



# AIAA

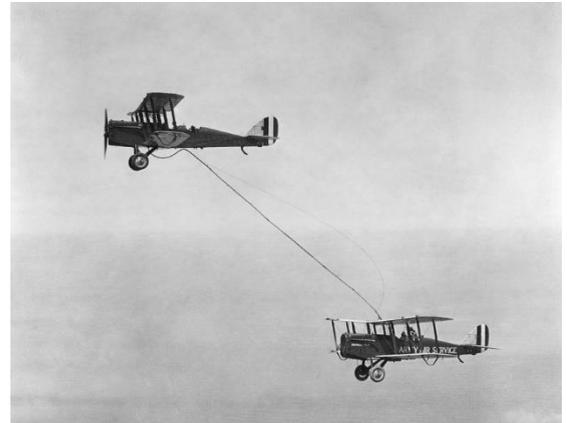
*American Institute of  
Aeronautics and Astronautics  
Dayton-Cincinnati Section*

**Lunch 'n' Learn  
October 21, 2022**

**“Force Design in the Dark: An  
Introduction to Integrated Aerial  
Rearming & Refueling”**

**Guest Speaker:**

**Dr. Rick Graves, Air Force Research  
Laboratory**



**The First Aerial Refueling Event: 27 Jun 1923**

**Abstract:** An introduction to the topic of integrate aerial rearming is presented to advance discussion associated with the technical maturity of an aerial rearming capability that is being explored within the Department of Defense community. The pedigree for the aerial rearming challenge topic executed through the Air Force Explore nationwide campaign promoted by the Air Force’s Transformational Capabilities Office is discussed and the role of this progressive organization is contrasted with the traditional mission of AFRL’s enabling technology directorates. Technology development timelines for aerial rearming are described in relation to historical times lines associated with traditional aerial refueling capabilities. The nature of future manned and unmanned mission scenarios and flight test demonstrations is assessed in the context of recent guidance provided by the Secretary of the Air Force.

**Biography:** Dr. Rick Graves is the Air Vehicles Digital Engineering Lead within AFRL’s Aerospace Systems Directorate at Wright-Patterson Air Force Base. He also served as a founding member of the Air Force’s Transformational Capabilities Office, which received its IOC authorization from the AFRL commander in September of 2020. He will be giving an introductory presentation on integrated aerial rearming & refueling that summarizes the public release aspects of his team’s activities to research technologies required to integrate this new autonomous capability into the Air Force portfolio. Dr. Graves has been an AIAA member since 1991 and is an AIAA Associate Fellow.

**Time:** 11:45 am

**Location:**

*China Garden Buffet  
112 Woodman Dr.  
Dayton, OH 45431*

**Lunch:**

*You will be able to  
purchase the buffet*

