

National Aeronautics and Space Administration



Historically Black Colleges and Universities

TECHNOLOGY INFUSION ROAD TOUR

and Minority-Serving Institutions

www.nasa.gov

Prairie View A & M University



Chris Liu, Ph.D.

Associate Vice President for Research



AERIAL VIEW OF CAMPUS



PRAIRIE VIEW
A&M UNIVERSITY





**PRAIRIE VIEW
A&M UNIVERSITY**

Colleges and Schools

College of Agriculture and Human Sciences

Agriculture, Nutrition, & Human Ecology
Cooperative Extension Program
Cooperative Agricultural Research Center
Dietetics Internship Program
Master of Human Science

College of Arts and Sciences

Biology
Chemistry
Social Work, Behavioral & Political Science
Languages and Communications
Mathematics
Department of Music and Theatre
Physics
ROTC – Army
ROTC – Navy
Solar Observatory

College of Juvenile Justice and Psychology – Ph.D

Criminal Justice
Criminal Justice/Specialization in Juvenile Justice
Psychology
Juvenile Justice
Juvenile Justice Forensic Psychology
Juvenile Justice
Clinical Adolescent Psychology

College of Business

Accounting, Finance, and MIS
Management and Marketing
Master of Business Administration
Master of Science and Accounting

College of Engineering

Chemical Engineering
Civil & Environmental Engineering
Computer Science
Electrical and Computer Engineering - Ph.D.
Engineering Technology
Mechanical Engineering

College of Education - E.D.

Alternative Teacher Certification
Curriculum and Instruction
Educational Leadership and Counseling
Health and Human Performance

College of Nursing - Ph.D.

B.S. in Nursing (BSN)
Basic Program
LVN-BSN Program
RN-BSN Program
M.S. in Nursing (MSN)

School of Architecture

Bachelor of Science in Architecture
Bachelor of Science in Construction Science
Master of Architecture
Master of Science in Community Development

- **A member of the Texas A&M University System**
- **Second oldest public university in Texas (1876)**
- **Land-grant university (1890)**
- **Offers 50 baccalaureate, 37 master's and 4 doctoral degree programs through eight colleges and schools**

PVAMU RESEARCH CENTERS/INSTITUTES

- Cooperative Agricultural Research Center (CARC)
- ★ "Center of Excellence in Research and Education for Big Military Data Intelligence (CREDIT)
- "International Goat Research Center
- "Community for Urban and Rural Enhancement Services (CURES)
- "Texas Institute for the Preservation of History and Culture (TIPHC)
- ★ Prairie View Solar Observatory (PVSO)
- ★ Radiation Institute for Science and Engineering (RaISE)
- ★ Small Business Development Center (SBDC)
- Center for International Business Education (CIBE)
- Center for Applied Radiation Research (CARR)
- "The Center for Radiation Engineering and Science for Space Exploration (CRESSE)
- "The Center for Digital Battlefield Communications (CEBCOM)
- "The Center for Energy and Environmental Sustainability (CEES)
- "The Center of Excellence for Communication Systems Technology Research (CECSTR)



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NASA Grants and Contracts

Prime Sponsor	Start Date	End Date	Sponsor	PI	Title
NASA-Earth Science Technology Office	1-Aug-15	30-Sep-15	L-3 Communication	Shield Lin	Computer Workstations to L-3 Software Simulation Laboratory
NASA-Earth Science Technology Office	1-Aug-15	30-Sep-15	L-3 Communication	Shield Lin	Additional Lab Equipment to L-3 Software Simulation Laboratory
NASA-Earth Science Technology Office	1-May-15	30-Sep-19	L-3 Communication	Shield Lin	L-3 Simulation Software Initiative (SSI) Student Internships
NASA-Earth Science Technology Office	17-Jun-13	31-Jul-15	United Negro College Fund Special Programs	Richard Wilkins	International Space Station (ISS) University Research-1 (UR-1) Project
NASA-Johnson Space Center	1-Oct-12	20-Sep-17	L-3 Communication	Shield Lin	L-3 Simulation Software Fy 12-13
NASA-Johnson Space Center	1-Sep-11	31-Aug-13	University of Texas at Austin	Shield Lin	Texas Space Grant Space Exploration Software Simulation Curriculum ..
NASA-Johnson Space Center	6-Dec-11	31-Aug-16	United Negro College Fund Special Programs	Abburu Kumar	Development of Technologies for Elucidation and Mitigation of Bone Loss In Microgravity ...
NASA-Johnson Space Center	1-Mar-11	30-Sep-12	L-3 Communication	Shield Lin	L-3 Simulation Software
NASA-Stennis Space Center	1-Sep-14	31-Dec-15	Emory University	Huichen Wang	Mechanisms underlying the risk of HZE particle-induced solid tumor development
NASA	1-Jan-09	30-Sep-16	Lockheed Martin Space Operation	Kendall Harris	LMSO Storefront Property
NASA-Stennis Space Center	20-Sep-14	19-Mar-16	NASA-Stennis Space Center	Huichen Wang	DNA Repair and Protection from Apoptosis in Neuronal Progenitors Exposed to Space Radiation

