Selected Papers on Automath. Edited by R. P. Nederpelt, J. H. Geuvers and R. C. De Vrijer. Elsevier, Amsterdam. (1994). 1024 pages. $214.25, Dfl. 375.00.

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Preface. Contents. Hints for the reader. Notation. Introduction. Twenty-five years of Automath research (R.P. Nederpelt and J.H. Geuvers). Part A. Motivation and exposition. 1. Verification of mathematical proofs by a computer (N.G. de Bruijn). 2. The mathematical language Automath, its usage, and some of its extensions (N.G. de Bruijn). 3. A description of Automath and some aspects of its language theory (D.T. van Daalen). 4. Formalization of classical mathematics in Automath (J. Zucker). 5. A survey of the project Automath (N.G. de Bruijn). 6. The language theory of Automath. Chapter I, Sections 1–5 (Introduction) (D.T. van Daalen). 7. Reflections on Automath (N.G. de Bruijn). 8. Type systems—Basic ideas and applications (R.P. Nederpelt). Part B. Language definition and special subjects. 1. Description of AUT-68 (L.S. van Benthem Jutting). 2. AUT-SL, a single line version of Automath (N.G. de Bruijn). 3. Some extensions of Automath: The AUT-4 family (N.G. de Bruijn). 4. AUT-QE without type inclusion (N.G. de Bruijn). 5. Checking Landau's "Grundlagen" in the Automath system. Appendix 9 (AUT-SYNT) (L.S. van Daalen). 6. The language theory of Automath (Chapter VIII, 1 and 2 (AUT-II) (D.T. van Daalen). 7. Generalizing Automath by means of a lambda-typed lambda VIII (N.G. de Bruijn). 8. Lambda calculus extended with segments (Chapter 1, Sections 1.1 and 1.2 (Introduction) (H. Balsters). Part C. Theory. 1. A normal form theorem in a λ-calculus with types (L.S. van Benthem Jutting). 2. Lambda calculus notation with nameless dummies, a tool for automatic formula manipulation, with application to the Church-Rosser theorem (N.G. de Bruijn). 3. Strong normalization in a typed lambda calculus with lambda structured types (R.P. Nederpelt). 4. Big trees in a λ-calculus with λ-expressions as types (R.C. de Vrijer). 5. The language theory of Automath. Parts of Chapters II, IV, V–VIII (D.T. van Daalen). 6. The language theory of Λ_∞, a typed λ-calculus where terms are types (L.S. van Benthem Jutting). Part D. Text examples. 1. Example of a text written in Automath (N.G. de Bruijn). 2. Checking Landau's "Grundlagen" in the Automath system. Parts of Chapters 0, 1 and 2 (Introduction, Preparation, Translation) (L.S. van Benthem Jutting). 3. Checking Landau's "Grundlagen" in the Automath system. Chapter 4 (Conclusions) (L.S. van Benthem Jutting). 4. A text fragment from Zucker's "Real Analysis" (L.S. van Benthem Jutting and R. C. de Vrijer). 5. Checking Landau's "Grundlagen" in the Automath system. (Appendices 3 and 4 (The PN-lines; Excerpt for "Satz 27") (L.S. van Benthem Jutting). Part E. Verification. 1. A verifying program for Automath (I. Zandleven). 2. Checking Landau's "Grundlagen" in the Automath system. (Parts of Chapter 3 (Verification) (L.S. van Benthem Jutting). 3. An implementation of substitution in a λ-calculus with dependent types (L.S. van Benthem Jutting). Part F. 1. Set theory with type restrictions (N.G. de Bruijn). 2. Formalization of constructivity in Automath (N.G. de Bruijn). 3. The Mathematical Vernacular, a language for mathematics with typed sets (N.G. de Bruijn). 4. Relational semantics in an integrated system (R.M.A. Wieringa). 5. Computer program semantics in space and time (N.G. de Bruijn). Bibliography. References. Indexes. Index of names. Index of notations. Index of subjects.

Humour the Computer. Edited by Andrew Davison. MIT Press, Cambridge, MA. (1995). 226 pages. $13.95.

