

American Nuclear Society Texas A&M University-Kingsville

Samuel Glasstone Award Submission

Officers:

Position	Outgoing (2016-2017)	Incoming (2017-2018)	
President	Abdullah Weiss	Luis Ramirez	
Vice-President	Nicolas Pizana	Lucas Olivares	
Secretary	Juan Alberto Garza	Moiz Butt	
Treasurer	Diego Leon	Rolando Morin	
Webmaster	Diego Adame	Clay Blackwell	
Fundraising & Development Chair	Virginia Puentes	Rohan Joseph	
Historian & Outreach Chair	Michael Coble	Juan Alvarez	
Travel Committee Chair	Felicia Avila	Jacob Cann	

Date of Completion: April 30th, 2017

Faculty Advisor

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Background

Texas A&M University-Kingsville (TAMUK) is a small University located in the South Texas city of Kingsville. With approximately 8,300 students, about a quarter being enrolled in engineering programs, nuclear science has a presence in the university; and while that presence is not very prominent currently, it is gaining recognition and relevance slowly with the assistance of our efforts at the American Nuclear Society-TAMUK.

The American Nuclear Society (ANS) at Texas A&M University-Kingsville was initiated

as a student organization on-campus on September 30th, 2015, and was approved by the office of student activities on October 26th, 2015. Ever since then, ANS-TAMUK has been one of the most active (if not the most active) student organization on campus. Our purpose is to advocate nuclear science studies in all departments of the university, while helping promote and expand the Nuclear Engineering program at TAMUK. Within the past few months that we came to existence, we have managed to achieve a wide variety of accomplishments including: initiating and pushing research studies, presenting, and publishing them at several ANS national conferences, hosting a seminar about nuclear reactor design,



increasing awareness of nuclear energy on and off-campus, promoting the nuclear industry and the nuclear engineering program by participating in several University events such as the Bigger Event and the Fall Carnival, and assisting in the professional and scholastic development of undergraduate engineering students.

In the 2016-2017 year, under the guidance of Dr. Xue Yang, our section pushed several presentations and publications from TAMUK in ANS meetings, leading to a total of 12 presentations, and 7 student publications. We participated in several community service events from beach cleanups to helping build the college of engineering float for the La Posada Parade for the second year in a row. We held several fundraisers from selling bake sales to caffeine sales. We toured several facilities including the Texas A&M University, NSC reactor in College Station, and the South Texas Project (STP) nuclear power plant in Bay City.

Moreover, our student section gained national recognition as we won the ANS Student Member-Get-A-Member campaign, becoming the top student section with the highest percentage of new recruits, and Abdullah Weiss, the section president, as top individual recruiter across ANS national.

Our student section is the only presence of the American Nuclear Society in the South Texas/Coastal Bend area. Our University is the only university in the region to offer a nuclear engineering program, and one of the few in the nation.



ANS-TAMUK Organizational Structure

- 1. <u>The President</u> will reside as the leader and face of the section as he works closely with all officers.
- 2. <u>The Vice President</u> will cooperate with the President on all things; will connect with other student organizations, and will serve as project manager on all academic and competitive activities (projects, competitions, etc...).
- 3. <u>The Treasurer</u> will manage all the aspects of money, make budget sheets, and work on fundraisers with the Fundraising Chair.
- 4. <u>The Secretary</u> will organize all the matters within the section and ensure total coordination through agendas, "minutes" reports, and other records.
- 5. <u>The Webmaster</u> will work cooperatively with the Historian to build the image of the section on social media and in events, and will serve as a liaison between members and between officers, and both via email and social media.
- 6. <u>The Historian and Outreach Chair</u> will assist the Webmaster with social media and outreach, and will ensure the absolute best image of the section at all times. Will also be responsible of scheduling socials and community service events, and will make a poster (and slideshow if instructed) from pictures of the section taken at events.
- 7. <u>The Fundraising and Development Chair</u> will be responsible of scheduling, planning, and running fundraising events. Will also be responsible of writing proposals for money from all sources of potential funding.
- 8. <u>Travel Committee</u> will cooperate with all officers on planning, funding, and any other related tasks regarding tours, trips, and any travel that the organization organizes (especially travel to the annual ANS Student Conference).

