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Checklist of New Titles
April 1982

A selection of recent and new titles just published for the computer scientist and engineer from the leading professional society in the field!

Please send us these new titles:

☐ Tutorial: COMPUTER GRAPHICS (2nd Ed.)
  by John C. Belfast and Kenneth S. Booth

Serving as an introductory course in computer graphics, this popular tutorial has been updated and revised to reflect the increasing developments and use of computer graphics in all areas. Addressing fundamental issues in hardware and software, with an emphasis on decision-making in the acquisition of computer graphics equipment, the second edition has expanded sections covering raster graphics, interactive graphics, and visible surface algorithms. Examples of computer graphics applications in engineering and research are included. Includes 45 reprints, 17 of which are new and simply illustrated in full color.
425 (EH0194-3): April 1982, 570 pp. $36.00; M. $25.00

☐ Tutorial: VLSI TECHNOLOGIES—THROUGH THE 80S AND BEYOND
  by Dennis J. McGreevy and Kenneth A. Pickor

The semiconductor industry, now in its fourth decade of growth, is experiencing unprecedented demand from all facets of government, industry, and science. This has created highly competitive R&D efforts to reduce physical size of these chips while improving performance to cost characteristics. In this tutorial, an attempt is made to chart the most probable trends in microelectronics technology, starting with existing trends today and projecting them into the remainder of this decade. Parameters to which to identify and describe past and future trends are discussed, and market demands and projections of anticipated supply are also presented. A detailed discussion of the trends in various VLSI technologies in which such factors as size, complexity, and cost are also examined.
424 (EH0192-3): April 1982, 345 pp. $25.00; M. $18.75

☐ Proceedings: 1982 WORKSHOP ON INDUSTRIAL APPLICATIONS OF MACHINE VISION—Raleigh, North Carolina

Covering one of the most important areas of CAD/CAM and robotics, this workshop featured a truly international selection of presentations by speakers from around the world. With the focus primarily on industrial applications, papers and sessions covered such topics as: radiometric views of vision systems, prototyping in high-technoglyphics, inspection technologies and applications, 3-D vision techniques, and machine tool vision systems.
412 (BC0175-5): May 1982, 238 pp. $25.00; M. $18.75

☐ Proceedings: FIRST ANNUAL PNEUMATIC CONFERENCE ON COMPUTERS AND COMMUNICATIONS—Phoenix, Arizona

Sponsored by the IEEE Computer and Communications Societies in association with the IEEE Phoenix Section, this conference had the theme “Control of Complexity” in recognition of the symbolic relationship between computers and communications. With the growth of semiconductor applications, use of the devices has accelerated to unprecedented levels in complex computer and communication applications. The focus of the conference is to recognize the opportunities resulting from these increased use and also accompanying problems that man, machine, and industry are facing today and will face tomorrow. Featured are over 80 papers in 28 sessions.
413 (BC0176-6): May 1982, 444 pp. $32.00; M. $24.00

☐ Proceedings: 5TH ANNUAL INTERNATIONAL SYMPOSIUM ON COMPUTER ARCHITECTURE—Austin, Texas

Cosponsored by the ACM SIGARCH and the IEEE Computer Society, this annual conference focuses on current trends in computer networks, microprocessor systems, software/hardware interfaces, performance of computer systems, hardware descriptive languages, and computer architecture education.
411 (BC0174-3): April 1982, 336 pp. N.M. $28.00; M. $21.00

☐ Proceedings: 14TH SOUTHEASTERN SYMPOSIUM ON SYSTEM THEORY—Blackburg, Virginia

Designed to promote better communications between the EE and Systems faculties of various Southeastern universities, this annual conference focuses on the general development of system theory, methodology and practice. Topics covered include process control and modeling, electric power systems, transportation, communication, and economic systems; computer systems; estimation theory, etc.
409 (BC0172-5): April 1982, 318 pp. $25.00; M. $18.75

☐ Tutorial: CONTEXT-DIRECTED PATTERN RECOGNITION AND MACHINE INTELLIGENCE TECHNIQUES FOR INFORMATION PROCESSING
  by Yeh-Han Pao and George W. Emst

A high-technology information industry is evolving in which powerful information processing methodologies are required to support hardware systems. This tutorial addresses the growing evidence that indicates that the combined use of pattern recognition and artificial intelligence methodologies tend to result in techniques that are far more powerful than would have been available otherwise. Contains 41 papers.
423 (EH0193-3): February 1982, 580 pp. N.M. $30.00; M. $22.50


Designed to answer the question of what technologies one needs to design and use custom and "semicustom" VLSI arrays, this tutorial attempts to provide a single source of information on the major concerns of VLSI designers today. For the least expensive and most expedient development of VLSI, the author suggests a completely integrated CAD system with specific processing requirements. Essential: expanding the concepts further, the author provides bridging materials to enable designers, implementers, and users to realize the effects of their activities on other aspects of VLSI design.
386 (EH0191-1): February 1982, 480 pp. N.M. $25.00; M. $18.75

☐ Proceedings: INFOCOM ’82—Las Vegas, Nevada

Organized jointly by the IEEE Computer Society and the Communications Society, this conference was created in recognition of the fact that computers and communications are becoming more and more intertwined. Sessions covered design and analysis of computer networks, network experiments and design techniques, communications protocols, local computer networks, distributed computer systems, emerging applications of networks and communications, hardware design considerations, etc.
408 (BC0174-9): March 1982, 248 pp. N.M. $25.00; M. $18.75

☐ Proceedings: 15th Annual Simulation Symposium—Tampa, Florida

Sponsored by the IEEE Computer Society, ACM, SCS, and IMACS, this annual symposium provides a continuing forum for the interchange of ideas, techniques, and applications in the field of simulation. Although the main emphasis is on digital discrete-event simulation, other techniques are presented. Typical sessions include: industrial applications, avionics simulation, corporate management, simulation languages, biomedical applications, communication applications, etc.
407 (BC0174-2): March 1982, 368 pp. N.M. $25.00; M. $18.75

☐ Proceedings: COMPCOM Spring 82—San Francisco, California

Featuring a theme of "High Technology in the Information Industry," this year's annual Spring conference was oriented toward bringing computer technology to the public. Sessions covered interactive graphics tools, speech input/output, VLSI architectures, local network technologies, impact of personal computers on education, office systems, etc.
397 (BC0173-8): February 1982, 480 pp. N.M. $30.00; M. $22.50

☐ Proceedings: 15th Annual ASILOMAR CONFERENCE ON CIRCUITS, SYSTEMS & COMPUTERS—Pacific Grove, California

Held in November annually, this conference is devoted to the presentation of new ideas and preliminary research results in various areas related to circuits, systems, and computers. Sessions cover such topics as: VLSI, digital and analog filtering, topological applications, image processing, energy and socioeconomic systems, session applications, microprocessor-based systems, microwave circuitry, etc.
383 (BC0174-1): February 1982, 496 pp. N.M. $30.00; M. $22.50

☐ Proceedings: MICRO-DECON ’82—Newark, Delaware

Intended to promote technical interchange among industrial and educational institutions in the Delaware area, this annual conference is increasingly attracting an international audience. The proceedings cover such topics as microprocessors in signal processing, hardware, data management using micros, control systems, languages, and algorithms, etc.
405 (BC0176-1): March 1982, 128 pp. N.M. $20.00; M. $15.00

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