Inspired by the Council of Principal Investigators

Seeking to elevate graduate and professional education at Texas A&M University

- Recruiting high achieving doctoral students
- Competitive funding packages for high achieving doctoral students that have earned or are good candidates for nationally competitive external fellowships, federal training grants, and federal research grant supplements to broaden participation

Call to Action

- CPI worked with University Administration (TAMU President, VP for Research) to garner resources
- Charged the Graduate and Professional School to administer the program beginning fall 2022
GREAT – Annual Full-Funding Package with GREAT supplemental

- $3,000 monthly stipend
- Full tuition and required fees
- 12 months of health insurance
- 1,500 professional development scholarship
Supplements for nationally competitive *External Fellowships* awarded directly to individual doctoral students

**Multi-year Fellowships** - Supplements top off
- fellowship funding during years of active fellowship funding, and
- faculty, department, or college assistantship funding in other years to ensure the recipient receives a full funding package up to 5 years.

**One- to two-year Dissertation Fellowships** - Supplements top off
- fellowship funding to ensure the recipient receives a full-funding package for the duration of the fellowship tenure.

*Ex. NSF-GRFP, NIH F31, Ford Dissertation*
Supplements for Federal Training Grants awarded to a faculty team or department / program and from a US agency outside of TAMU and the TAMUS

Supplements top off
- grant funding during years of active grant stipend funding, and
- faculty, department, or college assistantship funding in other years to ensure the recipient receives a full funding package up to 5 years.

Ex. NIH T32, DOE GAANN, USDA NNF, NSF NRT
Supplements for *Federal Research Grant Supplements to broaden participation* awarded to faculty and from a US agency outside of TAMU and the TAMUS.

Supplements top off federal research grant supplemental funding to ensure the recipient receives a full funding package during the years the student receives the federal research grant supplemental funding.

*Ex. NSF AGEP-GRS, NSF MPS-GRSV, NIH-DSP*
List of eligible fellowships / grants is published on the Graduate and Professional School Graduate Recruitment, Enhancement, and Travel Program website.
Category I – External Fellowships
College/Dept/IDP staff or administrator submits on behalf of doctoral student*

Category II – Federal Training Grants
Training Grant PI or staff or administrator submits*

Category III – Federal Research Grant Supplements
Research Grant PI or staff or administrator submits

https://tamugrad.infoready4.com/
What is asked in the request for funding?

External Fellowships
- Submitter and/or PI contact info
- Department Business Office contact info
- Type (ex. Multi-Year or Dissertation) and name
- Fellowship funding start and end dates
- Annual duration (9 or 12 months)
- URL for RFP
- What and how much is covered (ex. stipend, T&F, medical insurance, other expenses)

Grants
- Submitter and/or PI contact info
- Department Business Office contact info
- Sponsor Award # and Maestro ID #
- # of funded trainee slots
- Project funding start and end dates
- Annual duration (9 or 12 months)
- URL for RFP
- What and how much is covered (ex. stipend, T&F, medical insurance, other expenses)
Upon review and approval of a request, the Grad School sends the faculty/staff/administrator:

- Award letter
- Recommended business procedures
- Invoice template for reimbursement
## Summary of Administration FY23

<table>
<thead>
<tr>
<th>Category 1 Multi-Year External Fellowships</th>
<th>Category 1 Dissertation Fellowships</th>
<th>Category 2 Federal Training Grants</th>
<th>Category 3 Federal Research Grant Supplements</th>
<th>Professional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Requests Awarded</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td># of Unique Students Supported</td>
<td>58*</td>
<td>4</td>
<td>57</td>
<td>4</td>
</tr>
<tr>
<td>FY23 Estimated Funding Commitments</td>
<td>$294,200</td>
<td>$86,900</td>
<td>$504,300</td>
<td>$22,400</td>
</tr>
</tbody>
</table>

*The 58 unique students include 41 NSF GRFP Fellows on active tenure or reserve status.*

**Total Reimbursed:** $908,000

**Total Number of Doctoral Students Awarded:** 123 (29 departments, 6 colleges/schools)
Number of Recipients by College/School

