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Soggetti	Numerical analysis Biomathematics Mathematics - Data processing Numerical Analysis Mathematical and Computational Biology Computational Mathematics and Numerical Analysis
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Modelling invasive processes in biology -- Modelling oxygen capillary supply to striated muscle tissues -- Modeling human response to bed-net promotion campaigns and its impact on malaria transmission -- Computational Modelling and Optimal Control of HIV/AIDS Transmission in a Community with Substance Abuse Problem -- Standard difference scheme for a singularly perturbed convection-diffusion equation in the presence of perturbations -- A Higher Order Immersed Discontinuous Galerkin Finite Element Method for the Acoustic Interface Problem -- A parameter uniform numerical method for a boundary value problem for a singularly perturbed delay differential equation -- Optimal L ² - error estimate for a System of Elliptic Quasi-variational Inequalities with Non coercive Operators -- Convergence of finite element approximations for generalized Marguerre-von Kármán equations -- The Maple Program Procedures at Solution Systems of Differential Equation with Taylor Collocation Method -- Numerical Study of Convective Heat and Mass Transfer Flow in Channels -- A parameter uniform method for an initial value problem for a system of singularly perturbed delay differential

equations -- On a technique to construct grid methods of higher accuracy order for a singularly perturbed parabolic reaction-diffusion equation -- Spectral Analysis of Large Sparse Matrices for Scalable Direct Solvers -- Numerical study of two-dimensional jet flow issuing from a funnel -- Higher-Order Immersed Finite Element Spaces for Second-Order Elliptic Interface Problems with Quadratic Interface -- Calendering analysis of a non-Newtonian material -- Wavelet solution of convection-diffusion equation with Neumann boundary conditions -- Test of Causality between oil price and GDP growth in Algeria -- Solution Behavior of Heston Model Using Impression Matrix Norm -- Approximations to the solution of the Frank Kamenetskii equation in a spherical geometry -- Blow up of series solutions on the half line -- Two models of sub diffusion processes: When they are similar? -- Analysis of customers' impatience in M/M/1 queues with server subject to random breakdowns and exponential vacations -- Exchange curve and coverage analysis -Tools for better inventory management: a case study -- Modeling Combustion Process in Circulating Fluidized Bed Boiler: A Fuzzy Graph Approach.

Sommario/riassunto

This volume contains contributions from the Gulf International Conference in Applied Mathematics, held at the Gulf University for Science & Technology. The proceedings reflects the three major themes of the conference. The first of these was mathematical biology, including a keynote address by Professor Philip Maini. The second theme was computational science/numerical analysis, including a keynote address by Professor Grigori Shishkin. The conference also addressed more general applications topics, with papers in business applications, fluid mechanics, optimization, scheduling problems, and engineering applications, as well as a keynote by Professor Ali Nayfeh.