

FLUCTUATIONS, IRREVERSIBILITY, AND CHAOS

This section begins with a pair of papers by Professor Beretta presenting a novel dynamical theory of irreversibility and the approach to stable equilibrium. This is a quite different (and no doubt controversial) approach to the problem treated by Professor Lamb in the opening chapter. The paper by Dr. Kleber explores the use of quantum trajectories as a technique for solving time-dependent problems in quantum statistical physics. Next come papers by Dr. Liboff and Dr. Ambegaokar which treat statistical properties of plasmas and quantum Brownian motion in fluids. Dr. Banyai's paper studies the scaling relations which relate the microscopic and macroscopic descriptions of physical systems. Finally, the paper by Drs. Aguirregabiria and Bel explores the role of time retardation in promoting the onset of chaotic behavior.