- Engineering: 33
- Agriculture: 27
- Arts and Sciences: 26
- Veterinary Med: 23
- Medicine: 13
- Dentistry: 1
Stipend/Assistantship Supplemental Funding

GREAT Program Stipend/Assistantship Reimbursements

<table>
<thead>
<tr>
<th>College/School</th>
<th>Stipend/Assistantship Reimbursements</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRICULTURE</td>
<td>$150K</td>
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<tr>
<td>VETERINARY MED</td>
<td>$130K</td>
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<tr>
<td>ENGINEERING</td>
<td>$100K</td>
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<tr>
<td>ARTS AND SCIENCES</td>
<td>$100K</td>
</tr>
<tr>
<td>MEDICINE</td>
<td>$91K</td>
</tr>
<tr>
<td>DENTISTRY</td>
<td>$10K</td>
</tr>
</tbody>
</table>
Tuition and Fees Supplemental Funding

GREAT Program Tuition and Fees Reimbursements

College/School

- VETERINARY MED: $40k
- AGRICULTURE: $36k
- MEDICINE: $27k
- ARTS AND SCIENCES: $20k
- ENGINEERING: $17k
- DENTISTRY: $3k
Health Insurance Supplemental Funding

GREAT Program Health Insurance Reimbursements

College/School

- Agriculture: $5,095
- Arts and Sciences: $3,024
- Engineering: $2,016
- Medicine: $317
- Dentistry: $0
- Veterinary Med: $0
GREAT Program Professional Development Scholarship Reimbursements

- AGRICULTURE (27/28): $36,750
- ENGINEERING (25/34): $32,250
- VETERINARY MED (22/24): $32,250
- ARTS AND SCIENCES (23/26): $26,250
- MEDICINE (13/13): $18,750
- DENTISTRY (1/1): $1,500
$11,273 to 14 prospective PhD students

*Interdisciplinary Programs are listed separately since prospective students do not always have an identified home department at the time of their campus visit.*
Next Steps

✓ Continue to review faculty requests for other fellowship/training grants eligibility
✓ Review stipend threshold and GREAT funds availability
✓ Research leadership (Aggies Research Program) and mentoring (Graduate Mentoring Academy) participation:
  o Solidify expectations
  o hold Q&A sessions
  o include a summary of participation in the next annual report

✓ 1,500 professional development scholarship
✓ Create and implement a customer service facing platform
Contact great@tamu.edu regarding

1. Eligibility for an external fellowship/grant not listed;
2. During the proposal development process for grants not yet awarded;
3. Questions about the program and request forms.

Shannon D. Walton, Ph.D
Assistant Dean
Graduate and Professional School
shannon@tamu.edu

Jackie Perez
Director of Business Services
Graduate and Professional School
jackieperez@tamu.edu
Center for the Integration of Research, Teaching & Learning

Dr. Julie Harlin, Associate Dean, Graduate and Professional School
Dr. Radhika Viruru, Clinical Professor, Teaching, Learning & Culture
Goals Today

Overview of the CIRTL Network & CIRTL@TAMU

Three Requests:

1. Collaborate with us to help us identify TAMU courses in teaching & learning for CIRTL Certificates
2. Promote Teaching-As-Research with your postdocs & graduate students – Application Deadline Wednesday, March 20
3. Have a teaching-as-research project idea but no time to do it? Let us match you with a TAR fellow!
What is CIRTL? 
A Diverse National Network

CIRTL established 2003 (NSF)

CIRTL Network founded in 2006
~TAMU original member

Now 43 member research universities and growing!

https://cirtl.net/institutions/

• Content can be STEM focused, but open to **ALL disciplines**
• Network programming for faculty, postdocs and graduate students (cirtl.net)
• CIRTL@TAMU programming for faculty, postdocs and graduate students (cirtl.tamu.edu)
“The CIRTL mission is to enhance excellence in undergraduate education through the development of a national faculty committed to implementing and advancing effective teaching practices for diverse learners as part of successful and varied professional careers.”

