

**Kentucky Space Grant Consortium and NASA EPSCoR Programs
Funded Projects 2016-2022**

Program Key:

SPACE GRANT PROGRAMS

EMG - Enhanced Mini-Grant
GF - Graduate Fellowship
MG - Mini-Grant
RIA - Research Initiation Award
REU - Research Experience for Undergraduates
TP/TF - Team Projects / Team Fellowships
UF - Undergraduate Fellowship

NASA EPSCoR PROGRAMS

ISS - International Space Station Flight Opportunities
R3 - Rapid Response Research
RIDG - Research Infrastructure Development Grant
WCS - Workshop / Conference / Seminar
CRA/RA - Competitive Research Award

Project Leads 2016-2022:

ACTC - Ashland Community and Technical College
BCTC - Bluegrass Community and Technical College
EKU - Eastern Kentucky University
HCC - Hopkinsville Community and Technical College
KSU - Kentucky State University
OCTC - Owensboro Community and Technical College
MoST - Morehead State University
MuST - Murray State University
NKU - Northern Kentucky University
TMU - Thomas More University
UL/UofL - University of Louisville
UK - University of Kentucky
UK-Pad - University of Kentucky, Paducah Campus
WKCTC - Western Kentucky Community and Technical College / Challenger Learning Center
WKU - Western Kentucky University

AMK - Aviation Museum of Kentucky
KSC - Kentucky Science Center / Challenger Learning Center
LASC - Living Arts and Science Center
ST - Space Tango



NASA Kentucky Space Grant Consortium and EPSCoR Programs
Funded Projects: 2021-2022

