NC Space Grant
New Investigator Program

Faculty Information	Research	TA
Dr. Brian Magi, UNC-Charlotte Brian.Magi@uncc.edu	Developing a Global Lightning Dataset from Remote Sensing Observations	TA04, TA05, TA08
Dr. Gang Chen, UNC-Charlotte Gang.Chen@uncc.edu	Multiscale Analysis of the Impacts of Forest Invasive Disease on Wildfire Burn Severity Using Landsat Imagery, MASTER Airborne Simulator Data and Machine Learning	TA04, TA05
Dr. Mark Pankow, NCSU mrpankow@ncsu.edu	Development of Tethered CubeSat Program	TA02, TA04, TA12
Dr. V. Narayanaswamy, NCSU venkat.narayan@ncsu.edu	Plasma-based integrated suction/blowing actuator for high-speed propulsion	TA01, TA02
Dr. Yun Jing, NCSU yjing2@ncsu.edu	Simulation Studies of Membrane-base Acoustic Metamaterials as Future Noise Insulation Materials	TA06
Dr. Matthew Bryant, NCSU mbryant@ncsu.edu	Multifunctional Compliant Structures for Hybrid Wind and Solar Energy Harvesting on Mars	TA03, TA07, TA10, TA12
Dr. Jacob Adams, NCSU jjadams2@ncsu.edu	Modeling and Fabrication of Microscale Wire Grids for Co-Located Transparent Antennas and Solar Cells	TA03, TA05, TA08, TA12
Dr. Trisha Sain, NCA&T tsain@ncat.edu	Numerical Modeling of Constitutive Behavior of Ice at High Strain Rates	TA11, TA12, TA14
Dr. Fatemeh Afghah, NCA&T fafghah@ncat.edu	Inter-Satellite Communications In Autonomous Small Satellite Networks	TA05
Dr. Regina DeWitt, ECU dewittr@ecu.edu	Radiation and the Survival of Ancient Life	TA06
Dr. Ademe Mekonnen, NCA&T mekonnen@ncat.edu	Investigation of the Relationship Between Convection and African Easterly Waves using NASA Satellite and Reanalysis Datasets	TA11

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Dr. Barkley Sive, ASU sivebc@appstate.edu	Ground Based Measurements of Atmospheric Formaldehyde and Oxygenated Volatile Organic Compounds (OVOCs) in Houston, TX during NASA's DISCOVER-AQ Aircraft Campaign	TA08
Dr. Nico Hotz, Duke University nico.hotz@duke.edu	Novel Flexible Quantum Dot Solar Cell for Space Applications	TA03, TA10, TA12
Dr. Adriana Heiman, ECU heimanna@ecu.edu	Fe Isotope Biosignatures and the Redox State of the Ocean Recorded in 1.69 Ga Late Paleoproterozoic BIFs with Implications for Space Exploration	TA06
Dr. Jeffrey Wilcox, UNC-Asheville jwilcox@unca.edu	Remote Thermal Imaging and On-site Hydrologic Data Collection to Delineate Groundwater Flow to Seepage Wetlands in Western North Carolina	TA04
Dr. Philip Bradford, NCSU philip_Bradford@ncsu.edu	Novel Composite Thermal Interface Materials for Heat Transfer in Aerospace Structures	TA12, TA14
Dr. Sun Yi, NCA&T syi@ncat.edu	Overcoming Communication Time-Delays in Spacecraft Formation Flying	TA05
Dr. Cindy Waters, NCA&T kwaters@ncat.edu	Methods and Characterization and Titanium Metal Foams for Space Applications	TA12, TA14
Dr. Rachel Smith, ASU smithrl2@appstate.edu	Investigating Solar System Evolution Using High-Resolution Spectroscopy and Radiative Transfer Modeling	TA08, TA11
Dr. Brendan O'Connor, NCSU Brendan_oconnor@ncsu.edu	Physical Stability and Optimization of Organic Solar Cells for Space Applications	TA03, TA10, TA12
Dr. Hsiao-Ying S. Huang, NCSU hshuang@ncsu.edu	A Dislocation Based Stress Development in Lithium-ion Battery Materials	TA03
Dr. Sarah Carmichael, ASU carmichael@appstate.edu	Mn Oxides as Biosignatures in Subsurface Environments	TA07

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Dr. Suzanna Brauer, ASU brauersl@appstate.edu	Microbial Signatures as a Tool to Aid the Search for Life in the Universe	TA07
Dr. Fei Yan, NCCU fyan@nccu.edu	Surface Plasmon-based Colorimetric Detection of Reactive Oxygen Species: Assessing Radiation Damage to Astronauts on Extended Space Missions	TA06
Dr. Jonathan Bird, UNC-Charlotte j.bird@uncc.edu	Electromagnetic Launch Assistance for Space Vehicles Using Electrodynamic Wheels	TA01
Dr. Marcela Rojas-Pierce, NCSU mrojasp@ncsu.edu	Cross-talk Between Vacuolar Traffic and Plant Gravitropism	TA07
Dr. Gaolin Milledge, NCCU gzheng@nccu.edu	Comparative Genomic Analysis of Some Hazard Resistant Deinococcus-Thermus Bacteria	TA06, TA07
Dr. Ahmad Sleiti, UNC-Charlotte asleiti@uncc.edu	Validated Computational Tool for Optimizing Turbine Cooling Design with CAD-based Geometries	TA14
Dr. Tiegang Fang, NCSU tfang2.ncsu.edu	Electrostatic Atomization Enhancement of Liquid Sprays for Liquid Propellant Rocket Engine	TA01, TA02
Dr. Yong Zhu, NCSU yzhu7@ncsu.edu	Vertically Aligned Carbon Nanotube Arrays for Ultrahigh Mechanical Damping	TA10, TA12
Dr. Praveen Ramaprabhu, UNC-Charlotte pramapra@uncc.edu	Turbulent Mixing in the Context of Supernovae Detonations	TA07
Dr. Preston Phillips, UNC-Pembroke Lee.phillips@uncp.edu	Carolina Bays: A Paleoclimatic Perspective	TA07
Dr. Xiaoning Jiang, NCSU xjiang5@ncsu.edu	High Temperature Piezoelectric Sensors for Future Propulsion Structure Health Monitoring	TA01, TA02, TA08, TA10, TA12, TA13
Dr. Fabian Heitsch, UNC-CH fheitsch@unc.edu	Chemical Enrichment of the Young Solar System	TA07