VOLUMES XXXVIII AND XXXIX

INDEX OF PAPERS BY AUTHORS

Author	*Title*	*Vol.*	*Page*
ADAMS, WILLIAM & SHANKS, DANIEL	Strong Primality Tests That Are Not Sufficient.....	39	255
AGRAWAL, G. P.	See: LAX, M. & AGRAWAL, G. P.....	39	535
ALFELD, PETER	Fixed Point Iteration with Inexact Function Values..	38	87
ARCHER, DAVID & DÍAZ, JULIO CÉSAR	A Collocation-Galerkin Method for a First Order Hyperbolic Equation With Space and Time-Dependent Coefficient.....	38	37
ARNOLD, DOUGLAS N. & WINTHER, RAGNAR	A Superconvergent Finite Element Method for the Korteweg-de Vries Equation.....	38	23
ARYA, J. P.	See: JOSHI, C. M. & ARYA, J. P.....	38	201
BAKER, GARTH A., DOUGALIS, VASSILIOS A. & KARAKASHIAN, OHANNES A.	On a Higher Order Accurate Fully Discrete Galerkin Approximation to the Navier-Stokes Equations.....	39	339
BANK, RANDOLPH E. & ROSE, DONALD J.	Analysis of a Multilevel Iterative Method for Nonlinear Finite Element Equations.....	39	453
BEALE, J. THOMAS & MAJDA, ANDREW	Vortex Methods. I: Convergence in Three Dimensions.....	39	1
BEALE, J. THOMAS & MAJDA, ANDREW	Vortex Methods. II: Higher Order Accuracy in Two and Three Dimensions	39	29
BECK, WALTER E. & NAJAR, RUDOLPH M.	A Lower Bound for Odd Triperfects.....	38	249
BEIGHTON, S. & NOBLE, B.	An Error Estimate for Stenger's Quadrature Formula.....	38	539
BELEVITCH, V. & BOERSMA, J.	On Stieltjes Integral Transforms Involving Γ-Functions.....	38	223
BLAIR, J. M.	See: WILLS, C. A., BLAIR, J. M. & RAGDE, P. L..	39	617
BOERSMA, J.	See: BELEVITCH, V. & BOERSMA, J.....	38	223
BOYD, DAVID W.	The Sequence of Radii of the Apollonian Packing...	39	249
BOYD, JOHN P.	A Chebyshev Polynomial Rate-of-Convergence Theorem for Stieltjes Functions.....	39	201
BREMNER, ANDREW & MORTON, PATRICK	The Integer Points on Three Related Elliptic Curves.....	39	235
BRENT, RICHARD P.	Succinct Proofs of Primality for the Factors of Some Fermat Numbers.....	38	253
BRENT, R. P., van de LUNE, J., te RIELE, H. J. J. & WINTER, D. T.	On the Zeros of the Riemann Zeta Function in the Critical Strip. II.....	39	681
BREZINSKI, CLAUDE	Some New Convergence Acceleration Methods.....	39	133
BRUNNER, H., HAIRER, E. & NØRSETT, S. P.	Runge-Kutta Theory for Volterra Integral Equations of the Second Kind.....	39	147
BRUNOTTE, HORST	The Computation of a Certain Metric Invariant of an Algebraic Number Field.....	38	627
BUHLER, J. P., CRANDALL, R. E. & PENK, M. A.	Primes of the Form $n! \pm 1$ and $2 \cdot 3 \cdot 5 \cdots p \pm 1$...	38	639
BUNCH, JAMES R.	A Note on the Stable Decomposition of Skew-Symmetric Matrices.....	38	475
BUNSE, W. & BUNSE-GERSTNER, A.	Computation of Bounds for the Positive Eigenvector of a Nonnegative Irreducible Matrix by Monotone Iteration.....	39	125

