

Speaker: Wen Huang (USTC)

Title: Mean Complexity, Almost Countable Spectrum and Sarnak Conjecture

Abstract: This talk reviews mean complexity and recent progress on the Sarnak conjecture, with particular emphasis on the logarithmic version and its equivalent forms. We present a characterization via polynomial mean complexity and introduce topological dynamical systems with "almost countable" spectrum. Our main result establishes the logarithmic Sarnak conjecture for zero-entropy systems in this class, which encompasses Anzai skew-products over circle rotations, time-one maps of suspension flows over rotations, and systems with finite maximal pattern entropy.