

*A User's Guide to Operator Algebras*. By Peter A. Fillmore. John Wiley & Sons, New York. (1996). 223 pages. \$59.95.

Contents:

Preface. 1. Fundamentals. 2. Spectrum and order. 3. Examples and constructions. 4. Von Neumann algebras. 5. Representations. 6. Structure theory. 7. Tensor products. 8. Crossed products. 9. Factors. 10.  $K$ -theory. References. Index.

*HTML: The Definitive Guide*. By Chuck Musciano and Bill Kennedy. O'Reilly & Associates, Sebastopol, CA. (1996). 385 pages. \$27.95.

Contents:

Preface. 1. HTML and the World Wide Web. 2. HTML quick start. 3. Anatomy of an HTML document. 4. Text basics. 5. Rules, images, and multimedia. 6. Links and webs. 7. Formatted lists. 8. Forms. 9. Tables. 10. Frames. 11. Netscape dynamic documents. 12. Tips, tricks, and hacks. A. HTML grammar. B. HTML tag quick reference. C. The HTML DTD. D. Character entities. E. Color names and values. Index.

*An Information-Theoretic Approach to Neural Computing*. By Gustavo Deco and Dragan Obradovic. Springer-Verlag, New York. (1996). 261 pages. \$49.95.

Contents:

Acknowledgments. Foreword. 1. Introduction. 2. Preliminaries of information theory and neural networks. Part I. Unsupervised learning. 3. Linear feature extraction: Infomax principle. 4. Independent component analysis: General formulation and linear case. 5. Nonlinear feature extraction: Boolean stochastic networks. 6. Nonlinear feature extraction: Deterministic neural networks. Part II. Supervised learning. 7. Supervised learning and statistical estimation. 8. Statistical physics theory of supervised learning and generalization. 9. Composite networks. 10. Information theory based regularizing methods. References. Index.

*The New Book of Prime Number Records*. By Paulo Ribenboim. Springer-Verlag, New York. (1996). 541 pages. \$59.95.

Contents:

Preface. Guiding the reader. Index of notations. Introduction. 1. How many prime numbers are there? 2. How to recognize whether a natural number is a prime. 3. Are there functions defining prime numbers? 4. How are the prime numbers distributed? 5. Which special kinds of primes have been considered? 6. Heuristic and probabilistic results about prime numbers. Conclusion. Bibliography. The pages that couldn't wait. Primes up to 10,000. Index of tables. Index of names. Subject index.

*Extensions of First Order Logic*. By María Manzano. Cambridge University Press, U.K. (1996). 388 pages. \$59.95.

Contents:

Preface. I. Standard second order logic. 1. Introduction. 2. Second order grammar. 3. Standard structures. 4. Standard semantics. 5. Semantic theorems. II. Deductive calculi. 1. Introduction. 2. Sequent calculi. 3. Soundness theorem in standard semantics. 4. Incompleteness in standard structures. III. Categoricity of second order Peano arithmetic. 1. Introduction. 2. Second order Peano axioms. 3. Categoricity of Peano axioms. 4. Peano models and primitive recursion. 5. Induction models. 6. Induction models and primitive recursion in induction models. IV. Frames and general structures. 1. Introduction. 2. Second order frames. 3. General structures. 4. Algebraic. 5. Logics obtained by weakening the schema of comprehension. 6. Weak second order logic. V. Type theory. 1. Introduction. 2. A relational theory of finite types. 3. Algebraic definition of relational general structures. 4. A functional theory of types. 5. Equational presentation of the functional theory of finite types. VI. Many-sorted logic. 1. Introduction. 2. Structures. 3. Formal many-sorted languages. 4. Semantics. 5. Substitution of a term for a variable. 6. Semantic theorems. 7. The completeness of many-sorted logic. 8. Reduction to one-sorted logic. VII. Applying many-sorted logic. 1. General plan (Applying many-sorted logic to higher order logic). 2. Higher order logic as many-sorted logic (Applying many-sorted logic to modal logic). 3. Modal logic. 4. Propositional modal logic as many-sorted logic. 5. First order modal logic as many-sorted logic (Applying many-sorted logic to dynamic logic). 6. Dynamic logic. 7. Propositional dynamic logic as many-sorted logic. Bibliography. List of notation. Index.

*The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA*. By Diane Vaughan. University of Chicago Press, Chicago, IL. (1996). 575 pages. \$24.95.

Contents:

List of figures and tables. Preface. 1. The eve of the launch. 2. Learning culture, revising history. 3. Risk, work group culture, and the normalization of deviance. 4. The normalization of deviance, 1981-1984. 5. The normalization of deviance, 1985. 6. The culture of production. 7. Structural secrecy. 8. The eve of the launch revisited. 9. Conformity and tragedy. 10. Lessons learned. Appendices. A. Cost/safety trade-offs? Scrapping the escape rockets and the SRB contract award decision. B. Supporting charts and documents. C. On theory elaboration, organizations, and historical ethnography. Acknowledgments. Notes. Bibliography. Index.