

PURDUE ENGINEERING DISTINGUISHED LECTURE SERIES

The Era of Autonomy in Space Exploration - It's Finally Here!



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Hosted by: College of Engineering
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LECTURE
TUES., MARCH 11
1:30-2:30 PM | ARMS ATRIUM

PANEL
TUES., MARCH 11
2:30-3:30 PM | ARMS ATRIUM

LECTURE ABSTRACT:

For decades, space exploration has conjured visions of advanced technology. However, for much of our history, spaceflight has made limited use of autonomy and onboard computational capability. This has changed in the past few years, particularly at more distant locations or in applications where the number of collaborative sensors is large. This seminar will review the systems trade between ground-in-the-loop and autonomous operations from a risk perspective, discuss recent advances in space exploration enabled by autonomy, and highlight the new class of spaceflight missions possible in the coming decade. Recent examples from the speaker's experience working with NASA's Mars Perseverance rover, Ingenuity Mars Helicopter, Double Asteroid Redirection Test (DART) and Dragonfly teams will be referenced.

PANEL DISCUSSION:

If Autonomy in Space Exploration is here, where can we go, what can we do, and what can we learn?