- Learning in Communities
- Learning through Diversity
- Teaching as Research
## General Benefits of Engagement in CIRTL Programming

<table>
<thead>
<tr>
<th>Activity</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop teaching and delivery skills</td>
<td>• Beneficial skills regardless of career path</td>
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<tr>
<td></td>
<td>• Increase confidence in teaching and communicating</td>
</tr>
<tr>
<td>Help <strong>differentiate</strong> in the academic job market</td>
<td>• Professional development in teaching</td>
</tr>
<tr>
<td></td>
<td>• Teaching as Research Fellows</td>
</tr>
<tr>
<td>Expand professional network across the university and the country</td>
<td></td>
</tr>
<tr>
<td>National program recognition</td>
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</tr>
</tbody>
</table>

Opportunities for faculty, postdocs, and graduate & professional students
CIRTL Certification Levels

CIRTL@TAMU holds an annual CIRTL Banquet in the Spring to celebrate our CIRTL Certificate Recipients’ achievements

• Do not have to achieve levels sequentially
• Can receive more than 1 Associate Certificate
• We also connect CIRTL Certificates to the G.R.A.D. Aggies Certificate program
Three Requests
#1: Help Identifying TAMU Courses in Teaching & Learning

Courses in Teaching & Learning

- Open to any graduate/professional student that meets CIRTL learning outcomes
- May be eligible to receive CIRTL certification

CIRTL@TAMU can work with faculty to:

- Identify courses that are eligible
- Promote these courses through CIRTL@TAMU marketing
TAR Fellows

Opportunity to approach the scholarship of teaching and learning with the same rigor you approach your disciplinary research

Open to TAMU-CS graduate students & postdoctoral scholars

1-year program

Need some teaching experience/PD in teaching to be eligible

Information Session, Weds 3/6 4pm

Application Deadline, Weds 3/20

#2: Teaching as Research Fellows Program
CIRTL Scholar/Practitioner Level

tx.ag/TARFellows
tx.ag/applyTAR
TAR Process

**Anticipated Timeline**

- **April 2024**: Identify Research Question
- **May-June 2024**: Design Study/IRB Proposal
- **Fall 2024 Semester**: Collect Data
- **Spring 2025 Semester**: Analyze Data & Draw Conclusions
- **Spring 2025 Semester**: Report Findings

Data collection cannot begin until approval or exemption is received from IRB.

Stipends paid to grad students at each identified milestone, up to $1000 total.


See: tx.ag/TARFellows, tx.ag/applyTAR
#3: TAR Faculty Mentors

Have a research question related to teaching and learning?

- Allow us to match you with a TAR Fellow who you can help mentor through the process
Today...Overview

Overview of the CIRTL Network & CIRTL@TAMU

Three Requests:

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   1. Information Session Wednesday, March 6, 4pm CT
3. Have a teaching-as-research project idea but no time to do it? Let us match you with a TAR fellow!
Visit our website at
http://cirtl.tamu.edu

Dr. Julie Harlin, Associate Dean, Graduate and Professional School
Dr. Radhika Viruru, Clinical Professor, Teaching, Learning & Culture
Email cirtl@tamu.edu
Texas A&M University
RESEARCH ENTERPRISE
STRATEGIC INITIATIVES

Henry Fadamiro
AVP for Research & Strategic Initiatives
Strategic Research Themes/Sub-Themes

• Defined cross-cutting themes/topics that:
  • Leverage TAMU’s strengths, capacity, and capabilities (colleges, schools, agencies, C&I, core facilities).
  • Leverage external resources/partnerships.
  • Address state, national, and global challenges.
  • Deliver significant societal impact.
  • Advance knowledge and elevate TAMU’s stature and rankings as a top-tier research university.

• Process:
  • Review of strategic plans and research priorities of TAMU colleges, schools, agencies.
  • Broad consultation (internal and external).
  • Input from DOR Strategic Plan process.
  • Input from research leadership groups.
  • Alignment with National research agenda and priorities of federal funding agencies and TX.

