



**PRAIRIE VIEW
A&M UNIVERSITY**

The Office of Research, Innovation
and Sponsored Programs



PVAMU student winners, faculty, and administrators at the 15th Texas A&M University System Annual Pathways Student Research Symposium held at West Texas A&M University, Canyon on November 1-2, 2018

RESEARCH

BRIEFS

PVAMU Students Win Big

15th TAMUS Annual Pathways Student Research Symposium

CONTRIBUTOR ALI FARES AND RAMASWAMY KRISHNAMOORTHY

Thirty-two PVAMU students attended the 15th Texas A&M University System Annual Pathways Student Research Symposium that took place at West Texas A&M University, Canyon on November 1-2, 2018. It was a campus-wide effort from all the Colleges, the Office of Graduate Studies, and the Office of Research, Innovation, and Sponsored Programs (ORISP). The students were accompanied by Drs. Carmen Carter, Ramaswamy Krishnamoorthi, Grace Abolaji, Pamela Martin, Richard Griffin, and Lorie Proctor. PVAMU students were at their best, receiving compliments from attendees from other TAMUS members.

Nine PVAMU students won prizes in the categories of Agriculture, Environmental Science, Computer Science, and Engineering. The number of winners this year is three times that of last year. PVAMU, along with WTAMU and TAMU-Commerce, is one of the top three institutions in the number of awards won.

UNDERGRADUATE AWARD WINNERS

- Agriculture: 1st place - Asja Jackson; 2nd place - Victoria Parker; 3rd place - Ellen-Ashley Williams
- Environmental Science: 3rd place - Esther Armah (Chemical Engineering)
- Engineering and Computer Science: 3rd place - De Jaune' Bickham
- Life Science: 3rd place - Chonique Long
- Humanities and Social Science: 3rd place - Chanelle Ferguson

M.S. AWARD WINNERS

- Agriculture: 2nd place - Kolade Adelaja

DOCTORAL AWARD WINNERS

- Engineering: 4th place - Damilola Adelina (Electrical and Computer Engineering)

Visit pathways.wtamu.edu for a list of all winners at the Pathways Symposium.

The Office of Research, Innovation and Sponsored Programs (ORISP) encourages undergraduate and graduate research by supporting events such as Pathways Research Symposium, and by awarding meritorious students research assistantships. Nearly eighty student research assistantships will be awarded for the 2018-19 academic year.

IN THIS ISSUE

- 1 PVAMU Students Win Big
- 2 Research Horizons Seminar Series
- 3 Student Research Assistantships
 - NSF Innovation Inclusion (I-Corps) Summit
- 4 Enhancing Evidence-Based Pedagogies with Maker Culture in STEM Education
- 5 NASA Day on "the Hill"
- 6 An Undergraduate Student Researcher Won the 2018 Irrigation E3 Program
 - Maestro Research Portal Training
- 7 2018 White House Initiative for HBCUs
- 8 IACUC Members and Staff at the ICARE Training
- 9 PVAMU Hosts International Cybersecurity Conference
- 10 Second Annual Undergraduate Research Information Session

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Research Horizons Seminar Series

A New Campus Wide Research Forum

CONTRIBUTOR ALI FARES



Professor Mohamed Chouikha, the inaugural speaker of the Research Horizons Seminar Series during his presentation on Cybersecurity.

On Friday, October 26, 2018, thirty-nine PVAMU students, faculty and staff attended the inaugural lecture of Research Horizons Seminar Series organized by ORISP at the Land Grant Cooperative Extension auditorium. This series was launched as a forum for students, faculty, and off-campus invited speakers to discuss and share the results of their research, creativity, and discovery in a collegial environment. It's also a venue to encourage inquisitiveness that stimulates intellectual and academic growth and to foster research vibrancy among participants and presenters. We expect to cultivate a unique environment that will promote cross-fertilization of ideas, concepts, and paradigms at PVAMU and beyond.

