

Neural, Parallel & Scientific Computations

Volume 14, 2006

CONTENTS

Jialin Hong, Rudolf Scherer, and Lijin Wang Midpoint rule for a linear Stochastic oscillator with additive noise	1
R. P. Agarwal and C. S. Ryoo A numerical investigation on the structure of the roots of the twisted q-Bernoulli polynomials	13
Stefano De Marchi Polynomials arising in factoring generalized Vandermonde determinants III : computation of their roots	25
Edwin Tecarro, Theodore Van Rooy, and Mandri Obeyesekere Computational studies of a cell cycle model	39
Ding Lixin and Yu Jinghu Some analyses about the time complexity of evolutionary algorithms	51
Nicholas D. Assimakis A new algorithm for the steady state Kalman filter	69
Boris P. Belinskiy, John R. Graef, and R. E. Melnik The stability of a wing in a flow	75
J. Leonel Rocha and J. Sousa Ramos Computing conditionality invariant measures and escape rates	97
Chung-Chien Hong and N. G. Medhin A nonlinear programming approach to the study of social networks	115
Elias A. Lipitakis On sparse approximate inverse matrix techniques and Evans preconditioning methods	135
S. S. Papakonstantinou and I. C. Demetriou Discrete L_1 linear spline approximation	157

M.Ch. Karra, M. P. Bekakos, I. Ž. Milovanovic and E. I. Milovanovic A FPGA Implementation of the unidirectional systolic array for the matrix-vector multiplication	169
P. D. Michailidis, T. Typou, V. Stefanidis and K. G. Margaritis Performance models for matrix computations on networks of heterogeneous workstations	177
K. M. Giannoutakis and G. A. Gravvanis Fast normalized approximate inverse preconditioning for solving non-linear finite element systems	205
A. Tassopoulos Complex decision support systems: Automatic control of the parameters of an iterative process	225
C. Volgis and I. E. Lagaris A global optimization approach to neural network training	231
M. P. Bekakos, , I. Ž. Milovanović, E. I. Milovanović, and N. M. Stojanovic Fault-tolerant linear systolic arrays for matrix-vector multiplication	241
J. Digalakis, K. Tsouros, and K. Margaritis A grid-cluster framework for memetic algorithms	259
C. Pontikakos, M. Sambrakos, T. Glezakos and T. Tsiligiridis Location-based services: A framework for an architecture design	273
G. A. Gravvanis Parallel inverse arrowhead matrix algorithms on symmetric multiprocessor systems	291
A. Tassopoulos A new conception of the diffusion of technological innovations: A system's approach	309
I. N. Tselepis, I. Ž. Milovanović, E. I. Milovanović and M. P. Bekakos Mapping systolic arrays for matrix multiplication onto hardware platforms	331
Lauren Brubaker, Laura Gross, and Jianping Zhu On a Completely Residual-Based Method for Computer Code Verification	337
Nejib Smaoui A State Feedback Control Scheme for the Generalized Korteweg-de Vries-Burgers Equation	345

Yixun Shi	351
Application of Vector Devision in Solving Systems of Linear Equations	
George Papakonstantinou, Ioannis Riakiotakis, Theodore Andronikos, Florina M. Ciorba and Anthony T. Chronopoulos	359
Dynamic Scheduling for Dependence Loops on Heterogeneous Clusters	
Rui Ding, Haiyan Tian, and Shujuan Hu	385
NumericalMethods for Semilinear Elliptic Boundary Value Problems	
Zvi Retchkiman Konigsberg	401
Primes and Twin Primes Verification and Generator Algorithms	
I. Andreadis, S. Chatzianagnostou and M.P. Bekakos	407
Efficient Image Restoration through Kohonen Self–Organizing Network	
Chung-Chien Hong and N. G. Medhin	425
Positive and Negative Affinities Model For Social Networks	
R. K. Mohanty, Samir Karaa, and Urvashi Arora	453
Fourth Order Nine Point Unequal Mesh Discretization for the Solution of 2D Nonlinear Elliptic Partial Differential Equations	
Content of Volume 14	471
Author Index	475