Author	Title	Vol.	Page
BUNSE-GERSTNER, A.	See: BUNSE, W. & BUNSE-GERSTNER, A.	39	125
BUTLER, GREGORY	Computing in Permutation and Matrix Groups II: Backtrack Algorithm	39	671
BUTLER, GREGORY & CANNON, JOHN J.	Computing in Permutation and Matrix Groups I: Normal Closure, Commutator Subgroups, Series..	39	663
CANNON, JOHN J.	See: BUTLER, GREGORY & CANNON, JOHN J.	39	663
CANUTO, C. & QUARTERONI, A.	Approximation Results for Orthogonal Polynomials in Sobolev Spaces	38	67
CHAMBERS, LI. G.	An Upper Bound for the First Zero of Bessel Functions	38	589
CHANG, S. H.	On Certain Extrapolation Methods for the Numerical Solution of Integro-Differential Equations	39	165
CHEN, T. H. CHARLES	Asymptotic Error Estimates for Gaussian Quadrature Formulas	38	143
CHOW, JEFF	On the Uniqueness of Best $L_2[0, 1]$ Approximation by Piecewise Polynomials With Variable Breakpoints	39	571
COHN, HARVEY	An Explicit Modular Equation in Two Variables and Hilbert's Twelfth Problem	38	227
COLMAN, W. J. A.	The Number of Partitions of the Integer N into M Nonzero Positive Integers	39	213
CONDE, SALVADOR	See: KALLA, SHYAM L., CONDE, SALVADOR & LUKE, YUDELL L.	38	207
COSTELLO, PATRICK J.	Density Problems Involving $p_r(n)$	38	633
CRANDALL, R. E.	See: BUHLER, J. P., CRANDALL, R. E. & PENK, M. A.	38	639
CRISCI, M. R. & RUSSO, E.	A-Stability of a Class of Methods for the Numerical Integration of Certain Linear Systems of Ordinary Differential Equations	38	431
CRUZ, ANDRÉS & SESMA, JAVIER	Zeros of the Hankel Function of Real Order and of Its Derivative	39	639
CUYT, ANNIE A. M.	Numerical Stability of the Halley-Iteration for the Solution of a System of Nonlinear Equations	38	171
DAY, J. D. & MURTHY, D. N. P.	Two Classes of Internally S-Stable Generalized Runge-Kutta Processes Which Remain Consistent With an Inaccurate Jacobian	39	491
DENNIS, J. E., JR. & MARWIL, EARL S.	Direct Secant Updates of Matrix Factorizations	38	459
DÍAZ, JULIO CÉSAR	See: ARCHER, DAVID & DÍAZ, JULIO CÉSAR	38	37
DiDONATO, A. R.	Recurrence Relations for the Indefinite Integrals of the Associated Legendre Functions	38	547
DOUGALIS, VASSILIOS A.	See: BAKER, GARTH A., DOUGALIS, VASSILIOS A. & KARAKASHIAN, OHANNES A.	39	339
DUPONT, TODD	Mesh Modification for Evolution Equations	39	85
ELDÉN, LARS	Time Discretization in the Backward Solution of Parabolic Equations. I	39	53
ELDÉN, LARS	Time Discretization in the Backward Solution of Parabolic Equations. II	39	69
EVÉQUOZ, HUGO	See: JACCARD, YVES & EVÉQUOZ, HUGO	39	443
FORD, WILLIAM F.	See: SMITH, DAVID A. & FORD, WILLIAM F.	38	481
FRANKE, RICHARD	Scattered Data Interpolation: Tests of Some Methods	38	181
FRANSÉN, ARNE	See: WRIGGE, STAFFAN & FRANSÉN, ARNE	38	567
FREILICH, J. H. & ORTIZ, E. L.	Numerical Solution of Systems of Ordinary Differential Equations With the Tau Method: An Error Analysis	39	467
GABUTTI, B. & LYNESS, J. N.	An Acceleration Method for the Power Series of Entire Functions of Order 1	39	587

Author	*Title*	*Vol.*	*Page*
GEKELER, ECKART	Linear Multistep Methods for Stable Differential Equations $y'' = Ay + B(t)y' + c(t)$	39	481
GLADWIN, C. J.	On Optimal Integration Methods for Volterra Integral Equations of the First Kind	39	511
GOLDSTEIN, CHARLES I.	A Finite Element Method for Solving Helmholtz Type Equations in Waveguides and Other Unbounded Domains	39	309
GOSTIN, GARY B. & McLAUGHLIN, PHILIP B., JR.	Six New Factors of Fermat Numbers	38	645
GRAHAM, IVAN G.	Galerkin Methods for Second Kind Integral Equations With Singularities	39	519
GREAVES, G.	An Algorithm for the Solution of Certain Differential-Difference Equations of Advanced Type	38	237
GROTHKOPF, U. & OPFER, G.	Complex Chebyshev Polynomials on Circular Sectors With Degree Six or Less	39	599
GUPTA, G. K.	See: KOVVALI, S. & GUPTA, G. K.	38	447
HAIRER, E.	See: BRUNNER, H., HAIRER, E. & NØRSETT, S. P.	39	147
HALPERN, LAURENCE	Absorbing Boundary Conditions for the Discretization Schemes of the One-Dimensional Wave Equation	38	415
HAN, HOUDE	The Finite Element Method in a Family of Improperly Posed Problems	38	55
HILLIKER, DAVID LEE	An Algorithm for Solving a Certain Class of Diophantine Equations. I	38	611
HUDSON, RICHARD H. & WILLIAMS, KENNETH S.	Class Number Formulae of Dirichlet Type	39	725
ISERLES, ARIEH	Composite Exponential Approximations	38	99
JACCARD, YVES & EVÉQUOZ, HUGO	Approximation of the Spectrum of an Operator Given by the Magnetohydrodynamic Stability of a Plasma	39	443
JAGER, H.	On the Speed of Convergence of the Nearest Integer Continued Fraction	39	555
JEROME, JOSEPH W. & ROSE, MICHAEL E.	Error Estimates for the Multidimensional Two-Phase Stefan Problem	39	377
JOHNSON, CLAES & PITKÄRANTA, JUHANI	Analysis of Some Mixed Finite Element Methods Related to Reduced Integration	38	375
JOSHI, C. M. & ARYA, J. P.	Inequalities for Certain Hypergeometric Functions	38	201
KALLA, SHYAM L., CONDE, SALVADOR & LUKE, YUDELL, L.	Integrals of Jacobi Functions	38	207
KALLMAN, RALPH	A Method for Finding Permanents of 0, 1 Matrices	38	167
KARAKASHIAN, OHANNES A.	See: BAKER, GARTH A., DOUGALIS, VASSILIOS A. & KARAKASHIAN, OHANNES A.	39	339
KÖLBIG, K. S.	Closed Expressions for $\int_0^1 t^{-1} \log^{n-1} t \log^p (1-t)dt$	*39*	*647*
KOVVALI, S. & GUPTA, G. K.	Polynomial Formulation of Second Derivative Multistep Methods	38	447
LADERMAN, JACK & LADERMAN, JULIAN D.	Simplified Forecasting by Polynomial Regression With Equally Spaced Values of the Independent Variable	38	601
LADERMAN, JULIAN D.	See: LADERMAN, JACK & LADERMAN, JULIAN D.	38	601
LASKA, MICHAEL	An Algorithm for Finding a Minimal Weierstrass Equation for an Elliptic Curve	38	257
LASSEY, KEITH R.	On the Computation of Certain Integrals Containing the Modified Bessel Function $I_0(\xi)$	39	625

