

HARMONIC AND SPECTRAL ANALYSIS

International Zoom Conference

May 31 – June 2, 2021

Fourier series on singular measures

DORIN DUTKAY

University of Central Florida

In connection to the Fuglede conjecture, Jorgensen and Pedersen discovered in 1996 that certain Cantor-type measures admit complete orthogonal Fourier series, that is orthonormal bases of exponential functions for their L^2 space. In this talk we will present some recent results in this area, convergence properties of Fourier series on fractal measures, connections between the Beurling dimension of the spectrum and the Hausdorff dimension of the support, tiling and spectral properties, extensions and generalizations.