◈ IEEE publications bulletin

This Bulletin is the official announcement vehicle for IEEE publications, and information and educational services. Its purpose is to list as they become available all conference records, standards, special issues of Transactions and Journals, and other nonperiodic publications that may be purchased from IEEE Service Center. The IEEE Publications Order Number is shown in boldface near the end of every entry.

Conference Publications

The publications listed below have become available since the last issue of this bulletin and, except as noted, were sent automatically to present subscribers to the appropriate option and suboption of the IEEE Open Order Plan (OOP). All conference publications are identified by appropriate OOP suboption codes. For completeness, the listing includes special issues or sections of IEEE periodicals that are devoted to IEEE conferences, as well as Conference Publications in the strict sense. Out-of-Stock items may be found in the Engineering Societies Library in New York City and in all libraries that subscribe to OOP.

For your convenience, the LC catalog card number is printed inside IEEE publications; all pre-assigned LC numbers are announced in the entries below. The standard availability of LC cards for pre-assigned numbers is approximately six months after publication date.

Aerospace and Electronics Conference, 32nd IEEE National (NAECON), held May 20-22, 1980 in Dayton, OH; sponsored by IEEE Dayton Section and IEEE AES, *Proceedings,* 3 vols., 1295 pp., (Page numbers on the title page are inaccurate. The three volumes do not preisely begin and end with the page numbers indicated), LC 79-640977 (serials entry), ISSN 0547-3578, $60.00 **80CH1554-5 (OOP 1C)**

Coverage: Forty-one technical sessions comprehensively cover the field. They are concerned with: flight-essential avionics; digital technology; life-cycle cost management; command, control, and communications; commercial applications; sensor and weapon technology; software engineering and management.

Antennas and Propagation Society (AP-S) International Symposium, 1980 IEEE, [and] USNC/URSI Meeting, held June 2-6, 1980 in Quebec, Canada; sponsored by IEEE AP and U.S. National Committee of the International Union of Radio Science. *AP-S Digest* (contains only AP-S papers except for one plenary session with four contributions from Joint AP-S—USNC/URSI), 2 vols., 766 pp., LC 80-80679 (preassigned), $40.00. **80CH1557-8 (OOP 1D)**. *Program and Abstracts of Papers from USNC/URSI* available from Universite Laval, Cité Universitaire, Quebec, Canada.

Coverage: Some of the topics featured in the thirty-one technical sessions are millimeter wave, dipole and slot, satellite, horn, adaptive and active, reflector, vehicular, offset reflector and lens, microstrip, and wire antennas; fiber and guided wave optics; interferometry; adaptive antenna and satellite antenna systems; phased, HF to UHF, and microstrip arrays; measurements and calculations; radar; transients; propagation; inverse scattering; etc.

Bioengineering Conference, 8th Northeast (formerly New England [Northeast] Bioengineering Conference), held March 27-28, 1980 in Cambridge, MA; sponsored by IEEE EMB, MIT, and ASEE. *Proceedings,* 552 pp., $45.00. **80CH1574-3 (OOP 1F)**

Coverage: Different aspects of bioengineering are covered in twenty-three technical sessions: biomaterials and bone; instrumentation and diagnostics; computer applications; fracture healing; ultrasonic methods; eye and vision; cancer epidemiology; cardiovascular function, monitoring, instrumentation, and diagnosis; implantable devices; cell imaging; rehabilitation; pulmonary function; dynamic modeling; tomography and imaging; biomechanics; neural signals and electrodes; simulation.

Carnahan Conference on Crime Countermeasures *see* Crime Countermeasures, [14th] Carnahan Conference on

Communications, 16th [IEEE] International Conference on (ICC 80), held June 8-12, 1980 in Seattle, WA; sponsored by IEEE CSCB. *Conf. Record,* 3 vols., approx. 1100 pp., LC 72-194957 (serials entry), $50.00. **80CH1506-5** (printed in error in the publication as 80CH1505-6) (OOP 1C)

Coverage: Some of the topics covered in the sixty-two technical sessions include: satellite communications; digital networks, switching, and modulation techniques; fiber optics; microwave; software; analog systems; videotex; computer communication networks; radio; etc. The papers are mostly of the tutorial or state-of-the-art review type.

Computer Network Protocols *see* Trends and Applications: 1980 Computer Network Protocols

Crime Countermeasures, [14th] Carnahan Conference on, held May 14-16, 1980 in Lexington, KY; sponsored by University of Kentucky, IEEE Lexington Section, and IEEE AES; edited by John S. Jackson and R. William De Vore. *Proceedings* (University of Kentucky Bulletin 120), 160 pp., LC 79-644630 (serials entry), ISBN 0-89779-034-8, $40.00. **80CH1495-1 (OOP 1C)**

Coverage: Five technical sessions and six additional papers discuss these topics in crime countermeasures: communication and control; recognition and verification; alarm systems; white collar crime; detection and identification.