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Preface. Moby Dick 2.1 (Kenneth M. Sheldon). A standard for the transmission of IP datagrams on avian carriers (David Waitzman). A problem in the making (Darryl Rubin). How I bought my first computer (Larry R. Custead). BOHF (Part 1) (Simon Travaglia). The generic word processor (Philip Schrodt). Natural upgrade path (Christopher Lishka). The case of the bogus expert (Part 1) (Kris Hammond). Ordinary people tell how they use their personal computers (Lucinda Luongo). I am the very model of a genius computational (Jonathan R. Partington). Zork, RAMS and the curse of Ra: Computo, ergo sum (Curt Suplee). Laptop in Colombo puts Campbell in the soup (Lai See). Masters of computer science (Lindsay Marshall). You'd better love your BLANK computer: The generic computer book (Duncan Mackenzie). Shakespeare on programming (Michael A. Covington). Evil aliens control IBM (Freddy Smarm). Mother should have warned you! (Paul Bonner). BOFH (Part 2) (Simon Travaglia). Latest Sun and IBM announcements (Chuck Musciano). Twelve ways to fool the masses when giving performance results on parallel computers (David H. Bailey). The case of the bogus expert (Part 2) (Kris Hammond). Real programmers don't use Pascal (Ed Post). Gateway to heaven (Eileen Tronolone). Zen and the art of software documentation (W.C. Carlson). The Unix philosophy (Anonymous). Field replaceable mouse balls (Anonymous). Babbage—The language of the future (Tony Karp). Gulliver's computer (Jonathan Swift). "Uncle Bill" is in the driver's seat! (Anonymous). Breathlock service to go companywide (Anonymous). To my darling husband (Anonymous). Computer-based predictive writing (Peter J. Denning). Making your serviceman feel welcome (Anonymous). Man, bytes, dog (James Gorman). Microsloshed walls (Trygve Lode). The tin men (Michael Frayn). A user's view from the trailing edge (William E. Kost). Lisp: They may also serve, who decline to enlist (Robert M. Baer). The case of the bogus expert (Part 3) (Kris Hammond). Alternatives to OSI (Jock C. St. Martin). A salutory tale of software development (Anonymous). You get what you pay for? (Stephen Manes). You can't fool 'em down on the farm (Anonymous). BOFH (Part 3) (Simon Travaglia). ADA: The devil's work (Herman Higgins). Netmail spreads common cold (Craig Milo Rogers). I know what's wrong with my computer (Anonymous). What is technical harassment (Rick Fadler). I'm just a two-bit programmer on a sixteen-bit machine (David S. Platt). If architects had to work like programmers (J. David Ruggiero). VAX and IBM (Anonymous). The Australian fifth degeneration project (Lee Naish). An ancient rope-and-pulley computer is unearthed in the jungle of Apraphul (A.K. Dewdney). The VAXorcist (Christopher Russell). Small ads (Lindsay Marshall). La Boite Bleue (William A. Rennie). The difference between hardware and software (Anonymous). User friendly? You must be joking (Dan Greenberg). A day in the life of a network manager

(Larry R. Custead). The complexity of songs (Donald E. Knuth). Write in C (Anonymous). A simplified guide to hardware maintenance (David H. Ahl). A linguistic contribution to goto-less programming (R. Lawrence Clark). BOFH (Part 4) (Simon Travaglia). The how-to-choose-a-computer-book book (Russel Griffin and Victor Miller). The case of the bogus expert (Part 4) (Kris Hammond). A parable about generality in architecture (Anonymous). Taking a stroll down Babel Street (Peter J. Brown). Please remove this label (Espen Andersen). Productivity in computer science (Danny Cohen). Is big beautiful: Some computer cartoons from the 1960's (Greg Michaelson). Creators admit Unix and C were a hoax (Anonymous). The Uzi versus the computer (Anonymous). The church of the cyber-spiritualists (Andrew Davison). Personal computing (Evad Lha). BOFH (Part 5) (Simon Travaglia). Out of the mouths of babes (Eve R. Wirth). Computers don't argue (Gordon R. Dickson). Transcripts from the General Motors HelpLine (Michael Edward Chastain). Related reading.

Variational Inequalities and Network Equilibrium Problems. Edited by F. Giannessi and A. Maugeri. Plenum Press, New York. (1995). 305 pages. $89.50.
Contents:

1. On a separation approach to variational inequalities (C. Antoni). 2. Traffic scheduling in telecommunication systems and network flow (M. Bonucceli). 3. On the duality theory for finite dimensional variational inequalities (M. Castellani and G. Mastroeni). 4. Some properties of periodic solutions of linear control systems via quasi-variational inequalities (P. Cubiotti). 5. Generalized quasi-variational inequalities and traffic equilibrium problem (M. De Luca). 6. Vector variational inequality and geometric vector optimization (K.-H. Elster and R. Elster). 7. Testing a new class of algorithms for nonlinear complementarity problems (F. Facchinei and J. Soares). 8. Equilibrium in transport networks with capacity constraints (P. Ferrari). 9. Separation of sets and gap functions for quasi-variational inequalities (F. Giannessi). 10. Stability of monotone variational inequalities with various applications (J. Gwinner). 11. A primal-dual proximal point algorithm for variational inequality problems (K. Iwaoka, M. Fukushima and T. Ibaraki). 12. Relations between t-, s-, z-domain descriptions of periodically-switched networks (M. Köksal). 13. On side constrained models of traffic equilibria (T. Larsson and M. Patriksson). 14. Advantages and drawbacks of variational inequalities formulations (P. Marcotte). 15. Variational and quasi-variational inequalities in network flow models. Recent developments in theory and algorithms (A. Maugeri). 16. A variational inequality associated to a scalar conservation law with unilateral constraints (M.K.V. Murthy). 17. Continuity of the solution set of homogeneous equilibrium problems and linear complementarity problems (W. Oettli and N.D. Yen). 18. Tensor approximations of smooth nonlinear complementarity systems (T. Rapcsák). 19. Basic existence theorems for generalized variational and quasi-variational inequalities (B. Ricceri). 20. Sensitivity analysis of variational inequalities by normal-map techniques (S. Robinson). 21. Monotone relations and network equilibrium (R.T. Rockafellar). 22. Generalized monotonicity-concepts and uses (S. Schaible).

Technoscientific Imaginaries: Conversations, Profiles, and Memoirs. Edited by George E. Marcus. University of Chicago Press, Chicago. (1995). 560 pages. $65.00 (cloth), $22.50 (paper).
Contents:

Introduction (George E. Marcus). I. Scientists, families, and friends. 1. Cornucopions of history: A memoir of science and the politics of private lives (Livia Polányi). 2. Eye(I)ing the sciences and their signifiers (language, tropes, autobiographers): InterViewing for a cultural studies of science and technology (Michael M.J. Fischer). II. Mind, body, and science. 3. Twenty-first-century PET: Looking for mind and morality through the eye of technology (Joseph Dumit). 4. Medicine on the edge: Conversations with oncologists (Mary-Jo Del Vecchio Good, Irene Kuter, Simon Powell, Herbert C. Hoover, Jr., Maria E. Carson, and Rita Linggood). III. Science, Inc. 5. Reflections on fieldwork in Alameda (Paul Rabinow). 6. Innocence and awakening: Cyberdämmerung at the Ashibe Research Laboratory (Allucquére Rosanne Stone). 7. The world of industry-university-government: Reimaging R&D as America (Gary Lee Downey). IV. Arms and the scientist. 8. Trust but verify: Science and policy negotiating nuclear testing treaties—Interviews with Roger Eugene Hill (Diana L.L. Hill). 9. Becoming a weapons scientist (Hugh Gusterson). V. Science and the hope of nations. 10. Rehabilitating science, imaging "Bhopal" (Kim Laughlin). 11. Of beets and radishes: Desovietizing Lithuanian science (Kathryn Milun(aitis)). 12. Andrzej Staruszkiewicz, physicist (Leszek Koczanowicz). 13. Bachigai (out of place) in Ibaraki: Tsukuba Science City, Japan (Sharon Traweek). VI. Science beheld. 14. Bitter faiths (Kathleen Stewart). 15. Confabulating Jurassic science (Mario Biagioli). Discussions: Excerpts from the Collective Editorial Meeting. VII. A look backward: Perilous states revisited. 16. Insurgent urbanism: Interactive architecture and a dialogue with Craig Hodgetts (James Holston). 17. Kith and kin in borderlands (Gundrun Klein). VIII. A look forward: A preview of Volume 3. 18. Imagining in-formation: The complex disconnections of computer networks (Christopher Pound). Contributors. Index.

Cross-Level Inference. By Christopher H. Achen and W. Phillips Shively. University of Chicago Press, Chicago. (1995). 248 pages. $55.00 (cloth), $18.95 (paper).
Contents:

1. Cross-level inference. 2. Ecological regression and its extensions. 3. Bias in Goodman ecological regression. 4. Problems of specification in cross-level models. 5. Relaxing the Goodman assumptions. 6. Relaxing the Goodman assumptions. 7. Models with unobservable variables. 8. Tabular approaches. 9. Contextual studies and aggregation. References. Index.