* Each officer's outlined duties are available in their specified handbook.

Nuclear-related academic programs we helped develop & grow



Dr. Xue Yang presenting on computer applications of nuclear engineering



Dr. Xue Yang Presenting in Thermal Hydraulics of Nuclear Reactors Class

Our student section actively pursues the development and advancement of nuclear-related academic programs here at Texas A&M University-Kingsville. Our Nuclear Engineering minor program is headed by our section's advisor, Dr. Xue Yang (shown lecturing in the pictures), who does a great job helping us, students, understand the topics covered.

Over in the Physics department, Dr. Hisham Alabataineh is the head of nuclear-related programs in that department including the Nuclear Physics courses, and the courses in Nuclear Power Technology Certification in cooperation with the Nuclear Power Institute (NPI) at Texas A&M University-College Station.

This past academic year, approximately 100 students were enrolled in these programs (in comparison to the 34 students that were enrolled prior to the establishment of our ANS student section).



Course Descriptions:

MEEN 3398: Applications of computer software to solve nuclear engineering problems; nuclear data and cross-section libraries; deterministic and stochastic models; single and multi-objective optimization; applied nuclear engineering codes.

MEEN 4395: Thermal hydraulics of nuclear reactor core, two phase flow regimes, the boiling curve, the dry out phenomena, natural circulation in reactor core, transient and instabilities of two phase flow.

MEEN 4396: Introduction to nuclear safety systems and licensing principles. Design criteria and regulations. Deterministic, probabilistic, and reliability analysis. Radiological consequences, and risk assessment. Design basis accidents and severe accident management. Implications for advanced reactors.

MEEN 4397: Introduction to basic topics in the analysis and design of nuclear power plants including an overview of atomic and nuclear physics, an introduction to reactor design theory, and basics of analysis and design of nuclear fission reactors.

EVEN 3399: Nuclear fuel cycle and associated environmental impacts and safety concerns related to nuclear chemistry, nuclear physics, health physics, and environmental engineering.

*This minor is open for all undergraduate students.

Academic Programs Related to Nuclear Science in the College of Arts & Sciences

The nuclear physics program offers students a Bachelor of Science in Physics (Nuclear) if they complete a set of physics courses including the following two courses:

Nuclear Physics (PHYS 4360): Study of nuclear phenomena and properties including mass, stability, magnetic moment, radioactive decay processes and nuclear reactions. The application of nuclear principles to other fields such as astronomy, engineering, manufacturing and medicine.

Nuclear Physics Laboratory (PHYS 4160): Laboratory study of natural and artificial radioactivity and particle physics. Particle physics detectors, such as Geiger-Müller, sodium-iodide, plastic scintillation and solid state detectors. Detector resolution, radioactive half-life, muon lifetime, energy of particles and gamma rays and coincidence measurements.

*Only offered once every two years via TTVN

Alternatively, the department of physics offers a Nuclear Power Technology Certificate through the Nuclear Power Institute at Texas A&M University (College Station):



Nuclear Power Plant Fundamentals: Understanding the operation of a nuclear power reactor; includes reactor water chemistry, material science, electrical science, mechanical science, civil engineering for nuclear power plant engineers, and digital process control systems.

Nuclear Power Plant Operations: Overview of mass, momentum and energy conservation as it relates to nuclear power plants; includes coupled neutronic/thermal models to study plant operations semi-quantitatively achieving an integrated plant understanding.

Topics: Mass, momentum, and energy conservation. Neutron power kinetics. Coupled neutronic/thermal hydraulic modeling. Plant operations. Qualitative transient modeling. AGN/NSC demonstration transients.

