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*The ergodic hypothesis and its sequelae*
The celebrated Ergodic Theorems of George Birkhoff and von Neumann in the 1930's gave rise to a mathematical formulation of Boltzmann's Ergodic Hypothesis in thermodynamics. This reformulated hypothesis has been described by a variety of authors as the conjecture that ergodicity -- a form of randomness of orbit distributions -- should be ``the general case'' in conservative dynamics. I will discuss remarkable discoveries in the intervening century that show why such a hypothesis must be false in its most restrictive formulation but still survives in some contexts. In particular we will study the case of conservative partially hyperbolic systems introduced in S. Crovisier's course. In the end, I will begin to tackle the question, "When is ergodicity and other chaotic behavior the general case?"