

entitled *An Introduction to Automata Theory* consists of chapters on finite automata (including circuits), a chapter on Turing machines, and a chapter on Post systems and context-free languages. The last section of the book has chapters on partial recursive functions, computational complexity, algebraic decomposition theory, stochastic automata, and constructors. Unfortunately, the mathematical side of Arbib's book is the weakest. There are a number of errors in the proofs. Many arguments are sketched vaguely, and nontrivial gaps are left. In some cases, proofs are lifted from the literature (almost word for word). This is unfortunate, since proofs in the open literature often omit steps too difficult for students to supply. To summarize, Arbib's book is an excellent survey of the different sides of automata theory, but I would not recommend it as a textbook.

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New Journals Received

Artificial Intelligence. An International Journal. Vol. 1, Nos. 1 and 2 (combined), Spring 1970. Four numbers per volume. Editor-in-chief: Bernard Meltzer (University of Edinburgh). Associate editor: Bertram Raphael (Stanford Research Institute). American Elsevier Publishing Co., 52 Vanderbilt Ave., New York, N.Y. \$20 plus \$1 postage; single numbers \$6.50, double numbers \$13.

Behavioral Research in Highway Safety. An Independent Journal. Vol. 1, No. 1, January 1970. Quarterly. Editor: Theodore K. Behavioral Research in Highway Safety, 2852 Broadway, New York, N.Y. \$12.

Comparative and General Pharmacology. Vol. 1, No. 1, March 1970. Quarterly. Editor: G. A. Kerkutt (University of Southampton). Scientifica, 823-825 Bath Road, Bristol, England. \$40; single copy \$11.

Computer Programs in Biomedicine. An International Journal. Vol. 1, No. 1, January 1970. Quarterly. Managing editor: W. Schneider (Uppsala University Data Center). North-Holland Publishing Co., P.O. Box 3489, Amsterdam. \$30.

Environmental Pollution. An International Journal. Vol. 1, No. 1, July 1970. Quarterly. Editor: Kenneth Mellanby (Monks Wood Experimental Station, Huntingdon, England). Elsevier Publishing Co., Ripple Road, Barking, Essex, England. \$15.60.

Ferroelectrics. Vol. 1, No. 1, March 1970. Four issues per volume. Editors: I. Lefkowitz (Philadelphia) and G. W. Taylor (Princeton). Gordon and Breach, 150 Fifth Ave., New York, N.Y. To institutions \$53, to individuals \$14.50.

Indian Journal of Pure and Applied Mathematics. Vol. 1, No. 1, January 1970. Quarterly. Executive Editor: F. C. Auluck (Delhi). Editor of Publications, National Institute of Sciences of India, Bahadur Shah Zafar Marg, New Delhi 1. \$12; single issue \$4.

Inorganic Macromolecules Reviews. The Chemistry, Physics and Technology of Macromolecular Inorganic Compounds and Materials. Vol. 1, No. 1, January 1970. Quarterly. Editors: F. G. R. Gimblett and K. A. Hodd (Brunel University, London). Elsevier Publishing Co., P.O. Box 211, Amsterdam. Dfl. 90 plus 4.50 postage.

The International Journal of Biochemistry. Vol. 1, No. 1, February 1970. Bimonthly. Editor: G. A. Kerkut (University of Southampton). Scientifica, 823-825 Bath Road, Bristol, England. \$40; single copy \$8.

Journal of Behavior Therapy and Experimental Psychiatry. An Interdisciplinary Journal. The journal of the Behavior Therapy Society. Vol. 1, No. 1, March 1970. Quarterly. Editor: Joseph Wolpe (Temple University Medical School). Pergamon Press, Fairview Park, Elmsford, N.Y. To institutions \$35; to individuals \$12; to members of the American Psychological and Psychiatric Associations \$9; to students and residents \$6.

Journal of Molecular and Cellular Cardiology. Vol. 1, No. 1, March 1970. Four issues per volume. Editors: R. J. Bing (Huntington Memorial Hospital, Pasadena) and L. H. Opie (Hammersmith Hospital, London). Academic Press, 111 Fifth Ave., New York, N.Y. \$15 plus 50¢ postage.

Journal for Research in Mathematics Education. Vol. 1, No. 3, May 1970. Quarterly. Editor: David C. Johnson (University of Minnesota). National Council of Teachers of Mathematics, 1201 16th St. NW, Washington, D.C. \$6; to members (concurrently with membership) \$5.

