Attractors Of Evolution Equations

Problems, ideas and notions from the theory of finite-dimensional dynamical systems have penetrated deeply into the theory of infinite-dimensional systems and partial differential equations. From the standpoint of the theory of the dynamical systems, many scientists have investigated the evolutionary equations of mathematical physics. Such equations include the Navier-Stokes system, magneto-hydrodynamics equations, reaction-diffusion equations, and damped semilinear wave equations. Due to the recent efforts of many mathematicians, it has been established that the attractor of the Navier-Stokes system, which attracts (in an appropriate functional space) as t - all trajectories of this system, is a compact finite-dimensional (in the sense of Hausdorff) set. Upper and lower bounds (in terms of the Reynolds number) for the dimension of the attractor were found. These results for the Navier-Stokes system have stimulated investigations of attractors of other equations of mathematical physics. EAN/ISBN : 9780080875460 Publisher(s): Elsevier Science & Technology, North Holland Discussed keywords: Evolutionsgleichungen Format: ePub/PDF Author(s): Babin, M. I. A. V. - Vishik

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