The University of Texas at El Paso
DUNS No.: 132051285
Cage Code: 0MLB3
NACIS ID(s):611310
Federal EIN No.: 746000813

POC:
Irene Holguin
Research Administrator
Office of Research and Sponsored Projects
University of Texas at El Paso
Administration Building, Room 209
500 W. University Ave.
El Paso, Texas 79968-0587
Tel: 915-747-8683
Email: isholguin@utep.edu
Website: research.utep.edu

Ahsan Choudhuri, PhD
Professor and Chair, Department of Mechanical Engineering
Mr. and Mrs. MacIntosh Murchison Chair II in Engineering
Director and Principal Investigator, NASA MIRO Center for Space Exploration & Technology Research
University of Texas at El Paso
500 W. University, Suite A126, El Paso, TX 79968-0521
Tel: 915 747 6906, Fax 915 747 5019
Email: ahsan@utep.edu

Capability Statement

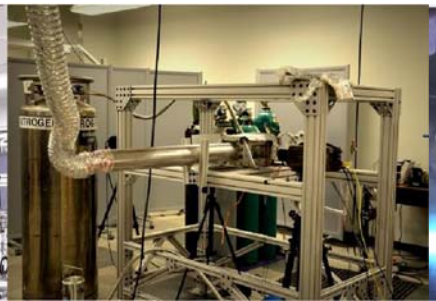
The **MIRO Center for Space Exploration and Technology Research (MIRO cSETR)** at the **University of Texas at El Paso (UTEP)** supports NASA's vision of space exploration by focusing on advanced capabilities in the areas of non-toxic and green propulsion. The MIRO cSETR vision is to establish a sustainable minority university center of excellence in advanced propulsion research through strategic partnerships and to educate a diverse future aerospace workforce. To achieve this vision and create advanced technologies and exploration capabilities for lunar, mars, asteroid, solar system and beyond missions, a multidisciplinary engineering team partners with NASA centers [Johnson Space Center (JSC)-lead NASA partner, Marshall Space Flight Center (MSFC), Glenn Research Center (GRC), and NASA White Sands Test Facility (WSTF)], aerospace industries [Lockheed Martin Corporation (LMC), Blue Origin, and Alliant Techsystems Operations LLC (ATK)], Air Force Research Laboratory (AFRL), academic institutions [University of Maryland at College Park (UMD), Princeton University, Savannah State University (SSU), and Southern Arkansas University (SAU)], and other organizations [Texas Space Grant Consortium (TSGC)].

MIRO cSETR has established itself in progressive, world- renowned research in propulsion and energy. This comes from a continuous commitment to innovative and modern experimental and analytical capabilities. The MIRO cSETR has two laboratories provide 12,000 ft^2 of modular, high-bay reconfigurable space with state-of-the -art diagnostics equipment and experimental setups, Goddard Combustion and Propulsion Research Facility and Challenger-Columbia Structures and Materials Research Facility.

Goddard Combustion and Propulsion Research Facility

- Ultra high velocity projectile-resistant combustion bunker
- 600 ft^2 test space
- Fully-instrumented remote control operation
- Altitude Simulation System
- Two-stage ejectors with 70,000-200,000-ft continuous simulated altitude capability
- Torsional Thrust Balance
- Cryogenic Propellant Production and Delivery System
- Multi-fuel Manifolds and Feed Systems for Liquid and Gaseous Fuels
- High Pressure Optically Accessible Rocket Combustor
- High Pressure Optically Accessible Turbine Combustor
- High Heat Flux Test Facility for Regenerative Cooling
- Flat-Flame, Twin-Flame Counter Flow, Oxy-fuel Burner
- Microgravity Combustion Test Rig
- High Speed Particle Image Velocimetry
- Stero-Particle Image Velocimetry
- Laser Doppler Velocimetry
- Phase Doppler Particle Analyzer
- Laser Induced Fluorescence
- Color Schileren Delflectometry
- Ultra High Speed Intensified Imaging






- Emission Analyzers
- Gas Chromatograph

Challenger-Columbia Structures and Materials Research Facility

- Fatigue and Impact Testing Systems
- Universal Testing Systems
- Digital Image Correlation System
- Nano-Indentation System
- Pulsed Laser Deposition System
- Class 100 Clean Room Facility
- Electron Beam Deposition System
- RF Magnetron Sputtering System
- High Temperature Induction Furnaces
- Thermal Cycling Systems
- Planetary Ball Mill
- Scanning Electron Microscopy
- Energy Dispersive X-Ray Spectroscopy
- X-Ray Photoelectron Spectroscopy

In addition, the MIRO cSETR has a Computational Laboratory with capabilities such as:

- Visual Wall
- Windows/Linux Desktop Computers
- CFD, FSI, MD Simulations, HPC
- Multi-Scale/Physic Modeling
- Multi-Monitor Display for Simulations

CONTACT INFORMATION:

MIRO Center for Space Exploration and Technology Research
University of Texas at El Paso
Engineering Room M-305
W. University Ave.
El Paso, TX 79968-0521
Tel: (915) 747-8252; Fax: (915) 747-5549
Web: http://research.utep.edu/csetr
Email: csetr@utep.edu