SPECTRAL AND FRAME SPECTRAL MEASURES: PROJECTIONS AND CURVATURE

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Time：Thu, May 21st, 11:00 - 11:30
Venue: Room 106, SCMS

Abstract:

Spectral measures and frame spectral measures reflect geometric properties of sets and measures. Motivated by Fuglede's conjecture and by recent developments on Fourier frames for singular and surface-carried measures, this talk discusses several open problems concerning the interaction between geometric structure and spectrality.

We will focus on two related themes. The first theme concerns transformations of frame spectral measures, especially projections and finite-to-one geometric maps. The second theme concerns the role of curvature. While graph-like structures often lead to positive frame spectral results, curved or closed surfaces may create obstructions. We will present some model questions and outline possible first steps toward understanding when frame spectrality is preserved or obstructed by geometric features.