Author	*Title*	*Vol.*	*Page*
LAX, M. & AGRAWAL, G. P.	Evaluation of Fourier Integrals Using B-Splines	39	535
LEVIN, DAVID	Procedures for Computing One- and Two-Dimensional Integrals of Functions With Rapid Irregular Oscillations	38	531
LEVIN, MOSHE	On the Evaluation of Double Integrals	39	173
van der LINDEN, F. J.	Class Number Computations of Real Abelian Number Fields	39	693
LING, CHIH-BING	Evaluation of Generalized Howland Integrals	38	593
LING, CHIH-BING & WU, MING-JING	Evaluation of Integrals of Howland Type Involving a Bessel Function	38	215
LLORENTE, P. & ONETO, A. V.	On the Real Cubic Fields	39	689
LUKE, YUDELL L.	See: KALLA, SHYAM L., CONDE, SALVADOR & LUKE, YUDELL L	38	207
van de LUNE, J.	See: BRENT, R. P., van de LUNE, J., te RIELE, H. J. J. & WINTER, D. T	39	681
LYNESS, J. N.	See: GABUTTI, B. & LYNESS, J. N	39	587
McLAUGHLIN, PHILIP B., JR.	See: GOSTIN, GARY B. & McLAUGHLIN, PHILIP B., JR	38	645
MAHLER, K.	On the Zeros of a Special Sequence of Polynomials.	39	207
MAJDA, ANDREW	See: BEALE, J. THOMAS & MAJDA, ANDREW	39	1
MAJDA, ANDREW	See: BEALE, J. THOMAS & MAJDA, ANDREW	39	29
MARKOWICH, PETER A.	Eigenvalue Problems on Infinite Intervals	39	421
MARSDEN, M. J.	Spline Interpolation at Knot Averages on a Two-Sided Geometric Mesh	38	113
MARWIL, EARL S.	See: DENNIS, J. E., JR. & MARWIL, EARL S	38	459
MORTON, PATRICK	See: BREMNER, ANDREW & MORTON, PATRICK	39	235
MUROTA, KAZUO	See: SUGIHARA, MASAAKI & MUROTA, KAZUO	39	549
MURRAY, FRANCIS J.	Formulas for Factorial N	39	655
MURTHY, D. N. P.	See: DAY, J. D. & MURTHY, D. N. P	39	491
NAGARAJA, K. S. & VERMA, G. R.	Evaluation of the Integral $\int_0^p u^n e^{-u^2}(u+x)^{-1}\,du$	39	179
NAJAR, RUDOLPH M.	See: BECK, WALTER E. & NAJAR, RUDOLPH M.	38	249
NÉMETH, GÉZA & ZIMÁNYI, MAGDA	Polynomial Type Padé Approximants	38	553
NOBLE, B.	See: BEIGHTON, S. & NOBLE, B	38	539
NØRSETT, S. P.	See: BRUNNER, H., HAIRER, E. & NØRSETT, S. P	39	147
ONETO, A. V.	See: LLORENTE, P. & ONETO, A. V	39	689
OPFER, G.	See: GROTHKOPF, U. & OPFER, G	39	599
ORTIZ, E. L.	See: FREILICH, J. H. & ORTIZ, E. L	39	467
OSHER, STANLEY & SOLOMON, FRED	Upwind Difference Schemes for Hyperbolic Systems of Conservation Laws	38	339
PAINE, J.	Correction of Sturm-Liouville Eigenvalue Estimates	39	415
PARLETT, B. N., SIMON, H. & STRINGER, L. M.	On Estimating the Largest Eigenvalue With the Lanczos Algorithm	38	153
PENK, M. A.	See: BUHLER, J. P., CRANDALL, R. E. & PENK, M. A	38	639
PITKÄRANTA, JUHANI	See: JOHNSON, CLAES & PITKÄRANTA, JUHANI	38	375
POHST, MICHAEL, WEILER, PETER & ZASSENHAUS, HANS	On Effective Computation of Fundamental Units. II	38	293
POHST, MICHAEL & ZASSENHAUS, HANS	On Effective Computation of Fundamental Units. I	38	275
QUARTERONI, A.	See: CANUTO, C. & QUARTERONI, A	38	67

