

COINCIDENCE AND DISPARITY OF FRACTAL DIMENSIONS FOR DYNAMICALLY DEFINED SETS

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Time: Mon, Jun 23th; 14:00-15:00pm

Venue: Room 102, SCMS

Abstract:

There are many different notions of fractal dimension, such as Hausdorff dimension, lower and upper box dimension, and Assouad dimension. These can all be distinct for general sets, but they coincide for self-similar sets satisfying the open set condition. This raises the following question: for which classes of sets arising from iterated function systems (IFSs) can these dimensions be distinct? We will survey some results and open problems related to this broad question in three settings, namely affine IFSs, bi-Lipschitz IFSs, and infinite conformal IFSs. This talk is based on a joint project with Simon Baker, De-Jun Feng, Chun-Kit Lai and Ying Xiong, and another paper with Alex Rutar.