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Altri autori (Persone)	RepinSergey TiihonenTimo TuovinenTero
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Nota di contenuto	Foreword -- Preface -- Part I Numerical Methods for Nonlinear Problems -- The Finite Element Immersed Boundary Method for the Numerical Simulation of the Motion of Red Blood Cells in Microfluidic Flows, by Ronald H. W. Hoppe and Christopher Linsenmann -- Iterative Solution Methods for the Large-Scale Constrained Saddle Point Problems , by Erkki Laitinen and Alexander Lapin -- Analytical-Numerical Methods for Hidden Attractors' Localization: The 16th Hilbert Problem, Aizerman and Kalman Conjectures, and Chua Circuits, by Gennady A. Leonov and Nikolay V. Kuznetsov -- Numerical Study of a High Order 3D FEM-Level Set Approach for Immiscible Flow Simulation, by Stefan Turek, Otto Mierka, Shuren Hysing, and Dmitri Kuzmin -- GAs and Nash GAs Using a Fast Meshless Method for CFD Design, by Hong Wang, Hong-Quan Chen, and Jacques Periaux -- Part II Reliable Methods for Computer Simulation -- Balancing Discretization and Iteration Error in Finite Element A Posteriori Error Analysis , by Rolf Rannacher and Jevgeni Vihharev -- On Quantitative Analysis of an Ill-Posed Elliptic Problem with Cauchy Boundary Conditions , by Sergey Repin and Tuomo Rossi -- On the Advantages and Drawbacks of A Posteriori Error Estimation for Fourth-Order Elliptic Problems , by Karel Segeth -- Upper Bound for the Approximation Error for the Kirchhoff-Love Arch Problem , by Olli Mali -- Guaranteed

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### Sommario/riassunto

This book contains the results in numerical analysis and optimization presented at the ECCOMAS thematic conference “Computational Analysis and Optimization” (CAO 2011) held in Jyväskylä, Finland, June 9–11, 2011. Both the conference and this volume are dedicated to Professor Pekka Neittaanmäki on the occasion of his sixtieth birthday. It consists of five parts that are closely related to his scientific activities and interests: Numerical Methods for Nonlinear Problems; Reliable Methods for Computer Simulation; Analysis of Noised and Uncertain Data; Optimization Methods; Mathematical Models Generated by Modern Technological Problems. The book also includes a short biography of Professor Neittaanmäki.

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