Custom Integrated Circuits Conference, 2nd [IEEE] (CICC 80), held May 19-21, 1980 in Rochester, NY; sponsored by IEEE ED and IEEE Rochester Section. *Proceedings,* 124 pp. + 11 pp., LC 80-80925 (preassigned), $15.00. **80CH1562-8 (OOP 1D)**

Coverage: Seven technical sessions discuss recent developments in integrated circuits in areas such as design methods; fabrication technologies; packaging; modeling; testing; applications; and the physics of devices.

Design Automation Conference, 17th, held June 23-25, 1980 in Minneapolis, MN; sponsored by ACM and IEEE C. *Proceedings,* 642 pp., LC 76-150348 (serials entry), ISSN 0420-0098, ISBN 0-89791-020-6, $44.00. **80CH1550-3 (OOP 1E)**. Also available through ACM as Order No. 477800

Coverage: Thirty-four technical sessions cover: integrated circuits; computer aided design; test generation and diagnosis; advanced concepts; circuit layout; fault simulation and testability analysis; routing; placement; high level computer design; interactive graphics; algebraic methods; design and verification techniques; digital hardware simulation.

Electrical and Electronics Engineers in Israel, 11th [1979 IEEE] Convention of, held Oct. 23-25, 1979 in Tel Aviv, Israel; sponsored by IEEE Reg. 8 and IEEE Israel Section. *Proceedings*, approx. 225 pp., LC 78-54882 printed erroneously in the volume; there is no LC for this publication, $36.00. **79CH1566-9** (OOP 1H)

Coverage: Instrumentation; electromagnetic compatibility; communications; semiconductor devices; guidance, control and estimation; antennae; surface acoustic waves; power and drive; bioengineering; wave propagation; reliability; data processing and information theory; microwaves; electro-optics; computers and algorithms.

Electrical Conduction and Breakdown in Dielectrics, U.S./Japan Seminar on, held Oct. 29-Nov. 2, 1979 in Gainesville, FL; sponsored by National Science Foundation and Japan Society for the Promotion of Science. Papers in *IEEE Transactions on Electrical Insulation,* Vol. EI-15, No. 3, June 1980. $10.00. **JH51615** (not distributed under OOP)

Coverage: The nineteen Seminar papers in this issue review past knowledge, discuss current state of the art practices, identify remaining problems, and recommend future efforts in dielectric conduction and breakdown.

European Solid-State Circuits Conference *see* Solid-State Circuits Conference, 5th [1979] European

Ferroelectrics, 4th IEEE International Symposium on Applications of (ISAF 79), held June 13-15, 1979 in Minneapolis, MN; sponsored by IEEE SU, U.S. Army Research Office, Honeywell Corporate Materials Science Center, and Sandia Laboratories. *Proceedings*, 417 pp., $45.00. **79CH1382-1** (OOP 1D). Also published in *Ferroelectrics,* 1980, Vols. 27 and 28.

Coverage: This Symposium focuses on applied ferroelectrics device research in thirteen technical sessions on: pyroelectrics; transducers; materials; electrooptic waveguides and devices; photoferroelectrics; thin films and surface waves; PLZT (polycrystalline ferroelectric) goggles; photorefraction; dielectrics; and new areas.

Fusion Research, 8th [1979] Symposium on Engineering Problems of, held Nov. 13-16, 1979 in San Francisco, CA; sponsored by Lawrence Livermore Laboratory, IEEE NPS, and the U.S. Dept. of Energy. *Proceedings*, 4 vols. 2273 pp., LC 80-80158 (preassigned), $125.00. **79CH1441-5** (OOP 1B)

Coverage: Controlled thermonuclear fusion is explored in forty-three technical sessions that discuss these topics: magnet design; beam technology; experimental systems; superconductors; power supplies; fusion reactor design and engineering; electrical components and rotating machines; instrumentation and diagnostics; data acquisition; vacuum technology; etc.

Human Factors and Nuclear Safety, IEEE Standards Workshop on, held Dec. 2-7, 1979 in Myrtle Beach, SC; sponsored by IEEE Nuclear Power Engineering Committee, IEEE Standards Board, U.S. NRC, and Brookhaven National Laboratory; edited by Theresa M. Schmall. *Conf. Record*, 199 pp., LC 80-81356 (preassigned), ISSN 0270-2231, $25.00. **TH0075-2** (OOP 6)

Coverage: The workshop's goal "was to identify what needs to be accomplished to assure proper consideration of human factors in nuclear power plant design and operation and to initiate the identified efforts." In nine sections, this volume records the progress towards that goal. This publication also features a bibliography.

