

Experiments on the Onset of Chaotic Behavior

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In recent years experiments on fluids have demonstrated that the onset of weak turbulence follows well-defined bifurcation routes. Three main scenarios have been identified: a cascade of period doubling, intermittency, and quasiperiodic routes. It is all related to the three possible ways a limit cycle loses its stability. The generality of the phenomenon is such that it can be observed in numerous physical systems, such as a pendulum, electronic circuits, and wave phenomena. In the following we give a few general references, far from being exhaustive.

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