your group a wonderful time in Waco!

Sincerely,

Jim Holmes
Mayor
City of Waco

UNIVERSITY OF HOUSTON

Welcome from the Program Chair

Dear Members and Colleagues of the Texas Academy of Science,

It is my distinct pleasure to welcome you to the 128th Annual Meeting of the Texas Academy of Science, hosted jointly by Baylor University and McLennan Community College in the vibrant city of Waco, Texas. This year's meeting promises to be exceptional, with a record number of presentations and posters showcasing the outstanding scientific work being conducted across our state.

Kudos to Robert R. "Bob" Kane, Ph.D., our current TAS President, for his vision, leadership, and immense support. TAS comprises an amazing team of Directors and individuals. Thank you to our local hosts, Dr. Christie Sayes of Baylor University and Dr. Shannon K. Hill of McLennan Community College, for their generous hospitality and meticulous planning. Thanks to the TAS Board of Directors, Section Chairs, and Vice Chairs for their excellent job; Dr. Gerald J. Mulvey, TAS Development Chair, whose efforts secured valuable industry sponsorships; Dr. Christopher Vitec, our IT Director, whose technical expertise was invaluable throughout the planning process; Dr. Kathy Wood, our Treasurer, for her wisdom and guidance; Dr. Craig Younce, our VP, for his support.

We all look forward to promoting the work of TAS through engaging discussions, inspiring presentations, and the opportunity to reconnect with colleagues while forging new professional relationships. Thank you for being part of this exciting gathering of Texas's scientific community.

Warmest regards,

Marcella Burns

Maria "Marcella" Burns, Ph.D.
TAS President Elect (2024-2025)
Academic Director TLIM, and Faculty Information Science Technology Department
University of Houston

Baylor University

Welcome from the Host University

February 19, 2025

Dear Texas Academy of Science Attendees,

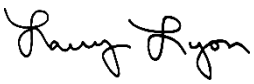
On behalf of the Graduate School and Baylor University, it is my sincere pleasure to welcome you to the Hurd Center for this Texas Academy of Science meeting. We are delighted to host this exciting event that brings together students and faculty from across the state.

We especially look forward to the presentations by our Outstanding Texas Educator, Mark Rogers of Austin Achieve Public Schools, and our Distinguished Texas Scientist, Dr. Jingbo Louise Liu, Professor of Chemistry at Texas A&M University-Kingsville. We thank them both for their noteworthy contributions to STEM education in our state.

We trust you will enjoy your time on campus and in Waco. Please do not hesitate to ask the Hurd or other Baylor staff for assistance during your visit. They are there to help ensure your experience is positive and memorable.

Again, welcome to Baylor University (and Sic 'em Bears!).

Sincerely,



Larry Lyon
Vice Provost and Dean of the Graduate School

MCLENNAN COMMUNITY COLLEGE

January 27, 2025

To members of the Texas Academy of Science:

Welcome, everyone! McLennan Community College is please to co-host the 2025 Texas Academy of Science Annual Meeting!

The entire Waco/McLennan Community College area is thrilled to be hosting this event for the first time, and we are looking forward to an exciting time!

The McLennan Science Department and the entire McLennan Community College family welcomes faculty and students from all over Texas to what promises to be an incredible week. If you find some time to relax along the way, we hope you will take advantage of our many entertainment venues and attractions. Here are links to a couple of websites that may be helpful: https://wacochamber.com/waco-attractions/ and https://destinationwaco.org/things-to-do/.

We are glad you are here for this spectacular event and hope you have a great time here. Enjoy the conference and have a wonderful time in Waco!

Sincerely,

Johnette McKown
President

MCLENNAN COMMUNITY COLLEGE

Welcome to McLennan Community College; we are thrilled to co-host the august membership of the Texas Academy of Science! Established in 1965, MCC sits on the bank of the Bosque River atop limestone bluffs, which are part of the Austin Chalk Formation. The dense riparian vegetation provides rich habitat for a wide-variety of species, including a robust population of greater roadrunners. We encourage you to explore and enjoy our beautiful campus!

For the first time in TAS history, the Annual Meeting is being co-hosted by 2 institutions, McLennan Community College and our esteemed neighbor downstream, Baylor University. This has been a dynamic and productive collaboration and we hope that you get the best of both worlds!

We deeply appreciate and share the Academy's mission of promoting scientific excellence and supporting student success. We hope that you find the meeting informative and fun!

Sincerely,

Shannon K. Hill, Ph.D.
Division Chair of Math and Science
McLennan Community College

Welcome from the Development Chair

Welcome to the 128th Annual Meeting of the Texas Academy of Science.

In the past years, we embarked on a new initiative to enhance recognition for our members, especially our student members. Each of our Board of Directors generously contributed to a new fund drive, with the collected funds supporting the Academy as a whole. We were also excited to introduce special conference recognitions for our TAS Fellows. These include an invitation to the Presidential Breakfast, special badge ribbons, and other acknowledgments of their achievements.

Looking ahead, we will launch a fundraising campaign to increase the number and value of awards for top student presentations at the 2025 Annual Meeting: Our goal is to encourage all students to excel in their chosen fields, thereby boosting the number and quality of STEM students entering the Texas workforce. Details of this effort will be announced later this year.

Enjoy the meeting and the beautiful city of Waco, Texas!

Gerald J. Mulvey, Ph.D., CCM
Texas Academy of Science - Member Board of Directors - Development Committee Chair
President and Chief Scientist Nighthawk Weather LLC

Welcome from the Treasurer

I am so glad that all of you have joined us this year for our Annual Conference and I hope that this time proves to be both an encouragement and a stimulus for you not only in your own work but also in your engagement with the Texas Academy of Science.

One of the things that I really appreciate about TAS is that it is an organization completely maintained by volunteers. Volunteers that already have a "day job" that keeps them extremely busy. They really don't need to add anything else to their to-do list… And yet they spend hours making sure that TAS can be one of the premier organizations in our state. Therefore, we are always looking for new people like you to help make TAS even better. Every year there are positions that we need to fill from our membership and we hope that in the future you might consider volunteering for one of these positions.

A few years ago it was my honor to serve as President of TAS. It was not something that I was seeking at the time but I'm glad that I said yes when a fellow member asked me to consider it. All in all, the 12 years that I have served TAS as President and later as Treasurer have taught me a lot and helped me make some very good friends with a variety of professionals and scientists across the state. I'm looking forward to continued association with an organization that I have grown to love and respect.

Mary Kathleen Wood

Kathleen Wood, Ph.D. (retired)
Treasurer, Texas Academy of Science

Welcome from the TAS Coordinator of Information Technology

It is my pleasure to join in welcoming you to Waco for the 128th annual meeting of the Texas Academy of Science. I can verify that a number of people have been putting a lot of effort to pull this together, so I would like to specifically recognize Dr. Maria Burns (President-elect), and our two local hosts, Dr. Shannon Hill (at McLennan Community College) and Dr. Christie Sayes (at Baylor University). All these of these volunteers, as well as many others, have done an amazing job putting this meeting together.

I would also like to thank both participating campuses – McLennan Community College and Baylor University. Without the participation of both of these institutes, this meeting would not be possible. So if you have the time please take the opportunity to say thank you to the local hosts, and certainly to the many volunteers that help make this meeting work. Lastly, I would like to recognize the volunteers within the Academy – this academy runs through volunteer efforts, including people serving on the Board, and without their work and dedication the Academy would cease to exist.

I look forward to meeting many of you, and learning some amazing science, especially from our student authors. It is my hope that our behind-the-scenes work has made this meeting as glitch-free and as smooth an experience as possible. Take your time to learn some new science, experience both campuses, and explore Waco.

Sincerely,

Christopher Vitek
Coordinator of Information Technology, Texas Academy of Science
School for Integrative Biological and Chemical Sciences
University of Texas Rio Grande Valley

About the Texas Academy of Science

History

First founded by teachers as the Academy of Science in Texas in 1880, the organization as we know it now emerged around 1929 and included a physicist, a botanist, a mathematician and two biologists as its founding members. Now, TAS publishes a peer-reviewed journal (The Texas Journal of Science since 1949), conducts an annual meeting that highlights research across 17 sections across the sciences, provides substantial funding opportunities for students (~$25,000 awarded annually) and facilitates expert testimony on policy issues related to STEM or science education. TAS membership approaches 600 individuals, with a large portion of the membership as students.

Mission

As part of its overall mission, the Texas Academy of Science promotes scientific research in Texas colleges and universities, encourages research as a part of student learning and enhances the professional development of its professional and student members. TAS possesses a complex, intriguing and long-standing educational mission.

Strategic Planning

The Texas Academy of Science (TAS) Board of Directors approved a vision for a 5-year Strategic Plan: “to increase the visibility and effectiveness of TAS in promoting strong science in Texas.” As part of that initiative, the Academy seeks to reach out to foundations and organizations that support and benefit the Texas science community. We believe that a number of opportunities exist for strategic partnerships that could bolster the impact of organizations that raise the profile of science in strategic partnerships that could bolster the impact of organizations that raise the profile of science in Texas. Our ultimate goal will be to make TAS the premier state academy in the United States;
however, this cannot be accomplished without funding from both individuals and corporations. It should also be noted that 100% of the contributions given to TAS for student awards goes directly to the award.

Baylor University, Waco (TX)

Baylor University, established in 1845, is the oldest continually operating university in Texas. This private Christian university is renowned for its commitment to academic excellence and research. Baylor offers a wide range of undergraduate, graduate, and professional programs across its 12 nationally recognized academic divisions. The university's picturesque campus spans approximately 1,000 acres along the Brazos River, providing a vibrant and supportive environment for over 20,000 students from all 50 states and more than 90 countries. Baylor is also known for its strong athletic programs, particularly in basketball and football.

McLennan Community College, Waco (TX)

McLennan Community College (MCC), located on a scenic 275-acre campus adjacent to Cameron Park and the Bosque River, offers a diverse array of educational opportunities. Established in 1965, MCC serves approximately 8,500 students each semester, providing pathways to associate degrees, certificates, and transfer programs to four-year universities. The college is recognized for its beautiful campus, outstanding architecture, and commitment to sustainability. MCC's faculty are dedicated to student success, offering personalized support and a wide range of extracurricular activities to enhance the college experience.

Waco, Texas

Waco, Texas, located along the Brazos River and I-35, is a vibrant city known for its rich history and cultural attractions. Founded in 1849, Waco has grown into a bustling community with a population of approximately 144,816. The city is home to notable landmarks such as the Waco Mammoth National Monument, the Texas Ranger Hall of Fame and Museum, and the Dr. Pepper Museum. Waco's economy is diverse, with strong sectors in education,
manufacturing, and tourism. The city also gained national attention through the popular home renovation show "Fixer Upper," which has contributed to a surge in local tourism.

Texas Academy of Science Officers 2024-2025

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Matthew Barnes
Texas Tech University

President
Bob Kane
Baylor University

President Elect
Maria Burns
University of Houston

Vice President
Craig Younce
Hardin-Simmons University

Treasurer
Kathleen Wood
Univ. of Mary Hardin-Baylor (retired)

Collegiate Academy Counselor
Milka Montes
University of Texas Permian Basin

Collegiate Academy Co-Counselor
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Chair, Board of Development
Gerald Mulvey
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2025-2026 Student Representative
Jennifer Hunt
University of Texas Permian Basin

2024-2025 Student Representative
Kristen Collier
Angelo State University

Executive Secretary
Christopher Ritzi
Sul Ross State University

Corresponding Secretary
Louise Liu
Texas A&M Kingsville

2025 Local Hosts
Christie Sayes, Baylor University
Shannon Hill, McLennan Community College

Coordinator of Information Technology
Christopher Vitek
University of Texas Rio Grande Valley

Graduate Academy Counselor
Travis LaDuc
University of Texas at Austin

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Temple College

AAAS Representative
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Temple College

2023-2026 Academic Director
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Manuscript Editor of TJS
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2024-2027 Non-Academic Director
OPEN

2023-2026 Non-Academic Director
Megan Bean
Texas Parks and Wildlife

2022-2025 Non-Academic Director
Gerald Mulvey
Nighthawk Weather LLC

Historian, TX Academy of Science
Raymond C. Mathews, Jr.
Lady Bird Johnson Wildflower Center International

Program Coordinator
Hugo A. Barrera-Saldaña
Autonomous University of Nuevo Leon
Monterrey, Nuevo Leon, México

Texas Academy of Science 2025 Awardees

Distinguished Texas Scientist

Dr. Jingbo Louise Liu

Professor of Chemistry, Department of Chemistry, Texas A&M University-Kingsville

Dr. Jingbo Louise Liu is an experienced leader in science and technology, renowned for her impactful contributions to renewable energy research and commitment to scientific innovation. With over two decades of leadership experience and a Ph.D. in Materials Science and Engineering, she bridges the gap between cutting-edge research and strategic program leadership. Her belief in education and mentorship aligns with building an inclusive scientific community, engaging scientists and engineers at all levels. Dr. Liu's approach transcends traditional boundaries, combining academic discipline with practical impact, essential for organizations meeting modern science and technology challenges. Her blend of technical understanding and strategic insight supports scientific missions and enhances organizational performance. Dr. Liu's leadership in securing funding and peer recognition showcases her exceptional caliber in stewarding innovative pursuits. As a proactive thinker and charismatic communicator, she embodies the transformative leadership essential for intellectual and technological evolution within the scientific community.

