

המחלקה למתמטיקה, בן-גוריון

קולוקוויום

ביום שלישי, 27 בדצמבר, 2022

בשעה 14:30 – 15:30

בMath-101

ההרצאה

Some recent developments in mathematical quasicrystals

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תקציר: 40 years after the discovery of the first quasicrystals, mathematical theory of quasicrystals has entered a new phase. While the original discovery was largely based on materials, the current focus is on mathematical modelling of quasicrystalline structures. Many questions remain open, including the fundamental questions of rigidity, dynamical systems, and the relationship between discrete structures and harmonic analysis. One of the main goals is to understand the role of non-Euclidean geometries in the structure of quasicrystals. This study is motivated by the discovery of new connections between quasicrystals and dynamical systems, and the use of harmonic analysis to study the rigidity of discrete structures. The goal is to provide a broader context for the study of quasicrystals, and to explore the connections between different areas of mathematics, including harmonic analysis, non-abelian theory, and model theory.

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