



# Edmund Spencer, PhD.

Associate Professor of Electrical Engineering

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316 Citations

\$2,959,371 Total Grant Funding

## Research Interests

Space Plasma Physics  
Space Weather

Space Plasma Characterization  
Space Instruments and Data  
Interpretation

Solar Wind/Magnetosphere  
Interactions  
Geomagnetic Storm Phases

## Experimental Capabilities

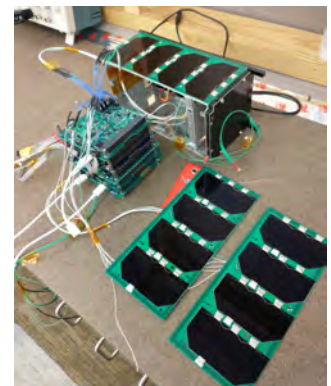
- CubeSat based Science Missions for measurements, data analysis and interpretation.
- Plasma Impedance Probe Instrument design and development for ionosphere experiments.



The completed 2U CubeSat Jagsat-1 being tested for solar panel and power system performance before delivery to NanoRacks in Houston.



Mohammed Al-Abdullah (EE), Gavin Brown (ME) holding Jagsat-1, Dr. Spencer, and Colin Campbell (EE) in the ECE Space Instrumentation Lab.



Jagsat-1 internal electronics being tested for ISS compliance prior to closing up the satellite for delivery.

2021

### IEEE Transactions on Plasma Science

"Time Domain Expressions for the Current of a Dipole Probe in a Magnetized Plasma"

2022

### IEEE Aerospace and Electronic Systems Magazine

"Hybrid Perturbations in Stacked Patch-Ring Circularly Polarized Microstrip Antennas for CubeSat Applications"

2015

### Radio Science

"Ionosphere Plasma electron Parameters from Radio Frequency Sweeping Impedance Probe Measurements"

2024

### Journal of Geophysical Research: Space Physics

"Determination of Outer Radiation Belt MeV Electron Energization Rates and Delayed Response Times to Solar Wind Driving During Geomagnetic Storms"



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