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Nota di contenuto	1 Applications of Observability Inequalities -- 2 Optimal Design of Piezoelectric Microactuators: Linear vs Non-linear Modeling -- 3 Formulation and Analysis of a Class of Direct Implicit Integration Methods for Special Second-Order I.V.P.s in Predictor-Corrector Modes -- 4 Application of a Local Discontinuous Galerkin Method to the 1D Compressible Reynolds Equation -- 5 Classical Symmetries for Two Special Cases of Unsteady Flow in Nanoporous Rock -- 6 Asymptotic Behaviour of Finite Length Solutions in a Thermosyphon Viscoelastic

Model -- 7 Conservation Laws and Potential Symmetries for a Generalized Gardner Equation -- 8 On a Nonlocal Boussinesq System for InternalWave Propagation -- 9 Subdivision Schemes and Multiresolution Analyses: Focus on the Shifted Lagrange and Shifted PPH Schemes -- 10 Modelling Sparse Saliency Maps on Manifolds: Numerical Results and Applications -- 11 M. Linear Elimination in Chemical Reaction Networks -- 12 Minimal Set of Generators of Controllability Space for Singular Linear Systems -- 13 On Stability of Discontinuous Galerkin Approximations to Anisotropic Stokes Equations -- 14 Numerical Simulation of Wear-Related Problems in a Blast Furnace Runner.

Sommario/riassunto

This work gathers a selection of outstanding papers presented at the 25th Conference on Differential Equations and Applications / 15th Conference on Applied Mathematics, held in Cartagena, Spain, in June 2017. It supports further research into both ordinary and partial differential equations, numerical analysis, dynamical systems, control and optimization, trending topics in numerical linear algebra, and the applications of mathematics to industry. The book includes 14 peer-reviewed contributions and mainly addresses researchers interested in the applications of mathematics, especially in science and engineering. It will also greatly benefit PhD students in applied mathematics, engineering and physics.