NASA 3/16 - 3/18 Megumi Hada Computational Model Prediction and Biological Validation ..

NASA Center for Radiation Engineering and Science for Space Exploration (CRESSE)



- *Funded by the National Aeronautics and Space Administration (NASA)*

Director: Dr. Richard Wilkins

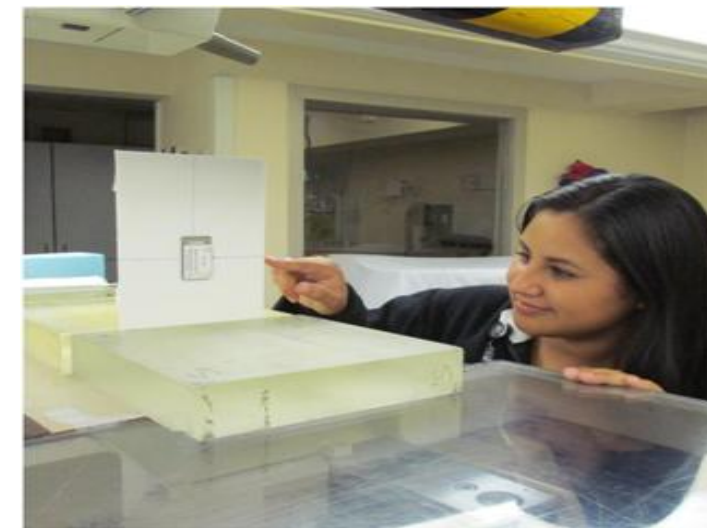
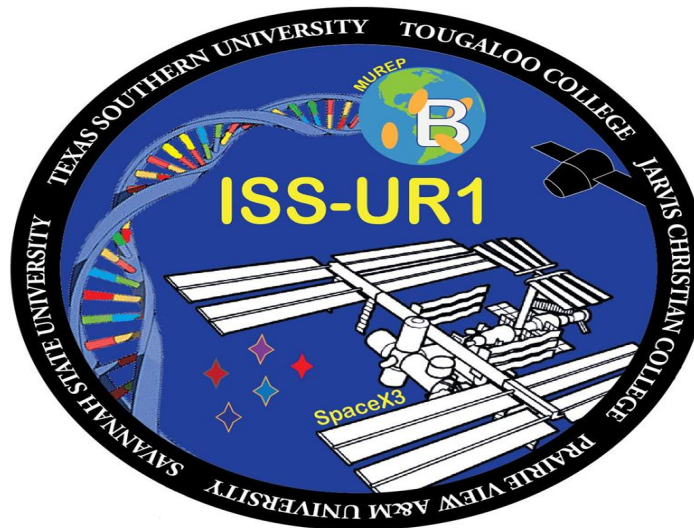
rtwilkins@pvamu.edu



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Dr. Wilkins shows his support for NASA.



Grad student Janet Ruedas works with the UR-1 RAMs



The UR-1 payload must fit into a 10 cm x 10 cm x 25 cm aluminum box. This picture shows the payload cell tube in the box and the two NASA/PVAMU Radiation Area Monitors (RAMs). This was a “fit-check” performed at the offices of NanoRacks, the company that will integrate the payload onto the SpaceX capsule.