Author	Title	Vol.	Page
RAGDE, P. L.	See: WILLS, C. A., BLAIR, J. M. & RADGE, P. L.	39	617
RANNACHER, ROLF & SCOTT, RIDGWAY	Some Optimal Error Estimates for Piecewise Linear Finite Element Approximations	38	437
te RIELE, H. J. J.	See: BRENT, R. P., van de LUNE, J., te RIELE, H. J. J. & WINTER, D. T.	39	681
ROSE, DONALD J.	See: BANK, RANDOLPH E. & ROSE,DONALD J.	39	453
ROSE, MICHAEL E.	See: JEROME, JOSEPH W. & ROSE, MICHAEL E.	39	377
ROTKIEWICZ, A.	On Euler Lehmer Pseudoprimes and Strong Lehmer Pseudoprimes With Parameters L, Q in Arithmetic Progressions	39	239
RUSSO, E.	See: CRISCI, M. R. & RUSSO, E.	38	431
SCHATZ, A. H. & WAHLBIN, L. B.	On the Quasi-Optimality in L_∞ of the $\mathring{H}^1$-Projection into Finite Element Spaces	38	1
SCOTT, RIDGWAY	See: RANNACHER, ROLF & SCOTT, RIDGWAY	38	437
SESMA, JAVIER	See: CRUZ, ANDRÉS & SESMA, JAVIER	39	639
SHAMPINE, L. F.	Type-Insensitive ODE Codes Based on Implicit $A(\alpha)$-Stable Formulas	39	109
SHANKS, DANIEL	See: ADAMS, WILLIAM & SHANKS, DANIEL	39	255
SHIVAKUMAR, P. N. & WONG, R.	Asymptotic Expansion of the Lebesgue Constants Associated With Polynomial Interpolation	39	195
SIDI, AVRAM	Numerical Quadrature Rules for Some Infinite Range Integrals	38	127
SIDI, AVRAM	The Numerical Evaluation of Very Oscillatory Infinite Integrals by Extrapolation	38	517
SIMON, H.	See: PARLETT, B. N., SIMON, H. & STRINGER, L. M.	38	153
SMITH, DAVID A. & FORD, WILLIAM F.	Numerical Comparisons of Nonlinear Convergence Accelerators	38	481
SOLOMON, FRED	See: OSHER, STANLEY & SOLOMON, FRED	38	339
STRINGER, L. M.	See: PARLETT, B. N., SIMON, H. & STRINGER, L. M.	38	153
SUGIHARA, MASAAKI & MUROTA, KAZUO	A Note on Haselgrove's Method for Numerical Integration	39	549
THOMPSON, J. F.	See: WARSI, Z. U. A. & THOMPSON, J. F.	38	501
VERMA, G. R.	See: NAGARAJA, K. S. & VERMA, G. R.	39	179
VERON, LAURENT	Some Remarks on the Convergence of Approximate Solutions of Nonlinear Evolution Equations in Hilbert Spaces	39	325
van der VORST, H. A.	A Generalized Lanczos Scheme	39	559
WAHLBIN, L. B.	See: SCHATZ, A. H. & WAHLBIN, L. B.	38	1
WARSI, Z. U. A. & THOMPSON, J. F.	A Noniterative Method for the Generation of Orthogonal Coordinates in Doubly-Connected Regions	38	501
WEILER, PETER	See: POHST, MICHAEL, WEILER, PETER & ZASSENHAUS, HANS	38	293
WERSCHULZ, ARTHUR G.	Optimal Error Properties of Finite Element Methods for Second Order Elliptic Dirichlet Problems	38	401
WILLIAMS, H. C.	Determination of Principal Factors in $\mathbb{Q}(\sqrt{D})$ and $\mathbb{Q}(\sqrt[3]{D})$	38	261
WILLIAMS, H. C.	A $p + 1$ Method of Factoring	39	225
WILLIAMS, KENNETH S.	See: HUDSON, RICHARD H. & WILLIAMS, KENNETH S.	39	725
WILLS, C. A., BLAIR, J. M. & RAGDE, P. L.	Rational Chebyshev Approximations for the Bessel Functions $J_0(x)$, $J_1(x)$, $Y_0(x)$, $Y_1(x)$	39	617
WINTER, D. T.	See: BRENT, R. P., van de LUNE, J., te RIELE, H. J. J. & WINTER, D. T.	39	681
WINTHER, RAGNAR	See: ARNOLD, DOUGLAS N. & WINTHER, RAGNAR	38	23

Author	*Title*	*Vol.*	*Page*
WONG, R.	See: SHIVAKUMAR, P. N. & WONG, R.	39	195
WRIGGE, STAFFAN & FRANSÉN, ARNE	A General Method of Approximation. Part I	38	567
WU, MING-JING	See: LING, CHIH-BING & WU, MING-JING	38	215
ZAGIER, DON	On the Number of Markoff Numbers Below a Given Bound	39	709
ZASSENHAUS, HANS	See: POHST, MICHAEL & ZASSENHAUS, HANS	38	275
ZASSENHAUS, HANS	See: POHST, MICHAEL, WEILER, PETER & ZASSENHAUS, HANS	38	293
ZIMÁNYI, MAGDA	See: NÉMETH, GÉZA & ZIMÁNYI, MAGDA	38	553
ZIV, ABRAHAM	Relative Distance—An Error Measure in Round-Off Error Analysis	39	563

SUBJECT CLASSIFICATION SYSTEM FOR INDEX OF REVIEWS

The following subject classification system is used for the yearly index of reviews. Individual reviews in the quarterly issues are assigned index classification numbers in simplified form.

