

ILLINOIS TECH

Armour College of Engineering

Ph.D. Opportunity in Unsteady Aerodynamics Research at Illinois Tech

The Experimental Turbulent Flows Laboratory in the Department of Mechanical, Materials, and Aerospace Engineering (MMAE) at Illinois Institute of Technology (IIT) invites applications for a Ph.D. position in unsteady aerodynamics research.

About Us

Join a world-leading department in experimental fluid mechanics, utilizing state-of-the-art facilities at the John T. Rettaliata Engineering Center, including National Diagnostics Facility (NDF) Wind Tunnel, Mark Markovin and Andrew Fejer Wind Tunnels, facilities for supersonic flow, axial-compressor flow, jets, and anechoic chambers.

Research Focus

You will be part of a new multi-university initiative investigating and controlling the effects of high sea states on wing-in-ground effect (WiG) aerodynamics. Your role will involve: conducting a 1/10th scale experimental study on an airfoil in the NDF wind tunnel, simulating high sea states using a novel traveling wave generator, using advanced techniques like particle image velocimetry (PIV) and particle tracking velocimetry (PTV).

Qualifications

- Education: Master's degree in mechanical or aerospace engineering (or a closely related field) before the start date.
- Experience: Background in experimental fluid dynamics/aerodynamics
- Skills: Proficiency in MATLAB or Python

Application Process

Interested applicants can learn more about the PhD program [here](#). Innovative and motivated individuals are encouraged to apply. Please email a cover letter and resume as a single pdf file to Prof. Douglas W. Carter at dcarter10@iit.edu and Prof. Louis N. Cattafesta III at lcattafestaiii@iit.edu. The anticipated start date is January 2025.

Eligibility Requirements: Due to the nature of the funding source, applicants must be U.S. citizens, U.S. permanent residents, or eligible to obtain a student visa to study in the United States. Please note that, in compliance with U.S. government regulations, students from certain countries (Cuba, Iran, North Korea, and Syria) are not eligible for this position.