Outstanding Texas Educator

Mark Rogers

Austin Achieve, Austin Texas – Math

Mark Rogers is a National Board Certified mathematics educator at Austin Achieve in Austin, Texas, where he's pioneering a unique 13-year "looping" project, advancing with the same student cohort from kindergarten through graduation. A two-time State Finalist for the Presidential Award for Excellence in Math and Science Teaching (2024 & 2017), Rogers is known for his innovative teaching methods, including creating mathematical music videos and integrating real-world applications into his lessons.

Before joining Austin Achieve in 2018, he taught at Meridian School, where his work with the inaugural graduating class contributed to the school's #1 ranking in Texas by US News & World Report. An SXSWedu Advisory Board member and recipient of numerous teaching awards, Rogers brings diverse experience from his previous roles as a Morgan Stanley Investment Analyst and Quality Assurance Manager. He holds a Master of Education from Western Governors University and degrees from The University of Texas at Austin.

Texas Academy of Science 2025 New Officers

Vice President (2025-6)

Dr. Dennis Gibson II

Chair of Physical Sciences, Howard Payne University

Dr. Gibson II is the Chair of Physical Sciences at Howard Payne University in Brownwood, Texas. He is an Environmental-Analytical Chemist and is currently investigating how environmental pollutants impact the development of cells and their structure.

His current research topic is investigating novel low-cost stains for imaging microplastics with fluorescent microscopy in various environments. He also developed HPU's Summer Research Symposium which invites area high school students to perform summer research alongside undergraduate students.

This program ends with an oral presentation and an abstract submission to a regional conference.

Non-Academic Director 2025-2028

Dr. Darin Frye

Chief Science Director, Navy Medical Research Command – San Antonio

Dr. Darrin L. Frye is a decorated preventive medicine physician, former citizen soldier, global educator, and dedicated researcher. He served in Operations' Enduring and Iraqi Freedom, earning the Bronze Star Medal with the Army, and selected International Physician of the Year by the Palm Beach Medical Society.

As an Associate Professor for the Joint Special Operations University, Dr. Frye led the Science and Technology and Innovative Futures Department.

He now serves as the Chief Science Director for the Navy Medical Research Command - San Antonio, where he leads teams focused on combat casualty care reducing preventable deaths on the battlefield.

Student Director

Ms. Dhivya Rajamanickam

PhD Student, Baylor University

Ms. Dhivya Rajamanickam is a third-year Ph.D. student in Biology at Baylor University, researching mosquito surveillance, blood meal analysis, and brain histochemistry of Aedes aegypti mosquitoes under Dr. Jason Pitts. She leads mosquito surveys at Cameron Park Zoo, analyzes host preferences, and investigates avian malaria pathogens. She also studies brain histochemistry in Orco mutant Aedes aegypti to understand their olfactory mechanisms.

Passionate about teaching, she has been a Teaching Assistant for Bio Heroes, BU Trees, and Genetics Lab. Her leadership roles include Young Professionals at Texas and American Mosquito Control Associations, International Recruitment Chair at CEGSS, Mental Health Ally at Baylor, and Volunteer at Mayborn Museum. Her goal is to continue research on mosquito-borne diseases and vector biology.

New TAS Fellow

Dr. Maria “Marcella” Burns

Program Director & Faculty, Information Science Tech Department, University of Houston

Dr. Maria Burns serves as the Program Director and Assistant Professor of the Technology Leadership and Innovation Management program at the University of Houston’s Information Science Technology Department, Cullen College of Engineering, and is the Incoming TAS President for 2025-2026. Her research specializes in Artificial Intelligence and Machine Learning applications within the Maritime Transportation and Energy Industries. As a PI and Co-PI, she has secured over $1,700,000 in research funding, focusing on data science and critical infrastructure security. Dr. Burns employs demographics, policy analysis, and geospatial modeling to tackle socio-economic and health challenges. She is an Honorary Member of the U.S. Coast Guard Auxiliary, and was bestowed awards from the Texas Department of Public Safety, Taylor & Francis Publishers, and the Texas Emergency Management Advisory Committee (TEMAC).

TAS Awards Banquet Agenda

HURD @ Baylor University
5:30 pm – 8:15 pm Saturday,
March 1, 2025

Welcome from TAS	Dr. *Robert Kane, TAS President & Master of Ceremonies*
Outstanding Texas Educator Award Distinguished Texas Scientist Award New TAS Fellow	Dr. Craig Younce, TAS Vice President
Undergraduate Poster Awards Undergraduate Oral Presentation Awards	*Dr. Milka Montes, Collegiate Academy Counselor*
Sammy Ray Marine Science Award	*Madelyn Knauss, Texas Tech University*
Amir-Moez Award for Excellence in Mathematics	*Dipak Singh, Stephen F. Austin State University Mathematics & Computer Science Chair*
Graduate Student Presentation Competition Awards *Student Research Grants*	*Dr. Travis LaDuc, Graduate Academy Counselor*
Recognition of Outgoing Board Members	*Dr. Robert Kane, TAS President*
Recognition of New Board Members Introduction of New TAS President	
Closing Remarks	*Dr. Maria Burns, Incoming TAS President*

Want a T-Shirt?

Donate $20 and get a t-shirt!

Main Campus Buildings

1 Community Services Center (CSC)
- Community Clinic at MCC
- Conference Center
- Tartan Cafe

2 Northwood House (NH)
3 Physical Plant (PHP)
4 Mathematics (MATH), Wellness & Fitness (WF)
5 MCC Foundation (MCCF)
6 The Highlands Gym (H)
7 Highlander Drive Parking Garage (HD PG)
8 Music & Theatre Arts (MTA)
9 Ball Performing Arts Center (BPAC)
- Box Office

10 Business Technology (BTB)
11 Highland Arbor (HA)
12 Enrollment Services Center (ESC)
- Highlander Central

13 Administration (A)
14 Starr Plaza (SP)
15 Learning Technology Center (LTC)
- Highlander Cafe
- McKown Learning Commons (Library)

16 Watson Arbor (WA)
17 Michaelis Academic Center (MAC)
- MCC Bookstore
- The Thistle Stop Cafe
- University Center

18 Student Services (SS)
- Campus Police
- Student Life Center (SLC)

19 Liberal Arts (LA)
20 Faculty Office (FO)
21 Lecture Hall (LH)
Research & Effectiveness (RE)
22 Health Professions (HP)
23 Health Professions Nursing (HPN)
24 Health Professions Simulation (HPS)
25 Science (S)
26 Central Utilities (CU)
27 Cameron Drive Parking Garage (CD PG)
28 Intramural Fields (IF)
29 Softball Field (SBF)
30 Bosque River Ballpark (BRB)
31 Field House (FH)
32 Baseball Field (BF)
33 Bosque River Stage (BRS)
34 Boat Ramp (BR)

Map Key

- Emergency Call Boxes
- Open Parking Lots
- Gated Parking Lots
- Bus Stop
- Highlander Central (ESC)
  - Admissions
  - Financial Aid
  - Information

Off-Site Facilities

ESEC Emergency Services Education Center
7601 Steinbeck Bend Road (Waco)

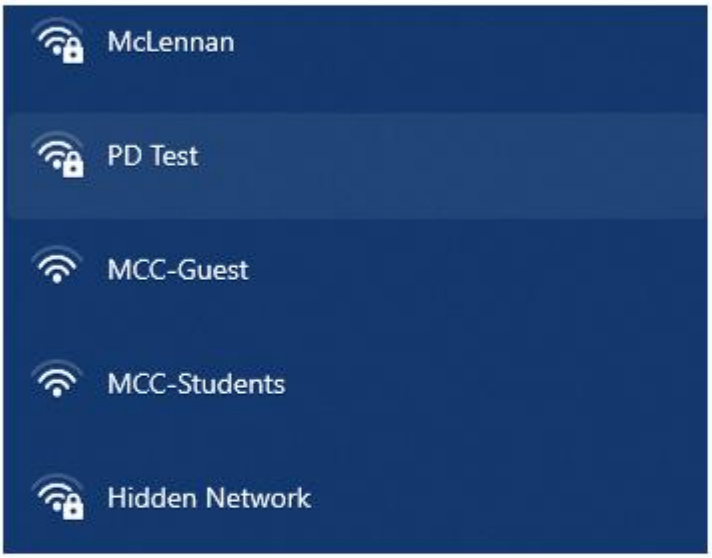
HR Highlander Ranch
223A Cobbs Lane (Bosqueville)

Escanee aquí para obtener mapas digitales en español.

McLENNAN COMMUNITY COLLEGE
1400 College Drive • Waco, Texas (254)299-8622
www.mclennan.edu

TAS Conference WiFi at MCC

1. Open your WiFi management screen.



2. Select the "**TAS Conference**" network.
3. Type in the password: **stemexcellence**


A B C D E F G H I J
1 2 3 4 5 6 7 8 9 10
Baylor University
1 B6 Baylor Bookstore
2 F6 Baylor Sciences Building
3 B7 Lot #23: Behind Bill Daniel
4 B5 Lot #34: Hurd Visitor parking
5 D7 Lot #36: Cashion
6 C5 Lot #45: Dutton Garage
7 B3 Lot #58: Clifton Robinson Tower
8 E5 Lot #61: Mayborn
9 C4 Mark & Paula Hurd Welcome Center
E 11th St
S Loop Dr
FM 434
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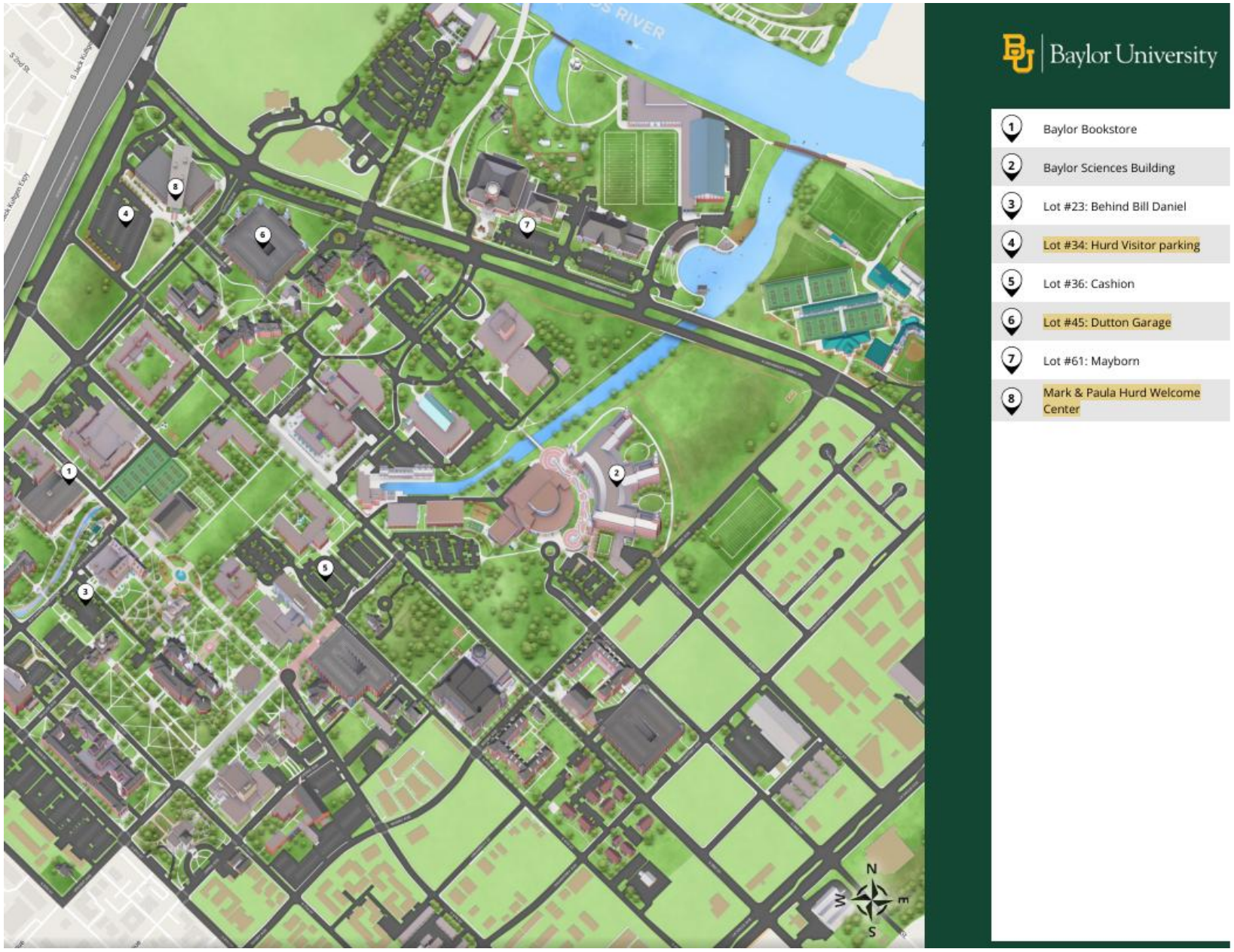
Baylor University
1 Baylor Bookstore
2 Baylor Sciences Building
3 Lot #23: Behind Bill Daniel
4 Lot #34: Hurd Visitor parking
5 Lot #36: Cashion
6 Lot #45: Dutton Garage
7 Lot #61: Mayborn
8 Mark & Paula Hurd Welcome Center
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Texas Academy of Science **Texas Academy of Science 128th Annual Meeting** Feb 28–Mar 1, 2025

Baylor University

The Events Planned on **Saturday, March 1, 2025**, at the HURD Welcome Center on the Baylor University Campus I-35 and University Parks Drive, Waco, Texas.
Link: https://hurdcenter.web.baylor.edu/contact-location

PARKING

Up to 500
Overflow in Dutton garage

HURD front door

RECEPTION

Souvenir shop

Coffee shop

Interactive Baylor exhibits

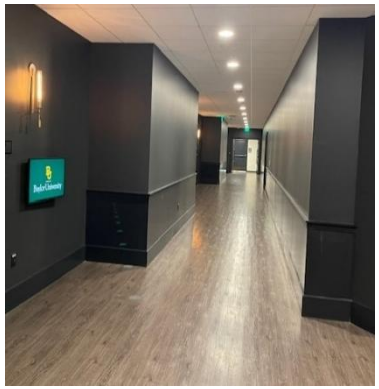
GRADUATE STUDENT PANEL

Large capacity break-out room

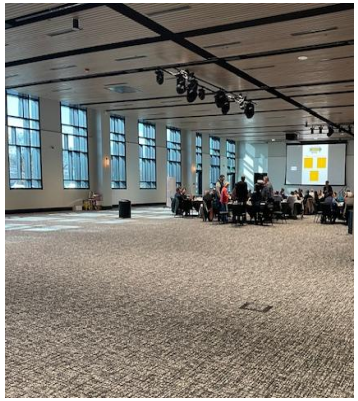
Signage

BANQUET

Separated double-sided food lines



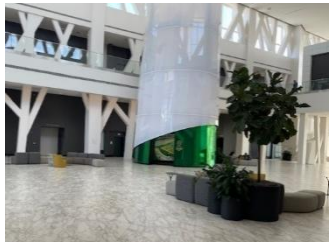
500-700 seating for dinner



Stage with A/V for the MC

FACULTY

Large open space



Niche seating areas

BOOTHS

Tables and poster stands provided

Welcome to Waco!

