

*Bounding Approaches to System Identification.* Edited by Mario Milanese, John Norton, H el ene Piet-Lahanier and  Eric Walter. Plenum Press, New York. (1996). 565 pages. \$135.00.

Contents:

1. Overview of the volume (J.P. Norton). 2. Optimal estimation theory for dynamic systems with set membership uncertainty: An overview (M. Milanese and A. Vicino). 3. Solving linear problems in the presence of bounded data perturbations (B.Z. Kacewicz). 4. Review and comparison of ellipsoidal bounding algorithms (G. Favier and L.V.R. Arruda). 5. The dead zone in system identification (K. Korsman and L. Ljung). 6. Recursive estimation algorithms for linear models with set membership error (G. Belforte and T.T. Tay). 7. Transfer function parameter interval estimation using recursive least squares in the time and frequency domains (P.-O. Gutman). 8. Volume-optimal inner and outer ellipsoids (L. Pronzato and  . Walter). 9. Linear interpolation and estimation using interval analysis (S.M. Markov and E.D. Popova). 10. Adaptive approximation of uncertainty sets for linear regression models (A. Vicino and G. Zappa). 11. Worst-case  $l_1$  identification (M. Milanese). 12. Recursive robust minimax estimation ( . Walter and H. Piet-Lahanier). 13. Robustness to outliers of bounded-error estimators and consequences on experiment design (L. Pronzato and  . Walter). 14. Ellipsoidal state estimation for uncertain dynamical systems (T.F. Filippova, A.B. Kurzhanski, K. Sugimoto and I. Valyi). 15. Set-valued estimation of state and parameter vectors within adaptive control systems (V.M. Kuntsevich). 16. Limited-complexity polyhedral tracking (H. Piet-Lahanier and  . Walter). 17. Parameter-bounding algorithms for linear errors-in-variables models (S.M. Veres and J.P. Norton). 18. Errors-in-variables models in parameter bounding (V. Cerone). 19. Identification of linear objects with bounded disturbances in both input and output channels (Y.A. Merkuryev). 20. Identification of nonlinear state-space models by deterministic search (J.P. Norton and S.M. Veres). 21. Robust identification and prediction for nonlinear state-space models with bounded output error (K.J. Keesman). 22. Estimation theory for nonlinear models and set membership uncertainty (M. Milanese and A. Vicino). 23. Guaranteed nonlinear set estimation via interval analysis (L. Jaulin and  . Walter). 24. Adaptive control of systems subjected to bounded disturbances (L.S. Zhiteckij). 25. Predictive self-tuning control by parameter bounding and worst-case design (S.M. Veres and J.P. Norton). 26. System identification for  $H_\infty$ -robust control design (T.J.J. van den Boom and A.A.H. Damen). 27. Estimation of mobile robot localization: Geometric approaches (D. Meizel, A. Preciado-Ruiz and E. Halbwachs). 28. Improved image compression using bounded-error parameter estimation concepts (A.K. Rao). 29. Applications of OBE algorithms to speech processing (J.R. Deller, Jr.). 30. Robust performances control design for a high accuracy calibration device (M. Milanese, G. Fiorio and S. Malan). Index.

*Foundations for Programming Languages.* By John C. Mitchell. MIT Press, Cambridge, MA. (1996). 846 pages. \$60.00.

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Series foreword. Preface. 1. Introduction. 2. The language PCF. 3. Universal algebra and algebraic data types. 4. Simply-typed lambda calculus. 5. Models of typed lambda calculus. 6. Imperative programs. 7. Categories and recursive types. 8. Logical relations. 9. Polymorphism and modularity. 10. Subtyping and related concepts. 11. Type inference. Bibliography. Index.

*Electronic Publishing on CD-ROM.* By Steve Cunningham and Judson Rosebush. O'Reilly, Sebastopol, CA. (1996). 383 pages. \$36.95 (CD-ROM included).

Contents:

Table of contents. Preface. I. Overview of electronic publishing. 1. Electronic publications. 2. CD-ROM and online publishing. 3. Two electronic titles. II. CD-ROM development. 4. Developing a CD-ROM. 5. Designing electronic documents. 6. *Authoring systems*. 7. Electronic document standards. 8. CD-ROM disc standards. III. CD-ROM manufacturing, marketing, and distribution. 9. Manufacturing CD-ROMs. 10. CD-ROM publishing costs. 11. CD-ROM marketing and distribution. IV. Appendixes. A. Resources. Glossary. Bibliography. Index.

*Mastering Excel: A Problem-Solving Approach.* By James Gips. John Wiley and Sons, New York. (1997). 324 pages. \$35.95.

Contents:

I. Fundamentals. 1. Introduction. 2. Creating simple worksheets. 3. Changing the appearance of the worksheet. 4. Simple functions and the Fill operation. 5. Operations on cells. 6. Relative vs. absolute addressing. 7. Common operations. 8. Workbooks with multiple worksheets. 9. The problem-solving process. II. Features. 10. Charts. 11. Logical functions. 12. Functions related to IF. 13. Dates and times. 14. Financial functions. 15. RAND and simulation. 16. Data management with lists. 17. Data analysis using the Analysis ToolPak. 18. Goal seeking and the Solver. Index.

*Axiomatic Domain Theory in Categories of Partial Maps.* By Marcelo P. Fiore. Cambridge University Press, Cambridge, U.K. (1996). 240 pages. \$54.95.

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Preface. 1. Introduction. 2. Categorical preliminaries. 3. Partiality. 4. Order-enriched categories of partial maps. 5. Data types. 6. Recursive types. 7. Recursive types in Cpo-categories. 8. FPC. 9. Computational soundness and adequacy. 10. Summary and further research. A. Lemma 8.4.4. B. Theorem 8.6.6. C. Lemma 9.1.3. D. Propositions D.0.1 and D.0.2. Bibliography. Index. Symbol index.