Thermal Science Research Center (TSRC)



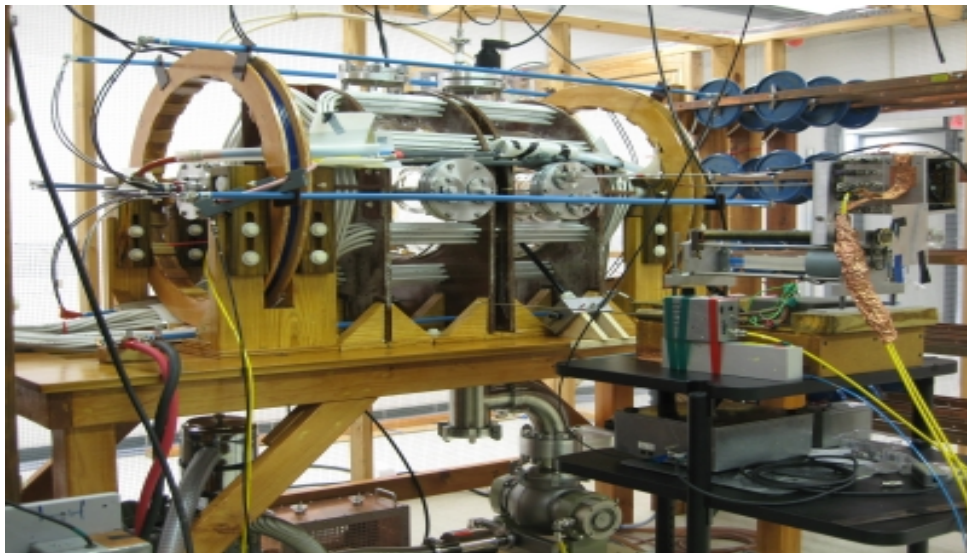
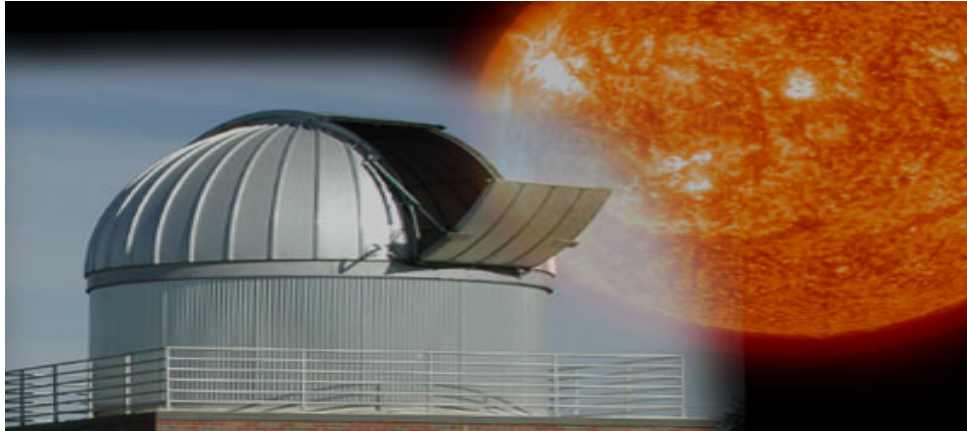
- *Funded by Department of Energy, Nuclear Regulatory Commission, Sandia National Laboratory*
- Studies mechanisms and quantitative factors controlling high heat flux removal in engineering components
- Modeling and Simulations
- U.S. Patent (N0. 6,824,305)
- Director: Dr. Ronald Boyd

rdboyd@pvamu.edu



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Prairie View Solar Observatory