Program	PI FirstName	PI LastName	School/Org	Dept	Project Title
GF	Sundar	Atre	UofL	ME	In-Space Additive Manufacturing of Aluminum Alloys
GF	Sean	Bailey	UK	ME	Development of a Lightweight Sonic Anemometer Array for the Measurement of Turbulent Fluxes from Rotorcraft UAS
GF	Matthew	Beck	UK	ME	Incorporating computed distributions of micro-/mesoscale properties into meso-/macroscale material response models
GF	John	Caruso	UofL	H&SS	GF: Musculoskeletal changes from a high-speed high-impact hip exercise intervention
GF	Timothy	Dowling	UofL	P&A	Graduate Fellowship Proposal: Mach and Froude Numbers on Mars: The Lower Atmosphere
GF	Jinjun	Liu	UofL	Chem	Cavity-Enhanced Double Resonance Spectroscopy of Astrochemical Molecules
GF	John	Maddox	UK-Pad	ME	Characterizing Thermal Conductivity of Flexible Insulation Materials Through Modal Contribution Measurements
GF	Savio	Poovathingal	UK	ME	Development of a Novel Computational Framework to Investigate Thermochemistry of Melt Flow in Aerothermal Entry Physics
GF	Savio	Poovathingal	UK	ME	Development of an artificial neural network to transfer microstructural information of thermal protection systems (TPS) into vehicle-scale simulations
GF	Paul	Rottmann	UK	CME	Multiscale Mechanical Evaluation of the Deformation Pathways in Porous Materials
GF	Mahendra	Sunkara	UofL	ME	A Silicon Anode Technology for Lithium Ion Batteries
GF	Daniela	Terson de Palevill	UofL	H&SS	Autogenic Feedback Training Exercise- AFTE to improve autonomic function in people with spinal cord injuries
GF	Fuqian	Yang	UK	CME	Mechanical behavior of bonded PDMS for microfluidics in microgravity
MG	Jessica	Byassee	LASC	Education	Using Planetarium Presentations to Reinforce Classroom Learning
EMG	Jessica	Byassee	LASC	Education	Bridging Gaps in STEAM Education: Community Learning, Engagement and Development at the Living Arts and Science Center
EMG	Mellisa	Duncan	WKCTC	CLC	NASA and STEM: On the Move
EMG	Vance	Jaeger	UofL	ChemE	Enhancing STEM Education for the Visually Impaired through a Design and Prototyping Course
EMG	Beth	Koch	NKU	CINSM	Kentucky FIRST LEGO League
EMG	Jessica	Lair	EKU	P&A	Live, Interactive Shows for the Hummel Planetarium
TP	Aleck	Leedy	MuST	IE	Autonomous Mardi Gras Robot
TP	Y. Charles	Lu	UK-Pad	ME	Design of Big Blue Rover for NASA Human Exploration Challenge
TP	Sergiy	Markutsya	UK-Pad	ME	2022 AIAA Design, Build, Fly Competition
REU	Michael	Carini	WKU	P&A	TESS Light curves of blazars: Probing the most rapid variability timescales and relativistic jet physics
REU	John	Caruso	UofL	H&SS	REU: Musculoskeletal changes from a high-speed high-impact hip exercise intervention
REU	JiangBiao	He	UK	ECE	Fault-Tolerant Electric Propulsion Drive System
REU	Benne	Holwerda	UofL	P&A	Diffuse UV haloes around the flattest galaxies
REU	Dan	Ionel	UK	ECE	Artificial Intelligence and Data Science Analysis for Battery and Solar PV Systems
REU	John	Maddox	UK-Pad	ME	Inductive Heating System for Comparative Cut-Bar Apparatus
REU	Wesley	Ryle	TMU	M&P	Stellar Properties from Eclipsing Binaries: A Key Foundation to Cutting Edge Astrophysics
REU	Wesley	Ryle	TMU	M&P	Course-Based Undergraduate Research Experiences: A Variable Star Project
REU	Minchul	Shin	NKU	P,G&ET	Origami Robot Development and its Applications in Space
RIDG	Hailong	Chen	UK	ME	Microstructure-Based Thermomechanical Homogenization Using a Meshfree Framework
RIDG	Michael	Renfro	UK	ME	A stochastic approach to permeability and tortuosity modeling using experimental flow tube measurements
ISS	Alexandre	Martin	UK	ME	KRUPS: ISS Flight for Instrument Testing
R3	Joe	Chappell	UK	Pharm	NASA EPSCoR R3 Appendix D (BPS): Comparison of stress-inducible sesquiterpene lactone profiles of lettuce cultivars
R3	Alexandre	Martin	UK	ME	NASA EPSCoR R3 Appendix A (SMD): Material response of woven heat shield material in Venusian atmosphere
R3	Hui	Wang	UofL	ME	NASA EPSCoR R3 Appendix G (ARMD): Composite Solid Electrolytes for High Safety Lithium Metal Batteries
CRA	Gordon	Emslie	WKU	P&A	Solar Activity and Space Weather

NASA Kentucky Space Grant Consortium and EPSCoR Programs
Funded Projects: 2020-2021

