

The DRONES (Drones, Robotics, and Navigation Enabled Systems) Innovation Research Cluster of the FedEx Institute of Technology represents an interdisciplinary collaborative effort designed to build Memphis and the Mid-South as a national leader in the application of unmanned and autonomous systems. The Cluster is comprised of researchers and experts examining a diverse set of innovative applications of unmanned systems, autonomous systems, and robotics.

Faculty serving as DRONES Research Fellows provide proactive leadership and cohesion to the region's interests in these state-of-the-art challenges. Corporations and community groups based in Tennessee plus state government agencies join together to tackle public policy questions and to find ways to incorporate these exciting new technologies in practical applications that drive the state's economic growth.

The 2018-2019 DRONES Call for proposals is now inviting proposals toward establishing the University District as a national testing center for integration of unmanned and autonomous systems into urban environments. Known as the Autonomous Systems Integration, Logistics, and Application Range (or ASILAR), the DRONES Cluster will target the introduction of deployed autonomous systems to explore the social, psychological, and practical challenges of interacting in a world with unmanned and autonomous systems.

Faculty at the University of Memphis are invited to submit three-page proposals that focus on two major categories:

- **Deployed Autonomous and Unmanned Systems Solutions Research:**
Projects in this category should emphasize development, acquisition, or modification of hardware to be used in solving one of several challenge areas:
 - Building to Vehicle Communication
 - Ingress/Egress Autonomous and Unmanned Systems Engagement
 - Negotiation of and Engagement with Pedestrian Environments
 - Payload Delivery
- **Social, Psychological, Cultural Autonomous & Unmanned Systems Engagement Research:** Projects in this category should address challenges associated with unmanned and autonomous systems engagement and interaction. Challenge areas include:
 - User Experience with autonomous and unmanned platforms
 - Socialization of and around autonomous unmanned platforms
 - Socio-economic and generational engagement with unmanned platforms

Priority will be given to proposals that can: 1) directly benefit our regional community, corporate and government partners; 2) yield advanced content that can be included in DRONE's ASILAR and advance Memphis as a center of autonomous and unmanned systems research; 3) bring new ideas to DRONE's interdisciplinary research portfolio; 4) create training and workforce development opportunities; and 5) engage multiple disciplines in innovative ways. Proposals may address both categories of research. Faculty whose proposals are selected for funding will be designated as DRONES Research Fellows of the FedEx Institute of Technology. They will be required to present their research at DRONE's annual Research Workshop and actively help develop the ASILAR as a national testing center.

Deadline for receipt of proposals is May 18. **Please submit proposals as email attachments addressed to: FedEx Institute of Technology at fedex@memphis.edu with subject line as 2018 DRONES Research Cluster Proposal submission.** A selection committee of robotics, autonomous systems, and unmanned systems experts and DRONES leadership will review applications and select those for funding. Those submitting proposals will be notified of the outcome within several weeks of the committee's meeting. To foster interdisciplinary collaboration, successful proposals may be clustered into distinct research groups under DRONES that will be tasked with developing larger grant proposals from external granting bodies. For additional information, please contact Dr. Eddie Jacobs at: eljacobs@memphis.edu.