

Attractor Bifurcation and Dynamic Transitions in Rayleigh Benard Convection
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One of the most fundamental example of pattern formation in fluids is the so called Rayleigh-Benard convection where a layer of fluid between two plates becomes unstable as the temperature gradient between the top and bottom plates exceed a critical threshold. At the onset of transition, the system bifurcates from the motionless conductive solution to a low dimensional local attractor. In this talk, I will describe some important features of this attractor using the tools of the dynamic transition theory.