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Uniform statistical properties of chaotic dynamical systems

I am going to talk about statistical limit laws for Birkhoff sums, such as the central limit theorem, the weak invariance principle, or the almost sure invariance principle. The motivation is fast-slow systems, driven by a family of dynamical systems, where one needs to obtain estimates which are uniform for the family.

I plan to present our recent results with Zemer Kosloff and Ian Melbourne which allow us to treat nonuniformly hyperbolic maps such as Pomeau-Manneville, logistic and Viana maps, and externally forced Sinai billiards.