University of Crete
Departments of Mathematics and Applied Mathematics

Analysis Seminar

10:00am, Wednesday, 3 Apr 2019
Room A-303

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Fuglede's spectral set conjecture for convex polytopes

A set $\Omega \subset \mathbb{R}^d$ is called spectral if the space $L^2(\Omega)$ admits an orthogonal basis of exponential functions. In 1974, B. Fuglede conjectured that spectral sets could be characterized geometrically as sets which can tile the space by translations. Although this conjecture inspired extensive research, the precise connection between the notions of spectrality and tiling is still not clear. In the talk I will survey the subject, and discuss some recent results, joint with Nir Lev, where we focus on the conjecture for convex polytopes.