

Non-uniform specification properties, thermodynamic formalism, and towers

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Equilibrium states for uniformly hyperbolic systems were originally studied via one of two approaches: (1) Markov partitions, and (2) specification properties. The first of these was then extended to non-uniformly hyperbolic systems via countable-state Markov shifts and Young towers. I will focus on the second and discuss a general program (joint work with Dan Thompson) of using non-uniform specification properties to study thermodynamics for non-uniform hyperbolicity, including examples where no tower construction is yet available (this includes geodesic flow in non-positive curvature, which will be more fully discussed in Todd Fisher's talk). I will also discuss the connection between this approach and the construction of towers, which includes joint work with Stefano Luzzatto and Yakov Pesin.