

## סמינר - SEMINAR

הנדך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ב' 20.02.2017 (כדי בשבט, תשע"ז), בבנין דן קאהן, אודיטוריום 1, 14:30.

ירצה:

**Asst. Prof. Moran Bercovici**  
Faculty of Mechanical Engineering

על הנושא:

### **MICROSCALE ELECTROKINETICS – FROM ENHANCED BIOCHEMICAL ANALYSIS TO CONFIGURABLE MICROSTRUCTURES**

The seminar will be given in English

להלן תקציר ההרצאה:

The unique physicochemistry of fluids at the microscale holds both challenges in the understating of basic phenomena and opportunities in leveraging these phenomena toward new technologies. My team's work at Technion's Microfluidic Technologies Laboratory combines experimental, analytical, and computational tools to study microfluidic problems characterized by coupling between fluid mechanics, electric fields, chemical reactions, and biological processes. A central theme in our lab is the development of novel lab-on-a-chip techniques, devices, and assays for research and clinical applications in life and medical sciences. In the first part of the seminar, I will present our work on leveraging isotachophoresis (an electrokinetic focusing technique) to accelerate reaction kinetics by several orders of magnitude, enabling rapid and highly sensitive biosensing assays. In the second part, I will present our ongoing work studying the interaction between non-uniform electroosmotic flows and elastic surfaces, with the goal of realizing dynamically configurable microstructures.

בברכה,

*פרופ"ם מואל אולובסקי*  
מרכז הסמינרים