Program	PI FirstName	PI LastName	School/Org	Dept	Project Title
GF	Sean	Bailey	UK	ME	Spallation Particle Characterization for Ablative Thermal Protection Systems
GF	Matthew	Beck	UK	CME & ME	Connecting stochastically computed effective properties to experimentally measured mechanical behavior of fibrous TPS materials
GF	Lindsey	Bryson	UK	Civil	Research Leading to Forecasting of Sinkholes using Satellite Data
GF	Timothy	Dowling	UofL	P&A	Seasonal Dependence of Froude and Mach numbers in the OpenMARS Reanalysis
GF	Beth	Guiton	UK	Chemistry	Predicting the Structure and Stability of Thermoelectric Composite Interfaces in Deep-Space using In Situ Microscopy
GF	Dan	Ionel	UK	ECE	Electric Aircraft Propulsion Concepts with Axial Flux PM Machines, Integrated Condition Sensing, and HIL Enabled WBG Power Electronic Drives
GF	Doo Young	Kim	UK	Chemistry	Formation of Single Metal Atoms Coordinated with Four Nitrogen Atoms in Carbon Nano-Onions for Efficient and Selective CO2 Conversion into Fuels
GF	John	Maddox	UK-Pad	ME	Isolating Modal Contributions to Thermal Conductivity in Porous Insulation Materials
GF	Savio	Poovathingal	UK	ME	Development of a Novel Computational Framework to Investigate Thermochemistry of Melt Flow in Aerothermal Entry Physics
GF	Savio	Poovathingal	UK	ME	Development of an artificial neural network to transfer microstructural information of thermal protection systems (TPS) into vehicle-scale simulations
GF	Michael	Sama	UK	Bio & Ag	Performance of Real-Time Kinematic Global Navigation Satellite System Receivers on Unmanned Aircraft Systems for Precision Meteorology
GF	Hui	Wang	UofL	ME	NASICON-type Composite Solid Electrolytes in Solid-State Li Batteries for Cold Environments
GF	Howard	Whiteman	MuST	Bio Sciences	AMERICAN CHESTNUT RESTORATION ON PUBLIC LANDS: A REMOTE SENSING APPROACH
RIA	Bikram	Bhatia	UofL	ME	Barocaloric Materials for Solid-State Cooling at Cryogenic Temperatures
RIA	Yanyu	Chen	UofL	ME	Multi-Scale Optimization of Damping Composite Structures for Additive Manufacturing
RIA	Xu	Jin	UK	ME	Autonomous Multi-UAV System for COVID-19 Body Temperature Monitoring of Crowds
RIA	Jinjun	Liu	UofL	Chemistry	High-Resolution Laser Spectroscopy of Trace Gases in the Lower Atmosphere of Venus in Support of NASA's Exploration Missions
MG	Mellisa	Duncan	WKCTC	CLC	NASA and STEM: Virtual Reality
MG	Ed	Murphy	AMK	Education	Aerospace Motivates Kids: A Context for STEM
EMG	Jessica	Byassee	LASC	Education	Advancing STEAM Engagement
EMG	Haluk	Cetin	MuST		Mapping invasive plant species in Kentucky using LiDAR, UAS and satellite imagery, and GIS
EMG	Veronica	Greenwell	KSC	CLC	Kentucky Science Center Challenger Learning Center Immersion Program
EMG	Benne	Holwerda	UofL	P&A	Galaxy Populations Identified by Machine Learning
EMG	Elizabeth	Koch	NKU	CINSAM	Kentucky FIRST LEGO League
TP	Regina	Hannemann	UK	ECE	Kentucky Organization of Robotics and Automation (KORA)
TP	Aleck	Leedy	MuST	Engineering	Autonomous Pac-Man Robot
TP	Y. Charles	Lu	UK-Pad	ME	Design of Big Blue Rover for NASA Human Exploration Challenge
TP	Sergiy	Markutsya	UK-Pad	ME	2021 Design/Build/Fly
TP	Shawn	Payne	OCTC	AMT	OCTC NASA Human Exploration Rover Teams
TP	Savio	Poovathingal	UK	ME/ECE	Kentucky Re-entry Universal Payload System: Enhancing instrumentation Suite
REU	Matthew	Beck	UK	CE & ME	Contact overlap effects on thermal and mechanical properties of fibrous TPS materials
REU	Lutz	Haberzettl	UofL	P&A	How to teach a machine to find cosmic smileys
REU	Lutz	Haberzettl	UofL	P&A	Machine Learning Search for the Earliest Galaxies
REU	Benne	Holwerda	UofL	P&A	The Full Size of the Milky Way using the Smallest Stars
REU	Dan	Ionel	UK	ECE	Markov Theory based Optimization of Reliable and Highly Efficient All-electric Aircrafts
REU	Jonathan	Kopechek	UofL	Bioengineering	Evaluation of a Dual Chamber Bag System for Rehydration of Dried Blood under Reduced Gravity
REU	John	Maddox	UK-Pad	ME	Control System Development for Space Environment Simulation Chamber
REU	Sergiy	Markutsya	UK-Pad	ME	Simulation of Ionic Liquids Confined Between Electrodes Using Coarse-Graining Approach
RIDG	Bassil	El Masri	MuST	E&ES	Assessing the Impacts of Physiological and Environmental controls on the Accuracy of WUE: Linking Field Observations, Satellite Imagery, and Land Surface Model
RIDG	Biyun	Xie	UK	ECE	Fault-Tolerant Workspace Analysis for Redundant Space Robots Experiencing Locked Joint Failures
RIDG	Jiangbiao	He	UK	ECE	High-Reliability Aircraft Propulsion Drives based on Digital Twin Technology
ISS	Stuart	Williams	UofL	ME	Electrokinetic assembly of stable nanoparticle haloing suspensions
R3	Doo Young	Kim	UK	Chemistry	R3 Task E19: Atomically Dispersed Metal Electrocatalysts Supported on Nitrogen-Doped Carbon Nano-Onions for Efficient and Selective CO2 Conversion into Fuels
R3	Martha	Grady	UK	ME	R3 Task D15: Microgravity Effects On Biofilm Stiffness

