List of Forthcoming Articles

METHODS FOR EVALUATING FLUID VELOCITIES IN SPECTRAL SIMULATIONS OF TURBULENCE. S. Balachandar and M. R. Maxey, *Brown University, Providence, Rhode Island, USA.*

ON THE USE OF A VARIABLE-STEP METHOD FOR THE COMPUTATION OF DIATOMIC EIGENVALUES NEAR DISSOCIATION: THE LENNARD–JONES POTENTIAL. H. Kobeissi, M. Kobeissi, and M. Dagher, *Lebanese University and National Research Council, Beirut, LEBANON.*

ACCURATE SEMI-IMPLICIT TREATMENT OF THE HALL EFFECT IN MAGNETOHYDRODYNAMIC COMPUTATIONS. Douglas S. Harned and Z. Mikic, *Science Applications International Corporation, San Diego, California, USA.*

ACORN—A NEW METHOD FOR GENERATING SEQUENCES OF UNIFORMLY DISTRIBUTED PSEUDO-RANDOM NUMBERS. R. S. Wikramaratna, *Atomic Energy Establishment, Winfrith, Dorchester, UNITED KINGDOM.*

PSEUDO-RANDOM TREES. MULTIPLE INDEPENDENT SEQUENCE GENERATORS FOR PARALLEL AND BRANCHING COMPUTATIONS. John H. Halton, *The University of North Carolina, Chapel Hill, North Carolina, USA.*

AN EFFICIENT SCHEME FOR CONVECTION-DOMINATED TRANSPORT. W. N. G. Hitchon, D. J. Koch, and J. B. Adams, *University of Wisconsin, Madison, Wisconsin, USA.*

SEMI-IMPLICIT REDUCED MAGNETOHYDRODYNAMICS. Michael E. Kress, *College of Staten Island, Staten Island, New York, USA;* Kurt S. Riedel, *Courant Institute of Mathematical Sciences, New York University, New York, New York, USA.*

EFFICIENT IMPLEMENTATION OF ESSENTIALLY NON-OSCILLATORY SHOCK-CAPTURING SCHEMES, II. Chi-Wang Shu, *Brown University, Providence, Rhode Island, USA;* Stanley Osher, *University of California, Los Angeles, California, USA.*

MULTIDIMENSIONAL UPWIND METHODS FOR HYPERBOLIC CONSERVATION LAWS. Phillip Colella, *University of California, Lawrence Livermore National Laboratory, Livermore, California, USA.*

Computation of Molecular Integrals over Partially Generalized Hermite–Gaussian Functions. Miljenko Primorac, *University of Zagreb, Zagreb, Croatia, YUGOSLAVIA.*

A FACTORIZABLE FORMULATION OF TIGHT BINDING. Earl E. Lafon, *Oklahoma State University, Stillwater, Oklahoma, USA.*

FAST, ADAPTIVE SUMMATION OF POINT FORCES IN THE TWO-DIMENSIONAL POISSON EQUATION. Leon van Dommelen and Elke A. Rundensteiner, *Florida State University, Tallahassee, Florida, USA.*

GROWTH OF EQUILIBRIUM CLUSTERS OF LENNARD–JONES MOLECULES. A. C. Reardon and D. J. Quesnel, *University of Rochester, Rochester, New York, USA.*

APPROXIMATE SOLUTIONS FOR LARGE TRANSFER MATRIX PROBLEMS. Norman H. Fuchs, *Purdue University, West Lafayette, Indiana, USA.*

ASYMPTOTIC SOLUTIONS OF NUMERICAL TRANSPORT PROBLEMS IN OPTICALLY THICK, DIFFUSIVE REGIMES. II. Edward W. Larsen, *The University of Michigan, Ann Arbor, Michigan, USA;* J. E. Morel, *University of California, Los Alamos National Laboratory, Los Alamos, New Mexico, USA.*

RESOLUTION OF THE ONE-DIMENSIONAL SCATTERING PROBLEM BY A FINITE ELEMENT METHOD. Th. Laloyaux, Ph. Lambin, J.-P. Vigneron, and A. A. Lucas, *Universitaires Notre-Dame de la Paix, Brussels, BELGIUM.*

EXPLICIT ENERGY-CONSERVING SCHEMES FOR THE THREE-BODY PROBLEM. Yuan-Shun Chin and Chaoyu Qin, *Academia Sinica, Beijing, PEOPLE'S REPUBLIC OF CHINA.*

GENERALIZATIONS OF ARAKAWA'S JACOBIAN. Rick Salmon and Lynne D. Talley, *University of California, Scripps Institution of Oceanography, La Jolla, California, USA.*

SCALING INTEGRATION METHOD FOR SINGULAR INTEGRALS AND ITS APPLICATION TO BEM. Yasunao Katayama and Masato Koda, *IBM Research, Tokyo Research Laboratory, Tokyo, JAPAN*.