6 Strategic Research Themes and 21 Sub-Themes Defined:

• Community, Culture, and Economic Resilience
• Emerging Technologies and Innovations
• Health and Quality of Life
• National Security
• Space Exploration
• Sustainability and Environment
<table>
<thead>
<tr>
<th>Strategic Research Themes</th>
<th>Strategic Research Sub-Themes</th>
<th>Examples of Research Areas of Strength/Opportunity within Texas A&amp;M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community, Culture, and Economic Resilience</td>
<td>Arts Ecosystem and Culture</td>
<td>Impact of arts on health &amp; wellbeing, education and economy, community, transformation and healing, adaptation to social, economic and technological challenges, public humanities, cultural heritage, historic creative activity, civic education, creative production and performance, use of new media and technologies in arts.</td>
</tr>
<tr>
<td>Human Development and Social Dynamics</td>
<td>Human resource development, change management, resilience, leadership development, social dynamics, policy, human factors, bioethics, education disparities</td>
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<tr>
<td>Workforce and Future of Work</td>
<td>Workforce development, future of work, cultures of work, policy, inclusive workforce</td>
<td></td>
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<tr>
<td>Emerging Technologies and Innovations</td>
<td>Artificial Intelligence, Learning, and Autonomy</td>
<td>Machine learning, deep learning, human-machine interactions, sensors, robotics, computer vision, ethical/policy, technology adoption</td>
</tr>
<tr>
<td>Biotechnology and Biomanufacturing</td>
<td>Synthetic biology, genomics, gene editing, genetic medicines and RNA/DNA vaccines, biomanufacturing</td>
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<tr>
<td>Data, Visualization, and Information Technologies</td>
<td>Digital twins, computing platforms, visualization, AR/VR technology, LEED production stages, communicating with the future, policy</td>
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<tr>
<td>Microelectronics and Semiconductors</td>
<td>Analog and mixed signal circuits, artificial intelligence hardware, accelerators, brain-inspired computing, integrated photonic, intelligent and cognitive-EM sensors, MEMS sensors and actuators, memristors and emergent memory devices, microfluidics, molecular computing, neuromorphic materials, radiation-hardened electronics, secure edge computing, 5G/6G technology, workforce development</td>
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<tr>
<td>Quantum Science and Technology</td>
<td>Quantum sensing, quantum biology, quantum communications, quantum computing</td>
<td></td>
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<tr>
<td>Health and Quality of Life</td>
<td>Diagnostics, Treatments, Intervention, and Cures</td>
<td>Biomedical devices, diagnostic technologies, precision medicine, genomics/epigenomics, toxicology/environmental health, neuroscience, infectious diseases, zoonotic/emerging diseases, digital health, telehealth, cancer therapeutics/vaccines, cardiovascular diseases, communication and adoption, clinical trials, governance</td>
</tr>
<tr>
<td>Disease Prevention and Health Promotion</td>
<td>Risk and protective factors, food-nutrition-health link, prevention of chronic diseases, stress management, vaccine development, emergency-energy-health interactions, health communication</td>
<td></td>
</tr>
<tr>
<td>Health Disparities and Community Health</td>
<td>Rural and community health, socioeconomic health disparities, women's health and gender differences, military and operational medicine, humanitarian assistance/disaster response, health resilience, global health security, governance</td>
<td></td>
</tr>
<tr>
<td>National Security</td>
<td>Bio-Defense and Biosecurity</td>
<td>Detection/diagnosis, rapid response/cleanup, preclinical response, one health, rapid therapy/vaccine development, applied biosafety/biokemical mitigation, environmental monitoring, manufacturing, supply chain</td>
</tr>
<tr>
<td>Cybersecurity</td>
<td>Cybersecurity assessment, human dimensions, cyber modeling, privacy versus security, governance</td>
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<tr>
<td>Nuclear Security</td>
<td>Arms control, nuclear terrorism, risk analysis, nuclear forensics, nuclear proliferation, nuclear power, policy</td>
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<tr>
<td>Advanced National Security Technologies</td>
<td>Directed energy, hypersonic technology, ballistics, encryption, systems engineering, materials for extreme environments, policy</td>
<td></td>
</tr>
<tr>
<td>Space Exploration</td>
<td>Human Space Flight</td>
<td>Human factors and behavioral performance, human health countermeasures, space radiation, exploration medical capability, research operations and integration, food/nutrition, space humanities</td>
</tr>
<tr>
<td>Space Engineering and Construction</td>
<td>Aerospace power and energy storage, robotics, sensors, and autonomous systems, robotics, space flight, materials and manufacturing, space food systems</td>
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</tr>
<tr>
<td>Earth and Planetary Sciences</td>