NASA Kentucky Space Grant Consortium and EPSCoR Programs

Funded Projects: 2019-2020

Program	PI FirstName	PI LastName	School/Org	Dept	Project Title
GF	Robert	Adams	UK	ECE	Preconditioned Sparse Direct Solvers for Large-Scale Electromagnetic Modeling
GF	Sean	Bailey	UK	ME	Analysis of Spallation Products using Arc-Jet Experiments
GF	Marcelo	Guzman	UK	Chem	Air Quality Measurements with Small Unmanned Aerial Systems
GF	Jesse	Hoagg	UK	ME	Sampled-Data Formation Control of Fixed-Wing UAVs for Measuring Atmospheric Turbulence
GF	Jesse	Hoagg	UK	ME	Autonomous Aerial Robot Formations for Imaging Livestock for Health Monitoring
GF	Dan	Ionel	UK	ECE	Model and Graph Theory-based Differential-evolution Optimization Framework for Power, Propulsion and Energy Storage Systems of Electric Aircraft
GF	John	Kielkopf	UL	P&A	Hunting for Dark Matter in Spheroidal Galaxies
GF	John	Maddox	UK-Pad	ME	Characterization of the Effect of Mechanical Loading on the Thermal Conductivity of Porous Insulation Materials
GF	Sergiy	Markutsya	UK-Pad	ME	A Computational Study of the Interfacial Structure of Ionic Liquids at Mesoscale
GF	Alexandre	Martin	UK	ME/CME	Mesoscale analysis of inhomogeneities in ablative materials using statistical distribution of properties
GF	Christopher	Richards	UL	ME	Combined Static and Dynamic Anti-Windup Architecture for Landers and Ascent Vehicles Experiencing Large Disturbances
GF	Hui	Wang	UL	ME	LATP Solid Electrolyte in All-solid-state batteries for Cold Environments Applications
GF	Hui	Wang	UL	ME	Sulfide-Electrolyte-based All-Solid-State Batteries with High Safety and Performance
GF	Howard	Whiteman	MuST	Biol/WSI	AMERICAN CHESTNUT RESTORATION ON PUBLIC LANDS: A REMOTE SENSING APPROACH
RIA	Christoph	Brehm	UK	ME/CE/Chem	Development of a RANS-Based Wall-Model for Cartesian Grid Navier-Stokes Solvers
RIA	Lindsey	Bryson	UK	CE/KGS	Using Satellite Data to Develop Rainfall-Induced Landslide Susceptibility and Forecasting Models
RIA	Alexandre	Martin	UK	ME/CME	Thermal conductivity characterization of low-density volumetric ablators using a cut-bar apparatus
RIA	Wei	Ren	UK	P&SS/CE/CS	Integrating Multi-scale Remotely Sensed Data and Ecosystem Modelling to Assess Agroecosystem Carbon Dynamics and Greenhouse Gas Emissions
RIA	Wesley	Ryle	TM	M&P	Determination of Fundamental Parameters for Massive Eclipsing Binary Systems
RIA	Michael	Sama	UK	BAE	ENABLING A CITIZEN SCIENCE CONTRIBUTION TO METEOROLOGY USING SMALL UNMANNED AIRCRAFT SYSTEMS
RIA	Thomas	Seigler	UK	ME	Control of Eddy-Current Actuation Systems for Noncontact Space Robotics
RIA	Ambrose	Seo	UK	P&A	Investigating Optical Properties of Oxide Materials at High Temperature
MG	Aida	Bermudez	EKU	HP	Leggo My Science
MG	Edward	Murphy	AMK	ED	Aerospace Motivates Kids; A Context for STEM