A PSEUDOSPECTRAL MATRIX ELEMENT METHOD FOR SOLUTION OF THREE-DIMENSIONAL INCOMPRESSIBLE FLOWS AND ITS PARALLEL IMPLEMENTATION. Hwar C. Ku, Richard S. Hirsh, Thomas D. Taylor, and Allan P. Rosenberg, *Johns Hopkins University, Laurel, Maryland, USA*.

SPLIT-STEP SPECTRAL SCHEMES FOR NONLINEAR DIRAC SYSTEMS. J. de Frutos and J. M. Sanz-Serna, *Universidad de Valladolid, Valladolid, SPAIN*.

A NEW MULTIGRID APPROACH TO CONVECTION PROBLEMS. Wim A. Mulder, *University of California, Los Angeles, California, USA*.

A COMPARISON OF FOURIER PSEUDOSPECTRAL METHODS FOR THE SOLUTION OF THE KORTEWEG–DE VRIES EQUATION. F. Z. Nouri and D. M. Sloan, *University of Strathclyde, Glasgow, Scotland, UNITED KINGDOM*.

NUMERICAL SOLUTION OF POISSON'S EQUATION FOR RAPIDLY VARYING DRIVING FUNCTIONS. C. Wu, *Auburn University, Auburn, Alabama, USA*; E. E. Kunhardt, *Polytechnic University, Farmingdale, New York, USA*.

STATISTICAL PROPERTIES AND NUMERICAL IMPLEMENTATION OF A MODEL FOR DROPLET DISPERSION IN A TURBULENT GAS. Peter J. O'Rourke, *Los Alamos National Laboratory, Los Alamos, New Mexico, USA*.

RAREFIED GAS FLOW ANALYSIS BY DIRECT SIMULATION MONTE CARLO METHOD IN BODY-FITTED COORDINATE SYSTEM. Takashi Abe, *Institute of Space & Astronautical Science, Tokyo, JAPAN*.

PARAMETRIC EXCITATION OF COMPUTATIONAL MODES INHERENT TO LEAP-FROG SCHEME APPLIED TO THE KORTEWEG–DE VRIES EQUATION. Akira Aoyagi, *Kyushu Industrial University, Fukuoka-shi, JAPAN*; Kanji Abe, *University of Tokyo, Tokyo, JAPAN*.

CHEBYSHEV PSEUDOSPECTRAL SOLUTION OF THE STOKES EQUATIONS USING FINITE ELEMENT PRECON-DITIONING. P. Demaret and M. Deville, *Université Catholique de Louvain, Louvain-La-Neuve, BELGIUM*.

DEVELOPMENT OF THE MASK METHOD FOR INCOMPRESSIBLE UNSTEADY FLOWS. M. Briscolini and P. Santangelo, *IBM – European Center for Scientific and Engineering Computing, Rome, ITALY*.

A VLSI ARCHITECTURE FOR PERCOLATION SIMULATION. Peter D. Hortensius, *IBM Thomas J. Watson Research Center, Yorktown Heights, New York, USA*; Howard C. Card and Robert D. McLeod, *University of Manitoba, Winnipeg, Manitoba, CANADA*.

A HIGH-RESOLUTION TVD FINITE VOLUME SCHEME FOR THE EULER EQUATIONS IN CONSERVATION FORM. J. C. T. Wang and G. F. Widhopf, *The Aerospace Corporation, El Segundo, California, USA*.

REMOVAL OF INFINITE EIGENVALUES IN THE GENERALIZED MATRIX EIGENVALUE PROBLEM. Dimitrios A. Goussis, *University of California at Los Angeles, Los Angeles, California, USA*; Arne J. Pearlstein, *University of Arizona, Tucson, Arizona, USA*.

