

סמינר - SEMINAR

הנדך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ג' 10.12.2019
(י"ב בכסלו תש"פ), בניין דן קאהן, חדר 217, בשעה 13:30.

מרצה:

Assoc. Prof. Shai Revzen

Electrical Engineering and Computer Science
Ecology and Evolutionary Biology (courtesy)
University of Michigan, Ann Arbor, MI, USA

על הנושא:

Vignettes from Bio-Inspired Robotics and Dynamical Systems

The seminar will be given in English

להלן תקציר ההרצאה:

The biomechanics of animal locomotion offers a fascinating challenge: how can animals produce reliable and effective locomotion outcomes with bodies which are far inferior to our robots by most engineering metrics of mechanical tolerance, material quality, actuator performance, and sensor ability? The natural world offers proof by example that more is possible with less, suggesting that as engineers we suffer from a failure of imagination rather than a lack of technology. In this talk I present some vignettes from a decade's worth of work attempting to find the appropriate mathematical language to express what multi-legged organisms actually do when they run and walk. The process has led us to discover new ways to analyze animal movement using Data Driven Floquet Analysis; to define a new class of Event Selected hybrid dynamical systems which govern multi-contact motion, with associated proofs and numerical tools; and to identify new ways to model locomotion with sliding contacts. The talk will focus primarily on experimental results and a high level view of the ideas and approaches.

מארח: פרופ' ח יזהר אור

בברכה,

פ"פ א"א איתי סאס

מרכז הסמינרים