Nuclear Power Plant Systems: Principal elements of pressurized water reactor nuclear power systems; overview of reactor physics, thermodynamics, and heat transfer; focus on systems with both function and interfaces stressed throughout; includes basic reactor physics, reactor heat generation, reactor plant systems, support systems, and reactor safety. Also, Principal elements of boiling water reactor nuclear power systems; overview of reactor physics, thermodynamics, and heat transfer; focus on systems with both function and interfaces stressed throughout; includes basic reactor physics, reactor physics, reactor heat generation, reactor nuclear power systems; overview of reactor physics, thermodynamics, and heat transfer; focus on systems with both function and interfaces stressed throughout; includes basic reactor physics, reactor heat generation, reactor plant systems, support systems, and reactor safety.

Nuclear Power Plant Human Performance: The course is divided into six modules: Human Performance Fundamentals, the Organization & the Processes, the Individual Worker, the Engineer, Corrective Action Programs and Root Cause Analysis, and numerous Case Studies including TMI-2, Chernobyl and Davis-Besse.

* All of the listed courses under the College of Arts & Sciences (except for Nuclear Physics Laboratory) are offered via TTVN.

Contacts:

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Finances

Our section held several fundraisers to assist with our expenses. Since we are not funded through the department, we had to get creative to allocate funds for our activities. This year proved most successful as we were able to allocate funds for all our activities with our hard work fundraising, and asking for donations around. A huge source of our travel funds came from our members and officers whom were NRC scholars (recipients of the NRC scholarship at our University). Those scholars can obtain travel support from their scholarship, helping them and others accompanying them to get to their destinations for all travel related to nuclear activities. Another source (especially for the student conference travel) was the Honors college for our members in the Honors college who can obtain travel support from that college.

Below is a quick summary of our budget this year:

Income Source for Member Activities	Total Amount
Existing Funds	\$ 700.00
Fundraising/Donations/Dues	\$ 1,110.30
SOFC (Office of Student Activities)	\$ 1,000.00
NRC scholarship recipients travel support	\$ 4,644.04
Honors College Travel Support	\$ 500.00
TOTAL	\$ 7,954.34

Expenditures of Member Activities	Total Amount
College Station Trip	\$ 806.00
STP Trip	\$ 1,000.00
2017 ANS Student Conference	\$ 5,000.32
ESC Banquet	\$ 1,000.00
TOTAL	\$ 7,806.32

Remaining funds for next year's officers: \$148.02



Some fundraisers hosted by our section (caffeine sale on left, cotton candy sale on right)

Community Service

Our section participated in a few community service events this past year such as beach cleanups. We participated in these events with other student organizations at our University (such as the American Society of Mechanical Engineers, Society of Hispanic Professional Engineers, Mexican American Engineers & Scientists, Tau Beta Pi, and the American Society of Civil Engineers).



Our members participating in various community service events in Kingsville



Our ANS members at a Corpus Christi beach cleanup

Mustang Island Beach Cleanup (Corpus Christi, TX)







La Posada Parade Float build and assembly (Kingsville, TX)



Outreach

This year was an active year for outreach for our section. From showcasing our student section to students, to nuclear science roundtables, to invited talks and nuclear engineering student delegations. It's easily inferred that our section had a very busy year making sure everyone knows what "nuclear" truly means.



ANS Members at the Texas Capitol



Promoting our section in the Engineering Complex

Engineering Fall Picnic (Kingsville, TX) – Our table at the annual picnic hosted by the College of Engineering.



We were able to showcase our student section to the rest of the college at this event, and we successfully integrated with the rest of the students (under the extremely hot Texas sun).

Nuclear Science Roundtables (Kingsville, TX) – Roundtable discussions about anything related to nuclear open to anyone for participation.