1.00 Biography and Bibliography (History)

2.00 Selected Topics in Numerical Analysis

- 2.05 *Approximation Theory*
  - 2.05.1 *Least Squares, Curve Fitting, Harmonic Analysis*
  - 2.05.2 *Chebyshev (Best) Approximation*
  - 2.05.3 *Interpolation, Extrapolation*
  - 2.05.4 *Inverse Interpolation*
  - 2.05.5 *Rational Approximation*
  - 2.05.6 *Splines*
- 2.10 *Numerical Integration*
  - 2.10.1 *One-Dimensional*
  - 2.10.2 *Multi-Dimensional*
  - 2.10.3 *Monte Carlo*
- 2.15 *Numerical Differentiation*
- 2.20 *Roots of Equations*
- 2.25 *Evaluation of Series*
- 2.30 *Continued Fractions*
- 2.35 *Iteration Methods, Acceleration Techniques*
- 2.40 *Differences, Divided Differences*
- 2.45 *Algorithms, General Theory*
- 2.50 *Inequalities*
- 2.55 *Stability of Computation, Significance Arithmetic*
- 2.60 *Complexity of Computation*

3.00 Linear Algebra

- 3.05 *Matrices*
- 3.10 *Linear Equations*
  - 3.10.1 *Error Analysis*
- 3.15 *Eigenvalues and Eigenvectors*
  - 3.15.1 *Error Analysis*
- 3.20 *Matrix Inversion and Pseudo-Inverses*
  - 3.20.1 *Error Analysis*
- 3.25 *Linear and Nonlinear Programming, Theory of Games*
  - 3.25.1 *Error Analysis*
- 3.30 *Determinants*
- 3.35 *Sparse Matrices*

4.00 Ordinary Differential Equations

- 4.05 *Initial Value Problems*
  - 4.05.1 *Analytic Methods*
    - 4.05.1.1 *Error Analysis*
  - 4.05.2 *One-Step Methods*
    - 4.05.2.1 *Error Analysis*
  - 4.05.3 *Multistep Methods*
    - 4.05.3.1 *Error Analysis*
- 4.10 *Linear Boundary Value and Eigenvalue Problems*
  - 4.10.1 *Analytic Methods*
    - 4.10.1.1 *Error Analysis*
  - 4.10.2 *Initial Value (Trial and Error or Shooting) Methods*
    - 4.10.2.1 *Error Analysis*

4.10.3 *Finite Difference (Nonshooting) Methods*
4.10.3.1 *Error Analysis*
4.10.4 *Finite Element Methods*
4.10.4.1 *Error Analysis*
4.15 *Nonlinear Boundary Value and Eigenvalue Problems*
4.15.1 *Analytic Methods*
4.15.1.1 *Error Analysis*
4.15.2 *Initial Value (Trial and Error or Shooting) Methods*
4.15.2.1 *Error Analysis*
4.15.3 *Finite Difference (Nonshooting) Methods*
4.15.3.1 *Error Analysis*

5.00 Partial Differential Equations

5.05 *Initial Value Problems*
5.05.1 *Analytic Methods*
5.05.1.1 *Error Analysis*
5.05.2 *Explicit Difference Methods*
5.05.2.1 *Error Analysis*
5.05.3 *Implicit Difference Methods, Iterative Schemes*
5.05.3.1 *Error Analysis*
5.05.4 *Finite Element and Other Approximation Methods*
5.05.4.1 *Error Analysis*
5.10 *Boundary Value Problems*
5.10.1 *Analytic Methods*
5.10.1.1 *Error Analysis*
5.10.2 *Finite Difference Methods, Iterative Schemes*
5.10.2.1 *Error Analysis*
5.10.3 *Finite Element and Other Approximation Methods*
5.10.3.1 *Error Analysis*
5.15 *Eigenvalue Problems*
5.15.1 *Analytic Methods*
5.15.1.1 *Error Analysis*
5.15.2 *Finite Difference Methods, Iterative Schemes*
5.15.2.1 *Error Analysis*
5.15.3 *Finite Element and Other Approximation Methods*
5.15.3.1 *Error Analysis*
5.20 *Mixed Initial and Boundary Value Problems*
5.20.1 *Analytic Methods*
5.20.1.1 *Error Analysis*
5.20.2 *Explicit Difference Methods*
5.20.2.1 *Error Analysis*
5.20.3 *Implicit Difference Methods, Iterative Schemes*
5.20.3.1 *Error Analysis*
5.20.4 *Finite Element and Other Approximation Methods*
5.20.4.1 *Error Analysis*

6.00 Other Functional Equations

6.05 *Difference Equations*
6.10 *Difference-Differential Equations*
6.15 *Integral Equations*
6.20 *Integro-Differential Equations*
6.25 *Convolution Equations*
6.30 *Variational Equations*
6.35 *Abstract Operator Equations*
6.40 *Stochastic Differential Equations*

7.00 Special Functions

7.05 *Mathematical Constants, Special Polynomials (Nonorthogonal) and Numbers: Bernoulli, Euler, Stirling, Binomial Coefficients, Factorials*
7.10 *Elementary Functions, Powers and Roots*
7.15 *Gamma Functions, Psi Functions, Zeta Functions and Related Functions*
7.20 *Incomplete Gamma Functions*

7.20.1 *Exponential Integral, Cosine and Sine Integrals and Related Functions*
7.20.2 *Error Functions, Fresnel Integrals and Related Functions*
7.25 *Confluent Hypergeometric Functions*
7.25.1 *Parabolic Cylinder Functions*
7.25.2 *Coulomb Wave Functions*
7.30 *Bessel Functions*
7.35 *Lommel Functions, Struve Functions, Anger-Weber Functions and Associated Bessel Functions*
7.40 *Legendre Functions*
7.45 *Gaussian Hypergeometric Functions*
7.50 *Orthogonal Polynomials and Functions*
7.55 *Expansions in Series of Orthogonal Polynomials, Bessel Functions, Other Functions*
7.60 *Elliptical Integrals and Functions, Weierstrass Elliptic Integrals, Related Functions*
7.65 *Mathieu Functions*
7.70 *Spheroidal Wave Functions, Other Wave Functions*
7.75 *Generalized Hypergeometric Functions of a Single Variable*
7.80 *Generalized Hypergeometric Functions of More Than One Variable*
7.85 *Basic Hypergeometric Functions*
7.90 *Integral Transforms*
7.95 *Numerical Tables of Integrals and Transforms*
7.100 *Numerical Tables of Infinite Series*
7.105 *Handbooks of Mathematical Tables and Formulae*