ORISP anticipates this to be a weekly event that takes place on Friday between 11:00 AM and 12:00 PM during the fall and spring semesters. The inaugural speaker was Professor Mohamed Chouikha, Chief Scientist of the

newly established Systems to Enhance Cybersecurity for Universal Research Environments, (SECURE), Center of Excellence. The title of his presentation was: Cybersecurity present and future: Is there a need for a science of Cybersecurity? An important take-home message was that Cybersecurity is linked to every aspect of our lives from phone use to the airplane we fly, to the car we drive, and every other facet of our daily routines.

Cybersecurity provides job opportunities available to PVAMU's students who wish to follow this career track and has promising prospects. Indeed, our lives depend more and more on smart devices that are increasingly more vulnerable to malicious hacker interference locally, nationally, and internationally. This has created careers that span the globe and our students may choose to venture into this profession. ORISP encourages faculty and students alike to visit SECURE and learn more about the work at the SECURE Center of Excellence. Professor Chouikha's lecture and future lectures can be viewed at livestream.com/pvamucahs.



Students, Faculty, and Staff attending the Inaugural Lecture of Dr. Chouikha

Student Research Assistantships

CONTRIBUTOR AWADH BINHAZIM

Students are the reason we do what we do at PVAMU, where our mission is teaching, research, and service. ORISP recognizes the importance of providing research opportunities to our students. Through research experience, students can sharpen their critical thinking and analytical skills, and refine their writing skills among many other benefits. ORISP is committed to creating initiatives that expand various research opportunities for our students, and we are working collectively towards ensuring that our students interested in research are supported. Working through campus-wide initiatives, we provided assistantships to graduate students and will be strengthening the undergraduate research program by supporting several students in their endeavors.

Funding student research assistantships allow our students who wish to enrich their education to obtain such an experience. The Office of Research encourages the faculty and scientists to work with us to develop and expose our students to new research opportunities.

Collectively we can help our students to become contributing participants in academia and make it a shared experience. ORISP is dedicated to student research scholarship, and we are looking to doing more with our students at PVAMU.

Students must apply online and submit the following:

- One-page single-spaced proposal summarizing the student's research project. The summary must include the objectives of the research, a brief description of the methodology, and expected results.
- One page resume.
- Transcript from PVAMU or last university attended (copies are acceptable for now).
- Support letter from the faculty member or research scientist who is or will serve as the advisor on the proposed work.

TO APPLY Submit all the above-required documents as one PDF file and email to ORISP@pvamu.edu



NSF Innovation Inclusion (I-Corps) Summit

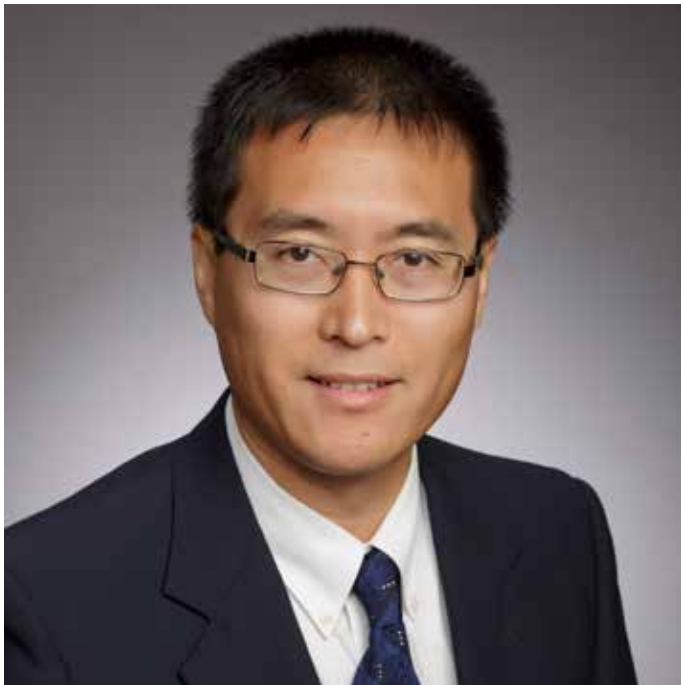
CONTRIBUTOR OLUSOLA EWULO & RAMASWAMY KRISHNAMOORTHY

Olusola Ewulo and Ramaswamy Krishnamoorthi were selected and funded by the National Science Foundation (NSF) to participate in the 2018 NSF Innovation Corps (I-Corps) Summit held in Crystal City, Virginia, October 3-5, 2018. The NSF-I-Corp program supports faculty researchers and scientists at universities to bring their inventions and innovations from the laboratory to the market through commercialization by partnering with industries, thus promoting entrepreneurship and bringing fruits of research rapidly to consumers.

