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## Buchanzeigen

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J. C. DIAZ, **Mathematics For Large Scale Computing**, Marcel Dekker, Inc., New York, 1989, 345 pages, \$85 (USA, Canada), \$102 (all other countries).

1. On the Gause-Broyden Method for Nonlinear Least-Squares (A. Griemwank and L. Shen) – 2. Parallel Adaptive Algorithms for Multiple Integrals (A. Genz) – 3. A comparison of Hypercube Implementations of Parallel Shooting (H. B. Keller and P. Nelson) – 4. An Asymptotic Induced Numerical Method for the Convection-Diffusion-Reaction Equation (J. S. Scroggs and D. C. Sorensen) – 5. The Rate of Convergence of the Modified Method of Characteristics for Linear Advection Equations in One Dimension (C. N. Dawson, T. F. Dupont, M. F. Wheeler) – 6. A Time-Discretization Procedure for a Mixed Finite Element Approximation of Contamination by Incompressible Nuclear Waste in Porous Media (R. E. Ewing, Y. Yuan, G. Li) – 7. Implementation of Finite Element Alternating-Direction Methods for Vector Computers (S. V. Krishnamachari and L. J. Hayes) – 8. Performance of Advanced Scientific Computers for the Efficient Solution of an Elastic Wave Code for Seismic Modeling (K. E. Jordan) – 9. Generalized Gray Codes and Their Properties (L. S. Barasch, S. Lakshmivarahan, S. K. Dhall) – 10. Nested Block Factorization Preconditioners for Convective-Diffusion Problems in Three Dimensions (G. K. Leaf, M. Minkoff, J. C. Diaz) – 11. Performance of the Chebyshev Iterative Method, GMRES and ORTHOMIN on a Set of Oil-Reservoir Simulation Problems (S. Gomes and J. L. Morales) – 12. A Survey of Spline Collocation Methods for the Numerical Solution of Differential Equations (G. Fairweather and D. Meade).

D. N. DIKRANJAN, I. R. PRODANOV, L. N. STOYANOV, **Topological Groups**, Marcel Dekker, Inc., New York, 1989, 287 pages, \$99.75 (USA, Canada), \$119.50 (all other countries)

1. Existence of characters – 2. Applications of the Følner Theorem – 3. Pontryagin duality – 4. Quasi-torsion elements in topological groups – 5. Minimal abelian groups – 6. Minimality of products of topological abelian Groups – 7. Minimal and totally minimal nonabelian groups.

CHRISTIAN BLATTER, **Lineare Algebra**, Verlag der Fachvereine, Zürich, 1989, 121 Seiten, sFr. 26.—,

1. Literatur – 2. Einführung – 3. Matrizen – 4. Koordinatentransformationen – 5. Lineare Gleichungssysteme – 6. Begriff des Vektorraums – 7. Dimension und Rang – 8. Die Determinante – 9. Lineare Abbildungen – 10. Das charakteristische Polynom – 11. Systeme von linearen Differentialgleichungen – 12. Quadratische Formen, Hauptachsentransformation – 13. Unitäre Räume

CHRISTIAN BLATTER, **Ingenieur Analysis I und II**, 2 Bde, Verlag der Fachvereine, Zürich, 1989, total 524 Seiten, sFr. 29.50/36.—. Bd. I: 1. Grundstrukturen – 2. Funktionen – 3. Differentialrechnung – Bd. II: 4. Integralrechnung – 5. Mehrdimensionale Differentialrechnung – 6. Vektoranalysis.

EMILIO O. ROXIN, **Modern Optimal Control**, Marcel Dekker, Inc., New York, 1989, 437 pages, \$99.75 (USA, Canada), \$119.50 (all other countries).

1. Thirty Years of Differential Games (Leonard D. Berkovitz) – 2. Some Concepts of Optimality for Infinite Horizon Optimal Control and Their Interrelationships (Dean A. Carlson) – 3. Discontinuous Solutions of Bounded Variation to Problems of the Calculus of Variations and of Quasi-Linear Hyperbolic Differential Equations. Integrals of Serrin and Weierstrass (Lamberto Cesari) – 4. Control Problems for Abstract Volterra Functional-Differential Equations (Constantin Corduneanu) – 5. Deterministic Control of Uncertain Systems (M. Corless and George Leitmann) – 6. Explicit Estimates for