Computers Math. Applic. Vol. 17, No. 12, pp. 1587–1588, 1989
Pergamon Press plc. Printed in Great Britain

BOOK REPORTS

The Book Reports section is a regular feature of *Computers & Mathematics with Applications.* It is an unconventional section. The Editors decided to break with the longstanding custom of publishing either lengthy and discursive reviews of a few books, or just a brief listing of titles. Instead, we decided to publish every important material detail concerning those books submitted to us by publishers, which we judge to be of potential interest to our readers. Hence, breaking with custom, we also publish a complete table of contents for each such book, but no review of it as such. We welcome our readers' comments concerning this enterprise. Publishers should submit books intended for review to the Editor-in-Chief,

Professor Ervin Y. Rodin
Box 1040
Washington University
St Louis
MO 63130, U.S.A.

Differential Equations. By David A. Sanchez, Richard C. Allen, Jr and Walter T. Kyner. Addison-Wesley, Reading, Mass. (1988). 752 pages. $40.95.

Contents:
1. First order differential equations
2. Linear second order differential equations
3. Elementary numerical methods
4. The Laplace transform
5. Linear systems of differential equations
6. Nonconstant coefficient second order linear equations and series solutions
7. Nonlinear differential equations
8. More on numerical method
9. Fourier series and partial differential equations

Modern Techniques of Surface Science (Cambridge Solid State Science Series). By D. P. Woodruff and T. A. Delchar. Cambridge Univ. Press, Cambridge (1988). 453 pages. $24.95.

Contents:
1. Introduction
2. Surface crystallography and electron diffraction
3. Electron spectroscopies
4. Incident ion techniques
5. Desorption spectroscopies
6. High field techniques
7. Work function techniques
8. Atomic and molecular beam scattering
9. Vibrational spectroscopies

Solid State Physics, Advances in Research and Applications. Edited by Henry Ehrenreich and David Turnbull. Academic Press, New York (1988). 321 pages. $69.00.

Contents:
1. Theory of heavy fermion systems
2. The theory and application of axial ising models
3. Excitations in incommensurate crystal phases

The Sources of Innovation. By Eric von Hippel. OUP, Oxford (1988). 218 pages. $27.00.

Contents:
1. Overview
2. Users as innovators
3. Variations in the functional source of innovation

4. The functional source of innovation as an economic phenomenon
5. Testing the relationship between the functional source of innovation and expected innovation rents
6. Cooperation between rivals: the informal trading of technical know-how
7. Shifting the functional source of innovation
8. Predicting the source of innovation: lead users
9. Epilogue: applications for innovation management

Numerical Modelling Applications to Marine Systems. Edited by J. Noye. North-Holland. Amsterdam (1987). 296 pages. 150.00 Dfl.

Contents:
1. Numerical modelling of marine systems
2. A three-dimensional numerical model of the Eastern Irish sea
3. Modelling wind-driven flow in shallow systems on the Southwest Australian coast
4. Diagnostic modelling of large-scale convection and other three-dimensional processes in the Coastal Ocean
5. A numerical sediment transport model for application to natural estuaries, harbours and rivers
6. Numerical modelling of internal tides
7. Comparison of finite difference and Galerkin methods in modelling depth-dependent tidal flow in channels
8. An improved open boundary condition for a tidal model of Bass Strait
9. An investigation of open boundary conditions for tidal models of shallow seas
10. Numerical methods for solving the transport equation
11. Finite difference methods for solving the one-dimensional transport equation
12. The application of Lagrangian particle-tracking techniques to modelling of dispersion in the sea
13. Time-splitting the one-dimensional transport equation

Graph Theory and Topology in Chemistry. Edited by R. B. King and D. H. Rouvray. Elsevier, New York (1987). 575 pages. $183.00.

Contents:
1. Knot theory and reaction topology
2. Molecular complexity, system similarity and topological indices
3. Polyhedra, clusters and the solid state
4. Eigenvalues, conjugated systems and resonances
5. Coding, enumeration and data reduction

Switching Handbook, a Guide to Signal Switching in Automated Test Systems. By Keithley Instruments, Inc. (1987). 138 + pages. $9.95.

Contents:
1. The switching function
2. Switching components
3. Example systems
4. Selection guide

Art Gallery Theorems and Algorithms. By Joseph O'Rourke. OUP, Oxford (1987). 282 pages. $45.00.

Contents:
1. Polygon partitions
2. Orthogonal polygons
3. Mobile guards
4. Miscellaneous shapes
5. Holes
6. Exterior visibility
7. Visibility graphs
8. Visibility algorithms
9. Minimal guard covers
10. Three dimensions and miscellany

The Hartley Transform. By Ronald N. Bracewell. OUP, Oxford (1986). 160 pages. $24.95.

Contents:
1. Introduction
2. The Hartley transform
3. Theorems
4. The discrete Hartley transform
5. Digital filtering by convolution
6. Two-dimensional transforms
7. Factorization of the transform matrix
8. The fast algorithm
9. An optical Hartley transform