MG	George	Pantalos	UL		Student travel MG - flight campaign
MG	Joshua	Ridley	MuST	IoE	BRINGING THE CLASSROOM TO PHYSICS
MG	Thomas	Tretter	UL	M&S Ed	Immersing K-12 Students in Foundational Astronomy Concepts and Practices
EMG	Katherine	Bullock	LASC	ED	Bridging Gaps in STEAM Education: Community Engagement and Informal Learning in Earth and Space Sciences
EMG	Katherine	Bullock	LASC	ED	Earth and Space Explorers: Expanding Summer Learning Opportunities in STEAM
EMG	Haluk	Cetin	MuST	EES	Workshop for the next generation pre- and in-service teachers: A satellite remote sensing and Geographic Information Systems approach
EMG	Micaha	Dean	UK	CoE	Science Olympiad
EMG	Mellisa	Duncan	WKCTC	CLC	NASA and STEM: On the Move
EMG	Derrick	Gilmore	KSU		Kentucky State University Minority Male STEM Conference
EMG	Beth	Koch	NKU	CINSAM	Kentucky First Lego League
EMG	Aleck	Leedy	MuST	IoE	An E-Day for Girl Scouts Focused on Activities for Earning STEM Badges
EMG	George	Pantalos	UL		HE-EMG - Student flight campaign
EMG	Michael	Renfro	UK	ME	HE-EMG - Curriculum Dev 3210001425
EMG	Thomas	Tretter	UL	M&S Ed	Astronomy Modeling Workshop for High School Teachers
TF	Regina	Hannemann	UK	ECE	Kentucky AstroRobotic Terrain Systems (KATS) Student Club
TF	Regina	Hannemann	UK	ECE	NASA Robotic Mining Competition ME Senior Capstone Projects
TF	Aleck	Leedy	MuST	IoE	Autonomous Orbital Space Debris Removal Robot
TF	Yongsheng	Lian	UL	ME	High Power Rocket Design and Competition at Intercollegiate Rocket Engineering Competition
TF	Y. Charles	Lu	UK-Pad	ME	Design of Big Blue Rover for Future Space Exploration
TF	Sergiy	Markutsya	UK-Pad	ME	2019 Design/Build/Fly
TF	Alexandre	Martin	UK	ME/ECE	Kentucky Re-entry Universal Payload System: recovery system and training
TF	Shawn	Payne	OCTC	AMT	OCTC NASA Human Exploration Rover Teams
UF	Matthew	Beck	UK	CME	Calculating distributions of local thermal conductivities in ablative materials: Mesoscale modeling of the effects of structural randomness on materials properties
UF	Vladimir	Dobrokhov	WKU	P&A	Graphene Oxide Colloids as Inks and Additives for Additive Manufacturing
UF	Vladimir	Dobrokhov	WKU	P&A	Development of Engineered Graphene-Polymer Nanocomposites through Embedding Smaller Nanoparticulates and Interfacial Dynamics
UF	Jonathan	Kopechek	UL	BE	Assessment of RBC Quality after Rehydration of Dried Blood under Reduced Gravity
UF	Jonathan	Kopechek	UL	BE	Development of Prototype for Rehydration of Dried Blood under Reduced Gravity
UF	Y. Charles	Lu	UK-Pad	ME	Optimal Design and Processing of 3D-Printed Products by Using Laminate Composite Theory
UF	John	Maddox	UK-Pad	ME	Instrumentation of Comparative Cut-Bar Thermal Conductivity Measurement Apparatus
UF	Sergiy	Markutsya	UK-Pad	ME	Computational Modeling and Simulation of Aqueous Solution of Ionic Liquids at Mesoscale

