SEMINAR SERIES

Supported by The Department of Biomechanics and
The Center for Research in Human Movement Variability (MOVCENTR)

COGNITIVE-BIOMECHANICS OF CANOPY TRAVERSAL

Featuring Dr. Nate Hunt

University of Nebraska at Omaha

• • •

October 18, 2019 | 12:00 - 1:15 pm | BRB 167

Parking Available in Lot T

ABSTRACT

Since the ascent of vertebrates into trees 260 million years ago, traversal of a heterogenous and disconnected canopy has presented distinct cognitive-biomechanical challenges to arboreal foraging and predator evasion. Arboreal animals navigating a complex, 3-dimensional, dynamic and uncertain environment push the performance of path selection, balance and agility far beyond the capacities of current robots. New techniques for modeling animal movement decisions within an optimality framework may help understand how animals respond to specific mechanical and geometric characteristics of the environment to leverage their biomechanical capacity.

ABOUT DR. NATE HUNT

Dr. Hunt is interested in the ways movement variability relates to movement stability and adaptability. A current focus is the role of learning in improving stability for various model systems: in humans responding to slips, in other animals like squirrels and cockroaches navigating the canopy, and in autonomous bioinspired robots. Long term goals of Dr. Hunt's research include building cognitive/biomechanical models that allow us to describe, predict and understand complex movement through natural environments.

University of Nebraska Omaha