

סמינריון

הנדך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום א' 12.09.2021 (וי בתשרי, תשפ"א), בשעה 09:00, יתקיים באמצעות הזום:

<https://technion.zoom.us/j/95754970699>

מרצה: איתי היימס

מנחה: פרופ' טל כרמון

על הנושא:

Resonance Enhancement Optimization

The seminar will be given in English

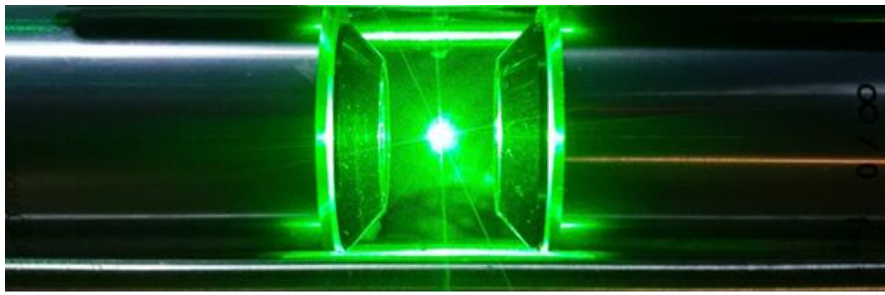
תקציר ההרצאה:

In this research we designed and fabricated the first spinning and levitating optical resonator, we also present a record value of quality factor over mode volume.

In 1970 that Arthur Ashkin manage to use radiation pressure to make an optical trap which his called optical tweezers, and for this contribution he received half of the 2018 physics Noble price. Since than optical tweezers are wildly used in a variety of different applications.

In the past, our lab group was able to achieve a record of quality factor over mode volume, and in this research, we manage to set a new record of this parameter and experimentally characterize is. It was achieved by spinning the droplet and reaching a higher level of stability that also enable repeatability for the experiment. In addition to that we manage to see the relation between the coupling efficiency to the gap between the drop and the levitating spinning drop.

It is important to note that at this research we were the first to demonstrated a spin of a levitating object, that the spin and the levitating are activated by the same optical trap, and the first to fabricate a spinning levitated object at the micro-scale.



בברכה,

פול פ"ח אתי סאס

מרכז הסמינרים