Industrial and Commercial Power System Technical Conference, [IEEE 1980], held May 12-15, 1980 in Houston, TX; sponsored by IEEE IA and IEEE Houston Section. *Conf. Record*, approx. 125 pp., LC 65-53571 (serials entry), $20.00. **80CH1543-8** (OOP 1B)

Coverage: In six technical sessions, the trends and practice in the design and applications of industrial and commercial power systems are covered.

Machine Processing of Remotely Sensed Data and Soil Information Systems and Remote Sensing and Soil Survey, 6th Symposium [on], held June 3-6, 1980 in West Lafayette, IN; sponsored by IEEE C, American Society of Agronomy, International Society of Soil Science,

et al; edited by P.G. Burroff and D.B. Morrison. *Proceedings,* 384 pp., LC 79-93130 (preassigned), $30.00. **80CH1533-9** (OOP 1E)

Coverage: The majority of the 16 technical sessions in this Symposium focus on the applications of remote sensing to soils. Other topics explored include data processing analysis; data processing systems; crop inventory; forestry; and land use.

Microcomputers: Systems, Software, Architecture, 3rd [1979] Rocky Mountain Symposium on, held Aug. 19-22, 1979 in Pingree Park, CO; sponsored by IEEE C and Colorado State University. *Proceedings,* 155 pp., LC 79-64511 (preassigned), $15.00. **79CH1463-9** (OOP 1E)

Coverage: The ten technical contributions in this Proceedings are concerned with two main topics: 1) microcomputer architectures and distributed processing, and 2) signal processing.

Microprocessors in Military and Industrial Systems Workshop, IEEE Computer Society, held Jan. 15-16, 1980 in Laurel, MD; sponsored by IEEE C and Johns Hopkins University. *Proceedings—the 1980 APL (Applied Physics Laboratory) Report,* 167 pp., LC 79-90547 printed in error in this volume—there is no LCN for this Workshop, $16.00. **80CH1579-2** (OOP 1E)

Coverage: In four technical sessions, the application of microcomputer technology to military and industrial systems is covered. Emphasis is on VLSI (very large integrated circuits) technology; software; firmware; signal processing; and logistics.

Microwave Symposium, IEEE MTT-S International, held May 28-30, 1980 in Washington, DC; sponsored by IEEE MTT; edited by Leonard M. Schwab and James H. Douglas. *Digest,* 511 pp., LC 77-645125 (serials entry), $20.00. **80CH1545-3** (OOP 1D). Selected papers to appear in *IEEE Transactions on Microwave Theory and Techniques,* Vol. MTT-28, No. 12, Dec. 1980 ($10.00, **JH53207,** not distributed under OOP)

Coverage: The 1980 Symposium features the theme "Technology Growth for the 80's." Twenty-two technical sessions cover subject areas such as the generation, amplification, and measurement of microwaves and millimeter waves; components; circuits; devices; systems; applications in communications, medicine, integrated circuits, and computer-aided microwave practices; microwave engineering for export.

Multiple-Valued Logic, 10th International Symposium on (ISMVL 80), held June 3-5, 1980 in Evanston, IL; sponsored by IEEE C and Northwestern University. *Proceedings,* 277 pp., LC 79-641110 (serials entry; accidentally not printed in the volume), ISSN 0195-623X, $25.00. **80CH1577-6** (OOP 1E)

Coverage: The 38 papers are on the topics of: circuit/device implementation; fault diagnosis; fuzzy logic; logic design and switching theory; probabilistic and variable-valued systems.

Northeast Bioengineering Conference *see* Bioengineering Conference, 8th Northeast

Nuclear Power Plants, Working Conference on Advanced Electrotechnology Applications to, held Jan. 15-17, 1980 in Washington, D.C.; sponsored by NRC and IEEE. *Record,* 532 pp., LC 80-80839 (preassigned), $32.00. **TH0073-7.** *Executive Summary,* 75 pp., LC 80-81600 (preassigned), $32.00. **TH0077-8.** Both volumes available together at $36.00 as **UH0136-2.** Neither volume available under OOP; available for single copy sales only, individually under TH number, or together under UH number

Coverage: Explores the possible applications of advanced electrotechnology to nuclear power plant safety and possible uses of other non-nuclear technologies.