NASA Kentucky Space Grant Consortium and EPSCoR Programs

Funded Projects: 2017-2018

Program	PI FirstName	PI LastName	Project Title	School/Org	Dept
GF	Twyman	Clements	Microgravity Tank Design Toolbox	ST	
GF	Aaron	Cramer	Market-Based Control and Optimal Simulation Techniques for Small Orbital Satellite Power Systems	UK	ECE
GF	Dan	Ionel	Bi-directional DC/DC Three Port Converter, WBG DC/AC Drive and Distributed Controls for Electric and Hybrid Airplanes	UK	ECE
GF	John	Kielkopf	Hunting for Dark Matter in Spheroidal Galaxies	UofL	P&A
GF	John	Maddox	Physics-Based Characterization of Fibrous Rigid Insulation Materials	UK-Pad	ME
GF	Alexandre	Martin	Material Interface Boundry Condition for Atmospheric Reentry Material Response Implementation into KATS	UK	ME
GF	Daniel	Pack	Genetic Engineering for Production of Curcumin in Human Cells	UK	CME
GF	Christopher	Richards	Resolving Discontinuities in SLS LTV Model Simulation	UofL	ME
RIA	Kathleen	Carter	The physiological adaptations while exercising on a robotic exoskeleton as compared to exercising using free weights	UofL	CEHD
RIA	Sergiy	Markutsya	Computational Study of Coarse-Grained Aqueous Ionic Liquid Solutions	UK-Pad	ME
RIA	Kaveh	Tagavi	Meteorite Reentry Melting and Fluid Flow	UK	ME
MG	Krista	Barton	MSU's Middle School Aerospace Challenge for Engineering	MoST	
MG	Mellisa	Duncan	NASA and STEM: Making Local Connections	WKCTC	CLCP
MG	Ed	Murphy	Aerospace Motivates Kids - A Context for STEM	AMK	
EMG	Krista	Barton	MSU's High School Aerospace Challenge for Engineering	MoST	
EMG	Katherine	Bullock	Public Engagement and Informal Education in Earth and Space Sciences	LASC	Ed
EMG	Aleck	Leedy	A Robotics Outreach Program for 3rd Graders at Murray Elementary	MuST	IoE
TF	Martha	Grady	University of Kentucky Speedfest Design, Build, Fly Competition	UK	ME
TF	Aleck	Leedy	Autonomous Pirate Robot	MuST	IE
TF	Sergiy	Markutsya	2018 Design/Build/Fly	UK-Pad	ME
TF	Shawn	Payne	OCTC NASA Rover Team 2018	OCTC	AMT
UF	Kathy	Carter	Comparative responses to exercise done with free weights and with a robotic exoskeleton	UofL	CEHD
UF	Alexandre	Martin	A porous media approach to parachute modeling	UK	ME

