

המחלקה למתמטיקה, בן-גוריון

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## קולוקוויום

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ביום שלישי, 27 בדצמבר, 2022

בשעה 14:30 – 15:30

בMath-101

ההרצאה

### **Some recent developments in mathematical quasicrystals**

חינתן על-ידי

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**תקציר:** 40 years after the discovery of quasicrystals, mathematical theory of quasicrystals is currently entering a new phase. While the original discovery was largely based on materials, the goal of mathematical modelling of quasicrystalline structures has been largely achieved, many open questions remain. One fundamental insight from the early days of quasicrystals is that dynamical systems, discrete structures can be attacked by methods from dynamical systems, discrete harmonic analysis. Over the last decade, attempts were made to study quasicrystal-ergodic theory and harmonic analysis in a broader context, for example to study connections between non-Euclidean geometries. This has created new connections between discrete structures like quasicrystals, lattices, and rigidity theory, including different areas of mathematics, such as non-abelian harmonic analysis, model theory, and rigidity theory.

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