Eats!

Ninfa's: Mexican
- 220 South 3rd Street

Portofino: Italian
- 725 Austin Ave

Cava: Mediterranean
- 812 S 6th St

Crickets: American
- 211 Mary Ave

Union hall: An Option for Everyone
- 720 Franklin Ave

Slow rise on the Brazos: Pizza
- 1620 N M.L.K. Jr Blvd

Revival: Burgers/Salads/Sandwiches
- 704 Elm Avenue

Treats!

Dichotomy: coffee, spirits
- 508 Austin Ave

Fabled: coffee, bookstore
- 215 S 4th St

Bitty and Beaus: coffee, gluten-free treats
- 110 Franklin Ave

Heritage Creamery: ice cream
- 1125 S 8th St

Tiffs Treats: cookies
- 720 S 5th St #112

Sub zero: nitrogen ice cream
- 215 South University Parks Dr. #105

Silos baking co.: cupcakes, pastries, etc.
- 601 Webster Ave

Fun!

Putters: drinks, arcade, and putt-putt
- 320 S 2nd St

Twisted Sisters Patio Bar: drinks & fun
- 115 Mary Ave

Lucky bucks bar: drinks, rooftop views
- 319 S 4th St

Southern Roots: pizza, brews, wine
- 219 N 8th St

Spice village: local shopping
- 2nd &, Franklin Ave

Dr pepper museum
- 300 South 5th Street

Magnolia Silos
- 601 Webster Ave

More comprehensive lists:
https://downtownwacotx.com/dine/ https://destinationwaco.org/things-to-do/downtown-waco/
Visit our "grease pit" just across the interstate from Baylor Campus for fast food options!

Brief Schedule

Friday, 28 February

8am

Board of Directors Meeting
MAC 201 @ MCC

9:30am

Registration (MCC)
Science Building Lobby @ MCC

Poster Set-up
Science Building Lobby @ MCC

Student Mixer
MAC 236 @ MCC

11am

Section Chairs Meeting
MAC 204 @ MCC

Administration Office: Treasurer and Collegiate Academy Judges
MAC 108 @ MCC

12:30pm

(S1) Chemistry & Biochemistry A
MAC 111 @ MCC

(S2) STEM Education
MAC 206 @ MCC

(S3) Freshwater Science
MAC 235 @ MCC

(S4) Biomedical Sciences
Lecture Hall @ MCC

(S5) Systematics & Evolutionary Biology
MAC 300 @ MCC

2:30pm

Biomedical Sciences Section Meeting
MAC 200 @ MCC

(S4) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

2:45pm

Freshwater Science Section Meeting
MAC 237 @ MCC

Systematics & Evolutionary Biology Session Meeting
MAC 305 @ MCC

(S3) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

(S5) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

3pm

(S1) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

(S4) Cell & Molecular Biology
Lecture Hall @ MCC

3:15pm

STEM Education Section Meeting
MAC 205 @ MCC

(S1) Chemistry & Biochemistry B
MAC 111 @ MCC

(S2) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

(S3) Marine Science
MAC 235 @ MCC

3:45pm

(S2) Anthropology
MAC 206 @ MCC

4pm

Anthropology Section Meeting
MAC 205 @ MCC

(S2) Geosciences
MAC 206 @ MCC

4:30pm

Marine Science Section Meeting
MAC 237 @ MCC

5:30pm

Geosciences Section Meeting
MAC 205 @ MCC

5:45pm

Cell & Molecular Biology Section Meeting
MAC 200 @ MCC

Poster Session
Science Building Lobby @ MCC

7:45pm

Poster Session Adjourned

Saturday, 1 March

7am

Past Presidents & Fellows Breakfast
MAC 304 @ MCC

7:45am

(S1) Chemistry & Biochemistry C
MAC 111 @ MCC

(S2) Mathematics & Computer Science
MAC 206 @ MCC

(S3) Plant Biology
MAC 235 @ MCC

(S4) Physics & Engineering
Lecture Hall @ MCC

(S5) Neuroscience
MAC 236 @ MCC

Texas Academy of Science 128th Annual Meeting Feb 28–Mar 1, 2025

Continued from **Saturday, 1 March**

8am

Registration
Science Building Lobby @ MCC

Administration Office: Treasurer and Collegiate Academy Judges
MAC 108 @ MCC

8:30am

Plant Biology Section Meeting
MAC 237 @ MCC

8:45am

(S3) Terrestrial Ecology & Management
MAC 235 @ MCC

9:30am

Terrestrial Ecology & Management Section Meeting
MAC 237 @ MCC

Mathematics & Computer Science Section Meeting
MAC 207 @ MCC

Physics & Engineering Section Meeting
MAC 200 @ MCC

(S1) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

(S2) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

(S3) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

(S4) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

9:45am

(S1) Chemistry & Biochemistry D
MAC 111 @ MCC

(S3) Conservation Ecology
MAC 235 @ MCC

10am

Neuroscience Section Meeting
MAC 201 @ MCC

(S5) Coffee Break
MAC 1st 2nd & 3rd floor lobbies

11:15am

Conservation Ecology Section Meeting
MAC 237 @ MCC

11:30am

Chemistry & Biochemistry Section Meeting
MAC 200 @ MCC

Lunch Break
LTC Cafeteria @ MCC

12pm

Section Chairs Post Meeting
MAC 204 @ MCC

12:30pm

Meeting moves from MCC to BU

1pm

Registration (BU)
HURD @ BU

Graduate Student Competition
HURD @ BU

Administration Office: Treasurer and Collegiate Academy Judges
HURD @ BU

3pm

Graduate School Fair
HURD @ BU

Mentoring & Networking Session
HURD @ BU

Faculty Reception
HURD @ BU

Graduate Student Panel
HURD @ BU

4pm

OTE Keynote Talk: Mark Rogers, Austin Achieve, TX
HURD @ BU

4:45pm

DTS Keynote Talk: Dr. Jingbo Louise Liu, Professor of Chemistry, Texas A&M University-Kingsville, TX
HURD @ BU

5:30pm

Awards Banquet
HURD @ BU

8:15pm

TAS Annual Meeting Adjourned

DETAILED SCHEDULE

Friday, 28 February

8am **Board of Directors Meeting**
MAC 201 @ MCC

9:30am **Registration (MCC)**
Science Building Lobby @ MCC

9:30am **Poster Set-up**
Science Building Lobby @ MCC

9:30am **Student Mixer**
MAC 236 @ MCC

11am **Section Chairs Meeting**
MAC 204 @ MCC

11am **Administration Office: Treasurer and Collegiate Academy Judges**
MAC 108 @ MCC

12:30pm **(S1) Chemistry & Biochemistry A**
MAC 111 @ MCC
Chaired by: Darrell Fry and Bidisha Sengupta

12:30pm **Avoiding Oxidant Disproportionation with tert-Butyl Hydroperoxide in Iron Catalyzed Carbon-Hydrogen Bond Oxidations**
» Iris Christopher, Dr. John Gary

12:45pm **Building an Understanding of Ab-Initio Calculations in Steps**
» Dr. Benny Armey

1pm **Catalyst and Oxidant Modifications for Carbon-Hydrogen Bond Oxidations**
» Meghan Jennings, Dr. John Gary

1:15pm **Characterization of Affibody Molecules that Target Crotalid Snake Venoms**
» Dr. Edith Osborne

1:30pm **Computational Insights into Nitrogen Activation Chemistry Utilizing Chalcogen Bonding Interactions**
» Kirk French, Surya Choutipalli, Dr. Kevin Shuford

1:45pm **Crystal growth and characterization of intermetallics for correlated emergent properties: Disorder in Ce2MnGe6**
» Ms. Morgan E. Raines, Mr. Benny C. Schundelmier, Teddy G. Spencer, Dr. Gregory T. McCandless, Dr. Kaya Wei, Dr. Julia Y. Chan

2pm **Development and Synthesis of Improved Prodrugs of TAK-242 (Resatorvid) for Localized and Controlled Delivery**
» Ms. Chloe Sells, Dr. Jessica Kostyo, Prof. Bob Kane

2:15pm **Direct partial oxidation of methane to methanol using dioxygen over superhydrophobic modified catalysts.**
» Oluchukwu Igboenyesi, Dr. Frederick MacDonnell

2:30pm **Granular hydrogel synthesis for an in vitro hydrogel model of brain parenchyma tissue**
» Amanda Mejia, Joseph Dorsey, Noor Nazeer, Nicole Hislop, Sabrina Woodward, Cody Crosby

2:45pm **High-throughput virtual screening of New Delhi metallo-beta-lactamase 1 (NDM-1) in Klebsiella pneumoniae leads to discovery of potential inhibitors**
» Sharon Rong, Dr. Josh T. Beckham

12:30pm **(S2) STEM Education**
MAC 206 @ MCC
Chaired by: Lockwood wcox@lcmcisd.org

Continued from **Friday, 28 February**

12:30pm **Credit as a Financial Asset: Maximizing Opportunities and Minimizing Risks**
» Mr. Anthony Dodson

12:45pm **Engage, Explore, Explain: Elevate Your Vocabulary Game!**
» Mr. Dustin Perez

1pm **Engaging Students with Innovative Teaching Methodology by Integration Music Into Chemistry and Chemical Sciences**
» Jingbo Liu, John-Ryan Lawrence, Sajid Liu

1:15pm **Teaching students mastery of instrumentation using micro-credentialing**
» Darrell Fry

1:30pm **From Classroom to Conference: Integrating Undergraduate Student Research to Transform STEM Education at a Community College**
» Dr. Jason Locklin

1:45pm **Methodical Microplastics: Development of an undergraduate CURE to quantify abundance of microplastic fibers in a local stream**
» Dr. Romi Burks, Mr. Andre Felton

2pm **Social Belonging and Impostor Phenomenon Effects on Student Success in Chemistry**
» Dr. Blain Mamiya, Joyce Macalling, Toluwalase Shobogun

2:15pm **Understanding the community college transfer student landscape in Texas: identifying the gaps to empower transfer success**
» Sariah Kaipat, Trinity Vig, Dr. Jason Locklin

2:30pm **Integrating Generative AI into Undergraduate Biology Courses for Enhanced Literature Reviews and Scientific Writing**
» Dr. Susan Klinedinst

2:45pm **Aquaponics in education: Utilizing a sustainable platform for STEM exploration**
» Ms. Alice Conely, Dr. Matthew Allen

3pm **What a GTA Wants: Training and Professional Development Requests by Graduate Teaching Assistants in STEM**
» Ms. Chloe Sells, Dr. Michelle Herridge

12:30pm (S3) Freshwater Science

MAC 235 @ MCC
Chaired by: Mary Kay Johnston and Cynthia Bashara

12:30pm **Increased salinity suppresses diversity of colonizing invertebrates in a field mesocosm experiment**
» Kale Humphries, Prof. Hayden Hays, Dr. Matthew A. Barnes

12:45pm **Exploring the Impact of Salinity Levels on Food Consumption in the Invasive Crab Species, Rhithropanopeus harrisii**
» Ms. Samantha Hamilton, Dr. Terrence Boyle

1pm **Does taxonomy REALLY matter? Using functional traits to predict aquatic insect presence under altered hydrologic conditions**
» Hayden Hays, Dr. Matthew A. Barnes

1:15pm **Habitat selection in the globular drop snail Helicina orbiculata in East Texas waterways using GIS data**
» Alexander Bell, Dr. Nicholas Negovetich, Dr. Ben Skipper