ANS members and non-members gathered around discussing nuclear science casually

This event allowed us to expose interested students at our University to nuclear science by talking about the following topics "What is Nuclear Energy?", and "Nuclear Policy".

<u>#CodeRGV Tech Tuesday nuclear reactors talk (Brownsville, TX) – Nuclear Science</u> <u>Week</u>



ANS & ASME Presidents, Abdullah Weiss and David Avila presenting to UT-RGV students

We had the chance to expose students and locals from the Brownsville community to nuclear reactors and nuclear science. We broadly covered different types of reactors, fuel production, the benefits of nuclear science, and current research topics in the industry.

Texas Nuclear Engineering Student Delegation (TNESD) (Austin, TX)

ANS-TAMUK members invited to take part of TNESD to speak with state representatives and senators about continuing support for nuclear-related policies in Texas, and to continue support for our Academic programs.



ANS members with Representative J.M. Lozano (Left) and Senator Eddie Lucio Jr. (Right)



Moiz Butt, Nicolas Pizaña, and Abdullah Weiss at the Delegation (Left picture, left to right)

We had the opportunity to meet with and speak with several figures crucial to nuclear-related government activities in Texas. These figures included Betsy Madru from Waste Control Specialists, Bobby janecka from the Texas Commission on Environmental Quality, Leigh Ing from the Texas Low Level Radioactive Waste Disposal Compact Commission to name a few.



Group Picture with Betsy Madru and the rest of the delegation.



Group Picture with Betsy Madru and the rest of the delegation

Socials and Recreational Activities

We made sure that our members have fun and enjoy their times with some socials and recreational extracurricular events such as post-mid-terms socials and scavenger hunts.

Such events were received positively by our members, and were considered important for the development of our section (which is why we have an officer dedicated to making sure such activities take place).



Our section's 2016-2017 T-Shirt, worn by many on and off-campus (We always have to explain to people what yellow cake means, it's a great way to make a conversation about nuclear with strangers).

Scavenger Hunt (Kingsville, TX)



Fundraising Chair Ginny completing one of the challenges for the scavenger hunt

The scavenger hunt enabled our student section to interact with the rest of the University in a fun way.

College Station Social (College Station, TX)



ANS Members enjoying the social

This social took place during the two-day career fair, and after our nuclear engineering department tour at Texas A&M University-College Station.

Friendsgiving Potluck Social (Kingsville, TX)



ANS Members getting food and enjoying the social

This social was a way to celebrate Thanksgiving, and take our minds off midterms stress.

Engineering Complex (EC) Christmas tree decorations (Kingsville, TX)



ANS President, Abdullah decorating the tree with an ANS member (Uriel Chapa) and the webmaster (Diego Adame)

We helped brighten everyone's view in the EC while having a little fun of our own.



Spring Post-midterms social (Kingsville, TX)

ANS Members enjoying their time at the social

This was our way to forget the "mid-terms grief".

3rd Annual Engineering Student Council Banquet (Kingsville, TX)

This year, we hosted the Engineering Student Council (ESC) banquet at our University, organizing, funding, preparing, and hosting the event.

At the event, all engineering-based student organizations were invited, and presented their works and achievements throughout the academic year. We also invited an engineer from Sandia National Laboratories, Dulce Barrera (a Mechanical Engineering alumni from our university), to speak at the event, who enjoyed the event very much.



ANS Officers (new and old) helping set-up for the event



Our new officers volunteering at the event (left), and our invited speaker in the middle (right)



Our invited speaker: Dulce Barrera Speaking at the beginning of the event



Our College of Engineering Dean speaking at the event



Attendees enjoying their time at the event



Invited members being awarded

Post-Banquet Social – Last ANS Social of the year (Kingsville, TX)

Directly after the banquet, we held a social and invited ANS members and many others. There was a great turnout, and the event was most enjoyable by everyone (including our invited speaker).



the floor

ANS Members having a good time at the social

Section-hosted Projects

As a method to attract new members and engage existing members with activites in our section, we initiated a couple projects this year, both of which were met with excitement and commitment from our members, and both of which attracted several new active members to our section.