Through extensive regional and national networks called I-Corp Nodes and I-Corp sites, the program also focuses on technology transfer, provides funding, training, and infrastructure for customer discovery and the identification of processes and products that have societal value. The Southwest I-Corps node includes the University of Texas at Austin, Texas A&M University, Rice University, Texas Tech University, and M.D. Anderson Cancer Center. Attendees at the summit participated in half-day networking that included conversations with nodes and sites from all the geographical areas of the country.

Attendance at this event is aligned with the development of the PVAMU Innovation and Commercialization Center for Entrepreneurs (ICCE). The establishment of ICCE will provide faculty, the business community, and students the opportunity to move forward with innovative and entrepreneurial endeavors.

Enhancing Evidence-Based Pedagogies with Maker Culture in STEM Education



CONTRIBUTOR YONGHUI WANG AND AWADH BINHAZIM

Congratulations to Dr. Yonghui Wang, the Principal Investigator for the award of \$676,238 from the U.S. Department of Education. A team of faculty members at Prairie View A&M University collaborated with faculty members at Texas A&M University (TAMU) for a project to introduce evidence-based pedagogy together with maker culture into their STEM courses to increase the enrollment as well as the retention rate of underrepresented students, including females and minorities.

This improvement of teaching infrastructure and pedagogy at minority-serving institutions will significantly enhance the teaching quality and ultimately will have a positive impact on the nation's economy. The purpose of this study is to contextualize the student learning experience and implement an integrated STEM education approach to teach skills and knowledge that are necessary to be competent in engineering and technology careers. The overarching goal of this project is to investigate the effectiveness of evidence-based learning and the integration of the maker culture into the curriculum in a minority-serving institution. The project uses undergraduate courses designed to motivate students' interests in hands-on and strengthen the aptitude of problem-solving and life-long learning skills for the future U.S. STEM workforce. The PIs will focus on reforming the teaching style of engineering/technology core courses offered in the participating departments. This project brings together faculties from two departments with computer programs, the Department of Computer Science, and the Department of Electrical and Computer Engineering, within the College of Engineering, to achieve its research and educational goals. One of the interesting goals is to address the "maker culture" by fostering underrepresented students including women to become "makers" in the engineering community. ORISP is proud of the achievements of Dr. Wang and his collaborators for a job well done!

NASA Day on “the Hill”

CONTRIBUTOR RAMASWAMY KRISHNAMOORTHY

At the invitation of President Ruth, NASA-Johnson Space Center (JSC) scientists, administrators, staff, and contractors spent the day on the PVAMU campus on October 16th, 2018, sharing information with students, faculty, and staff about opportunities for research, internships, and jobs. Pamela Obiomon, Dean of Engineering, moderated the day’s events.

The occasion coincided with the celebration of the 60th birthday of NASA! The Orion mission—NASA’s grand project of sending a crewed spacecraft to Mars and returning it safely to earth — is a mind-boggling goal in space research for the benefit of humanity and looks like another episode of Star Trek!

A nearly 200-strong audience watched with awe the videos that demonstrated NASA’s astonishing accomplishments and the incredible challenges ahead as they push forward the boundaries of space exploration.

Over a networking luncheon, PVAMU students had the great opportunity of connecting with the JSC researchers, administrators, staff, and contractors, some of whom were proud PVAMU alumni.