1:30pm **The effects of variable nutrient stoichiometry on biogeochemical processes in shallow lake mesocosms**
» Alexa Hoke, Isabelle Andersen, Jason Taylor, Katelyn McKindles, Thad Scott

1:45pm **Spatiotemporal Characterization of Microplastic Pollution in Two Urban Ephemeral Systems**
» Mr. Andre Felton, Sue Ellen Gibbs-Huerta, Beauxregard Martinez, Salem Farner, Briaunna Zamarripa, Cristina Mendez, Oscar Hernandez

Continued from **Friday, 28 February**

2pm **Interactions among Hydrilla verticillata and two common native aquatic macrophytes under greenhouse conditions**
» Dr. Jeffrey Hutchinson

2:15pm **Historical Wells and Aquifer Depletion Rates on the Texas High Plains**
» Dr. John Stout

2:30pm **Species sorting and dispersal effects on hyporheic invertebrate functional groups in the Lower Canyons of the Rio Grande.**
» Dr. Benjamin Hutchins, Ms. Zoey Chanin, Dr. Kathryn Perez, Mr. Pete Diaz, Dr. Benjamin Schwartz

12:30pm (S4) Biomedical Sciences

Lecture Hall @ MCC
Chaired by: Joni Ylostalo and Nicole Poritsanos

12:30pm **Comparative Analysis of B-Cell Repertoire and Therapeutic Antibody Variability: Implications for Phage Display Library Design**
» Mr. Tarun Hariharan

12:45pm **Activity of Atorvastatin Combined With Chemotherapeutic Drugs on Patient-Derived Neuroblastoma Cell Lines**
» Ms. Hannah Floyd, Mr. Manikantha Dunna, Dr. Patrick Reynolds

1pm **Modeling the Effects of Acute Inflammation on Endothelial Barrier Function from PDMS-based Brain Microvessels**
» Leila Martinez, Ruoqian Hu, Dr. Ying Zheng

1:15pm **Influence of Phytochemicals Present in Mint Extract in Preventing Oxidative Stress in Human Serum Albumin**
» Ms. Perla Tovar, Ms. Nkeiruka Aziekwu, Ms. Grace Murray, Ms. Tess Corbett, Bidisha Sengupta

1:30pm **Investigation on Therapeutic Potentials of some Polypeptides for Type-II Diabetes using Computational Approach**
» Nicolas Campos

1:45pm **Covalently Modifying Hepatocytes with Carbamate Bioconjugates**
» Johann Karunananthan, Elena McGown, Prof. Bob Kane

2pm **A Double-Blind, Placebo-Controlled Study on Probiotic Treatment for Halitosis**
» Sehyeon Song, Jihye Choi, Min Ji Jang, Dr. Md Ariful Haque, Dr. Jin Seok Moon, Dr. Keon Heo, Dr. Myeong Soo Park, Prof. Seockmo Ku

2:15pm **Evaluating the Water Quality of Treated Wastewater from Deep East Texas Wastewater Treatment Plants Using Microbial Biofilm**
» Ms. Olabisi Ogunlewe, Bidisha Sengupta

12:30pm (S5) Systematics & Evolutionary Biology

MAC 300 @ MCC
Chaired by: Thornton Larson and Matthew J. Greenwold

12:30pm **Brood pouch anatomy throughout the course of male pregnancy in Gulf pipefish**
» Farah Atatrah, Dr. Sunny Scobell

12:45pm **Characterization of a Potential New Species of the Wildflower Genus Anemone**
» Ms. Kricket Tolbert, Dr. Russell Pfau

1pm **Determining species boundaries in the springsnail Pyrgulopsis (Mollusca, Gastropoda, Hydrobiidae).**
» Dr. Kathryn Perez, Mr. Trenton Meadows, Ms. Chante Lundskog, Mr. Eric Miskow

1:15pm **Divergent gene expression between the eyes of surface and subterranean salamander species from central Texas (clade Paedomolge) through development**
» Ruben U. Tovar, Brittany A. Dobbins, Dr. Rebecca L. Young, Dr. Katherine Bockrath, Dr. Thomas J. Devitt, Dana M. García, David M. Hillis

Continued from **Friday, 28 February**

1:30pm **Exploring the morphology, geography and phylogeny of a family of Blindsnakes (Anomalepididae: Serpentes)**
» Mr. Camilo Linares, Christopher Bell, Dr. Claudia Koch, Dr. Matthew Heinicke, Dr. Hussam Zaher, Dr. Juan D. Daza

1:45pm **Hiding in plain sight: a commonly observed and widely distributed new species of wolf spider**
» Dr. Russell Pfau, Eric Neubauer

2pm **Investigating male pregnancy in Gulf Pipefish using scanning electron microscopy to describe the anatomy of the brood pouch over the reproductive cycle.**
» Ms. Jennifer Schmalz, Dr. Deanna Soper, Dr. Sunny Scobell

2:15pm **Investigation of the role of prolactin during reproduction in a fish with male pregnancy**
» Dr. Sunny Scobell

2:30pm **Use of ddRAD sequencing to diagnose cryptic species with low interspecific mitochondrial divergence**
» Halle Summers, Dr. Loren Ammerman

2:30pm **Biomedical Sciences Section Meeting**
MAC 200 @ MCC

2:30pm **(S4) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

2:45pm **Freshwater Science Section Meeting**
MAC 237 @ MCC

2:45pm **Systematics & Evolutionary Biology Session Meeting**
MAC 305 @ MCC

2:45pm **(S3) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

2:45pm **(S5) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

3pm **(S1) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

3pm **(S4) Cell & Molecular Biology**
Lecture Hall @ MCC
Chaired by: Adriana Visbal and Dr. Craig Younce

3pm **Visualising Liquid-Liquid Phase Separation of Intrinsically Disordered Proteins**
» Cas Knox, Oliver Kipp, Dr. Steven Whitten, Lance English

3:15pm **A Positive Control Let Us Make the RecA+ Strain**
» Dylan Dodd, Dr. Matthew Dyson

3:30pm **Delineation of in vitro and in vivo Oxysterol-modified RNA Adducts by Distinct TLC Spots**
» Ms. Abby Sweeney, Ms. Adaeze Ozuzu, Dr. Craig Younce, Dr. Godwin Ifere

3:45pm **Screening Compounds for Their Anti-Cell Proliferation Properties**
» Tina Prajapati, Dr. Rachna Sadana

Continued from **Friday, 28 February**

4pm **An easy and comprehensive protocol for microinjection into zebrafish (Danio rerio) and medaka (Oryzias latipes) eggs to study gene function**
» Ms. Alicia Mendoza, Ms. Isabella Simon, Dr. Sharmin Hasan

4:15pm **Making decisions: does mitochondrial metabolism influence retinogenesis?**
» Yaqueline Gutierrez, Yessenia Beltran, Emilia Santamaria, Elda Rueda

4:30pm **Measuring the Effects of Aerosol Exposure: Dose-Response Dynamics and Potential Outcomes**
» Ms. Taylor Jefferis, Dinny Stevens, Kiera Griffin, Yanira Baldovinos, Christie Sayes

4:45pm **Every amino acid matters, but some matter more: insights from population-wide histone missense mutation landscape**
» Dustin Fetch, Tiffany Bastos, Natalie Redding, Ksenia Dydo, Gauri Raje, Dr. Alexey Soshnev

5pm **Functional study of profilins using a vertebrate model**
» Samira Alam, Andre Gil, Leslie Mendez, Dr. Sharmin Hasan

5:15pm **Orco and IR8a co-receptor knockout leads to dis-regulation of tuning receptors and other chemosensory genes in Aedes aegypti**
» Mr. Matthew Cooke, Dr. Jason Pitts, Mr. Michael Chembars

5:30pm **Bioinformatic analysis of COX 1 and COX 2 proteins**
» Mr. Jerry Leisure

3:15pm **STEM Education Section Meeting**
MAC 205 @ MCC

3:15pm **(S1) Chemistry & Biochemistry B**
MAC 111 @ MCC
Chaired by: Darrell Fry and Bidisha Sengupta

3:15pm **In vitro studies on ethanolic extracts of Watercress leaves using spectroscopic and cell viability assays.**
» Bidisha Sengupta, Dr. Debarshi Roy

3:30pm **Innovative Biologically Equivalent Simulant for Forensic Tracedrop (BEST) for Enhanced Criminal Scene Reconstruction**
» Jingbo Liu, Maria Sandoval, Emily Rancourt, Sajid Liu

3:45pm **Investigation of itinerant kagomé-lattice magnets, ZrFe6–xCoxGe6**
» Eduarda Stein Christ, Victoria Li, Dr. Michael Shatruk

4pm **Lanthanide alkali metal sulfates, MLn(SO□)□(H□O)□, viable candidates for nuclear waste matrices?**
» Dr. Ralph Zehnder

4:15pm **Mechanistic Analyses of DNA Lesion Recognition and Repair in the Eukaryotic Global Genome Nucleotide Excision Repair**
» Ms. Temilade R. Adeniran, Ms. Linh Pham, Prof. Kenji Murakami, Dr. Jung-Hyun Min

4:30pm **Microplastics in Wastewater Treatment Plants of Deep East Texas**
» Mr. Jacob Swallow, Dr. Kefa Onchoke

4:45pm **Microwave Graphitization of Biochar Catalyzed by Ferric Nitrate**
» Ms. Jessica Villarreal

5pm **NO RADIOACTIVITY REQUIRED! A new approach to RecA-mediated DNA strand exchange**
» Haley Fossett, Dr. Robert Moore

5:15pm **N-Sulfonylation of Carbamates Under Mild Conditions**
» Ms. Claire Slort, Rahul Gaykar, Prof. Bob Kane

5:30pm **Organic Synthesis of Norneolambertellin**
» Mr. Nick Welch, Mr. Cody Dubes

3:15pm **(S2) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

Continued from **Friday, 28 February**

3:15pm **(S3) Marine Science**
MAC 235 @ MCC
Chaired by: Madelyn Knauss and Ms. Jennifer Hunt

3:15pm **Impact of Topology on Coral Larvae Settlement on Concrete Matrices**
» Ms. Jennifer Hunt, Brian Flowers, Dr. Thomas Ready

3:30pm **Longitudinal Study of White Band Disease in Acropora species in Roatán, Honduras**
» Ethan Villa, Deandre Rosales, Kylee Steiger, Stephanie Randell, Dr. Stephanie Lockwood, Dr. Traesha Robertson, Dr. Jacqueline Dove

3:45pm **LONGITUDINAL STUDY OF WHITE BAND DISEASE IN ACROPORA SPECIES IN ROATÁN, HONDURAS**
» Ethan Villa, Deandre Rosales, Kylee Steiger, Dr. Jacqueline Dove, Dr. Traesha Robertson, Dr. Stephanie Lockwood, Stephanie Randell

4pm **A Longitudinal Study: The Abundance and Disease Status of Starlet Corals in Roatán, Honduras**
» Gloria Dominguez, Kaylee Aguilar, Leon Rosales, Annie Mowry, Stephanie Randell, Dr. Stephanie Lockwood, Dr. Traesha Robertson, Jacqueline Dove

4:15pm **Effects of Hyposalinity and Nutrients on the GPP of Gracilaria tikvahiae**
» Mr. Donavuan Salazar

3:45pm **(S2) Anthropology**
MAC 206 @ MCC
Chaired by: Stephanie Baker and Theresa de Cree

3:45pm **Optimizing Skeletal Cast Resources: Developing Standardized Maintenance Protocols for Enhanced Osteology Study at Texas State University**
» Ms. Nathalia Garza, Ms. Stephanie Baker

4pm **Anthropology Section Meeting**
MAC 205 @ MCC

4pm **(S2) Geosciences**
MAC 206 @ MCC
Chaired by: Dr. Michael Read and Dr. Mindy Faulkner

4pm **Broader implications of the challenges associated with building a field guide to the macroscopic invertebrate fossils of the lower Walnut Formation in Travis County, Texas**
» Stacie Skwarcan, Christopher Bell

4:15pm **The physics of sandcastles: Jammed granular columns with and without fluid**
» Dr. Jeffrey Olafsen, Dr. Oliver-Denzil Taylor, Dr. Mihan McKenna Taylor

4:30pm **Rill marks on the beach face at McFaddin National Wildlife Refuge, Texas**
» Prof. R. LaRell Nielson

4:45pm **Searching for the K-Pg Iridium Anomaly in Central Arkansas**
» Dr. Mindy Faulkner, Ms. Rebecca Beyer

4:30pm **Marine Science Section Meeting**
MAC 237 @ MCC

5:30pm **Geosciences Section Meeting**
MAC 205 @ MCC

5:45pm **Cell & Molecular Biology Section Meeting**
MAC 200 @ MCC

Continued from **Friday, 28 February**

5:45pm **Poster Session**
Science Building Lobby @ MCC

Early-Life Medication Exposure: Unraveling the Gut Microbiome's Role in Neurodevelopmental Disorder Risk
» Ms. riya palanki

Pulmonary Endothelial Cell Proliferation in Response to HIV Nef Sequence Variants
» Eli Heath, Minh Nguyen, Mario Rodriguez, Amanda Garcia, Javaria Baig, Dr. Sharilyn Almodovar

Memristors: The Elusive Circuit Component
» Mr. Vance Vyoral, Prof. Derek Johnston

Identification of Novel Transcripts of the Obesity Related, Nepl15 Gene found in Drosophila melanogaster
» Chase Drucker, Dr. Surya Banerjee