<td>Earth science, astrophysics, astrobiology, planetary science, exoplanets, space human awareness, remote communications, asteroid detection and deflection</td>
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</tr>
<tr>
<td>Sustainability and Environment</td>
<td>Climate Resilience and Mitigation</td>
<td>Climate resilience/mitigation, coastal resilience, blue economy, carbon capture, environmental ethics/humanities, policy</td>
</tr>
<tr>
<td>Energy Transition/Clean Energy</td>
<td>Biomass/renewables, nuclear reactors, hydrogen economy, smart grid/infrastructure of the future, electrification, decarbonization, energy storage, critical materials, simulations of scenarios of energy of the future, response, training, policy</td>
<td></td>
</tr>
<tr>
<td>Food-Energy-Water (FEW) Nexus</td>
<td>Development and application of integrated tools/platforms to inform the decision-making process for FEW resilience, assessment of the sustainability of FEW systems, water quality decision support system, FEW and health, food security</td>
<td></td>
</tr>
<tr>
<td>Strategic Research Themes</td>
<td>Strategic Research Sub-Themes</td>
<td>Alignment with National and Texas (TX) Legislative Priorities</td>
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<tr>
<td>-------------------------------------------</td>
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<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>Community and Economic Resilience</td>
<td>Arts Ecosystem and Culture</td>
<td>NEA, NEH, NSF, NH</td>
</tr>
<tr>
<td></td>
<td>Human Development and Social Dynamics</td>
<td>NSF, NH, DOED, NEA, USAID, UN</td>
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<tr>
<td></td>
<td>Workforce and Future of Work</td>
<td>NSF, NH, DOED, USDA, DOC, CHIPS ACT, NEH, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX</td>
</tr>
<tr>
<td>Emerging Technologies and Innovations</td>
<td>Artificial Intelligence, Learning and Autonomy</td>
<td>NSF, NH, DOD, DARPA, CHIPS ACT, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX</td>
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<tr>
<td></td>
<td>Biotechnology and Biomanufacturing</td>
<td>NSF, NH, DOE, DOD, DARPA, CHIPS ACT, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX</td>
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<tr>
<td></td>
<td>Data, Visualization, and Information Technologies</td>
<td>NSF, NH, USDA, DOC, DARPA, NEH, SBRISTRTR, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX</td>
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<td></td>
<td>Microelectronics and Semiconductors</td>
<td>NSF, NH, DOE, DOD, DARPA, CHIPS ACT, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX</td>
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<tr>
<td></td>
<td>Quantum Science and Technology</td>
<td>NSF, NH, DOD, DARPA, MULTICYBER AGENCY R&amp;D</td>
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<tr>
<td>Health and Quality of Life</td>
<td>Diagnostics, Treatments, Intervention, and Cures</td>
<td>NH, DARPA, DHA, DHA, HPA, HPA, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX</td>
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<td></td>
<td>Disease Prevention and Health Promotion</td>
<td>NH, USDA, MA, CDC, DHA, DARPA, HPA, HPA, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX</td>
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<td></td>
<td>Health Disparities and Community Health</td>
<td>NH, DOED, USAID, TX, DHA, CHIPS ACT, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX, TX</td>
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<tr>
<td>National Security</td>
<td>Biodefense and Biosecurity</td>
<td>NH, DOE, DARPA, DHA, DOC, CHIPS ACT, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, USAID, UN, TX</td>
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<tr>
<td></td>
<td>Cybersecurity</td>
<td>NSF, DOD, DOE, DARPA, AFSOR, CHIPS ACT, MULTICYBER AGENCY R&amp;D, NATIONAL SECURITY, BSRISTRTR, MULTICYBER AGENCY R&amp;D</td>
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<tr>
<td></td>
<td>Nuclear Security</td>
<td>DOD, DOE, NASA, DARPA, CHIPS ACT, SECURITY BSRISTRTR, MULTICYBER AGENCY R&amp;D</td>
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<tr>
<td></td>
<td>Advanced National Security</td>
<td>DOD, DOE, NASA, DARPA, CHIPS ACT, SECURITY BSRISTRTR, MULTICYBER AGENCY R&amp;D</td>
</tr>
<tr>
<td>Space Exploration</td>
<td>Human Space Flight</td>
<td>NASA, DOE, DARPA, CHIPS ACT, NATIONAL LABS</td>
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<td></td>
<td>Space Experiment and Construction</td>
<td>NASA, DOE, DARPA, AFSOR, CHIPS ACT, SECURITY BSRISTRTR, MULTICYBER AGENCY R&amp;D</td>
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<td>Earth and Planetary Sciences</td>
<td>NASA, DOE, DARPA, AFSOR, CHIPS ACT, SECURITY BSRISTRTR, MULTICYBER AGENCY R&amp;D</td>
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<td></td>
<td>Food-Energy-Water Nexus</td>
<td>NSF, DOE, USDA, NH, CHIPS ACT, NATIONAL LABS, SECURITY, USAID, UN, TX</td>
</tr>
</tbody>
</table>
Ad hoc Committee for Strategic Research Priorities
  Charge: Review, brainstorm, and recommend strategic research priorities from the list of 21 research sub-themes.
  - Survey administered
  - Retreat (July 26, 2023)

