

CANTOR SETS IN HIGHER DIMENSIONS

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Time: Wednesday, June. 17th, 15:30

Venue: Room 102, SCMS

Abstract:

Cantor sets arise naturally in many dynamical systems, and their geometry plays a fundamental role in understanding central problems in dynamics, particularly in bifurcation theory. While all Cantor sets are topologically equivalent, their geometric properties can vary drastically, a diversity that becomes even richer as the dimension of the ambient space increases. This talk presents new results addressing some basic questions concerning Cantor sets in higher-dimensional spaces. What dictates the infinitesimal geometry of Cantor sets generated by smooth expanding maps? Under what conditions is it impossible to separate two intersecting Cantor sets by small perturbations? What precise role do their dimensions and regularities play in this stability problem? (Joint work with M. Zareh Bidaki)