Evaluating the Adipogenic Effects of Bisphenol S on OP9 Mouse Cells
» Ms. Hailee McCulloch, Ms. Lizbeth Campos, Dr. Stephanie Perez, Dr. Danielle Grove

The Effects of Dimethyl Terephthalate on Adipogenesis in an OP9 Mouse Cell Model
» Sophie Salgado, Eric Moninger, Dr. Stephanie Perez, Dr. Danielle Grove

Screening TZ62, TZ70, and TZ71 for Inhibition of Metastasis
» Mr. Maximiliano Perez, Dr. Rachna Sadana, Dr. Vaishali Chaubal

An Experimental Algorithm Analysis for Die Configurations
» Ms. Mary Heeren, Dr. Jeremy Becnel

The effects of driving under the influence of cannabis, a meta-analysis.
» Om Tannu

Infection sites do not affect virulence factors or biofilm formation by Pseudomonas aeruginosa
» Mr. Eltayeb Diab

Synthesis of Substituted Indoles and Imidazopyridines Through N-Alkynyl Imidazoles
» Mr. Gabriel Martinez, Dr. Mohanna Muppidi, Dr. Sean Kerwin

A morphological analysis of the dopaminergic pathway in the brain of a male-pregnant pipefish
» Ms. Madeleine Thomas, Dr. Sunny Scobell

The Impact of Obesity on Femoral Cortical Bone Size and Shape
» Alanna Melchor, ChristiAna Dunham, Dr. Deborah Cunningham, Daniel Wescott

A critical analysis of the bent-hip/bent-knee locomotor hypothesis for Australopithecus afarensis
» Ms. Jayci Bonnette, Dr. Adam Sylvester, Dr. Deborah Cunningham

Ivermectin induces apoptosis on HEC-1A endometrial carcinoma cells
» Ms. Jaitlynn Sherman, Dr. Matthew Dyson

Vertebral Canal Constriction: Exploring the Link Between Vertebral Neural Canal Size and Early Mortality
» Ms. Kelsey Fox, Dr. Michelle Hamilton

Enhancing Belonging for Underrepresented Students through Student-Designed Learning Field Experiences
» Dr. Brian Shmaefsky

Continued from **Friday, 28 February**

A mitochondrial based intervention for Mild Cognitive Impairment (MCI) using photobiomodulation, methylene blue, and medium chain triglycerides
» Mr. Hunter Dutkiewicz, Mr. Jordan Schwartz, Dr. Francisco Gonzalez-Lima, Dr. Douglas Barrett, Dr. Gabriela Guimaraes, Isabelle Rose

Evaluation of microplastic uptake by Asian clams in isolated pools within an ephemeral stream in Central Texas
» Ananya Seth, Dr. Jeffrey Hutchinson

Laser Synthesis of Mixed Metal Spinel Materials for the Oxidation Reduction Reaction
» Mx. Mal Millholland, Mr. Andres Garza, Mx. Makena Burns, Dr. Ben Martin

Modeling the optimal growth of gravitropic respondent Solanum pimpinellifolium root systems
» Aaron Garza, Prof. Arjun Chandrasekhar

Comparative mitogenome analysis of Procambarus crayfish species.
» Matthew Blow, Matthew J. Greenwold

Determining intra-genomic variation of Cladosporium velox: considerations for aerobiology fungal metagenomics
» Ms. Elise Berryhill, Dr. Josh McLoud

Facilitating Archaeological Research Through the Veterans Curation Program
» Alanna Melchor, James Moore, Darrell Anderson

Diet of the Great Horned Owl (Bubo virginianus) in a Chicago suburb
» Dr. Timothy Campbell, Ms. Jasmine Zhai, Ms. Ashley Lanzarotti, Mr. Alexander Delgado, Dr. Samuel Gutherz

Computational Analysis of the Hydrolytic Stability of Heteroboroles by Varying the Number of Water Molecules
» Mr. Gallage KPA Ariyaratne, Prof. Dustin Gross

Parking Predicament: A Microeconomic Analysis of Tech's Parking Shortage
» Mr. Affan Anas, Dr. Victoria Hang, Mr. James Kemper, Dr. Latchezar Popov, Mrs. Patricia Schovanec

Effects of Chinnaberry on Foraging of Gulf Coast Toads (Incilius nebulifer)
» Marion Mundy, Amy Lowe, Dr. Chris Distel

The Little Chamaeleon That Could
» Adelle Cannon, Dr. Juan D. Daza

Progress on Saurodactylus (Squamata: Gekkota: Sphaerodactylidae) classification: One or two genera
» Ms. Jayden Crew, Christopher Bell, Dr. Aaron Bauer, Dr. Juan D. Daza

Lose the Lichen: The Use of Photogrammetry in Epigraphic Documentation
» Aliyah Anderson, Dr. Nick Carter, Dr. Barb MacLeod, Jake Lozano

PAX6 colocalizes with actin filaments in hair cells
» Nisa Sindhi, Brittany A. Dobbins, Ruben U. Tovar, David M. Hillis, Dr. Thomas J. Devitt, Dana M. García

Gene Editing: A New Way to Treat Breast Cancer
» Ms. Cheyenne Willis

Predator Prey Simulation
» Dr. Jeremy Becnel, Mr. Brenden Swope

A Novel Machine Learning Approach for Predicting Evolutionary Stages of Stars
» Mr. Hitaishi Chillara

Continued from **Friday, 28 February**

Getting a(head) of ourselves: Ectopic head formation following nerve injury in Lumbriculus variegatus.
» Isabella Ortiz, Jake Garza, Dr. Veronica Martinez Acosta

Comparative Analysis of Molecular Impacts of Short-Chain PFAS Exposure on ABCG2 Transporter in Human Cell Models
» Gracen Collier, Dr. Ramon Lavado

Determining the Effect of Connectivity on Community Composition of Pollinators Through Pollen Metabarcoding
» Erin Miller

Interfaith Informatics
» Yordanos Ayelework, Dr. Aravind Mohan

Discovering Novel Inhibitors for 3-Oxoacyl-ACP-Reductase (FabG) in Plasmodium falciparum Using Virtual Screening
» Mahdia Rahman, Hannah Thomas, Dr. Josh T. Beckham

Phenotypic Analysis of Allopatric B. subtilis Strains
» Nichole Cepeda, Dr. Robert Jonas

Distortion of Single Transferable Vote on a Line
» Ms. Camille James, Dr. Barbara Anthony

Novel Sexy Role of Prolactin in Regulating EMT of Breast Cancer Through CD44 Splicing
» Ms. Reagan Farrell, Mr. Trevor Jones, Mr. Nicholas Pascuzzi, Dr. Ethan Chen

Upcycling Orange Peels for Sustainable Monascus Pigment Production
» Ian Konvicka, Dr. Md Ariful Haque, Prof. Seockmo Ku

Evaluating Diatom-Based Carbon Filtration for Emission Reduction in Controlled Environments
» Mr. Ethan Yager, Dr. Athenia Oldham

Acetate Formation from Various Alkenes: An Undergraduate Addition Reaction Laboratory
» Ms. Saira Sitgreaves, Mr. Benjamin Wisser, Dr. Bruce Hathaway, Dr. Scott Morris

Comparative Mitogenome Analysis of True Toads (G: Anaxyrus)
» Ciara E. Moroney, Dr. William I. Lutterschmidt, Matthew J. Greenwold

Synthesis of Methotrexate loaded Poly L-lactic acid combined with a hydrogel for treatment of Rheumatoid Arthritis
» Areej Khodair, Dr. Milka Montes

Minimizing Citrinin in Monascus purpureus Fermentation
» Khadija Ayesha, Lakshmi Devi Chittepu, Dr. Md Ariful Haque, Prof. Seockmo Ku

Using Thermal Imaging to Investigate Differences between Body Temperature and Surrounding Microhabitat Temperature in a Free-ranging Ectotherm
» Dr. William I. Lutterschmidt, Ms. Jenna Brue

Microbial and Saccharification Dynamics in Developing Sustainable Sorghum Makgeolli
» Marianne Howell, Elizabeth Campbell, Min Ji Jang, Dr. Md Ariful Haque, Prof. Samuel Haruna, Prof. Seockmo Ku

Investigating Carbon Source Effects on Fungal Cellulose Production from Red Yeast Rice
» Paulina Sandoval, Anishka Talari, Dr. Md Ariful Haque, Prof. Seockmo Ku

Microbial Dynamics and Probiotic Potential of Lactic Acid Bacteria in Traditional Korean Makgeolli
» Yu Jeong So, Min Ji Jang, Prof. Seockmo Ku, Yunju Jeong

Continued from **Friday, 28 February**

Adding worms to an aquaponic system: Impacts on plant growth
» Ms. Alice Conely, Dr. Matthew Allen

Cellular Uptake and Cytotoxicity of Micro and Nanoplastics
» Mrs. Alisha Janiga-MacNelly, Dr. Tham Hoang, Dr. Ramon Lavado

Effects of Temperature on the Fecundity of Secondary Cavity Nesters at the University of Texas at Tyler
» Gwendolyn J. Bouse, Jessica L. Coleman, Matthew J. Greenwold

Structural properties of lanthanide alkali metal sulfates, MLn(SO4)2(H2O)X
» Thomas Hodge, Jackson Turner, Dr. Ralph Zehnder

A lanthanum glutarate bromoterephthalate compound with unique structural properties
» William Best, Emory Brandon, Daniel Rios, Dr. Ralph Zehnder

Macroorganism Associations and Health Status of Demospongiae Species in Roatán, Honduras
» Ms. Cambria Blanton, Caden Helona, Naomi Hammond, Ashlynn Kennedy, Dr. Jacqueline Dove, Anne Mowry, Dr. Traesha Robertson, Stephanie Randell, Dr. Stephanie Lockwood

Liver Morphology in Gliding and Non-Gliding Geckos
» Lynsey Haynes, Dr. Juan D. Daza

Investigating Fermentation and Probiotic Properties of American Kimchi with 100% U.S.-Grown Crops
» Sehyeon Song, Maddie Shults, Min Ji Jang, Prof. Seockmo Ku

Zoonotic Risks in Tourist Hotspots: The Critical Need for Education on Safe Human-Animal Interactions
» Elea Vander Burgh

Flavonoid's Influence on Amyloid Beta Peptide Aggregation
» Mrs. Imani Harris, Dr. Robert Friedfeld, Bidisha Sengupta

Egg size variation in Carolina Wren clutches
» Ms. Kendra Rodrigue, Mr. Stefano Cavezza, Dr. Diane Neudorf

Comparative Analysis of Food-Induced Aggression in Drosophila Species with Varying Dietary Preferences
» Mrs. Laurie Neuman, Dainet Arencibia, Juan Magadan, Tammy Duong, Yuan Yuan Kang

Experimental test of predator odor detection in a cavity-nesting songbird
» Anna Maloney, Kendall Kinsey, Dr. Diane Neudorf

Plankton Communities of Coastal Habitats in Roatan, Honduras
» Aero Warren, Harrison Wolf, Annie Mowry, Dr. Traesha Robertson, Dr. Stephanie Lockwood, Dr. Jacqueline Dove, Stephanie Randell

Development of Modified Media for Enhanced Fungal Cellulose Production
» Gianmarco Frau, Dr. Md Ariful Haque, Lakshmi Devi Chittepu, Anishka Talari, Prof. Seockmo Ku

Floral Diversity and Function in the Upper Leon Creek Greenway
» Ms. Annie D'Arcy, Dr. Jeffrey Hutchinson

Using lichens as bioindicators for analyzing air quality in Central Texas
» Mr. Jack Luckey, Prof. Chad Cryer

Biodiversity Assessment of Vertebrates in Runnels County, Texas
» Maya Morrell, Makayla Easley

Developing an In Vivo Screening Protocol for Proteins Predicted to Phase-Separate
» Kaylie Cano, Sebastián Vélez Guzmán, Dr. Steven T. Whitten, Dr. Loren E. Hough, Dr. Karen A. Lewis

Continued from **Friday, 28 February**

Development and Validation of an Analytical Method for the Determination of Minor and Trace Metals in Water by ICP-OES
» Ms. Layla Jackson, Dr. Alakananda Chaudhuri

Assessing the effects of early life maternal separation stress on adolescent behavior and hypothalamic-pituitary-adrenal axis function in male and female C57BL/6J mice
» Grace Read, Caroline Fowler, Dr. Elisabeth Vichaya

Desmoinesian (Middle Pennsylvanian) fusulinids from Holman Hill, Mora County, New Mexico
» Ariana Rodriguez, Dr. Michael Read

Detection of non-native freshwater jellyfish Craspedacusta sowerbii in central Texas using environmental DNA
» Vera Ye, Morgan Jennison, Kaitlin Plate, Dr. Matthew A. Barnes

Microfragmentation method alters growth in the endangered stony coral Acropora palmata
» Dr. Deanna Soper, Ms. Maria Cordero, Ms. Nora Aigberadion, Ms. Monique Bedolla, Mr. Jason Spadaro, Mr. Ian Combs, Mrs. Keiyi Okamura, Mrs. Makayla stewart, Mrs. Sarah Hamlyn, Mr. Lou Schlecker

Preliminary Data on the Influence of Habitat Type and Environmental Variables on Fish Community Dynamics in Harmon Creek, Texas
» Erica Hagmeyer, Dr. Jeffrey R. Wozniak

