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Nota di contenuto	Preface -- Persistence of Periodic Orbits for Perturbed Dissipative Dynamical Systems (J. Hale, G. Raugel) -- Spectral Theory for Forward Nonautonomus Parabolic Equations and Applications (J. Mierczynski, W. Shen) -- A Dynamical Systems Approach to Traveling Wave Solutions for Liquid/Vapor Phase Transition (H. Fan, X. Lin) -- Instability of Radially-Symmetric Spikes in Systems with Conserved Quantity (A. Pogan, A. Scheel) -- Global Hopf Bifurcation Analysis of a Neuron Network Model with Time Delays (M. Li, J. Wei) -- Instability of Low Density Supersonic Waves of a Viscous Isentropic Gas Flow Through a Nozel (W. Liu, M. Oh) -- A Simple Proof of the Stability of Solitary Waves in the Fermi-Pasta-Ulam Model Near the KdV Limit (A. Hoffman, G. Wayne) -- Littlewood Problem for a Singular Subquadratic Potential (X. Li, Y. Yi) -- Semiflows for Neutral Equations with State-dependent Delay (H.-O. Walther) -- Threshold Dynamics of Scalar Linear Periodic Delay-Differential Equations (Y. Chen, J. Wu) -- Differential Equations with Random Delay (T.S. Doan, S. Siegmund) -- Beyond Diffusion: Conditional Dispersal in Ecological Models (C. Cosner) -- Global Attractor of a Coupled Two-Cell Brusselator Model (Y. You) -- Projectors on the Generalized Eigenspaces for Partial Differential

Equations with Time Delay (A. Ducrot, P. Magal, S. Ruan) -- Global Convergence in Monotone and Uniformly Stable Recurrent Skew-Product Semiflows (Y. Wang, X. Zhao) -- The Infinite Hierarchy of Elastic Shell Models: Some Recent Results and a Conjecture (M. Lewicka, R. Pakzad) -- Traveling Wavefronts for Lattic Differential Equations with Time Delay and Global Interaction (S. Ma, Z. Zou) -- Bifurcation of Limit Cycles from a Non-Hamiltonian Quadratic Integrable System with Homoclinic Loop (Y. Zhao, H. Zhu) Anomalous Diffusion in Polymers: Long-Time Behaviour (D. Vorotnikov).

Sommario/riassunto

This collection covers a wide range of topics of infinite dimensional dynamical systems generated by parabolic and hyperbolic partial differential equations, solitary equations, lattice differential equations, delay differential equations, and stochastic differential equations. Infinite dimensional dynamical systems are generated by equations describing the evolution in time of systems whose status must be depicted in infinite dimensional phase spaces. Studying the long-term behaviors of such systems is important in our understanding of their spatiotemporal pattern formation and global continuation, and has been among the major sources of motivation and applications of new developments in nonlinear analysis and other mathematical theories. The theory of infinite dimensional dynamical systems has also increasingly important applications in the physical, chemical and life sciences. This book collects 19 papers from 48 invited lecturers to the International Conference on Infinite Dimensional Dynamical Systems held at York University, Toronto, in September of 2008. As the conference was dedicated to Professor George Sell from University of Minnesota on the occasion of his 70th birthday, this collection reflects his pioneering work and influence in core areas of dynamical systems, including non-autonomous dynamical systems, skew-product flows, invariant manifolds theory, infinite dimensional dynamical systems, approximation dynamics, and fluid flows.