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Yao Li* (yaoli@math.umass.edu), 710 N. Pleasant Street, Department of Math & Stats, Amherst, MA 01003, and **Lai-Sang Young**, 253 Mercer Street, New York, NY 10003. *Asymptotic dynamics of some microscopic heat conduction models.*

In this talk I will present our recent results on the asymptotic dynamics for a class of stochastic microscopic heat conduction models. In these models, particles undergo both diffusion and energy exchange with their "local environments". Those stochastic models are derived from mechanical chain models (Eckmann & Young 2006) by randomizing certain chaotic quantities. We proved various rigorous results including the existence and uniqueness of nonequilibrium steady-states (NESS), the exponential convergence towards NESS, and the existence of local thermodynamic equilibrium (LTE). (Received September 19, 2015)