We worked on two projects this year, a Cold Fusion Investigation, and a Nuclear Farnsworth Fusor. The Cold fusion project proved most successful as it was completed, and presented at the 2017 ANS Student Conference with some intriguing results and conclusions, challenging the concept of cold fusion.

The fusor on the other-hand, is still in progress with a possibility of having a group of Mechanical Engineering students adopting the project (with some additions) for a senior design project.

Both of those projects represent a successful integration of nuclear-related projects and research on campus amongst students and faculty alike, as we are increasing interest and decreasing safety concern related to nuclear science topics.



Abdullah Weiss working on the cold fusion investigation



Cold Fusion Investigation – Completed and presented at the 2017 ANS Student Conference

This project successfully allowed our members to do a hands-on project that allows them to experiment with, and explore what fusion is; but most importantly, it gave them an opportunity to investigate and challenge scientific claims (in our case, the concept of cold fusion).

Nuclear Fusor – In progress



ANS Members working on the base of the nuclear fusor

This project was an attempt to involve ANS members with a slightly more advanced project than our typical ANS members' projects. Although it is still incomplete, the concept of this project caught the attention of a group of Mechanical Engineering students that will be working on their Senior Design (Capstone) project this upcoming fall (Fall 2017), and they plan on possibly adopting the project and taking it a few steps further than originally planned.

This allowed for an increase of nuclear-related projects in our college, reducing fear and increasing interest in such projects (a successful attempt to further integrate nuclear science into our University).

Trips

Our section went to a few trips this semester, all of which were enlightening, enjoyable, and fascinating to our members. Our section went on three major trips:

- 1. Texas A&M University-College Station Nuclear Engineering Department and reactor Tours
 - a. Where we learned a lot about nuclear equipment and research (and had our first reactor tour).
- 2. South Texas Project (STP) Nuclear Power Plant Tour
 - a. Where we introduced the plant to our University, and toured our first nuclear power plant.
- 3. The 2017 ANS Student Conference
 - a. Where 12 of us attended, and conducted four different presentations.



This year was filled with many enjoyable memories for all our members, and for our section and all of it was made possible with the help of our fundraising efforts, our NRC Scholars, our section's advisor (Dr. Xue Yang), the Honors College at our University, our associate Dean (Dr. Breanna Bailey), and Mr. Austin McCoy.

<u>Texas A&M University Nuclear Engineering department and reactor tours</u> (College Station, TX)

Our section's tour of the nuclear engineering department at College Station





We toured the Department of Nuclear Engineering at Texas A&M University including two laboratories under professors from the Nuclear Science Security and Policy Institute (NSSPI), the Nuclear Science Center, the Texas A&M University College of Engineering Career Fair and a department seminar (The opening Ray Rothrock Lecture Series). The members viewed different types of equipment used in the labs and gain more exposure to nuclear engineering.



South Texas Project (STP) Nuclear Power Plant (Bay City, TX)

Our student section's trip to the nuclear power plant in Bay City, TX.



This marked the first time that STP learned of the existence of the nuclear engineering and nuclear science programs and activities at our University. It also was the first time that any group of students from our University got the opportunity to tour a nuclear power plant.

This was an important milestone for our student section.

2017 ANS Student Conference (Pittsburgh, PA)



A group picture of all 12 TAMUK attendees of the 2017 ANS Student Conference (an amount double the amount of students that attended last year's conference).



Mechanical Engineering Graduate Student, Aws Al-Shalash, presenting his work in Tersoff Benchmarking of Be-C-H Interatomic Potentials. This work will be presented again in the 2017 ANS Annual Meeting, where it will published.