Strategic research priorities identified for FY24-25.
  - Advanced National Security Technologies
  - Arts Ecosystem and Culture
  - AI / Data, Visualization, and Information Technologies
  - Disease Prevention and Health Promotion
  - Food-Energy-Water-Health Nexus (Sustainability & Resilience)
  - Space Exploration (TAMUS Space Institute)
  - Semiconductor & CHIPS (TAMUS Semiconductor Institute)

Workshops organized to further develop select research priorities as strategic initiatives.
  - FEWH Nexus; Space Exploration; AI
- **Participants**
  - Invited faculty representatives and leaders from relevant colleges/centers/institutes (~40 participants from about 20 units).

- **Purpose**
  - To define TAMU’s clusters of excellence in the FEWH nexus and identify big ideas and opportunities to enhance societal impact and submit winning proposals to the state, federal agencies, and the private sector.

- **Objectives**
  1. Identify areas of strength and intersections, big ideas, major funding sources, and external partnerships to expand TAMU’s leadership in the FEWH nexus.
  2. Define opportunities for advancing societal impact to the state/nation/world.

- **Expected Outcomes**
  - Create a road map to leverage the outcomes of the workshop and ensure actionable steps for further development of the FEWH nexus initiative.
Workshop Outcomes

- 20 big ideas were proposed and discussed by participants. The five big ideas listed below were identified as high priority topical areas.
  - **Cultivate Sustainable Communities**: Design and implement behavioral programs that encourage sustainable practices related to FEWH.
  - **Cross-disciplinary Research Networks**: Development and evaluation of multiscale integrated tools, digital platforms, and supporting data for FEWH resilience.
  - **Disaster Risk Preparedness**: Disaster risk reduction through adopting a FEWH systems approach.
  - **Soil Dynamics**: Integrating soil management, soil regeneration and ecosystem health to reduce water and energy footprint and improve carbon sequestration.
  - **Sustainable Production of Foods in Extreme Conditions**: Develop resilient and adaptable food production systems to withstand droughts and floods.

- A proposal for a new institute focusing on the FEWH nexus (Sustainability and Resilience) was prepared for consideration as a congressional request.

Next Steps

- A faculty workshop is being planned for March 5, 2024.
- Further advance the initiative, generate new ideas, and develop proposal teams for major targeted funding opportunities.
**Purpose**
- To organize and advance TAMU’s efforts in space exploration and position the university to enhance our leadership in space and submit winning proposals to the Texas Space Commission, federal agencies, and commercial space industry.

**Objectives**
1) Identify research priorities/initiatives and resources needed to expand TAMU’s leadership in space exploration.
2) Get an update on the mission and activities of the Texas A&M Space Institute including how the new space facility next to NASA JSC will be utilized.

