# Packing Dimension Profiles and Random Fractals

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## Abstract

Packing dimension and packing measure were introduced by Tricot (1982), Taylor and Tricot (1985) in the Euclidean space as dual concepts to Hausdorff dimension and Hausdorff measure and have been useful for studying fractals and stochastic processes.

Some Hausdorff dimension results such as those for orthogonal projections and the image sets of Brownian motion have no direct analogue for the packing dimension. For solving these problems, Falconer and Howroyd (1997) and Howroyd (2001) introduced the concepts of packing dimension profiles.

In this talk, I will present some recent results on packing dimension profiles and their applications to random fractals determined by various random fields and Lévy processes.

This talk is based on joint works with D. Khoshnevisan, R. Schilling and N.-R. Shieh.