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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	1. Statistical mechanics of human resource allocation: A mathematical modeling of job-matching in labor markets -- 2. The Globalisation of Applied Mathematics -- 3. Emergent Periodicity in a Field of Chaos -- 4. Numerical algorithm for computation of complete theoretical seismogram in layered half-space media -- 5. Effect of Dual Splitter Plate attached with a Square Cylinder immersed in a Uniform Flow -- 6. The possibility of the existence of superluminal neutrinos: A theoretical framework -- 7. What a student can learn from the Saha Equation -- 8. Stochastic Analysis and Bounds on Noise for a Holling Type-II Model -- 9. An Improved Adomian Decomposition Method for nonlinear ODEs -- 10. Propagation of SH-Type Wave in Anisotropic Layer Overlying an Anisotropic Viscoelastic Half-Space- 11. A Simple Theoretical approach to the Fermi energy under size quantization with Quantum Mathematical Modelling in Nanostructured materials.- 12. Dependence of Brans-Dicke parameter on scalar field -- 13. Numerical Simulations of Natural Convection and Entropy Generation in a Square Cavity with an Adiabatic Body -- 14. Dynamical complexity of a ratio-dependent

predator–prey model with strong additive Allee effect -- 15. On An Interface Elliptic Crack.

Sommario/riassunto

The book is based on research presentations at the international conference, “Emerging Trends in Applied Mathematics: In the Memory of Sir Asutosh Mookerjee, S.N. Bose, M.N. Saha, and N.R. Sen”, held at the Department of Applied Mathematics, University of Calcutta, during 12–14 February 2014. It focuses on various emerging and challenging topics in the field of applied mathematics and theoretical physics. The book will be a valuable resource for postgraduate students at higher levels and researchers in applied mathematics and theoretical physics. Researchers presented a wide variety of themes in applied mathematics and theoretical physics—such as emergent periodicity in a field of chaos; Ricci flow equation and Poincare conjecture; Bose–Einstein condensation; geometry of local scale invariance and turbulence; statistical mechanics of human resource allocation: mathematical modelling of job-matching in labour markets; contact problem in elasticity; the Saha equation; computational fluid dynamics with applications in aerospace problems; an introduction to data assimilation, stochastic analysis and bounds on noise for Holling type-II model, graph theoretical invariants of chemical and biological systems; strongly correlated phases and quantum phase transitions of ultracold bosons; and the mathematical modelling of breast cancer treatment.