Coefficient of restitution of two colliding particles in experiment and simulation
» Dr. Jeffrey Olafsen, Dr. Kai Yang

Indole Variant-Specific Effects on Fusobacterium nucleatum Invasion and Barrier Function in Intestinal Epithelial Cells
» Ms. Jessalyn Hawkins, Mr. Colin Scano, Mr. Gregory Zaharas, Dr. Leigh Greathouse

Comparative Analysis of Varroa Mite Infestation in Managed Bee Populations in Williamson County, Texas
» Mr. Ramiro Collado Irizarry, Prof. Chad Cryer

You Better Belize They're Different: Phylogenetic analysis and species identification of native apple snails in Belize
» Mr. Gage Mallo, Mr. Johun Reyes, Dr. Romi Burks

Characterization of BRCA1/2 Variants in Latinas Using Genomic Prediction Tools: A Study from NIH All of Us Research Program
» Eunice Pelcastre Villanueva, Dr. Catherine Gavile, Dr. Erick Olivares, Dr. Cathy Samayoa, Adriana Visbal

Minimally invasive measurement of zonulin, a key biomarker for environmental enteric dysfunction and childhood growth faltering, in dried blood spot samples
» Luna Orozco, Elizabeth Kim, Emma Shoemaker, Laila Fahed, Tomasz Nowak, Dr. Samuel Urlacher, Dr. Michael Muehlenbein

Simulating the Minimum Number of People Needed for an Interstellar Journey
» Mr. Dominic Mashak, Dr. Steven Alexander

Using Molecules to Store Energy
» Mr. Dante Medina, Dr. Steven Alexander

Evidence of aging recovery on germination rate of admixed genotypes of Arabidopsis thaliana
» Syeda MTI Sanzara, Dr. Kattia Palacio-Lopez

How does exposure to drought and high-temperature conditions affect the development of Arabidopsis thaliana?
» Laura D'luyz Pastor, Syeda Sanzara, Yoselin Sanchez, Dr. Kattia Palacio-Lopez

Arabidopsis thaliana Fitness and Resource Allocation While in an Interspecific Competition with Lolium multiflorum.
» Daniel Medina, Kassandra Orellana, Dr. Kattia Palacio-Lopez

Continued from **Friday, 28 February**

Photonegative behaviors of polychaete worms
» Mr. Ian Gafford

Shoot for the Moon An In-depth discussion of child engagement in STEM
» Ms. RosAaliyah Olguin

Assessing Thermal Tolerance in Guinea and Johnson Grasses Using Chlorophyll Fluorescence as an Indicator of Plant Damage
» Mr. Arvin Allahyari

A Coumarin-enamine derivatized Chemosensor for Relay recognition
» Marlene Zepeta-Rodriguez

Fluorescence Microscopy Analysis of Microplastic Interactions with Microorganisms
» Nolan Godfrey

A Preliminary Summary for the Thermal Profiles of Microhabitats within Bastrop State Park: Helping to Inform Occupancy Models for the Houston Toad
» Peter Babcock, Dr. William I. Lutterschmidt, Paul Crump, Toby J. Hibbitts, Wade A. Ryberg, Danielle K. Walkup, Corey Fielder, Brandon C. Bowers

Osteological Comparison of the Houston Toad with other selected members of the family Bufonidae
» Lauren N. Scherrer, Dr. Juan D. Daza, Dr. William I. Lutterschmidt

Arachnid Species in Callahan County
» Jacob Wooten, Dr. Terrence Boyle

Rill marks on the beach face at McFaddin National Wildlife Refuge, Texas
» Prof. R. LaRell Nielson

Comparative Medium to Large Mammal Diversity Within the Crosstimbers of Central Callahan County Texas
» Melinda Siebert, Prof. Joel Brant

Effects of age and health of deer on nasal bot fly counts in white-tailed deer
» Evee Rasor, Julia Galvan, Prof. Chad Cryer

MiR-23a as a potential post-transcriptional regulator of KDM6A and CTCF protein expression in EMT
» Ms. Emily York, Dr. Joseph Taube

Developing a paleontological database for the fossil collection in the Department of Earth Sciences and Geologic Resources at Stephen F. Austin State University
» Kandace Muniz, Dr. Michael Read, Prof. R. LaRell Nielson

The impact of market integration on school-age children's gut microbiota and growth among the Amazonian Shuar
» Emma Shoemaker, Fernanda Miron, Dr. Samuel Urlacher

"Vocalization Signatures of Frog Species: A Study of Call Patterns for Species Identification and Biodiversity Monitoring in a Temperate Wetland Ecosystem"
» Sunshyne Gwinn, Prof. Joel Brant

A Comparison of Rural and Urban Bird Communities in the Big Country
» Caleb Dale, Prof. Joel Brant

Extraordinary extraction efforts: Experiments to enhance DNA extraction for tissues of apple snails of conservation interest
» Kylie Allemeier, Katelin Pilarski, Rachel Ling, Sarah Berver, Dr. Romi Burks

Potential Disruptors of the Acoustic Habitat of Carolina Wrens and The Implications For Reproductive Isolation
» Zachary Seidel, Dr. Diane Neudorf

Continued from **Friday, 28 February**

Rodent Habitat Selection in Three Counties (Callahan, Coleman, and Taylor) in Texas
» Ansynn Franklin, Prof. Joel Brant

Characterization of the Smackover Formation in Upshur County, Texas using core and geochemical data
» Eric Browning, Dr. Julie Bloxson

UV-vis spectrophotometry for kinetic study of the Dushman reaction
» Ms. Lily Sowell, Dr. Byron Rogers

PAX6 in Salamander Inner Ear: A Developmental and Comparative Study
» Ms. Kimia Feiz, Brittany A. Dobbins, Ruben U. Tovar, Dr. Thomas J. Devitt, David M. Hillis, Dana M. García

Varroa mite prevalence feral Central Texas bee colonies
» Caleb Bell, Prof. Chad Cryer

Indole Variant-Specific Effects on Fusobacterium Nucleatum Biofilm Growth, Virulence Expression, and Invasion of Intestinal Epithelial Cells
» Mr. Gregory Zaharas, Ms. Jessalyn Hawkins, Mr. Colin Scano, Dr. Leigh Greathouse

The importance of canopy width and connectivity for biodiversity in urban riparian habitats
» Maya Flores, Prof. Thomas Garrison, Dr. Mary Poteet

Effects of Angiotensin II in the Development of Atherosclerosis/Atherothrombosis
» Ms. Kennya Gomez

Examining the Effects of the ApoE4 Genotype on Hyperglycemia-Induced Affective and Mitochondrial Dysfunction in Male Mice
» Mr. Matthew Folh, Mr. Jonathan Duhon, Ms. Laura Kusumo, Dr. Elisabeth Vichaya

Development of oxonol fluorogenic probe for hydrogen peroxide detection in-vitro
» Mr. Biakengzaua Khupngai, Mr. MOHAN KODISANA, Dr. Syed Usama

Viscosity-Sensitive Cy3 Fluorophores for Cell Membrane Labeling
» Mr. MOHAN KODISANA, Dr. Syed Usama

Skeletal morphology of Tetracheilostoma Carla (Typhlopidae, Serpentes, Squamata), the world's smallest snake
» Mr. Caleb Shoemaker, Dr. Juan D. Daza

Bone fracture trends in elderly individuals with arthroplasty
» Theresa de Cree

Ecological Niche Modeling of selected West Coast Angiosperms
» Mason Scott, Ms. Samantha Hamilton

Early-Life Communication at Critical Developmental Timepoints Among NS-PTEN Mice
» Ms. Taylor Bradish, Mr. Gautham Chelliah, Ms. Chloe Lau, Mr. Colton Kelley, Mr. Joshua Thayil, Mr. Joaquin Lugo, Ms. Katherine Blandin, Dr. David Narvaiz, Dr. Joaquin Lugo

Investigating the Effects of the ApoE4 Genotype on Hyperglycemia-Induced Depressive Like Behavior and Neuroinflammation in Female Mice
» Mr. Jonathan Duhon, Mr. Matthew Folh, Ms. Laura Kusumo, Dr. Elisabeth Vichaya

Exploring the Potential of Novel 2D Transition Metal Compounds (2DTMCs) for Advanced Energy and Catalytic Applications: A Computational Study on Stability and Electronic Properties
» Puja Rijal, Dr. Uvin Dealwis, Dr. Kevin Shuford

Continued from **Friday, 28 February**

Synthesis and Computational Analysis of Diazaborolidines Derived from Phenylboronic Acid Derivatives and 1,2- and 1,3-diamines
» Mr. Ravindu Pathirana Hewage, Prof. Dustin Gross

Variations in Assignment Expectations as Represented by Rubric Structure and Content in General Chemistry
» Ms. Chloe Sells, Dr. Michelle Herridge

Improving CKKS Performance with Vector Computation and GPU Acceleration
» Smaran Manchala

Investigating Neuroinflammatory and Behavioral Outcomes of MOC2-7 Tumors in Male C57BL6/J Mice: Absence of Depressive-Like Phenotype with Evidence of Fatigue and Cachexia
» Avery Gillett, Caroline Fowler, Dr. Cory Dungan, Dr. Elisabeth Vichaya

Investigating the long-term effects of pifithrin-μ on cisplatin-induced cognitive impairment
» Mia Tarantino, Caroline Fowler, Valeria Muniz, Mathew Chatham, Tanish Raina, Dr. Elisabeth Vichaya

Transcranial Photobiomodulation (tPBM) Reduces Anxiety Symptoms and Improves Attentional Control
» Mr. Kevin Thakkar, Mr. Anagh Mirji, Laura Gamboa, Dr. Roger Davis, Dr. Francisco Gonzalez-Lima

The impacts of diel thermal variability on zebra mussel survivorship at the upper limit of their tolerance: linking laboratory results to natural field conditions in Texas
» Chase Herrington, Cadence Sen, Amya McCarroll, Dr. Jason Locklin

Temperature-induced stress and the starvation of zebra mussels (Dreissena polymorpha) in a Central Texas Lake
» Cadence Sen, Amya McCarroll, Chase Herrington, Dr. Jason Locklin

Bacteria Growth in Schools
» Carlie Buck

Empowering sciences student transfers: Identifying and addressing transfer rate disparities in a Central Texas community college
» Trinity Vig, Sariah Kaipat, Dr. Jason Locklin

The Effect of Reporting Bias on the Opioid Crisis: What You Don't Know CAN Hurt You
» Katy Garmon, Dr. Kendall Hammonds, Dr. Emily Garmon

Effects of location and time of hunting season on nasal bot fly counts in white-tailed deer
» Julia Galvan, Evee Rasor, Prof. Chad Cryer

Large-scale natural and anthropogenic environmental variables associated with Rio Grande chirping frog distribution in Central Texas
» Kamille Marry, Jeff R. Troy, Clark D. Jones

Completing a Fossil of a 99 Million Year Old Squamate from Myanmar Using 3D Modeling
» Lilly Nguyen, Elizabeth Kull, Dr. Juan D. Daza

Environmental factors affecting the antioxidant properties and phenolic content of green and purple basil
» Myla Benally, Luke Ford, Andrea Armeriv, Teresa Bilinski, Emily Niemeyer

Investigating the antidepressant effects of dimethyl fumarate in a murine model of diabetes
» Ms. Madilyn Johnson, Ms. Laura Kusumo, Mr. Reece Bonner, Ms. Kaylea Gawf, Dr. Elisabeth Vichaya

Cranial Anatomy of the Australian Western Beaked Gecko (Rhynchoedura omata: Diplodactylidae: Gekkota) in 3D
» Andrew Rock, Samira Alam, Tanya Duran, Sofiane Gana, Elyse Howerton, Mr. Camilo Linares, Amber Reynolds, Elizabeth Saxton, Dr. Aaron Bauer, Dr. Juan D. Daza

Continued from **Friday, 28 February**

Exploring Emotional Development through Physiological, Behavioral, and Contextual Factors
» Ms. Nicole Jackson, Dr. Yelim Hong, Ms. Megan Klinginsmith, Dr. Laura Quinones Camacho

Investigating chloroplast DNA diversity within populations of Mentzelia thompsonii
» Gisela Guerrero, Darren Pratt, Nadia Tuggle, Kiley Frost, Kyuyeon Kim, Alexis Tuyo, Joshua Brokaw

Travel or Treat?: An Analysis of Spider and Howler Monkey Prehensile Tail Use
» Ms. Lydia Lehman, Dr. Jill Pruetz

Understanding the Correlation Between Cardiovascular Disease and Major Depressive Disorder: The Role of Common Biomarkers
» Kylee Adkinson, Macie Berry, Dr. Katherine Sanchez, Dr. Karel Kalecký

Influence of the hyporheic zone on gene flow in invertebrates in the Edwards-Trinity Aquifer, Texas.
» Mr. Evan Guerrero, Dr. Kathryn Perez, Dr. Benjamin Hutchins, Dr. Benjamin Schwartz

Initial Characterization of Unique Mice Fibroblasts Populations
» Megan Hicks, Dr. James Harper

Mitochondrial structure is altered before muscle wasting during tumor induced cachexia
» Ms. Kenia Grimaldo, Sofiane Gana, Mrs. Mardelle Atkins

Early Life Stress in Fmr1 Knockout Mice Reduces Body Weight Acutely, But Minimally Alters the Behavioral Manifestation
» Ms. Katherine Blandin, Ms. Taylor Bradish, Mr. David Narvaiz, Mr. Joshua Thayil, Ms. Chloe Lau, Ms. Diuto Enyeribe, Ms. Maria Hemmerseier, Ms. Kendall Lally, Mr. Joaquin Lugo, Dr. Joaquin Lugo