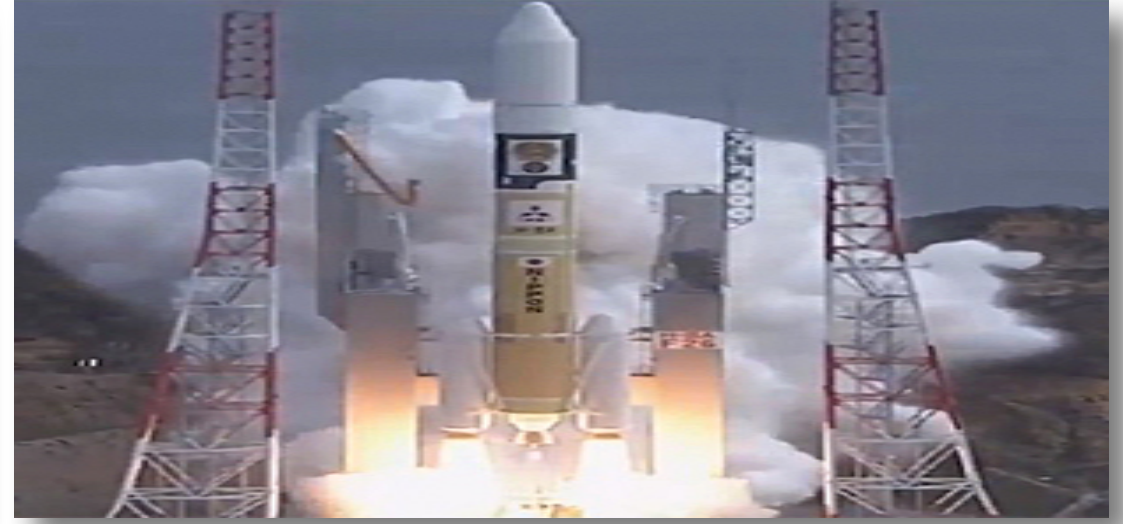
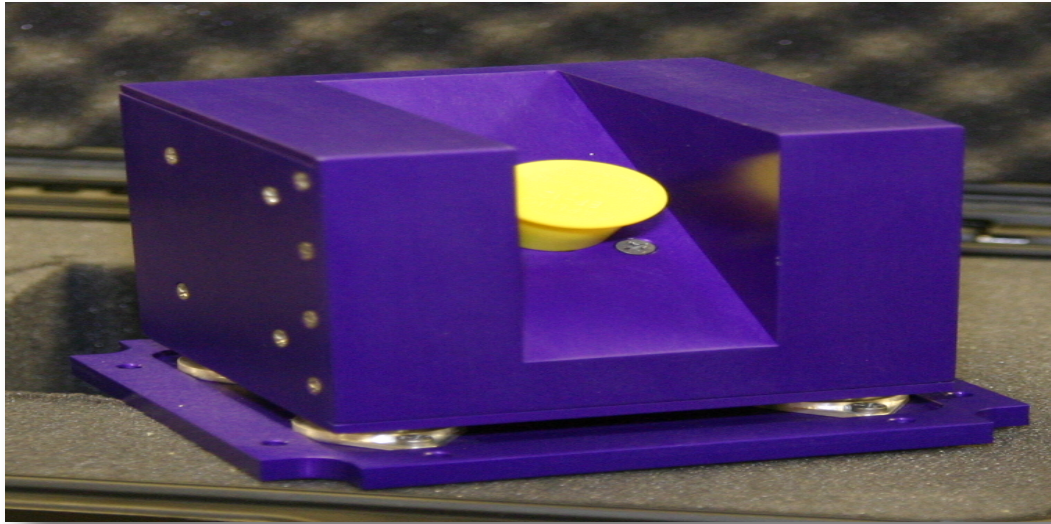


- *NASA/Marshall Space Flight Center, Nuclear Regulatory Commission*
- Monitors Solar Flares
- Fusion Plasma Research Project
- **First Ground-based Solar Research Facility in the State of Texas**
- Director: Dr. P. Saganti



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Radiation Institute for Science and Engineering (RaISE)



