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Soggetti	Mathematical models Game theory Mathematical physics Biomathematics Mathematical Modeling and Industrial Mathematics Game Theory, Economics, Social and Behav. Sciences Mathematical Applications in the Physical Sciences Mathematical and Computational Biology
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Travelling Wave Impulses of Fitzhugh Model with Diffusion and Cross-Diffusion (F. Berezovskaya) -- Local Limit Cycles of Degenerate Foci in Cubic Systems (T. Blows) -- Lyapunov-Schmidt and Centre Manifold Reduction Methods for Nonlocal PDEs Modelling Animal Aggregations (P.-L. Buono and R. Eftimie) -- Canard Cycles with Three Breaking Mechanisms (R. Roussarie and M. Caubergh) -- On the Integrability of Lotka-Volterra Equations: An Update (C. Christopher, W.M. Ameen and Z. Wang) -- Impact of Pharmacokinetic Variability on a Mechanistic Physiological Pharmacokinetic/Pharmacodynamic Model: A Case Study of Neutrophil Development, PM00104, and Filgrastim (M. Craig, M. Gonzalez-Sales, J. Li and F. Nekka) -- Asymptotic Behavior of Linear Almost Periodic Differential Equations (B.X. Dieu, L. Duc, S. Siegmund and N. Van Minh) -- A Preparation Theorem for a Class of Non-

differentiable Functions with an Application to Hilbert's 16th Problem (M. El Morsalani and A. Mourtada) -- Self-Inversive Cubic Curves (R.R. Fletcher) -- Elasticity Imaging (L. Guadarrama) -- Affine Complete Algebras (G. Kientega) -- A Codimension-Four Singularity with Potential for Action (B. Krauskopf and H.M. Osinga) -- Towards the General Theory of Global Planar Bifurcations (Y. Ilyashenko) -- Slow-fast Dynamics and its Application to a Biological Model (C. Li) -- Abelian Integrals: From the Tangential 16th Hilbert Problem to the Spherical Pendulum (P. Mardesic, D. Sugny and L. van Damme) -- Towards a Science of Security Games (T.H. Nguyen, D. Kar, M. Brown, A. Sinha, A.X. Jiang and M. Tambe) -- Scattering of Plane Electromagnetic Waves by Radially Inhomogeneous Spheres: Asymptotics and Special Functions (M.A. Pohrivchak, J.A. Adam and U. Nuntaplook) -- An Introduction to Symplectic Coordinates (M. Alvarez-Ramírez and R.J.A. García) -- Parallelized Solution of Banded Linear Systems with an Introduction to p-Adic Computation (A.A. Ruffa, M.A. Jandron and B. Toni) -- Genetic Vulnerability and Crop Loss: In search of a Mathematical Model for Alternative Crop Research (L.K. Rutto, V.W. Temu and M.-S. Ansari) -- Uncovering Cluster Structure and Group-Specific Associations: Variable Selection in Multivariate Mixture Regression Models (M. Tadesse, F. Mortier and S. Monni) -- Coalescing Complex Planar Stationary Points (L. Teyssier) -- The CD45 case revisited (H. Zoladek). .

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#### Sommario/riassunto

This book is the fourth in a multidisciplinary series which brings together leading researchers in the STEAM-H disciplines (Science, Technology, Engineering, Agriculture, Mathematics and Health) to present their perspective on advances in their own specific fields, and to generate a genuinely interdisciplinary collaboration that transcends parochial subject-matter boundaries. All contributions are carefully edited, peer-reviewed, reasonably self-contained, and pedagogically crafted for a multidisciplinary readership. Contributions are drawn from a variety of fields including mathematics, statistics, game theory and behavioral sciences, biomathematics and physical chemistry, computer science and human-centered computing. This volume is dedicated to Professor Christiane Rousseau, whose work inspires the STEAM-H series, in recognition of her passion for the mathematical sciences and her on-going initiative, the Mathematics of Planet Earth paradigm of interdisciplinarity. The volume's primary goal is to enhance interdisciplinary understanding between these areas of research by showing how new advances in a particular field can be relevant to open problems in another and how many disciplines contribute to a better understanding of relevant issues at the interface of mathematics and the sciences. The main emphasis is on important methods, research directions and applications of analysis within and beyond each field. As such, the volume aims to foster student interest and participation in the STEAM-H domain, as well as promote interdisciplinary research collaborations. The volume is valuable as a reference of choice and a source of inspiration for a broad spectrum of scientists, mathematicians, research students and postdoctoral fellows.

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