

Contents

Apostolatos, N.: On a Unified Concept of Mathematics	1
Atanassova, L., Herzberger, J.: A General Approach to a Class of Single-Step Methods for the Simultaneous Inclusion of Polynomial Zeros	11
Dimitrova, N.: On Some Properties of an Interval Newton Type Method and its Modification	21
Dobner, H. J.: Verified Solution of the Integral Equations for the Two-Dimensional Dirichlet and Neumann Problem	33
Frommer, A., Mayer, G.: Two-Stage Interval Iterative Methods	45
Han, W., Potra, F. A.: Convergence Acceleration for Some Rootfinding Methods . . .	67
Heindl, G.: A Program for Enclosing Cumulative Binomial Probabilities	79
Jahn, K.-U.: Effective Evaluation of Hausdorff Distances for Finite Unions of Hyper-rectangles	93
Kaucher, E., Baumhof, C.: A Verified Computation of Fourier-Representations of Solutions for Functional Equations	101
Kearfott, B., Du, K.: The Cluster Problem in Global Optimization: The Univariate Case	117
König, S., Ullrich, C. P.: Developing Expert Systems for Validating Numerics	129
Krämer, W., Barth, B.: Computation of Interval Bounds for Weierstrass' Elliptic Function $\wp(z)$	147
Nakao, M. T.: Solving Nonlinear Elliptic Problems with Result Verification Using an H^{-1} Type Residual Iteration	161
Neumaier, A.: The Wrapping Effect, Ellipsoid Arithmetic, Stability and Confidence Regions	175
Rump, S. M.: Validated Solution of Large Linear Systems	191
Schwandt, H.: The Interval Buneman Algorithm for Arbitrary Block Dimension	213
Spreuer, H., Adams, E.: On the Existence and the Verified Determination of Homoclinic and Heteroclinic Orbits of the Origin for the Lorenz Equations	233
Stetter, H. J.: Verification in Computer Algebra Systems	247
Walter, W. V.: FORTRAN-XSC. A Portable Fortran 90 Module Library for Accurate and Reliable Scientific Computing	265
Wolff von Gudenberg, J.: Implementation of Accurate Matrix Multiplication on the CM-2	287

Listed in Current Contents