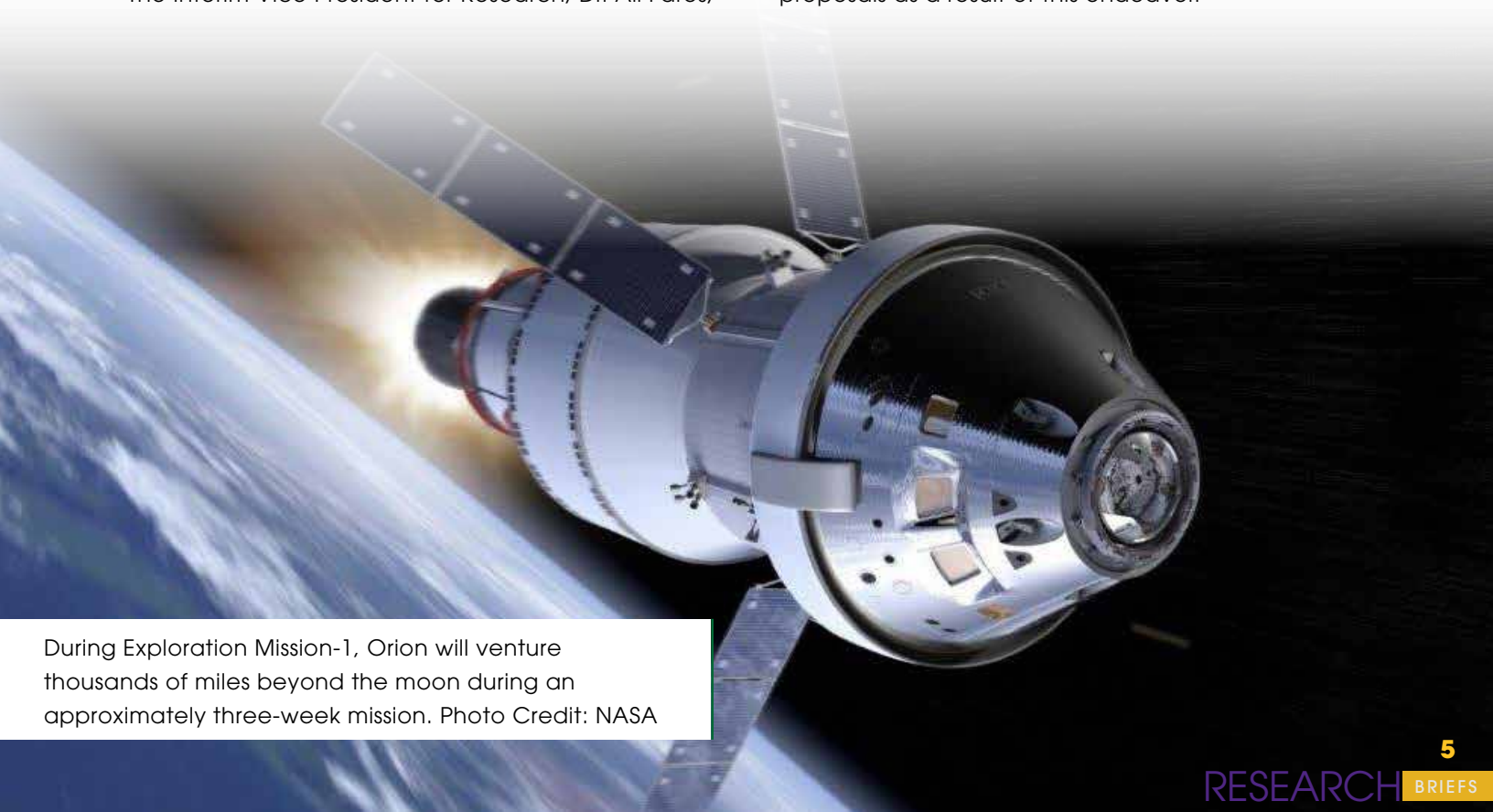
The Interim Vice President for Research, Dr. Ali Fares,

made a presentation regarding PVAMU’s research capabilities in engineering and science disciplines. He also highlighted PVAMU’s continuous collaboration with JSC on various projects throughout the years.

An important takeaway from the event was the availability of jobs and internship opportunities for STEM and non-STEM students with NASA and its multitude of contractors.

