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**FedEx Institute of Technology Announces  
2017 DRONES Research Cluster Awards and Sponsors FPV DRONES Race**

The FedEx Institute of Technology recently funded 10 research projects for 2017. The DRONES Research Cluster is driving innovation and leading Memphis in the investigation of future research and breakthrough technology. Nineteen researchers from colleges across campus, including the Herff College of Engineering and the College of Arts & Sciences, will work together to advance the science of what's next. These projects will focus on such areas as information sharing between autonomous vehicles, virtual reality and real-world automated navigation, and engineering battery composites for autonomous vehicles.

The 2017 DRONES research awards include:

- Gravitational Effects on Rapid Solidification of Metal Powders for On/Off-Earth Additive Manufacturing (Ebrahim Asadi);
- Drone Imaging of Active Sand and Gravel Quarries to Optimize Exploration and Mining (Roy Van Arsdale, David Lumsden, Randel Cox, Youngsang Kwon, Andrew Mickelson);
- Lightweight, Low-Power, Multi-Sensing Technology for Extreme Conditions (Firouzeh Sabri);
- Drone-Assisted Cavity Ringdown Sensor for Real-time Environmental Methane Gas Monitoring (Prabhakar Pradhan);
- Multi-layer Aerosol Deposition for Converting a UAV's Body Into a Solar Panel (Ranganathan Gopalakrishnan, Jingbiao Cui);
- Bridging the Gap Between Virtual Reality and Real-World Automated Navigation (Aaron Robinson, Ernest McCracken);
- Multi-Sensory UAV Approach to Stream Assessments (Chunrong Jia, Qijun Gu);
- Robust and Anonymous Information Sharing among Autonomous Vehicles (Lan Wang); and

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- Engineering Materials for Battery: Nanowhiskered Oxide Electrodes (Sanjay Mishra).

“Fostering a vibrant and interdisciplinary, unmanned and autonomous systems research community that collaborates with local business and community organizations is essential to advancing innovation in Memphis,” said Dr. Eddie Jacobs, director of the DRONES Research Cluster.

The 19 researchers will receive their awards and designation as DRONES Research Fellows at the DRONES Lightning Talks & Reception on Thursday, March 9. Project leaders will present an overview of their research to the community. The event will be from 4:30 to 6 p.m. in the FedEx Institute of Technology Methodist Presentation Theatre. It is free and open to the public.

In addition to this event, the DRONES cluster will kick off its funding year with an FPV (First-Person View) Drones Race Saturday, March 11, from 4 to 6 p.m. in the Innovation Drive parking garage. For more information, or to register for either event, visit [memphis.edu/fedex/drones](http://memphis.edu/fedex/drones).

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