

Scientific Computing

Volume 30, Number 3

Papers published electronically March 2008 to April 2008

CONTENTS

- 1105 The Modified Ghost Fluid Method for Coupling of Fluid and Structure Constituted with Hydro-Elasto-Plastic Equation of State
T. G. Liu, W. F. Xie, and B. C. Khoo
- 1131 Low-Dimensional Polytope Approximation and Its Applications to Nonnegative Matrix Factorization
Moody T. Chu and Matthew M. Lin
- 1156 A Continuous Interior Penalty Method for Viscoelastic Flows
Andrea Bonito and Erik Burman
- 1178 Stochastic Preconditioning for Diagonally Dominant Matrices
Haifeng Qian and Sachin S. Sapatnekar
- 1205 Restoration of Chopped and Nodded Images by Framelets
Jian-Feng Cai, Raymond Chan, Lixin Shen, and Zuowei Shen
- 1228 Multilevel Linear Sampling Method for Inverse Scattering Problems
Jingzhi Li, Hongyu Liu, and Jun Zou
- 1251 A Distributed SDP Approach for Large-Scale Noisy Anchor-Free Graph Realization with Applications to Molecular Conformation
Pratik Biswas, Kim-Chuan Toh, and Yinyu Ye
- 1278 The Generalized Singular Value Decomposition and the Method of Particular Solutions
Timo Betcke
- 1296 A Monomial Chaos Approach for Efficient Uncertainty Quantification in Nonlinear Problems
Jeroen A. S. Witteveen and Hester Bijl
- 1318 On Multisymplecticity of Partitioned Runge–Kutta Methods
Brett N. Ryland and Robert I. McLachlan
- 1341 A Nine Point Scheme for the Approximation of Diffusion Operators on Distorted Quadrilateral Meshes
Zhiqiang Sheng and Guangwei Yuan
- 1362 Numerical Variational Methods Applied to Cylinder Buckling
Jiří Horák, Gabriel J. Lord, and Mark A. Peletier
- 1387 Stopping Criteria for Rational Matrix Functions of Hermitian and Symmetric Matrices
Andreas Frommer and Valeria Simoncini
- 1413 Limited Data X-Ray Tomography Using Nonlinear Evolution Equations
Ville Kolehmainen, Matti Lassas, and Samuli Siltanen
- 1430 Improvement of Space-Invariant Image Deblurring by Preconditioned Landweber Iterations
Paola Brianzi, Fabio Di Benedetto, and Claudio Estatico
- 1459 An Augmented Lagrangian Approach to Linearized Problems in Hydrodynamic Stability
Maxim A. Olshanskii and Michele Benzi
- 1474 Fast Multilevel Algorithm for a Minimization Problem in Impulse Noise Removal
Raymond H. Chan and Ke Chen
- 1490 A Discrete Optimization Approach to Large Scale Supply Networks Based on Partial Differential Equations
A. Fügenschuh, S. Göttlich, M. Herty, A. Klar, and A. Martin
- 1508 Performance and Accuracy of LAPACK's Symmetric Tridiagonal Eigensolvers
James W. Demmel, Osni A. Marques, Beresford N. Parlett, and Christof Vömel

Continued on inside back cover

Continued from back cover

- 1527 **Multigrid One-Shot Method for Aerodynamic Shape Optimization**
Subhendu Bikash Hazra
- 1548 **Algebraic Multigrid Solvers for Complex-Valued Matrices**
Scott P. MacLachlan and Cornelis W. Oosterlee
- 1572 **Multilevel Projection-Based Nested Krylov Iteration for Boundary Value Problems**
Yogi A. Erlangga and Reinhard Nabben
- 1596 **Coupling Conditions for Networked Systems of Euler Equations**
Michael Herty
- 1613 **Microwave Tomography Using Topology Optimization Techniques**
Eddie Wadbro and Martin Berggren
- 1634 **Adaptive Finite Element Method for a Phase Field Bending Elasticity Model of Vesicle Membrane Deformations**
Qiang Du and Jian Zhang