

Research Opportunities at NASA/UTSA Center

The University of Texas at San Antonio has established a NASA funded center – NASA MIRO Center for Advanced Measurements in Extreme Environments (CAMEE) in 2019. The Center focuses on increasing the research/education capacity at UTSA in areas related to NASA research priorities. The Center is a collaborative initiative between College of Sciences and College of Engineering at UTSA, with collaboration from University of California, Los Angeles, University of Colorado, Boulder, and NASA Laboratories (JPL, GSFC, and Langley) with interdisciplinary expertise in areas of remote sensing, hypersonic measurements, atmospheric and oceanic measurements and modelling, sea-ice and Turbulence.

CAMEE's research focus areas are:

- F1. Polar Sea Ice and Sea Level Rise
- F2. Gulf of Mexico and Polar Oceans
- F3. Atmospheric Science and Extreme Events
- F4. Aerodynamics
- F5. Modeling, Simulation, and Big Data

CAMEE's research goals are:

1. Characterize changes in polar sea ice and ice sheets, especially areas undergoing rapid change.
2. Improve our understanding of extreme atmospheric and oceanic processes with data-driven models using improved measurement techniques.
3. Develop new data assimilation and modeling methods and algorithms to combine multi-sensor measurements for resolving turbulent fluxes across a variety of surfaces (atmosphere-ocean; ice-ocean; atmosphere-ice) and flow scale regimes.
4. Execute a synergistic experimental and computational effort to develop improved turbulence models with applicability over a range of flow scale regimes.

Undergraduate, graduate, and postdoctoral research opportunities exist in all of the above five research focus areas. The center is hiring highly motivated students interested in areas that include remote sensing and GIS (geoinformatics), sea-ice measurements, satellite and buoyancy glider ocean observations, atmospheric and oceanic model development, and wind-tunnel high-speed experiments.

If you are interested in any of the areas, please email the Center Assistant Director (camee@utsa.edu). The application should include cover letter, CV, brief research statement indicating your interest in any of the above field, a representative publication (if applicable). For specific questions, email the Center director Dr. Hongjie Xie at hongjie.xie@utsa.edu. More details of the center are available at <http://www.utsa.edu/NASA-CAMEE/>