**UPDATE: Sep 2020**

### Dr. Jeffrey Bons (bons.2@osu.edu)

1. Project: Understanding and Preventing Erosion/Deposition in Jet Engines
   - Technical Fields: Fluids, Heat Transfer, Experimental Methods
   - Research Activities: Experimental, Computational

### Dr. Marcello Canova (canova.1@osu.edu)

1. Project: Assessment and Forecasting of State of Health for Second Life Battery Applications
   - Technical Fields: Electrical Engineering, Automotive Battery Technology
   - Research Activities: Experimental

### Dr. Joseph Heremans (heremans.1@osu.edu)

1. Project: Design, build and measure solid-state heat engines.
   - Technical Field: Energy and Environment
   - Research activities: Experimental. Use materials from the lab, or make new materials, to construct solid-state coolers or solid-state heat engines, then measure its performance.

### Dr. Shauryra Prakash (prakash.31@osu.edu)

1. Project: Measuring electrical properties of biological cells
   - Technical Fields: Electromagnetics, Cell Biology
   - Research Activities: Experimental
2. Project: Continuous colloidal manufacturing
   - Technical Fields: Advanced Manufacturing, Fluid Mechanics
   - Research Activities: Experimental, Analytical
3. Project: Infection detection in fluid samples
   - Technical Fields: Machine Learning, Biosensing
   - Research Activities: Experimental, Computational

### Dr. Vaibhav Sinha (sinha.181@osu.edu)

1. Project: Design and Development of Radiation Instrumentation Techniques for Radioactive Dispersive Device Detection
   - Technical Fields: Radiological Engineering, Automation, Control System
   - Research Activities: Computational
2. Project: Advanced Neutron Dosimetry Modeling for Medical Applications
   - Technical Fields: Radiation Physics, Particle Transport
   - Research Activities: Modeling, Simulation

### Dr. Manoj Srinivasan (srinivasan.88@osu.edu)

1. Project: Biomechanics, robotics, design, assistive technologies, and machine learning.
   • Technical Fields: Biomechanics, Control Systems, Robotics, Dynamics
   • Research Activities: Experimental (Humans or Machines), Computational, Fabrication

**Dr. Renee Zhao (zhao.2885@osu.edu)**

1. Project: Untethered soft robots for design of biomedical devices
   - Technical Fields: Material Science, Control, Mechanics, 3D Printing
   - Research Activities: Experimental

**Dr. Haijun Su (su.298@osu.edu)**

1. Project: Prototype and Control of a Variable Stiffness Gripper Using Positive Pressure Layer Jamming
   - Technical Fields: Robotics, Design and Manufacturing
   - Research Activities: CAD modeling, prototyping and experimental
2. A semi-autonomous social assistive robot with an adaptive robotic gripper for fighting covid-19 pandemic
   - Technical Fields: Robotics, Design and Manufacturing
   - Research Activities: CAD modeling, prototyping and experimental

**Dr. Lian Duan (duan.322@osu.edu)**

1. **Project**: Computer Simulation of Flow past Realistic Automotive Models
   - Technical Fields: Vehicle aerodynamics
   - Research Activities: Computer-Aided Engineering (CAE); Computational Fluid dynamics (CFD); Aerodynamics; Fluid Dynamics

**Dr. Gunjan Agarwal (agarwal.60@osu.edu)**

1. Project: Collagen structure and function
   - Technical Fields: Biomaterials
   - Research Activities: Experimental (fluorescence and atomic force microscopy)
2. Project: Mineral deposits in tissues
   - Technical Fields: Nanotechnology
   - Research Activities: Experimental (magnetic force microscopy)

**Dr. Mrinal Kumar (kumar.672@osu.edu)**

1. Project: Autonomous UAV path planning in a wildfire
   - Technical Fields: dynamics, sensing, control
   - Research Activities: computational and experimental
2. Project: Identification of new objects and their intent in orbit
   - Technical Fields: Space mechanics, estimation, machine learning
   - Research Activities: computational

### Dr. Stephanie Stockar (stockar.1@osu.edu)

1. Project: Analysis of hierarchical strategies for engine control in autonomous vehicles
   - Technical Fields: System Dynamics and Control systems
   - Research Activities: Computational

### Dr. Ahmet Selamet (selamet.1@osu.edu)

1. Project: Turbocharger Compressor Surge
   - Technical Fields: Engine Boosting Systems
   - Research Activities: Experimental

### Dr. Ardeshir Contractor (contractor.15@osu.edu)

1. Project: Modeling coupled thermal, mechanical and electrical performance of vehicle integrated photovoltaics.
   - Technical Fields: Heat transfer, Structural mechanics, Photovoltaics
   - Research Activities: Computational

### Dr. Sheng Dong (dong.121@osu.edu)

1. Project: Experimental and computational study of composite materials.
   - Technical Fields: composite materials, material modeling, mechanical testing, finite element modeling, structural analysis, etc.
   - Research Activities: Experimental and computational, finite element methods.

### Dr. Hanna Cho (cho.867@osu.edu)

1. Project: Bone-inspired smart materials
   - Technical Fields: materials, material modeling, mechanical testing, 3D manufacturing
   - Research Activities: Experimental
2. Project: Crack formation in thick electrode batteries
   - Technical Fields: materials, material modeling and characterization, manufacturing
   - Research Activities: Experimental

### Dr. Travis Hery (hery.1@osu.edu) [Integrated Material Systems Lab]

1. Project: Performance Characterization of Structural Batteries for Automotive and Aerospace Applications
   - Technical Fields: Materials, Energy storage, Design
   - Research Activities: Fabrication, Experimental characterization and Data Analysis