



Solid State Institute
המכון למצב מוצק

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סמינר

"Photonic systems with unconventional optical trajectories"

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Abstract

In this talk I will describe two recent studies in which light is propagating in an unusual way. The first study is "Photonic Topological Insulators", which is a special photonic system in which light is permitted to propagate strictly on the edges in a unidirectional way. This means, that the light propagating on the edge is robust to scattering from defects and propagates in a robust way. I will describe the first Photonic Topological Insulators, and in particular discuss the prediction of solitons in a nonlinear Photonic Topological Insulators. The second study is on the topic of accelerating beams, which are a special family of light wavepackets that appear to bend, even when propagating in free space. This acceleration, or self-bending in the case of spatial acceleration, is first and foremost an effect of wave interference. This led to the immediate questions: can one obtain a self-bending beam with incoherent light? Can one generalize other interference phenomena (such as Talbot effect) to curved trajectories? I present answers to both of these questions.

ההרצאה תתקיים ביום רביעי, ה-16.4.13 בשעה 12:30

בבניין המכון למצב מוצק, בחדר הסמינרים

The lecture will take place on Wednesday, 13.4.16 at 12:30

at the Solid State Institute, seminar room

Ph.D. Student of Distinguished Professor Moti Segev