Mechanical Engineering Undergraduate, Abdullah Weiss, presenting his work on Compton Suppressed Gamma Spectroscopy of Spent Fuel. This work was first presented at NIST in Maryland



Mechanical Engineering Undergraduate, Nicolas Pizaña, presenting our section's Cold Fusion Investigation poster.



Abdullah Weiss again, presenting his poster on Thermal Analysis of a Fuel Channel.

This is the first time that our University presented four different papers at the same time at any conference. All of our papers were met with exceptional attention (especially our cold fusion paper) and a lot of positive feedback from judges (like the thermal analysis and Tersoff papers). Our presentations were also met with much love from the reviewers and judges.



Our section showed a very strong presence at the conference. All of our members loved the experience, and will pursue further involvement with ANS and our student section.



We would like to thank the University of Pittsburgh student section for putting on an amazing student conference this year, and we are glad that we had the opportunity to attend, and present at the conference (we had a lot of fun as you might be able to tell).

Honorary Guests

We had the pleasure of two guests this year, the first one being Dulce Barrera (a quality engineer from Sandia National Laboratories), and an alumnus of our University.



Dulce Barrera from giving an information session about Sandia National Laboratories.

We are very proud of Dulce, who is a Mechanical Engineering alumnus of our University, and honored to have her speak to our members and in our University. She also spoke at our ESC banquet as our invited speaker.

We also had the pleasure of having Dr. Andrew Klein (2016-2017 ANS President) down in Kingsville this year. He was an exceptional and amazing person who took the time to speak to our Dean, give a talk about the future of nuclear, and present us with awards for the member-get-a-member campaign.

His primary reason for being down in Kingsville was because we were declared the top student section-highest percentage of new recruits; and because Abdullah Weiss, our previous president and founder, was announced as the top individual recruiter for ANS student members across the nation.

We enjoyed his company, and were glad to be one of the institutions he visited during his term as ANS president.



Dr. Klein with our College Dean (Dr. Mohammad S. Alam)





Dr. Klein taking a tour of our campus, and speaking to some of our students



Dr. Klein talking to our student section members



Dr. Klein presenting our awards to Abdullah Weiss



Dr. Klein eating out with a group of members after his long day at the University

News Mentions

Our section was recognized locally and nationally this year, and we were mentioned on several news outlets highlighting our activities, and achievements.

Below is a list of all news mentions that we know of regarding our student section (as of April 29th, 2017):

- 1. <u>http://engineering.tamu.edu/news/2016/09/27/texas-am-kingsville-american-nuclear-society-</u> members-visit-department-of-nuclear-engineering-at-texas-am-university
- 2. <u>http://www2.ans.org/members/ansnews/docs/2016-7-8-hor.pdf</u> (Page 12)
- 3. <u>http://www.tamuk.edu/engineering/departments/mien/news/index.html</u> (The whole page)
- 4. <u>http://www.tamuk.edu/engineering/index.html</u> (6th story)
- 5. https://www.facebook.com/codergvbrownsville/videos/1687088301606343/
- 6. <u>http://engineering.tamu.edu/news/2017/04/13/texas-am-students-organize-attend-2017-texas-nuclear-engineering-student-delegation</u>



Looking Forward

Our current board is completely renewed in this upcoming academic year (2017-2018) with new officers and fresh faces. All ready to start contributing to the growth and development of nuclear science at Texas A&M University-Kingsville. The board consists of the following new officers:

Name	Position	Major	Standing
Luis Ramirez	President	Chemical Engineering	Sophomore
Lucas Olivares	Vice-President	Mechanical Engineering	Junior
Moiz Butt	Secretary	Mechanical Engineering	Senior
Rolando Morin Treasurer		Chemical Engineering	Senior
Clay Blackwell	Webmaster	Mechanical Engineering	Senior
Rohan Joseph	Fundraising & Development Chair	Chemical Engineering	Senior
Juan Alvarez	Historian & Outreach Chair	Mechanical Engineering	Senior
Jacob Cann	Travel Committee Chair	Chemical Engineering	Senior



From left to right: Moiz Butt, Lucas Olivares, Luis Ramirez, Clay Blackwell, and Rolando Morin We have great faith in them, and expect many great things from them next year.