NASA Kentucky Space Grant Consortium and EPSCoR Programs

Funded Projects: 2016-2017

Program	PI FirstName	PI LastName	Project Title	School/Org	Dept
GF	Michael	Carini	Characterization and threat assessment of eight potentially hazardous near earth asteroids	WKU	P&A
GF	Jesse	Hoagg	Fixed-Wing UAV Formations for Measuring Atmospheric Turbulence	UK	ME
GF	Alexandre	Martin	Development of a kinetic modeling scheme to capture phenolformaldehyde resin degradation	UK	ME
GF	Alexandre	Martin	Arc-jet validation of material response solvers	UK	ME
GF	Karla	Welch	Algorithmic Predictions of Sensorimotor Outcomes & Feature Identification Using Shrinkage Estimator & Classification Methods	UL	ECE
GF	Stuart	Williams	Acoustic Mixing of Sealed Microfluidic wells in support of NASA ACE missions	UL	ME
RIA	Michael	Fultz	Effect of Microgravity on the Contraction and Cytoskeletal Remodeling in the A7r5 smooth muscle cell	MoSU	Bio
RIA	Christopher	Hughes	Satellite Data Fusion to Better Understand Martian Structure and Volcanics	EKU	Geosc
RIA	Hongxiang	Li	A New Transceiver Design for Unmanned Aircraft System	UL	ECE
MG	Katherine	Bullock	STEM Education Program Development	LASC	
MG	Michael	Carini	Supporting the participation of the Cave Area Rocket Scientists in the Team America Rocket Competition	WKU	P&A
MG	Sherry	McCormack	High Altitude Ballooning Summer Research Project	HCC	Math
MG	Edward	Murphy	Aerospace Motivates Kids-A Context for STEM	AMK	
EMG	Katherine	Bullock	STEM Programs - Informal Science	LASC	
EMG	Ashley	Cox	The Sky's the Limit: Pre- & Inservice Faculty PD with Middle School Hands-on Learning	ACTC	A&S
EMG	Richard	Gelderman	Preparing the Public for the 2017 August 21 Eclipse	WKU	P&A
EMG	Richard	Gelderman	Supporting K-12 Students Ability to View Totality	WKU	P&A
EMG	Veronica	Greenwell	Solar Eclipse Viewing Logan County, Kentucky	KSC	
EMG	Tracy	Knowles	BCTC Eclipse Outreach Ambassador Project	BCTC	Health
TF	Kevin	Donohue	NASA Robotic Mining Competition	UK	ECE
TF	Aleck	Leedy	Autonomous Star Wars Themed Robot	MuSU	Engr
TF	John	Maddox	2017 Design/Build/Fly	UK-Pad	ME
TF	Alexandre	Martin	Kentucky Re-entry Universal Payload System: system integration and training	UK	ME
TF	Shawn	Payne	OCTC NASA Human Exploration Rover Team	OCTC	Manuf
UF	Haluk	Cetin	An integrated study using LiDAR, satellite imagery & GIS to map invasive plant species in Kentucky	MuSU	Geosc
UF	Charles	Lu	Analysis of mechanical properties of 2D layered graphene-polymer nanocomposites	UK-Pad	ME
UF	Charles	Lu	Statistical, Micromechanics-based Computational Modeling for Accelerating the Design of Aerospace Composites	UK-Pad	ME
UF	John	Maddox	Heat Shield Thermal Conductivity Measurement with Comparative Cut Bar Apparatus	UK-Pad	ME
RIDG	Christoph	Brehm	A new numerical method for fluid-structure interaction with large deformations	UK	ME
RIDG	Bassil	El Masri	A long-term monitoring network in Kentucky: linking climate change to carbon and water use efficiency, and soil properties	MuSt	Geosc
RIDG	Beth	Guiton	Determining the structure of thermoelectric materials in real-time using single-atom resolution and in situ imaging	UK	Chem
RIDG	Sanju	Gupta	Power generation from low-temperature waste heat: carbon-based aerogels as thermo-electrochemical energy harvesters	WKU	P&A
RIDG	Jesse	Hoagg	Data-driven adaptive reynolds-averaged navier-stokes k-omega models for unsteady turbulent flow	UK	ME
RIDG	Victor	Marek	Raising Cyber-awareness at the University of Kentucky	UK	CS
RIDG	Susan	Odom	A low temperature flow battery prototype for space applications	UK	Chem
WCS	Huacheng	Zeng	Jamming-resilient wireless communications via blind interference cancellation	UL	ECE