In the afternoon session, NASA scientists discussed their specific research projects in radiation biophysics and microbiology that involved a range of engineering and biological challenges in the planned space missions. NASA’s lead scientists, Ronnie Clayton, Honglu Wu, and Mark Ott explained the scientific and technical hurdles facing NASA’s space missions. Our faculty members were invited to submit collaborative grant proposals to NASA to overcome any of those challenges.

An immediate outcome of NASA Day is the recent submission of a research proposal in the area of high-pressure combustion in microgravity by Zial Huque of the Department of Mechanical Engineering and collaborators at Cornell University. We anticipate more proposals as a result of this endeavor.



During Exploration Mission-1, Orion will venture thousands of miles beyond the moon during an approximately three-week mission. Photo Credit: NASA

An Undergraduate Student Researcher Won the 2018 Irrigation E3 Program

CONTRIBUTOR RIPENDRA AWAL & ALI FARES

Zulfa Eisa is a very active undergraduate student researcher who has been working on several topics under the supervision of Ripendra Awal, a Research Scientist at the Cooperative Agricultural Research Center. She analyzed the effects of soil types on irrigation water requirements of some major crops at Prairie View using Irrigation Management System (IManSys) model. Dr. Awal mentored Ms. Eisa and encouraged her and supported her to apply for the Irrigation Association Exposure, Experience, and Education, E3, program which she did. Zulfa was also provided with a support letter as part of her E3 Program application package, from one of her teaching supervisors, Richard Griffin, a Professor of Agronomy and Soil Sciences.

Zulfa Eisa is a senior in Agriculture, College of Agriculture and Human Sciences. She will join 29 other students from major land-grant institutions and will be trained on irrigation water management issues. As a winner of this program, Zulfa received an education and travel award to the Irrigation Show and Education

Conference. The show will take place on December 3-7 in Long Beach, California. The Irrigation Foundation will cover the cost of her travel, accommodations, registration, educational classes, and a daily stipend. Students who excel are recognized and given opportunities to represent PVAMU and showcase their work at major national events. Zulfa will be proudly representing PVAMU at Long Beach, California.



Zulfa Eisa (center) and other students during 2018 World Water Day celebration at CAHS, PVAMU

Maestro Research Portal Training

CONTRIBUTOR OLUSOLA EWULO

The Office of Research, Innovation, and Sponsored Programs is committed to the ongoing professional training of research faculty and staff at PVAMU. A MAESTRO Research Portal training was conducted

on October 31, 2018. This one-day training attracted research faculty and departmental administrators alike.

Texas A&M University System (TAMUS), Mr. Tye Rougas, and Ms. Leonarda Horvat trained the attendees on the use of MAESTRO functionalities and delved in-depth into the use of the portal in approving proposals, uploading deliverables, reviewing research statistics, finding collaborators across the system, managing project closeouts, and using a financial function to track budget, encumbrances, and line-item balances. A special session was conducted with staff from the Office of Sponsored Programs (OSP). This session apprised OSP on the use of MAESTRO to be able to better serve the PVAMU research community.



MAESTRO Research Portal training attendees

Obiomon and Elmore-Cole Actively Participated in the 2018 White House Initiative for HBCUs

CONTRIBUTOR DONNA ELMORE-COLE

"Promoting Excellence, Innovation, and Sustainability at Historically Black Colleges and Universities." was the theme of the 2018 White House Initiative for HBCUs that addresses the Presidential Executive Order 13532. The event took place in the Washington D.C./ Arlington corridor on September 16-19 2018. The National Association of HBCUs-Title III Administrators and The Annual Congressional Black Caucus Legislative Conference also met as part of this event. Hundreds of HBCU leaders, students, faculty and other stakeholders filled the hallways of the Nation's Capital Washington Marriott Wardman Park.

Political leaders, federal agencies staff and industry's representatives spoke at dozens of breakout sessions. Speakers, including Claudia Rankins, Program Director for the National Science Foundation, David Levin, Director of Minority Serving Institutions at the US State Department. Sessions included current topics such as "Career Exploration with Federal Government," and "Using Tech Transfer to Inspire HBCU Entrepreneurship" which kept participants actively engaged with hopes of capturing as much relevant and operational information as possible.