Variations in antioxidant properties and phenolic content within cultivars of Monarda herbs
» Mattigan Aga, Alexis Flores, Holly Lawson, Emily Niemeyer

Exploring the phenolic composition of Monarda herbs: Influence of seed source and cultivar
» Alexis Flores, Mattigan Aga, Holly Lawson, Emily Niemeyer

Studying the Effectiveness of Chlorine Treatment in Wastewater using Microbial Biofilm
» Mr. Philip Baker, Ms. Cephus Bess-Grunewald, Ms. Olabisi Ogunlewe, Bidisha Sengupta

Identification of Affibody Molecules that Target Phospholipase A2
» Ms. Kechcheng Sreang, Ms. Grace Youngblood, Dr. Edith Osborne, Ms. Kelyia Estell

The Consequences on Neuroinflammation Following Neonatal Status Epilepticus in C57BL/6J Mice
» Mr. Joshua Thayil, Ms. Taylor Bradish, Mr. David Narvaiz, Katherine Blandin, Reagan Yarborough, Dr. Danielle Santana-Coelho, Dr. Joaquin Lugo

The Observational Analysis of the Behavioral Differences Between Palaemonetes paludosus and Pomacea bridgesii
» Ms. Kirstey Ferguson, Dr. Laura Weiser Erlandson

Analysis and Validation of Quantitative Trait Locus Mapping of Locomotive Behaviors in Drosophila species
» Mr. Pedro Rodriguez Navarro, Yuan Yuan Kang

FISH DIVERSITY IN ROATÁN, HONDURAS
» Emily Boling, Morena Flores Mejia, Rebecca Musick, Lorelei Payne, Anne Mowry, Dr. Traesha Robertson, Dr. Jacqueline Dove, Dr. Stephanie Lockwood, Stephanie Randell

The Need to Feed: Investigating Feeding Practices for Zebra Mussels in Laboratory Research
» Amya McCarroll, Cadence Sen, Chase Herrington, Dr. Jason Locklin

Continued from **Friday, 28 February**

Discovering novel inhibitors for 6-phosphogluconate dehydrogenase in Plasmodium vivax
» Celeste Rodriguez, Ifeanyichukw Nwofor, Dr. Josh T. Beckham

Neuroplastic Changes in Opioid Tolerance: A Comparative Study of Oxycodone and Fentanyl
» Arjun Trehan, mariana dejeux, Sarah Jewanee, Blake Reeves, Dr. Benjamin Schwartz, Dr. Jacques Nguyen

Effect of abiotic stresses on cellular responses in Penium margaritaceum
» Kassandra Orellana, Dr. Kattia Palacio-Lopez

Quantification of individual flavonoids and methylxanthines in cacao nibs sourced from different origins
» Alex Dow, Samantha Hazen, Holly Lawson, Emily Niemeyer

Progenesis as an Explanation for the Similarity Between Adult Miniaturized Geckos and Juvenile Larger Geckos' Hands
» Mrs. Elyse Howerton, Dr. Juan D. Daza, Dr. Aaron Bauer

Arginine Kinase 1 is necessary for eye development in Drosophila melanogaster
» Amber Reynolds, Josceline Tenido, Kaycee Torres, Courtney Farrington, Mrs. Mardelle Atkins

An Affinity Analysis of Aliivibrio fischeri and Zooxanthellae
» Murphy Jacobie, Dr. Stacie Brown

Analysis of Microplastic Concentrations in Dried Algae Mats and Sediment Collected from Detention Basins in the Edwards Aquifer Recharge Zone.
» Paulina Quinonez, Mr. Andre Felton, Dr. Jeffrey Hutchinson

Threads of Change: Zooplankton community shifts in response to fiber disturbances
» Caitlyn Lankford, Heaven Thompson, Ashton Fisher, Addison Lehew, Mary Kay Johnston

Hemangiosarcoma in Canines: A Personal Case Study in Disease Progression and Therapy
» Mr. Yuto Goto

Microgravity Experiment for Lunar Dust (MELD): A platform to study lunar dust interactions with surfaces
» Samantha Daigle, Karissa Coker, Jeffry Kelber, Eduardo Bidot, Matthew Wittal, Richard Zhang, John Beatty

A Study of the Default Mode Network in Individuals with ADHD
» Mr. Yuto Goto

Rad7-Rad16 in global genome nucleotide excision repair in Saccharomyces cerevisiae
» Ms. Chathurika Hewa Bhashithage, Dr. Jung-Hyun Min

Plants Grown at Reduced Pressures for Extraterrestrial Environments
» Craig Bateman, John Beatty

Synthesis and characterization of copper (II) complexes with 1,10-phenanthroline-5,6-dione and derivative ligands: Potential applications in triple-negative breast cancer therapy
» Mr. Matthew Cartwright, Ms. Sofia Stanfield, Dr. Hadi Arman, Dr. Charles Fermaint, Dr. Rafael Adrian

Effect of rapamycin and minocycline on autistic-like behaviors in male C57BL/6J mice after early life seizure induction.
» Ms. Sydney Pell, Katherine Blandin, Ms. Taylor Bradish, Ms. Madison Wallis, Ms. Chloe Lau, Mr. Colton Kelley, Mr. Luke Hammett, Mr. Joshua Thayil, Ms. Ashley Smelley, Mr. Gautham Chelliah, Mr. David Narvaiz, Ms. Leighton Douglas, Ms. Linay Burge, Dr. Joaquin Lugo

Calcium analysis of eggshells
» Ms. Kathryn Clevenger, Dr. Alyx Frantzen

Continued from **Friday, 28 February**

Studies of the transition metal complex on Human Serum Albumin
» Ms. Tess Corbett, Ms. Nkeiruka Aziekwu, Ms. Perla Tovar, Bidisha Sengupta

The Effects of Vitamin D on Zebrafish in Varied pH Environments
» Ethan Cortez

Primer Design: Developing New Tools for DNA Sequence Investigation in the Plant Genus Mentzelia
» Ms. Kseniia Schneider, Ms. Amy Osborn, Joshua Brokaw

Novel palladium(II)-polyphenol complexes: Synthesis, characterization, and anticancer potential against triple-negative breast cancer cells
» Mr. Victor Torres, Ms. Sofia Stanfield, Dr. Hadi Arman, Dr. Charles Fermaint, Dr. Rafael Adrian

Geologic Salt Analysis
» Katelyn Jones, Dr. Alyx Frantzen, Dr. Julie Bloxson

Metabolic Fingerprinting of Creek Ecosystems: The Influence of Urban Stressors on Productivity and Respiration
» Ria Bhatia, Carol Tran, Isabella Serrao, Charles Yang, Joji Sherman, Irfan Eshan, Kandace Diaz, Dr. Mary Poteet

Generalized Happy Numbers
» Mr. Briley Elrod, Dr. Rachel Lynn

From Storm Drains to Streams: How Riparian and Upland Leaf Inputs Transform Urban Creek Ecosystems
» Ms. Zoe Herndon, Mireya Velazquez, Alyssa Steinhart, Celeste Rodriguez, David Rimada, Pablo Ramos, Nardos Shiferaw, Madison McGee, Dr. Mary Poteet

Exploring Thermal Variability in Urban Creeks: The Combined Influence of UHI and Hydrogeology
» Areli Velasquez, Alondra Trejo, Catherine Byelousova, Zachary Courreges, Kimberly Tran, Sommer Montes, Zenaida Rodriguez, Dr. Mary Poteet

The limitations of using intrapersonal isotopic variation within the use of commingled bones
» Ms. Tori Rowe, Ms. Stephanie Baker, Ms. Emma Giacomello

Proportion of Daily Community Respiration in Texas Farm Ponds for Which Plankton are Responsible
» Ms. Sarah Baggett

Mechanism of the Rad34-Rad23-Rad33 in RNA Polymerase I-associated transcription-coupled nucleotide excision repair of yeast
» Ms. Meenuka Dalpathadu, Ms. Linh Pham, Prof. Kenji Murakami, Dr. Jung-Hyun Min

Automating Flashcard Creation: A Python-Based Approach for Organic Chemistry Education
» Benjamin Rybak-Dow, Patrick Harlan, Connor Stear, Lance English

Development of a Protein Structure Driven CURE Module for Second-Semester Organic Chemistry
» Connor Stear, Cas Knox, Benjamin Rybak-Dow, Dr. Steven Whitten, Lance English

Establishment of fish tissue cultures to assess toxicity of copper
» Ms. Tadeen Feroz, Ms. Olivia Donnelly, Ms. Taryn Pledger, Ms. Kaci Monk, Ms. Tyler Shannon, Dr. Scott Dyer

Using Guided Antimicrobial Peptides to Target Oncomicrobe F. nucleatum and Prevent Colorectal Cancer Progression
» Ms. Allison Barton, Dr. Ankan Choudhury, Dr. Leigh Greathouse

Ecological conflicts inherent in the spread and management of a Texas invasive, Paulownia tomentosa
» Dr. Richard Patrock

Continued from **Friday, 28 February**

Assessment of Fish Tissue Cultures as Substitutes for Animal Tests
» Ms. Taryn Pledger, Ms. Tadeen Feroz, Ms. Olivia Donnelly, Ms. Kaci Monk, Ms. Tyler Shannon, Dr. Scott Dyer

Characterizing The Role of dennd5b in Zebrafish Through Microinjection During Early Embryonic Development
» Isabella Simon, Magdalen Marston, Ms. Alicia Mendoza, Dr. Sharmin Hasan

Identifying Novel Inhibitors of 3-oxoacyl-(acyl-carrier-protein) reductase in Plasmodium falciparum to combat malaria
» Haneef Ibrahim, Dr. Josh T. Beckham, Dr. Walt Fast

Role of fnbp1 during early development of vertebrate
» Mr. Ty Franklin, Dr. Sharmin Hasan

Making decisions: does mitochondrial metabolism influence retinogenesis?
» Yaqueline Gutierrez, Yessenia Beltran, Emilia Santamaria, Elda Rueda

Increasing ethanol concentrations in increments can detrimentally affect yeast cell viability: modeling alcohol toxicity in animal cells.
» Mr. Logan Olguin, Mr. Brennen Leidy

The small mammal fauna from Matjhabeng, a Pliocene fossil locality in the Free State of South Africa.
» Mr. Brennen Leidy

Explaining the relationship between elevation and gut-microbe diversity of Sceloporus Poinsettii (Crevice Spiny Lizard) between the Christmas and Davis mountains
» Thomas Levrie, Thornton Larson

7:45pm **Poster Session Adjourned**

Saturday, 1 March

7am **Past Presidents & Fellows Breakfast**
MAC 304 @ MCC

7:45am **(S1) Chemistry & Biochemistry C**
MAC 111 @ MCC
Chaired by: Darrell Fry and Bidisha Sengupta

7:45am **Impact of Soil Microalgae on Olivine Weathering**
» Ms. Layla Jackson, Ms. Lauren Bomer, Dr. Betsy Leverett, Dr. John Hooker, Dr. Alakananda Chaudhuri

8am **Redox Cooperativity Analysis with Computational Chemistry: Interplay Between Energy Matching and Geometric Arrangement in Redox Non-Innocent Systems**
» Hadley Watts, Dr. John Gary

8:15am **Role of the NAC Linker in Early Protein Sorting**
» Travis Bishop, Emir Maldosevic, Dr. Ahmad Jomaa

8:30am **Structural rearrangements in lanthanum glutarate bromotherephthalate, La□(Glut)□(TPBr)(H□O)□·4H□O, initiated by drying**
» Dr. Ralph Zehnder

8:45am **Structure and mechanisms of Nucleotide Excision Repair in yeast**
» Dr. Jung-Hyun Min

9am **Substances of Health Concern: Label Accuracy of Cannabidiol and Tetrahydrocannabinol in Commercial Tinctures from the United States**
» Mr. Zander Sullivan, Dr. Coady Lapierre, Dr. Laura Weiser Erlandson, Dr. Linh Pham

Continued from **Saturday, 1 March**

9:15am **Synergistic Effects of Watercress Extract with plant flavonoid Kaempferol against Oxidative Damage in Human Serum Albumin**
» Ms. Nkeiruka Aziekwu, Ms. Bidisha sengupta

7:45am **(S2) Mathematics & Computer Science**
MAC 206 @ MCC
Chaired by: Dipak Singh and John Garza

7:45am **A Multimodal Approach for Resource Allocation During Natural Disasters**
» Agafia Bowden, Dr. Dipak Singh

8am **Classifying Z-related sets of order 5**
» Nicholas Jones, Prof. William Erickson

8:15am **Dissipative quantum systems with non-local point interactions**
» Christoph Fischbacher, Chloe Povey-Rowe, Brady Zimmerman, Danie Paraiso

8:30am **Lies and Deceptions of the Traveling Salesman**
» Prof. Paul Feit

8:45am **Methods Connecting Differential Operators and Combinatorics *withdrawn***
» Mr. Jonathan Thomas, Prof. William Erickson

9am **Predicting chemical respiratory sensitizers with machine learning QSAR models**
» Kiera Griffin, Dr. James Liu, Ms. Taylor Jefferis, Dr. Joshua Peeples, Christie Sayes

9:15am **Towards a Universal Format for Exercise Construction**
» Prof. Paul Feit

