

Autonomous Air and Ground Vehicles – Safely Adapting to Complex and Changing Environments



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Dr. James W. Gregory is a professor in the Department of Mechanical and Aerospace Engineering, and Director of the Aerospace Research Center at The Ohio State University. He received his doctorate and master's degrees in Aeronautics and Astronautics from Purdue University in 2005 and 2002, respectively, and his Bachelor of Aerospace Engineering from Georgia Tech in 1999, graduating with highest honors. His research interests focus on the intersection of aerodynamics and drones, leading to robust flight in all weather conditions. Dr. Gregory also led a team of researchers and students to set official world records for speed and distance for an autonomous drone in August 2017. He is also an instrument rated private pilot, with over 350 flight hours in single-engine aircraft. He enjoys sharing his passion for flight with broad audiences, including through his recent video lecture series on *The Science of Flight*.

Abstract

Autonomy is one of the biggest revolutions changing the landscape of both air and ground vehicles. In this talk I'll provide an overview of where autonomous air vehicles are heading – from personal air taxis (think of the Jetsons) to autonomous drones (package delivery). A wide range of autonomous air and ground vehicles will work together for societal benefit. But, before we'll see that ultimate vision, there are a host of technical and policy challenges that must be overcome. I'll provide an overview of our recent work with high-speed autonomous drones, and a traffic management system that will help enable the high-density operations that we envision in the future.

Hosted by Professor Marcelo Dapino

**Pre-recorded
presentation will be
available to registered
participants**