8.00 Probability and Statistics

8.05 *Random Numbers*
8.05.1 *Tables*
8.10 *Monte Carlo, Markov Chains*
8.15 *Multivariate Analysis*
8.20 *Regression Analysis*
8.25 *Analysis of Variance*
8.30 *Time Series Analysis*
8.35 *Nonparametric Analysis*
8.40 *Sequential Analysis*
8.45 *Classical Statistics*
8.50 *Handbooks of Tables and Formulae*

9.00 Number Theory

9.05 *Mersenne, Fermat, Perfect and Related Numbers*
9.10 *Number-Theoretic Functions and Tables*
9.15 *Binomial Congruences, Primitive Roots, Residues, etc.*
9.20 *Primes and Their Distribution*
9.25 *Factorization*
9.30 *Forms and Diophantine Equations*
9.35 *Continued Fractions and Diophantine Approximation*
9.40 *Normal Numbers and Distribution of Digits*
9.45 *Modular Computation*

10.00 Algebra and Combinatorial Theory

10.05 *Groups, Rings, Fields, Algebras*
10.10 *Finite Fields*
10.15 *Irreducible Polynomials*
10.20 *Arrays, Latin Squares*
10.25 *Projective Planes, Block Designs, Difference Sets*
10.30 *Permutations, Combinatorial Identities*
10.35 *Graph Theory*

11.00 Geometry

11.05 *Coordinate Conversion Tables*
11.10 *Polyhedra and Polytopes*
11.15 *Graph Theory*

12.00 Computers and Other Aids to Computation

12.05 *Digital Computers*

12.05.1 *Coding, Programming and Software*
12.05.2 *Design and Hardware*
12.05.3 *Computer Aided Instruction*
12.10 *Analog Computers*
12.10.1 *Design and Hardware*
12.15 *Digital-Analog (Hybrid) Computers*
12.15.1 *Coding, Programming and Software*
12.15.2 *Design and Hardware*
12.20 *Mechanical Aids to Computation—Slide Rules, Desk Calculators, Others*
12.25 *Nomographs*

13.00 Application

13.05 *Physical and Chemical Sciences*
13.05.1 *Weights and Measures Tables*
13.10 *Astronomy, Astrophysics*
13.10.1 *Navigation Tables*
13.15 *Engineering Sciences*
13.15.1 *Engineering Tables*
13.20 *Earth Sciences, Atmospheric Sciences, Fluid Dynamics*
13.20.1 *Triangulation and Geodetic Tables*
13.25 *Biology and the Behavioral Sciences*
13.30 *Economics and the Social Sciences*
13.35 *Information Theory, Automata, Logic Control Theory, Dynamic Programming, Cybernetics*
13.40 *Management Problems, Data Analysis and Processing*
13.45 *Actuarial Science*
13.45.1 *Actuarial and Financial Tables*
13.50 *Humanities, Linguistics*
13.55 *Logic*

14.00 Miscellaneous

14.05 *Mathematical Research, Mathematical Education*

INDEX OF REVIEWS BY AUTHOR OF WORK REVIEWED

Author	*Review Number*	*Classification*	*Vol.*	*Page*
AHMAD, SOHRAB	18	See: IRONS, BRUCE & AHMAD, SOHRAB	39	304
ALBREACHT, J. & COLLATZ, L., Editors	9	6.15	38	653
BECK, WALTER E. & NAJAR, RUDOLPH N.	4	9.05	38	334
de BOOR, CARL & GOLUB, GENE H., Editors	12	2.00	38	654
COLLATZ, L.	9	See: ALBREACHT, J. & COLLATZ, L., Editors	38	653
COLLATZ, L., MEINARDUS, G. & WERNER, H., Editors	8	2.05	38	653
CRANDALL, MICHAEL G., Editor	11	4.00, 5.00	38	654
DIXON, L. C. W., SPEDICATO, E. & SZEGÖ, G. P., Editors	15	2.00	38	654
DOOLAN, E. P., MILLER, J. J. H. & SCHILDERS, W. H. A.	24	4.05.2, 4.10.3, 4.15.3	39	739
ENGELS, H.	21	2.10	39	733
FUJII, H., KIKUCHI, F., NAKAGOWA, T. & USHIJIMA, T., Editors	7	4.05, 5.05	38	653
GEORGE, ALAN & LIU, JOSEPH W.	19	3.35	39	305
GLADWELL, I. & SAYERS, D. K., Editors	13	4.00	38	654
GLOWINSKI, R., LIONS, J. L. & TREMOLIERS, R.	25	5.00, 6.30	39	742
GOLUB, GENE H.	12	See: de BOOR, CARL & GOLUB, GENE H., Editors	38	654
HESTENES, MAGNUS	2	3.10, 3.35	38	332
IRONS, BRUCE & AHMAD, SOHRAB	18	5.10.3	39	304
JONES, WILLIAM B. & THRON, W. J.	17	9.35	39	301
KIKUCHI, F.	7	See: FUJII, H., KIKUCHI, F., NAKAGOWA, T. & USHIJIMA, T., Editors	38	653
KNOPP, M. I., Editor	27	9.00	39	744
KOTA, V. K. B.	20	10.05	39	306
KRONSJÖ, LYDIA I.	5	2.45	38	651
LEVINE, NORMAN	26	See: SALZER, HERBERT E., LEVINE, NORMAN & SERBEN, SAUL	39	743
LIONS, J. L.	25	See: GLOWINSKI, R., LIONS, J. L. & TREMOLIERS, R.	39	742
LIU, JOSEPH W.	19	See: GEORGE, ALAN & LIU, JOSEPH W.	39	305
MEINARDUS, G.	8	See: COLLATZ, L., MEINARDUS, G. & WERNER, H., Editors	38	653
MILLER, J. J. H.	24	See: DOOLAN, E. P., MILLER, J. J. H. & SCHILDERS, W. H. A.	39	739
MITTELMANN, H. D. & WEBER, H., Editors	10	4.15, 5.00	38	654

