Department of Mathematics
The Chinese University of Hong Kong

數學系
香港中文大學

Short Course

The Geometry of Fractal Percolation and Randomly Perturbed Self-Affine Sets

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Abstract: In this short course we consider the geometric Measure theoretical properties of two families of random fractals: the Fractal percolation sets and the randomly perturbed self-affine sets.

Lectures 1-6: We study Fractal percolation sets from the point of their Hausdorff dimension, connectivity, existence of interval in projections, dimension of slices and rectifiability.

Lectures 7-10. We introduce the self-affine transversality condition for randomly perturbed self-affine sets. We extend this method to dominated triangular C^1 mappings. Finally, we study the existence of interior points in randomly perturbed self-similar sets.

Date(s): Friday on **23 September, 7 October, 14 October,**
       21 October, 28 October, 4 November, 11 November,
       18 November, 25 November, and 2 December 2022

Time: 2:30 p.m. – 4:30 p.m.

Venue: Room 222, Lady Shaw Building,
       The Chinese University of Hong Kong, Shatin

All are Welcome!