

## סמינר - SEMINAR

הנדך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ד' 12.01.22  
(י' בשבט תשפ"ב), בשעה 15:00 באמצעות הזום: <https://technion.zoom.us/j/95446727090#success>

הסמינר יתקיים באופן היברדי בחדר ישיבות 217, בנין דן קהאן.

**The seminar will be held in a hybrid format: Dan Kahn Building, Room 217, Technion**

**מרצה:**

### **Assoc. Prof. Shai Revzen**

Electrical Engineering and Computer Science, Ecology and Evolutionary Biology (courtesy) University of Michigan,  
Also a Visiting Associate Professor at Faculty of Mechanical Engineering, Technion for fall 2021-2022.

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**על הנושא:**

### **Learning locomotion the easy way**

The seminar will be given in English

**להלן תקציר ההרצאה:**

It seems that animals are very good at learning how to move, and how to recover the ability to move after injury. Roboticists have attempted to imbue the same capabilities in robots with only moderate success. Through pursuing a deeper understanding of the underlying mathematics and physics of locomotion, I present the idea of using limit cycle oscillators as the key mathematical object to consider. Using tools developed for modeling the oscillators that appear in biological locomotion and combining them with insights from geometric mechanics, we created robots that can learn how to move with an optimization that lasts only a few dozens of cycles. The talk will present these ideas at a high level, primarily focusing on experimental results from animals, robots, and simulated robots.

**מארח:** פרופ'ח יזהר אור

בברכה,

פרופ'ח מ"ח אתי סאס  
מרכז הסמינרים