7:45am **(S3) Plant Biology**
MAC 235 @ MCC
Chaired by: Kevin Eddy and Josh Brokaw

7:45am **"Exploring Native West Texas Plant Extracts for Anti-Hemolytic Properties: Potential Natural Remedies for Red Blood Cell Protection and Inflammation**
» Ms. Atlanta Williams, Ms. Sui Tial

8am **Gene flow among populations of the annual wildflower Mentzelia pectinata (Loasaceae).**
» Ms. Amy Osborn, Gisela Guerrero, Jessica Edo, Yourim Cho, Joshua Brokaw

8:15am **Life History Evolution in the Annual Mentzelias: Sections Bicuspidaria and Trachyphytum (Loasaceae)**
» Joshua Brokaw

7:45am **(S4) Physics & Engineering**
Lecture Hall @ MCC
Chaired by: Cody Crosby and Brian Flowers

7:45am **Adapting an Open-Source Syringe Extruder to Photocrosslink Soft Hydrogels**
» Joseph Dorsey, Amanda Mejia, Angel Rodriguez, Sabrina Woodward, Domenic Cordova, Cody Crosby

8am **Evaluating Deep Learning Models for Multiclass Classification of LIGO Gravitational Wave Glitches**
» Mr. Rudhresh Manoharan, Dr. Gerald Cleaver

8:15am **First Principle calculations of effective Hubbard Parameter**
» Mrs. Manjula Raman, Mr. Anjy-Joe Olatunbosun, Dr. Kenneth Park

8:30am **From Dust to Dawn: The Search for Young Stellar Objects**
» Peter Newcomer, Dr. Luisa Rebull, Dr. April Andreas, Kivan Andreas, Andres Mar, Mickayla Tosch, Mr. David Dahari, Gabriel Dahari, Sahar Sultani, Mr. Joseph Perry, Ricky Perry, Maddie Sullivan, Mr. Jeff Benter, Bo Zeleznik, Jackson Ritchie, Tanner Hurliman, Jack Benter

Continued from **Saturday, 1 March**

8:45am **Historic First Liquid Fueled Advanced Nuclear Reactor permitted by the NRC**
» Dr. Charles Ivey

9am **Optimizing biomass pyrolysis and syngas reformation: A study on microwave reactor variables and efficiency**
» Chase Rheinlander, Dr. Chao Dong

9:15am **Pioneering Climate Resilience through Innovating Property-Variable Materials for South Texas' Energy Transition**
» Jingbo Liu, Sajid Liu

7:45am (S5) Neuroscience

MAC 236 @ MCC
Chaired by: Seena Mathew and Dr. Danielle Grove

7:45am **Abdominal photobiomodulation (PBM) as a therapeutic intervention for autism spectrum disorder (ASD): Impacts on mitochondrial function and gut health**
» Dr. Gabriela Guimaraes, Sarah Diaz, Ms. Nicole Jackson, Mr. Nisarg Vshah, Dr. Douglas Barrett, Dr. Francisco Gonzalez-Lima

8am **Assessing Anxiety in a Zebrafish Nicotine Cessation Model**
» Britney Castillo, Dr. Ayman Hamouda, Dr. Brent Bill

8:15am **Augmenting Cognitive Behavioral Therapy for Major Depressive Disorder with Transcranial Infrared Laser Stimulation**
» Dr. Douglas Barrett, Dr. Christopher Beevers, Dr. Francisco Gonzalez-Lima

8:30am **Cognitive Improvement and Prefrontal Network Interactions in Individuals with Remitted Bipolar Disorder after Transcranial Infrared Laser Stimulation**
» Dr. Roger Davis, Dr. Douglas Barrett, Dr. Erin Logue, Dr. Andreana Haley, Ms. Amy Bichlmeier, Ms. Lucy Chibib, Dr. Jennifer Siegel-Ramsay, Mr. Farzad Salehpour, Laura Gamboa, Mr. Anagh Mirji, Mr. Kevin Thakkar, Dr. Gabriela Guimaraes, Sarah Diaz, Mr. Hunter Dutkiewicz, Isabelle Rose, Jana Jimenez, Mr. Jordan Schwartz, Dr. Jorge Almeida, Dr. Francisco Gonzalez-Lima

8:45am **Effects of Transcranial Infrared Laser Stimulation on Brain Rhythmic Electrical Activity and Cognitive Aging**
» Isabelle Rose, Dariella Fernandez, Laura Gamboa, Mr. Hunter Dutkiewicz, Sarah Diaz, Dr. Roger Davis, Dr. Gabriela Guimaraes, Dr. Douglas Barrett, Dr. Francisco Gonzalez-Lima

9am **Location-independent axon pathfinding in the hindbrain of larval zebrafish**
» Annika Tracy, Dr. Kimberly McArthur

9:15am **Mental-Mixtral: AI-powered multi-modal mood disorder detection**
» Ms. Nikila Swaminathan

9:30am **Python-Based Machine Learning For Three-Dimensional Human Brain Model Segmentation and Analysis**
» Ms. Morgan Smith, Dr. Elizabeth Ochoa, Dr. Kevin Bieniek

9:45am **Transcranial Infrared Laser Stimulation (TILS) Improves Impulse Control in Adults with Attention-Deficit/Hyperactivity Disorder (ADHD)**
» Mr. Farzad Salehpour, Dr. Douglas Barrett, Mr. Anagh Mirji, Ms. Ayla Farzamnia, Mr. Vikas Burugu, Dr. Francisco Gonzalez-Lima

8am Registration

Science Building Lobby @ MCC

8am Administration Office: Treasurer and Collegiate Academy Judges

MAC 108 @ MCC

Continued from **Saturday, 1 March**

8:30am **Plant Biology Section Meeting**
MAC 237 @ MCC

8:45am **(S3) Terrestrial Ecology & Management**
MAC 235 @ MCC
Chaired by: Richard Patrock

8:45am **Do Grasses of Central Texas Use Water Stored in Limestone?**
» Mr. Eli Hartung

9am **Structure and composition of forests in the Leon and Salado Creek Greenways**
» Ms. Natalie Martinez, Dr. Jeffrey Hutchinson

9:30am **Terrestrial Ecology & Management Section Meeting**
MAC 237 @ MCC

9:30am **Mathematics & Computer Science Section Meeting**
MAC 207 @ MCC

9:30am **Physics & Engineering Section Meeting**
MAC 200 @ MCC

9:30am **(S1) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

9:30am **(S2) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

9:30am **(S3) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

9:30am **(S4) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

9:45am **(S1) Chemistry & Biochemistry D**
MAC 111 @ MCC
Chaired by: Darrell Fry and Bidisha Sengupta

9:45am **Synergizing Biocompatible Nanoagents with AI for Revolutionary Forensic Fingerprint Analysis**
» Jingbo Liu, John-Ryan Lawrence, Zhaohui Wang, Sajid Liu

10am **Synthesis and Characterization of a Water-Soluble TAK-242 Prodrug**
» Jacquelin LaBerteaux, Prof. Bob Kane

10:15am **Synthesis of AER-270 prodrugs to inhibit Aquaporin-4 using controlled-release kinetics**
» Mr. Akhil Kumar Sarkar, Dr. Michael Nicosia, Dr. Anna Valujskikh, Prof. Bob Kane

10:30am **Synthesis of bis-diamine monomer to construct oligo-benzodiazaborole-based macrocycles.**
» Mrs. Sathsara Senarathne, Mr. Javier Hodges, Prof. Dustin Gross

10:45am **Synthetic Efforts Towards Novel Prodrugs of TAK-242 (Resatorvid) for Localized Immunosuppression**
» Rahul Gaykar, Prof. Bob Kane

Continued from **Saturday, 1 March**

11am **The growth and characterization of intermetallic compound Gd4Mn4Sn7**
» Teddy G. Spencer, Ms. Morgan E. Raines, Dr. Gregory T. McCandless, Dr. Julia Y. Chan

11:15am **The Silicon-Germanium Bond**
» Keith Pannell

9:45am **(S3) Conservation Ecology**
MAC 235 @ MCC
Chaired by: Wendi Wolfram

9:45am **Assessment of Bird Communities Using eBird Data in the Red River Basin Following a Significant Weather Event**
» Zoe R. Williams, Jessica L. Coleman, Matthew J. Greenwold

10am **Detecting Leptonycteris nivalis at Emory Cave using airborne eDNA**
» Ashley Loehn, Dr. Loren Ammerman

10:15am **Effects of Invasive Chinaberry Tree Fruits on Invasive Asian Clams in Texas**
» Amy Lowe, Marion Mundy, Dr. Chris Distel

10:30am **Effects of Stream Restoration on Caddisflies**
» Fernanda Gonzalez, Dr. Mark Gustafson

10:45am **Environmental DNA detection of the Endangered Rio Grande Silvery Minnow**
» Ms. Julianne Bullock, Dr. Matthew A. Barnes

11am **Spatio-temporal patterns of environmental DNA detectability for a cryptic species of greatest conservation need**
» Kyra S. Woytek, Dr. William I. Lutterschmidt, Dr. Christopher M. Schalk, Dr. Daniel Saenz

10am **Neuroscience Section Meeting**
MAC 201 @ MCC

10am **(S5) Coffee Break**
MAC 1st 2nd & 3rd floor lobbies

11:15am **Conservation Ecology Section Meeting**
MAC 237 @ MCC

11:30am **Chemistry & Biochemistry Section Meeting**
MAC 200 @ MCC

11:30am **Lunch Break**
LTC Cafeteria @ MCC

12pm **Section Chairs Post Meeting**
MAC 204 @ MCC

12:30pm **Meeting moves from MCC to BU**

1pm **Registration (BU)**
HURD @ BU

1pm **Graduate Student Competition**
HURD @ BU

1pm **Mechanisms of Toxicity and Metabolic Disruption by Bisphenol Analogs in Human Cell Models**
» Rafia Afroze Rifa, Dr. Ramon Lavado

1:15pm **Antimicrobial Applications of Probiotic Byproducts in Food Safety**
» Min Ji Jang, Dr. Md Ariful Haque, Dr. Hae Woong Park, Prof. Seockmo Ku

Continued from **Saturday, 1 March**

1:30pm **Effects of Transcranial Photobiomodulation on Symptoms of Autism Spectrum Disorder**
» Sarah Diaz, Dr. Gabriela Guimaraes, Ms. Nicole Jackson, Mr. Nisarg Vshah, Dr. Roger Davis, Dr. Douglas Barrett, Dr. Francisco Gonzalez-Lima

1:45pm **Comprehensive insights into mosquito species diversity and habitat-specific host selection patterns to enhanced surveillance of vector-borne pathogens in Cameron Park Zoo, Waco, Texas.**
» Ms. Dhivya Rajamanickam, Dr. Jason Pitts

2pm **Examining the rescuing effects of voluntary wheel running on depressive-like behaviors and neuroinflammation in a mouse model of hyperglycemia**
» Ms. Laura Kusumo, Grace Summers, Mr. Matthew Folh, Mr. Jonathan Duhon, Ms. Kaylea Gawf, Dr. Elisabeth Vichaya

2:15pm **Modelling patterns of reproductive occupancy to inform management of toads in a dynamic desert system**
» Sadie Roth, Dr. Matthew A. Barnes, Dr. Kerry Griffis-Kyle

1pm **Administration Office: Treasurer and Collegiate Academy Judges**
HURD @ BU

3pm **Graduate School Fair**
HURD @ BU

3pm **Mentoring & Networking Session**
HURD @ BU

3pm **Faculty Reception**
HURD @ BU

3pm **Graduate Student Panel**
HURD @ BU

4pm **OTE Keynote Talk: Mark Rogers, Austin Achieve, TX**
HURD @ BU

4:45pm **DTS Keynote Talk: Dr. Jingbo Louise Liu, Professor of Chemistry, Texas A&M University-Kingsville, TX**
HURD @ BU

5:30pm **Awards Banquet**
HURD @ BU

8:15pm **TAS Annual Meeting Adjourned**

Sunday – Explore on Your Own

Sunday, March 1

Mammoth National Monument in Waco, Texas

The official Texas Academy of Science Conference program concludes on Saturday evening. Attendees wishing to extend their stay, can individually explore the remarkable natural attractions that Waco has to offer. Please note that the following suggestion is provided purely for informational purposes, and any visits would be independent of the TAS conference.

Discover the Wonders of the Ice Age!
Explore the Waco Mammoth National Monument, a site renowned for its significant paleontological discoveries. This unique location is home to the only known nursery herd of Ice Age Columbian Mammoths in America. These majestic creatures, standing 14 feet tall and weighing up to 20,000 pounds, roamed this region thousands of years ago.

Highlights of the Visit:

- **Fossil Exploration: Witness the fossil specimens of Columbian Mammoths and learn about their history.**
- **Guided Tour: Enjoy an informative tour led by expert paleontologists.**
- **Biodiversity Walk: Explore the park's 108-acre area, home to a variety of species including roadrunners and raccoons.**

Why Attend?

- **Educational Experience: Gain insights into paleontology and the Ice Age.**
- **Connect with Nature: Experience the diverse ecosystem and rich biodiversity of the park.**
- **Fun for All Ages: Suitable for students, families, and science enthusiasts.**

For more information, visit:
Waco Mammoth National Monument (U.S. National Park Service) (nps.gov)

Connect with TAS Texas Academy of Science on social media!

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Tag us or include #TAS128 in posts to be part of the conversation this weekend!