Hiroki TAKAHASI

Title: On intrinsic ergodicity of heterochaos baker maps and exponential mixing for the Dyck system

Abstract:

We consider piecewise affine transitive maps of [0,1]^2 or [0,1]^3 which were introduced and investigated by Saiki, Takahasi, Yorke (2021) and called heterochaos baker maps. We show that the natural coding spaces of these maps coincide with the Dyck system, and use this connection to show that the heterochaos baker maps have two ergodic measures of maximal entropy. Exploiting the connection further, we also show that the two ergodic measures of maximal entropy of the Dyck system constructed by Krieger (1974/75) are exponentially mixing for Holder continuous functions.

This talk is based on joint works with Yoshitaka Saiki (Hitotsubashi, Japan), James A. Yorke (Maryland, USA), Kenichiro Yamamoto (Nagaoka, Japan).