Author	Review Number	Classification	Vol.	Page
NAJAR, RUDOLPH N.	4	See: BECK, WALTER E. & NAJAR, RUDOLPH N.	38	334
NAKAGOWA, T.	7	See: FUJII, H., KIKUCHI, F., NAKAGOWA, T. & USHIJIMA, T., Editors	38	653
ODEN, J. T., Editor	14	13.15, 5.00	38	654
POWELL, M. J. D.	22	2.05	39	735
SALZER, HERBERT E., LEVINE, NORMAN & SERBEN, SAUL	26	2.05.3	39	743
SAYERS, D. K.	13	See: GLADWELL, I. & SAYERS, D. K., Editors	38	654
SCHILDERS, W. H. A.	24	See: DOOLAN, E. P., MILLER, J. J. H. & SCHILDERS, W. H. A.	39	739
SCHUMAKER, LARRY	6	2.05.6	38	652
SERBEN, SAUL	26	See: SALZER, HERBERT E., LEVINE, NORMAN & SERBEN, SAUL	39	743
SHANKS, DANIEL	1	9.00	38	331
SPEDICATO, E.	15	See: DIXON, L. C. W., SPEDICATO, E. & SZEGÖ, G. P., Editors	38	654
STROUD, A. H.	3	2.10, 4.00	38	333
SZEGÖ, G. P.	15	See: DIXON, L. C. W., SPEDICATO, E. & SZEGÖ, G. P., Editors	38	654
THRON, W. J.	17	See: JONES, WILLIAM B. & THRON, W. J.	39	301
TREMOLIERS, R.	25	See: GLOWINSKI, R., LIONS, J. L. & TREMOLIERS, R.	39	742
USHIJIMA, T.	7	See: FUJII, H., KIKUCHI, F., NAKAGOWA, T. & ISHIJIMA, T., Editors	38	653
VERWER, J. G., Editor	16	5.00	38	655
WEBER, H.	10	See: MITTELMANN, H. D. & WEBER, H., Editors	38	654
WERNER, H.	8	See: COLLATZ, L., MEINARDUS, G. & WERNER, H., Editors	38	653
WIMP, JET	23	2.25	39	736

INDEX OF REVIEWS BY SUBJECT OF WORK REVIEWED

Author	Review Number	Title	Vol.	Page
2.00 Selected Topics in Numerical Analysis				
de BOOR, CARL & GOLUB, GENE H., Editors	12	Recent Advances in Numerical Analysis	38	654
DIXON, L. C. W., SPEDICATO, E. & SZEGÖ, G. P., Editors	15	Nonlinear Optimization Theory and Algorithms	38	654
2.05 *Approximation Theory*				
COLLATZ, L., MEINARDUS, G. & WERNER, H., Editors	8	Numerical Methods of Approximation Theory	38	653
POWELL, M. J. D.	22	Approximation Theory and Methods	39	735

Author	Review Number	Title	Vol.	Page
2.05.3 *Interpolation, Extrapolation*				
SALZER, HERBERT E., LEVINE, NORMAN & SERBEN, SAUL	26	Tables for Lagrangian Interpolation Using Chebyshev Points	39	743
2.05.6 *Splines*				
SCHUMAKER, LARRY	6	Spline Functions: Basic Theory	38	652
2.10 *Numerical Integration*				
ENGELS, H.	21	Numerical Quadrature and Cubature	39	733
STROUD, A. H.	3	Numerical Quadrature and Solution of Ordinary Differential Equations	38	333
2.25 *Evaluation of Series*				
WIMP, JET	23	Sequence Transformations and Their Applications	39	736
2.45 *Algorithms, General Theory*				
KRONSJÖ, LYDIA I.	5	Algorithms, Their Complexity and Efficiency	38	651
3.00 Linear Algebra				
3.10 *Linear Equations*				
HESTENES, MAGNUS	2	Conjugate Direction Methods in Optimization	38	332
3.35 *Sparse Matrices*				
GEORGE, ALAN & LIU, JOSEPH W.	19	Computer Solution of Large Sparse Positive Definite Systems	39	305
HESTENES, MAGNUS	2	Conjugate Direction Methods in Optimization	38	332
4.00 Ordinary Differential Equations				
CRANDALL, MICHAEL G., Editor	11	Nonlinear Evolution Equations	38	654
GLADWELL, I. & SAYERS, D. K., Editors	13	Computational Techniques for Ordinary Differential Equations	38	654
STROUD, A. H.	3	Numerical Quadrature and Solution of Ordinary Differential Equations	38	333
4.05 *Initial Value Problems*				
FUJII, H., KIKUCHI, F., NAKAGOWA, T. & USHIJIMA, T., Editors	7	Numerical Analysis of Evolution Equations	38	653
4.05.2 *One-Step Methods*				
DOOLAN, E. P., MILLER, J. J. H. & SCHILDERS, W. H. A.	24	Uniform Numerical Methods for Problems with Initial and Boundary Layers	39	739
4.10.3 *Finite Difference (Nonshooting) Methods*				
DOOLAN, E. P., MILLER, J. J. H. & SCHILDERS, W. H. A.	24	Uniform Numerical Methods for Problems with Initial and Boundary Layers	39	739
4.15 *Nonlinear Boundary Value and Eigenvalue Problems*				
MITTELMANN, H. D. & WEBER, H., Editors	10	Bifurcation Problems and Their Numerical Solution	38	654
4.15.3 *Finite Difference (Nonshooting) Methods*				
DOOLAN, E. P., MILLER, J. J. H. & SCHILDERS, W. H. A.	24	Uniform Numerical Methods for Problems with Initial and Boundary Layers	39	739
5.00 Partial Differential Equations				
CRANDALL, MICHAEL G., Editor	11	Nonlinear Evolution Equations	38	654