TIME-DEPENDENT VISCOUS INCOMPRESSIBLE NAVIER–STOKES EQUATIONS: THE FINITE DIFFERENCE GALERKIN FORMULATION AND STREAMFUNCTION ALGORITHMS. John W. Goodrich and W. Y. Soh, *NASA Lewis Research Center, Cleveland, Ohio, USA*.

SYMBOLIC IMPLICIT MONTE CARLO. Eugene D. Brooks, III, *Lawrence Livermore National Laboratory, Livermore, California, USA*.

AN ENERGY-MINIMIZING MESH FOR THE SCHRÖDINGER EQUATION. Zachary H. Levine, *Cornell University, Ithaca, New York, USA*; John W. Wilkins, *The Ohio State University, Columbus, Ohio, USA*.

TVB RUNGE–KUTTA LOCAL PROJECTION DISCONTINUOUS GALERKIN FINITE ELEMENT METHOD FOR CONSERVATION LAWS III: ONE-DIMENSIONAL SYSTEMS. Bernardo Cockburn and San-Yih Lin, *University of Minnesota, Minneapolis, Minnesota, USA*; Chi-Wang Shu, *Brown University, Providence, Rhode Island, USA*.

CHEBYSHEV SPECTRAL COLLOCATION METHODS FOR LAMINAR FLOW THROUGH A CHANNEL CONTRACTION. Andreas Karageorghis and Timothy N. Phillips, *University College of Wales, Aberystwyth, UNITED KINGDOM*.

NONEQUILIBRIUM FLOW COMPUTATIONS, I: AN ANALYSIS OF NUMERICAL FORMULATIONS OF CONSERVA-TION LAWS. Yen Liu and Marcel Vinokur, *Sterling Software, NASA Ames Research Center, Moffett Field, California, USA*.

DOES A POINT LIE INSIDE A POLYGON? M. S. Milgram, *Chalk River Nuclear Laboratories, Chalk River, Ontario, CANADA.*

A COMPUTATIONAL METHOD FOR DETERMINING CURVATURES. J. Y. Poo and N. Ashgriz, *State University of New York at Buffalo, Buffalo, New York, USA.*

A SPECTRAL-DIFFERENCE METHOD FOR TWO-DIMENSIONAL VISCOUS FLOW. Guo Ben-yu and Xiong Yeu-shan, *Shanghai University of Science & Technology, Shanghai, PEOPLE'S REPUBLIC OF CHINA.*

A CLASS OF IMPLICIT UPWIND SCHEMES FOR EULER SIMULATIONS WITH UNSTRUCTURED MESHES. L. Fezoui, *INRIA Sophia-Antipolis, Valabonne, FRANCE*; B. Stoufflet, *AMD-BA, Saint-Cloud, FRANCE.*

TWO-POINT QUASI-FRACTIONAL APPROXIMATIONS TO THE BESSEL FUNCTIONS $J_v(x)$ OF FRACTIONAL ORDER. Pablo Martín and Antonio Luis Guerrero, *Universidad Simón Bolívar, Caracas, VENEZUELA.*

A RANDOM VORTEX SIMULATION OF FALKNER-SKAN BOUNDARY LAYER FLOW. D. M. Summers, *Napier Polytechnic, Edinburgh, UNITED KINGDOM.*

QN3D: A THREE-DIMENSIONAL QUASI-NEUTRAL HYBRID PARTICLE-IN-CELL CODE WITH APPLICATIONS TO THE TILT MODE INSTABILITY IN FIELD REVERSED CONFIGURATIONS. Eric J. Horowitz, *University of Maryland, USA*; Dan E. Shumaker and David V. Anderson, *Lawrence Livermore National Laboratory, University of California, Livermore, California, USA.*

SOLUTION OF POTENTIAL PROBLEMS USING AN OVERDETERMINED COMPLEX BOUNDARY INTEGRAL METHOD. W. W. Schultz and S. W. Hong, *University of Michigan, Ann Arbor, Michigan, USA.*

BOUNDARY VALUE PROBLEMS IN MAGNETOHYDRODYNAMICS (AND FLUID DYNAMICS). PAPER I: RADIATION BOUNDARY CONDITION. T. C. Vanajakshi, Kevin W. Thompson, and David C. Black, *NASA Ames Research Center, Moffett Field, California, USA.*