

סמינר - SEMINAR

הנדך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ב' 4.11.2019
(ו' בחשון תש"פ), בניין דן קאהן, אודיטוריום 1, 14:30.

מרצה:

Associate Prof. Tal Carmon

Faculty of Mechanical Engineering
Technion

על הנושא:

Micro-Photonics and Nano-Mechanics with Liquids, Gasses, and Plasma

The seminar will be given in English

להלן תקציר ההרצאה:

Current micro-fabrication technology is primarily based on solids. Differently here, we demonstrate novel functionalities of non-solid states of matter – among them: plasma, liquids, and gasses.

We use **liquid** water to demonstrate a new type of emitter. This optical emitter is in the form of a water-wave laser. In this laser, the emission is mediated by energy exchange between light and water waves, or in their scientific name - capillary waves.

We show that **gasses** support photonics that flies at an elevation of tens of nanometer over optical resonators. Our nano-flyers support irreversible optical refractive-index and optical isolation of light. Our nano-mechanical separation might impact studies on deviation in Newtonian gravity at short distances. Also, nano separation might support new types of MEMS that exploit the tremendous Van-der-walls forces that are predicted at these scales.

Finally, we show preliminary results on optical micro-resonators with **plasma** inside.

בברכה,

ד"ר תל קארמן

מרכז הסמינרים