Microstructures. An Official Journal of the International Metallographic Society. Vol. 1, No. 1, August-September 1970. Bimonthly. Editors: Hal Spector and Martin H. Waldman. A. Z. Publishing Corp., 647 North Sepulveda Blvd., Bel Air, Los Angeles. \$15; single issue \$3.

Nouvelle revue d'optique appliquée. Vol. 1, No. 1, January-February 1970. Bimonthly. Editor: R. Dupeyrat (Faculté des Sciences de Paris). Masson et Cie., 120, Boulevard Saint-Germain, Paris 6°. 146 F.

Research Communications in Chemical Pathology and Pharmacology. Vol. 1, No. 1, January 1970. Six numbers per volume. 10 Oakdale Drive, Westbury, N.Y. To institutions \$18, to individuals \$12.

Nordic Hydrology. An International Journal. Vol. 1, No. 1, March 1970. Quarterly. Editor: Arne Forsman (Toppbrinken 16-18, S-163, Spånga, Sweden). Munksgaard, 47 Prags Blvd., Copenhagen. \$17.10.

Studies in History and Philosophy of Science. Vol. 1, No. 1, May 1970. Quarterly. Editors: Gerd Buchdahl (University of Cambridge) and L. L. Laudan (University of Pittsburgh). Macmillan (Journals) Ltd., 4 Little Essex St., London.

\$13.50, Canada \$14.50; single copy 30s.

Theoretical Population Biology. An International Journal. Vol. 1, No. 1, May 1970. Editors: J. F. Crow (University of Wisconsin); S. Karlin (Stanford University); N. Keyfitz (University of California, Berkeley); R. MacArthur (Princeton University). Academic Press, 111 Fifth Ave., New York, N.Y. Per calendar year (3 issues in 1970), \$16 to institutions, \$10 to individuals.

Thermochimica Acta. Vol. 1, No. 1, March 1970. Bimonthly. Editor: W. W. Wendland (University of Houston). Elsevier Publishing Co., P.O. Box 211, Amsterdam. \$22.50 plus \$1.50 postage.

Books Received

Abuse of Central Stimulants. A symposium, Stockholm, November 1968. Folke Sjoqvist and Malcolm Tottie, Eds. Raven, New York, 1969. 536 pp., illus. \$9.75.

Advances in Behavior Therapy, 1968. A symposium, San Francisco, August 1968. Richard D. Rubin and Cyril M. Franks, Eds. Academic Press, New York, 1969. xviii, 246 pp., illus.

Advances in X-Ray Analysis. Vol. 13. Burton L. Henke, John B. Newkirk, and Gavin R. Mallett, Eds. Proceedings of a conference, Denver, Colo., August 1969. Plenum, New York, 1970. xii, 682 pp., illus. \$25.

Aerodynamics for Engineering Students. SI Units. E. L. Houghton and A. E. Brock. St. Martin's, New York, ed. 2, 1970. viii, 458 pp., illus. \$15.

Air Pollution and Its Control. Wayne T. Sproull. Exposition Press, New York, 1970. 110 pp., illus. \$4.

Analyse binaire. R. L. Vallée. Masson, Paris, 1970. Vol. 1, Théorie et applications aux circuits combinatoires (iv, 152 pp., illus. Paper, 60 F); vol. 2, Clef des automates numériques (iv, 188 pp., illus. Paper, 80 F).

Annual Review of Plant Physiology. Vol. 21. Leonard Machlis, Winslow R. Briggs, and Roderic B. Park, Eds. Annual Reviews, Palo Alto, Calif., 1970. x, 654 pp., illus. \$10.

Architectural Acoustics. Anita Lawrence. Elsevier, New York, 1970. xvi, 224 pp., illus. \$11.75.

Automatic Data Processing. Principles and Procedures. Elias M. Awad. Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1970. xvi, 496 pp., illus. \$13.25; student's edition, \$9.95.

Biologie et physiologie des éléments nerveux. P. Laget. Masson, Paris, 1970. viii, 174 pp., illus. Paper, 29 F. Structures et fonctions du système nerveux, vol. 1.

Biology and Its Relation to Mankind. A. M. Winchester. Van Nostrand Reinhold, New York, ed. 4, 1969. x, 726 pp., illus.

Can the Red Man Help the White Man? A Denver Conference with the Indian Elders. June 1968. Sylvester M. Morey, Ed. Church, New York, 1970. xii, 118 pp. Paper, \$1.95.

Carbonium Ions. George A. Olah and
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