

Department of Mathematics, BGU

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# BGU Probability and Ergodic Theory (PET) seminar

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*On Thursday, April ,23 2026*

*At 11:10 – 12:00*

*In 101-*

Auriel Rosenzweig (TAU)

will talk about

## **Schmidt Games and Hausdorff Dimension**

Abstract: In ,1965 Wolfgang Schmidt introduced the  $(\alpha, \beta)$ -Schmidt game as a dynamical tool for studying fundamental sets in Diophantine approximation. In particular, he proved that in Hilbert spaces these games can be used to obtain lower bounds on the Hausdorff dimension of sets that are small from the measure-theoretic point of view but large in a fractal sense. Schmidt's approach relies on the underlying geometry of the space.

In this talk, I will introduce these games and present an analogous result in the setting of complete doubling metric spaces, where we replace geometric arguments with a purely game-theoretic approach.

This is joint work with Itamar Bellaïche. No prior knowledge of game theory is assumed.