

Johns Hopkins University

Center for Environmental & Applied Fluid Mechanics

SPECIAL CEAFM SEMINAR

3:00 PM, Friday, May 15, 2026

Hodson Hall 210

Zoom: <https://wse.zoom.us/j/93762992307>

[Link for Spring 2026 recordings](#)



Dr. Ralph Lorenz

Applied Physics Laboratory
Johns Hopkins University

“Dragonfly: A Relocatable Rotorcraft Lander for Titan. Two years to Launch!”

Abstract: Saturn's giant moon Titan has been revealed to be remarkably Earth-like, with a landscape of vast dunefields, river channels and lakes under a smoggy sky punctuated by methane downpours. Titan has a rich inventory of complex organic molecules that may provide clues how the building blocks of life are assembled. In 2019 NASA selected APL's Dragonfly mission concept as the next New Frontiers mission to arrive in 2034, one Titan year after the Huygens probe's historic descent. Dragonfly is an octocopter lander, to be powered by a MultiMission Radioisotope Generator (MMRTG, like Curiosity and Perseverance) able to repeatedly take off and fly many kilometers in Titan's dense, cold atmosphere and low gravity to sample the surface in a wide range of geological settings. This presentation will describe how the concept originated and some of the its features in a range of technical domains from aeronautics to nuclear physics to machine vision. Integration and Test of the flight unit has now begun at APL.

For more details, visit: <https://www.jhuapl.edu/about/people/ralph-lorenz>

Hosted by: Prof. Rui Ni (MechE)