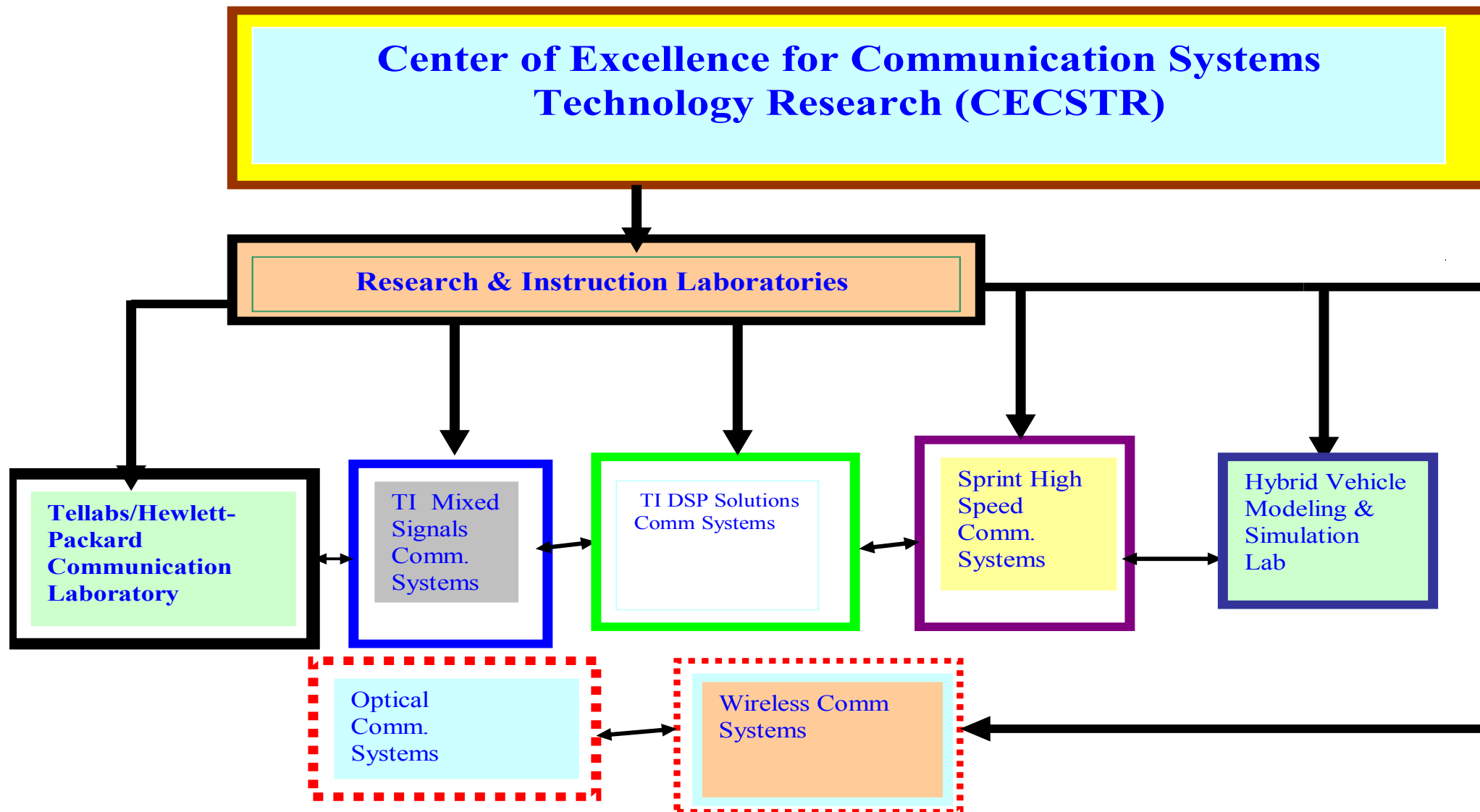
**First Prairie View A&M University Payload
Launched into Deeper Space on December 3, 2014**

Director: Dr. Premkumar Saganti
pbsaganti@pvamu.edu



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Center of Excellence for Communication Systems Technology Research (CECSTR)



Project Monitoring Team at JSC Houston with Columbia in Space

- **Real-time DSP Solutions performance in space.**
- **The concept of great-distance distributed signal analysis verified.**
- **Providing answers instead of raw data from space.**



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Center of Excellence for Battlefield Communications Research



Funded by the DoD

- **To develop a novel battlefield communications network architecture that supports multi-service applications (voice, data, and video) using seamless IP**
- **Ad hoc wireless networking**

Director: Dr. Lijun Qian

liqian@pvamu.edu



**PRAIRIE VIEW
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ICEProgram/facility 1

- Innovation
- Commercialization
- Entrepreneurship
- **SPECIFIC BENEFITS OF COLLABORATIVE INDUSTRY PARTNERSHIPS**
 - Reinforce
 - Niche market
 - Research opportunities



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University Contacts

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Office of Technology Commercialization

<http://otc.tamu.edu>



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