Prairie View A&M University had a significant presence at the event. Nneke Ede and Maduforo Eze are PVAMU student members of the Class of 2018 White House Initiative Competitiveness Scholars. Dr. Pamela Obiomon, Dean for the Roy G. Perry College of Engineering, gave a presentation at the Innovation Development session where she was recognized for her visionary steps to bring the IBM Skills Academy to PVAMU's faculty and students. Dr. Obiomon spoke on the topic, *"HBCUs and Industry Partnering to Fast-Track Critical U.S. Skills."*

Senior Contracts Negotiator, Donna Elmore-Cole with the Office of Research, Innovation, and Sponsored Programs, was invited to participate in the Partnerships and Research learning track. Joining a panel that was moderated by the NASA's OSBP HBCU/MI Program Manager Tabisa Kalisa, Elmore-Cole shared a University perspective of *"Understanding and Leveraging Federal Contracts for HBCU Sustainability."* Kalisa introduced the concept and objective of the current NASA/PAE/PVAMU Mentor Protégé Agreement (MPA), by presenting Goals and Metrics for NASA-Office of Small Business Programs. There is an abundance of untapped resources, in federal grants and contracts, by the HBCU and MI communities. Donna encouraged those University attendees that pursue federal contracting opportunities to have realistic expectations, frequently compare anticipated work with actuals, and be prepared to "champion" the project across departmental divides.

The closing session included thought-provoking remarks from Aeneas Williams, NFL Hall of Famer, business owner, and Southern University alum. Williams credits his father Lawrence Williams for teaching him how to act on making the right decision on what he knows is not right. Similarly, one would say that HBCU institutions such as PVAMU should continuously evaluate and align their goals to address the needs of their constituents, state, and nation.

FOR MORE INFORMATION about the conference:

whitehous.gov/the-press-office/2015/09/21/presidential-proclamation-national-historically-black-college-and

IACUC Members and Staff at the ICARE Training

CONTRIBUTOR INDRIKA RENAWEERA & AWADH BINHAZIM



ICARE Faculty

Prairie View A&M University is committed to the humane care and use of animals in research, testing and teaching through the proper oversight and assurance of compliance for the institution's animal care and use program. To achieve and maintain the highest standards of animal welfare, PVAMU is dedicated to consistently train individuals who oversee, use, or provide care for animals. This activity is a part of these integrated efforts.

The training was organized by the Interagency Collaborative Animal Research Education (ICARE) Project which is an interagency initiative of the National Institutes of Health (NIH), U.S. Department of Agriculture (USDA), U.S. Food and Drug Administration (FDA), Biomedical Advanced Research and Development Authority (BARDA), National Science Foundation (NSF), and U.S. Department of Veterans Affairs (VA).

The overall aim of the ICARE project is to empower

U.S. Institutional Animal Care and Use Committees (IACUC) and their institutions to improve animal welfare and increase compliance with federal standards while minimizing regulatory burden. PVAMU was represented by Awadh Bin hazim (IACUC Chair), Alphina Ho-Watson (Attending Veterinarian & IACUC Member), Olusola Ewulo (IACUC Member) and Indrika Ranaweera (Research Compliance Staff) attended the ICARE training held June 18 to 20, 2018 in Chicago, IL. The ICARE training focused on active learning pedagogy which has been shown to increase the effectiveness of adult education in the factual and theoretical understanding of scientific and ethical issues. Attendees worked in both large interactive sessions and small facilitated breakout groups participating in learning activities including interactive presentations, group work, and discussions. The PVAMU IACUC members had an exceptional opportunity of attending a thorough training, which included hands-on experience that will help the PVAMU program on animal welfare oversight.

We look forward to sharing the experience and expertise gained with others to strengthen PVAMU in animal welfare.

FOR MORE INFORMATION on ICARE training visit olaw.nih.gov/education/icare-interagency

PVAMU Hosts International Cybersecurity Conference

CONTRIBUTOR EMMANUEL OPARA, COLLEGE OF BUSINESS

Prairie View A&M University hosted the 29th Annual Conference of the International Information Management Association (IIMA) and the 5th Annual Conference of the International Conference on Information and Economic Development (ICITED) conference. It was a wonderful, engaging, rewarding, challenging, refreshing and thought-provoking experience. Dr. Emmanuel Opara served as conference chairperson.

