Solid State Institute
המכון למצב מוצק

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SEMINAR **סמינר**

Topological photonics in synthetic dimensions

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Abstract

In recent years, there has been an increasing interest in utilizing synthetic (non-spatial) dimensions for experimentally studying topological phenomena in physics. Synthetic dimensions are linked to increasing the dimensionality, inducing long-range connectivity, and other surprising effects in a plethora of physical systems. In this seminar, I will explain how to observe new physics by utilizing these dimensions. I will present the first realizations of 2D and 3D photonic topological insulators in synthetic dimensions, and show how these effects can be used to achieve multi laser mode-locking. Finally, I will discuss how this approach is linked to "photonic time crystals" and our latest experimental results in observing materials that change their macroscopic behavior abruptly in time.

ההרצאה תתקיים ביום רביעי, ה-19.1.22 בשעה 12:30
באודיטוריום המכון למצב מוצק, קומת כניסה
The lecture will take place on Wednesday, 19.1.22 at 12:30
at the Solid State Institute auditorium, entrance floor

Ph.D. student of Distinguished Professor Mordechai Segev