



Solid State Institute  
המכון למצב מוצק

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SEMINAR

סמינר

## “Pseudo-magnetism and Landau Levels in Deformed Honeycomb Structures”

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### Abstract

A non-uniform deformation of a honeycomb medium induces effective-magnetic and effective electric fields. One may choose a deformation which gives rise to a constant perpendicular effective magnetic field with Landau-level spectrum (flat bands). In the setting of photonic crystals, the tight binding (discrete) model is generally not applicable. I will present a continuum theory, backed by some mathematically rigorous and formal asymptotic results (joint work with J. Guglielmon and M. Rechtsman - Phys. Rev. A 103 2021), and then review very recent experimental confirmation of this theory (Barsukova et al. Nature Photonics 2024, to appear).

ההרצאה תתקיים ביום רביעי, ה-22.5.24 בשעה 12:30

באודיטוריום המכון למצב מוצק, קומת כניסה

**The lecture will take place on Wednesday, 22.5.24 at 12:30  
at the Solid State Institute auditorium, entrance floor**

Host: Distinguished Professor Moti Segev