

**EXACT DIMENSIONALITY AND LEDRAPPIER-YOUNG
FORMULAE FOR GIBBS MEASURES ON SOME PLANAR
SELF-AFFINE SETS**

JONATHAN M. FRASER (MANCHESTER)

Abstract: A lot of progress has recently been made in showing that certain classes of measure on self-affine sets satisfy the Ledrappier-Young formula; a formula for the (exact) dimension of a dynamical measure in terms of its Lyapunov exponents, entropy, and dimensions of projected measures. In particular, Barany-Kaenmaki proved that any Bernoulli measure on any self-affine set satisfies this formula. They also obtained this result for Gibbs measures on self-affine sets satisfying the totally dominated splitting condition. I will discuss the problem for a simple class of self-affine sets in the plane which do not satisfy this condition.

This is joint work with Thomas Jordan (Bristol) and Natalia Jurga (Warwick).