Appendix

Flyers & Postings



1st meeting

×

Day: Tuesday, August 30th

Room: EC 109

Time: 7:00 P.M.



Do you want to get involved in hands-on projects (including a mini fusion reactor)?

Do you want to gain a better understanding of nuclear science and the nuclear industry?

Do you want to have some fun while performing cutting edge research?

Do you want some pizza??

If so, come to our first general meeting and get involved with us at ANS. We strive to enrich your experience at TAMUK!!



American Nuclear Society Texas A&M University-Kingsville

5th meeting



Day: Thursday, March 30th Room: EC 113 Time: 6:00 P.M.



ELECTIONS! Become an ANS officer and get involved with nuclear on a national level!









American Nuclear Society Texas A&M University-Kingsville



American Nuclear Society (ANS) National President: Dr. Andrew Klein 6th General Meeting & Awards Ceremony



Come join us for our last meeting of the semester! Say goodbye to our current officers, and meet our new ANS officers and our ANS national president!!

Pizza Social following the meeting from 7:00 to 8:00 p.m.

FREE PIZZA & DRINKS Provided!!



American Nuclear Society at Texas A&M University-Kingsville with ANS National President: Dr. Andrew Klein







Exceptional service in the national interest







Sandia National Laboratories

Join us for Snacks and Refreshments Friday: 04/21/2017

12:00 pm Engineering Complex 107 All engineering majors welcome Hosted by the American Nuclear Society (ANS)



Tech Talk: An Overview of Life at Sandia National Laboratories

Presented by Dulce Barrera

Exceptional Service in the National Interest

This presentation will be have a primary emphasis on Sandia's Tech Area V facilities, whose mission is to advance nuclear technology through applied radiation sciences and unique nuclear environments. Being the world's premier source of nuclear and radiation science, TA-V operates unique nuclear facilities (ACRR, SPR/CX) and radiological facilities (GIF), which lead the nation in understanding the effects of radiation on systems, materials, and components.

At Sandia we apply science to help detect, repel, defeat, or mitigate threats.

A strong science, technology, and engineering foundation enables Sandia's mission through a capable research staff working at the forefront of innovation, collaborative research with universities and companies, and discretionary research projects with significant potential impact.

In keeping with our vision to be the nation's premier science and engineering laboratory for national security and technology innovation, we recruit the best and the brightest, equip them with world-class research tools and facilities, and provide opportunities to collaborate with technical experts from many different scientific disciplines.

Bring your resumes!!

Learn more: <u>www.sandia.gov/careers</u> Most positions require U.S. Citizenship Merican Nuclear Society Feas Add University Kingsylle

@ENERGY MISA



Acknowledgements

We would like to acknowledge the following people:

Mr. Carlos Hinojosa, for his help machining the apparatus for the fusor.

Dr. Breanna Bailey, for her financial support of our student conference trip.

Mr. Austin McCoy, for his continuous support of our student section.

Dr. Hisham Albataineh, for helping us obtain a work place for the cold fusion investigation, and for his excellent NPI course management.

Dr. Yousri Elkassabgi, for being the principal investigator of our Nuclear Engineering NRC grant.

Dr. Xue Yang, for his superb advising of our section, and for his incredible management of the Nuclear Engineering courses.

Victor Ibarra and **Evan Gonzalez**, for inviting us to participate in the Texas Nuclear Engineering Student Delegation.

Dr. Kim McCuistion and Maggie Abrigo, for their financial support from the Honors College.

Lori Russek, for her continuous support of our student section and incredible compassion.

We would also like to thank our friends and families for their support and help with our activities.

Finally, we thank the student section committee for their administration, and we thank ANS national for giving us the honor of having an ANS student section charter.