Author	Review Number	Title	Vol.	Page
GLOWINSKI, R., LIONS, J. L. & TREMOLIERS, R.	25	Numerical Analysis of Variational Inequalities	39	742
MITTELMANN, H. D. & WEBER, H., Editors	10	Bifurcation Problems and Their Numerical Solution	38	654
ODEN, J. T., Editor	14	Computational Methods in Nonlinear Mechanics	38	654
VERWER, J. G., Editor	16	Colloquium Numerical Solution of Partial Differential Equations	38	655
5.05 Initial Value Problems				
FUJII, H., KIKUCHI, F., NAKAGOWA, T. & USHIJIMA, T., Editors	7	Numerical Analysis of Evolution Equations	38	653
5.10 Boundary Value Problems				
5.10.3 Finite Element and Other Approximation Methods				
IRONS, BRUCE & AHMAD, SOHRAB	18	Techniques of Finite Elements	39	304
6.00 Other Functional Equations				
6.15 Integral Equations				
ALBREACHT, J. & COLLATZ, L., Editors	9	Numerical Treatment of Integral Equations	38	653
6.30 Variational Equations				
GLOWINSKI, R., LIONS, J. L. & TREMOLIERS, R.	25	Numerical Analysis of Variational Inequalities	39	742
9.00 Number Theory				
KNOPP, M. I., Editor	27	Analytic Number Theory	39	744
SHANKS, DANIEL	1	Solved and Unsolved Problems in Number Theory	38	331
9.05 Mersenne, Fermat, Perfect and Related Numbers				
BECK, WALTER E. & NAJAR, RUDOLPH N.	4	A Lower Bound for Odd Triperfects—Computational Data	38	334
9.35 Continued Fractions and Diophantine Approximation				
JONES, WILLIAM B. & THRON, W. J.	17	Continued Fractions, Analytic Theory and Applications	39	301
10.00 Algebra and Combinatorial Theory				
10.05 Groups, Rings, Fields, Algebras				
KOTA, V. K. B.	20	Table of Reduction of $U(10)$ Partitions Into $SU(3)$ Irreducible Components	39	306
13.00 Applications				
13.15 Engineering Sciences				
ODEN, J. T., Editor	14	Computational Methods in Nonlinear Mechanics	38	654

INDEX OF ERRATA

No.	Author	Title	Vol.	Page
585	BAILLIE, ROBERT	New Primes of the Form $k \cdot 2^n + 1$	38	335
588	BRILLHART, JOHN, LEHMER, D. H. & SELFRIDGE, J. L.	New Primality Criteria and Factorizations of $2^m \pm 1$	39	747
586	CORMACK, G. V. & WILLIAMS, H. C.	Some Very Large Primes of the Form $k \cdot 2^m + 1$	38	335
584	GOLOMB, SOLOMON W.	Properties of the Sequence $3 \cdot 2^n + 1$	38	335

No.	Author	Title	Vol.	Page
589	GRADSHTEYN, I. S. & RYZHIK, I. M.	Table of Integrals, Series, and Products	39	747
587	PETIT BOIS, G.	Tables of Indefinite Integrals	38	335

INDEX OF CORRIGENDA

Author	Title	Vol.	Page
AVDELAS, G. & HADJIDIMOS, A.	Optimum Accelerated Overrelaxation Method in a Special Case	38	657
BAILLIE, ROBERT, CORMACK, G. & WILLIAMS, H. C.	The Problem of Sierpinski Concerning $k \cdot 2^n + 1$	39	308
BLAIR, J. M., EDWARDS, C. A. & JOHNSON, J. H.	Rational Chebyshev Approximations to the Bickley Functions $Ki_n(x)$	38	657
FETTIS, HENRY E.	MTE 582, Math. Comp., v. 36, 1981, p. 320	38	337
FETTIS, HENRY E.	MTE 503, Math. Comp., v. 27, 1973, pp. 451–452	38	657
WILLIAMS, H. C.	Some Primes With Interesting Digit Patterns	39	759

INDEX OF MICROFICHE SUPPLEMENTS

Author	Title	MOC Issue
KÖLBIG, K. S.	Closed Expressions for $\int_0^1 t^{-1} \log^{n-1} t \log^p (1-t)\, dt$	October
WILLS, C. A., BLAIR, J. M. & RAGDE, P. L.	Rational Chebyshev Approximations for the Bessel Functions $J_0(x), J_1(x), Y_0(x), Y_1(x)$	October