



Speaker:

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Date: Monday, February 2, 2026
Time: 4:00 pm - 4:50 pm
Format: In-Person Seminar & Virtual Access
Location: Genomics Auditorium 1102A

Zoom: 943 6687 2379
Passcode: 453393

Title:

“Biomechanical and behavioral trade-offs for bees foraging in complex environments”

Abstract:

Bees and other flying pollinators forage widely for floral resources, frequently encountering challenging flight conditions such as wind and environmental clutter. How flying animals contend with these challenges, both biomechanically and behaviorally, is of increasing interest to biologists and engineers. We synthesized published findings to identify the primary strategies that pollinating insects adopt to contend with wind and clutter, and we propose a “time-risk” framework for evaluating how insects adjust their kinematics when flying through a challenging environment. We also identified an array of other behavioral options that bees can adopt, including shifting to a less challenging flight environment, or landing and walking. We use this framework to examine two case studies: one in which bumblebees fly with a headwind or a tailwind, and another in which bees have a choice between flight environments containing different sizes of obstacles, with or without wind. These types of combined biomechanical/ behavioral choice studies provide valuable new information about how different features of the environment affect how far and where within natural habitats pollinating insects are likely to fly.

Refreshments will be served in the Entomology Building Courtyard at 3:30pm