International participants came from Asia, North America, Europe, and Africa. Distinguished keynote speakers were Professor Ian Allison, Dean, Computing Engineering and Physical Sciences, the University of the West of Scotland who spoke on the topic: Bringing Cutting Edge Science and Business Together: A model for the University of the 21st Century. A thought-provoking topic was presented by Dr. Dave Clark, Senior Consultant with the Texas Organization of Rural & Community Hospitals who spoke on: Defending Hospitals

Against Life-Threatening Cyber Attacks. Participant's also shared conversations on several issues such as using Sococo, an online workplace for virtual collaboration, evaluating security policy compliance and also medical Informatics.

On Tuesday, October 9, 2018, the team visited the Northwest Houston Campus of PVAMU. Some members of the conference were recognized for their service and dedication to IIMA. On Wednesday, conference participants met at PVAMU College of Nursing in the renowned Texas Medical Center where Mr. Ned Pendley, Program Planning and Control (PP&C) Manager for the Orion Program at NASA, gave the team a captivating overview of NASA's activities as they plan for a trip to Mars. The team later visited and toured NASA-Johnson Space Center, where space rockets and capsules were on display. The team was amazed by NASA's past, present and future space programs. It was a great way to end the 3-day conference.



Professor Mohamed Chouikha, Chief Scientist of the newly established Systems to Enhance Cybersecurity for Universal Research Environments, (SECURE) Center of Excellence presents the keynote address on Cybersecurity at the IIMA/ ICITED conference.

Second Annual Undergraduate Research Information Session

CONTRIBUTOR GRACE ABOLAJI

The Office of Undergraduate Research hosted the day-long event to educate students and faculty about a number of opportunities. Participants learned about research and internship opportunities, the funding process, application process, resume writing, proposal, and abstract writing process, faculty mentoring, and writing a recommendation letter for students. This was a collaborative effort between the Office of Research, Innovation and Sponsored Programs (ORISP), and the College of Juvenile Justice & Psychology (CJJP). Ali Fares, Interim Vice-President, Awadh Bin hazim, Associate Vice-President of ORISP, and Camille Gibson, Interim Dean of the CJJP welcomed the student participants of the workshop. They all emphasized the importance and positive impact of undergraduate student research on their training and future professional implications. Forty-five students, and 14 faculty/staff, five of whom were from off-campus, attended the presentations and workshops. Students visited the vendor tables to discuss opportunities for research, funding and graduate programs.

The five off-campus presenters were: Adrienne Rosales, Assistant Professor, the University of Texas-Austin who talked about undergraduate research opportunity at her institution. Steven Thomas, Program Manager, Michigan State University (MSU), gave an overview of the Summer Research Opportunities Program at MSU. Laurie Connor, Director of the Summer Undergraduate

Research, Baylor College of Medicine shared valuable information about her program with the participant students. Kari Brewer Savannah, a Program Manager in Experimental Radiation Oncology at MD Anderson Cancer Center highlighted her program. Robert D. Spears, Associate Dean for Student and Academic Affairs gave detailed information about the Summer Health Professions Education Program (SHPEP) at the University of Texas.

The PVAMU presenters were: Laura Carson, Assistant Director of Compliance, Undergraduate Research and Student Success, College of Agriculture and Human Science. She led a workshop on Mentoring undergraduate students. Andrea Ashley- Oyewole, Assistant Professor of Chemistry, presented on how to write letters of recommendations for students. Priscilla Johnson, Co-op/Internship Coordinator, gave information for students on how to creating a strong resume. Karen Cotton, Manager for Research Marketing and Communication at ORISP presented on the research process and abstract writing. PVAMU is committed to undergraduate research and applications are being accepted for undergraduate research position sponsored by the ORISP. For more information, visit our website at pvamu.edu/research/undergraduate-research/. Plans are underway to feature student research at the **14th Annual Research Symposium at PVAMU, which is planned for April 11, 2019.**