**Expected Outcomes**
- Create a list of research priorities/big ideas for advancing space exploration at TAMU and identify key funding opportunities for each initiative.
- In collaboration with the Texas A&M Space Institute develop a plan for the use of the new space facility next to NASA JSC.
### Participants

- Interested faculty/staff across campus (140+ registrations; ~100 participants):
  - **Colleges/Schools/Agencies:**
    - College of Agriculture and Life Sciences/AgriLife (18)
    - School of Architecture (6)
    - College of Arts and Sciences (28)
    - Bush School (2)
    - School of Education and Human Development (6)
    - College of Engineering/TEES (47)
    - School of Engineering Medicine (1)
    - School of Medicine (4)
    - School of Military Sciences (1)
    - School of Visualization and Fine Arts (4)
    - Texas A&M Transportation Institute (2)
  - **Centers & Institutes:**
    - High Performance Research Computing (1); Global Cyber Research Institute (1); Scowcroft Institute of International Affairs (1); Cyclotron Institute (1); Texas A&M Cybersecurity Center (1); International Student & Scholar Services (1); Space Institute (1); Institute of Data Science (1)
  - **Other Units/Offices:**
    - Office of the Provost (1); Graduate and Professional School (1); Career Center (2); Division of Marketing and Communications (4); Division of Research (6); Technology Services (4).
Workshop Outcomes

Over 20 big ideas were proposed and discussed by workshop participants. The ideas listed below were identified as high priority.

- Microgravity Effects on Human Space Flight.
- Next-Gen X-ray Instruments for Crewed Missions to the Moon/Mars.
- Human Space Countermeasures.
- Automated Construction in Space.
- Tensegrity Reconfigurable Impact-Resistant Smart Structures.
- Texas Space Modular Manipulator Project.
- High Power Structural Batteries for Extreme Temperatures for Space Applications.
- Cislunar Astrodynamics and Space Domain Awareness Center of Excellence.
- Texas Space Strategic Technical Institute.
- Growing Plants and Producing Food in Space.
- Connecting the Earth and Moon.
- Sampling the Solar System through Spectroscopic Science.
- Planetary Sciences State-of-the-Art Database.
- Next-Gen Mission Control Center.

A proposal to establish a Next Generation Automated Mission Control Center at TAMU was developed for consideration as a congressional request.

Next Steps

- Meetings with group leaders to discuss next steps, alignment of the big ideas with specific major funding opportunities, and possible integration of some of big ideas for synergy.
- Team building for major funding opportunities.
- In collaboration with the Texas A&M Space Institute, develop a list of projects for the new Texas A&M facility in Clear Lake and proposal ideas for the Texas Space Commission.
Date: March 19, 2024
Participation: Open to interested faculty/staff across campus (invitation/open registration).
Planning Committee: 12 member including representatives of relevant units across campus.
Workshop Purpose and Objectives:
- Organize and advance TAMU’s efforts in AI and position the university to enhance our capacity and capabilities in AI and submit winning proposals to major funding opportunities in AI.
  - Assess the evolving external landscape of AI research, applications, and funding.
  - Identify clusters of research expertise at TAMU and areas where growth or partnerships would strengthen our positioning.
  - Identify operational measures and additional capabilities to enhance TAMU’s capabilities in responding to anticipated opportunities.

Expected Outcomes:
- Develop a report outlining a roadmap for advancing AI initiative at TAMU including areas of strengths, gaps in capacity/capabilities, list of big ideas, upcoming relevant funding opportunities, and recommendations for advancing AI research.

Agenda Highlights:
- Keynote Address (by a prominent expert such as NSF AI Director or a Senior Personnel at OSTP).
- Panel Discussions (panelists to include external and internal leaders including Govt. Relations).
- Breakout Sessions:
  - Core AI Research Themes.
  - AI Application Domains (including policy, humanities, and STEM domains).
- Interactive/Networking Sessions.
- Summary and Feedback.
Team Building and Proposal Development
- Determine alignment of big ideas with major funding opportunities.
- Proactive engagement with potential funding sources.
  - Federal, State, and the Private Sector.

Support from DOR:
- Support for building collaborative teams and proposal development to advance research ideas from the workshops including:
  - Identification of the right mix of talents (RDASH and related tools)
  - Team meetings/workshops
  - Proposal writing support and red teams
  - Travel to engage sponsors
  - Planning grants for major targeted funding opportunities (via TPT).

Input Solicitation:
- What are effective strategies for interdisciplinary team building and proposal development?
- What are effective strategies for community/stakeholder engagement?