

Contents

A Non-causal Inverse Model for Source Signal Recovery in Large-Domain Wave Propagation	1
Hunter M. Brown, Minh Q. Phan, and Stephen A. Ketcham	
Parallel-in-Space-and-Time Simulation of the Three-Dimensional, Unsteady Navier-Stokes Equations for Incompressible Flow	13
Roberto Croce, Daniel Ruprecht, and Rolf Krause	
Mathematical Modeling of Emotional Body Language During Human Walking	25
Martin L. Felis, Katja Mombaur, and Alain Berthoz	
On Quadratic Programming Based Iterative Learning Control for Systems with Actuator Saturation Constraints	37
Fei Gao and Richard W. Longman	
A Sparse Grid Based Generative Topographic Mapping for the Dimensionality Reduction of High-Dimensional Data	51
Michael Griebel and Alexander Hullmann	
Sparse Approximation Algorithms for High Dimensional Parametric Initial Value Problems	63
Markus Hansen, Claudia Schillings, and Christoph Schwab	
Investigating Capturability in Dynamic Human Locomotion Using Multi-body Dynamics and Optimal Control	83
Khai-Long Ho Hoang, Katja Mombaur, and Sebastian I. Wolf	
High Performance Calculation of Magnetic Properties and Simulation of Nonequilibrium Phenomena in Nanofilms	95
Vitalii Yu. Kapitan and Konstantin V. Nefedev	

Inverse Problem of the Calculus of Variations for Second Order Differential Equations with Deviating Arguments	109
Galina Kurina	
State-Space Model and Kalman Filter Gain Identification by a Superspace Method	121
Ping Lin, Minh Q. Phan, and Stephen A. Ketcham	
Stiff Order Conditions for Exponential Runge–Kutta Methods of Order Five	133
Vu Thai Luan and Alexander Ostermann	
A Reduced-Order Strategy for Solving Inverse Bayesian Shape Identification Problems in Physiological Flows	145
Andrea Manzoni, Toni Lassila, Alfio Quarteroni, and Gianluigi Rozza	
A Mathematical Study of Sprinting on Artificial Legs	157
Katja Mombaur	
Hilbert Space Treatment of Optimal Control Problems with Infinite Horizon	169
Sabine Pickenhain	
Optimum Operation of a Beer Filtration Process	183
Cesar de Prada, Smaranda Cristea, Rogelio Mazaeda, and Luis G. Palacín	
Energy-Aware Lease Scheduling in Virtualized Data Centers	195
Nguyen Quang-Hung, Nam Thoai, Nguyen Thanh Son, and Duy-Khanh Le	
Mathematical Models of Perception and Generation of Art Works by Dynamic Motions	207
Alexander Schubert, Katja Mombaur, and Joachim Funke	
An Eulerian Interface-Sharpening Algorithm for Compressible Gas Dynamics	221
Keh-Ming Shyue	
Numerical Simulation of the Damping Behavior of Particle-Filled Hollow Spheres	233
Tobias Steinle, Jadran Vrabec, and Andrea Walther	
FSSP Algorithms for Square and Rectangular Arrays	245
Hiroshi Umeo	
Optimization Issues in Distributed Computing Systems Design	261
Krzysztof Walkowiak and Jacek Rak	

Modeling, Simulation and Optimization of Complex
Processes - HPSC 2012

Proceedings of the Fifth International Conference on
High Performance Scientific Computing, March 5-9,
2012, Hanoi, Vietnam

Bock, H.G.; Phu, H.X.; Rannacher, R.; Schlöder, J. (Eds.)
2014, VIII, 272 p. 95 illus., 57 illus. in color., Hardcover
ISBN: 978-3-319-09062-7