Plasma Science, 7th IEEE International Conference on, held May 19-21, 1980 in Madison, WS; sponsored by IEEE NPS and the University of Wisconsin—Madison. *Conf. Record—Abstracts,* 152 pp., LC 80-80401 (preassigned), $20.00 **80CH1544-6** (OOP 1B)

Coverage: Forty-two technical sessions discuss: fusion technology; laser-plasma interaction; neutral, intense-electron, and ion beams; thermionics and plasma diodes; plasma waves, instabilities, and antennas; magnetofluiddynamics; gaseous electronics; arc technology and

science; nuclear-pumped lasers; plasma heating, focus, and diagnostics; computer methods; computer control and data acquisition; microwaves; and field-reversed ring configuration studies.

Power Electronics Specialists Conference, 11th IEEE (PESC 80), held June 16-20, 1980 in Atlanta, GA; sponsored by IEEE AES, IEEE ED, IEEE IECI, et al. *Record,* 401 pp., $25.00. **80CH1537-0** (OOP 1C)

Coverage: Topics covered in the six technical sessions include; multi-output converters; power transformers; transistors; circuit design; vehicle propulsion; solar simulator; thyristor; etc.

Power Engineering Society Winter Meeting, 1980 IEEE, held Feb. 3-8, 1980 in New York, NY; sponsored by IEEE PE. *Text of "A" Papers,* approx. 950 pp., LC 79-641227 (serials entry), ISSN 0195-6825, $45.00. **80CH1523-0** (OOP 1G). Abstracts in *IEEE Transactions on Power Apparatus and Systems,* Vol. PAS-99, No. 4, July/Aug. 1980 ($10.00, **JH52316,** not distributed under OOP). Individual preprints are available, write for the list of titles. *Discussion and Closures of Abstracted Papers* (80CH1524-8) will be available later as a separate volume. *NOTE:* For future meetings, full text plus discussions and closures will be published in the *Transactions.*

Coverage: Some of the topics featured in the sixty technical sessions are: insulated conductors; substations; systems; nuclear power; generation; reliability; transmission and distribution; energy development; switchgears; stability; etc.

Precision Electromagnetic Measurements, Conference on (CPEM 80), held June 23-27, 1980 in Braunschweig, Federal Republic of Germany; sponsored by U.S. Nat'l Bureau of Standards, IEEE, URSI, et al. *CPEM Digest,* 534 pp., LC 75-23855 (serials entry), $40.00. **80CH1497-7** (OOP 1B)

Coverage: Seventeen technical sessions discuss these topics: time and frequency; direct current and low frequency; lasers; dielectrics; cryo-electronics; automated measurements; fiber optics; microwaves; ac/dc transfer; power and energy; antennas and fields; ratio techniques; calibration.

Pulp and Paper Industry Technical Conference, [IEEE], held June 18-20, 1980 in Portland, OR; sponsored by IEEE IA. *Conf. Record,* 92 pp., LC 74-136000 (serials entry), ISSN 0190-2172, $20.00. **80CH1526-3** (OOP 1B)

Coverage: Fifteen papers from four technical sessions cover the use of electronics in the pulp and paper industry in areas such as: inverter drives; digital technology; cogeneration; electric cables; continuing education for engineers, et al.

Quantum Electronics Conference, 11th International (IQEC), held June 23-26, 1980 in Boston, MA; sponsored by IEEE QEA, OSA, American Physical Society, et al. *Digest of Technical Papers,* approx. 100 pp., LC 80-80923 (preassigned), $25.00. **80CH1561-0** (OOP 1D)

Coverage: The twenty-four technical sessions deal principally with lasers of various types; laser physics and chemistry; laser applications; spectroscopy; and nonlinear optics.

Radar Conference, IEEE International, held April 28-30, 1980 in Arlington, VA; sponsored by IEEE Washington Section, IEEE AES, and IEE. *Record,* 486 + 32 pp., LC 79-90227 (preassigned), $40.00. **80CH1493-6** (OOP 1C)

Coverage: Ten technical sessions are devoted to: targets and environment; synthetic aperture radar; Doppler and MTI (moving target indicator), clutter reduction, and special topics in signal techniques; antennas; track-while-scan and closed-loop tracking. A special feature is the 32-p. International Cumulative Index on Radar Systems, 1977-79. (The last cumulative index (JH 46755) was listed in the Oct. 1979 issue of the Bulletin.)

Reliability Physics Symposium, 18th [IEEE] International, held April 8-10, 1980 in Las Vegas, NV; sponsored by IEEE ED and IEEE R. *Proceedings,* 339 pp., LC 79-92901 (preassigned), $20.00. **80CH1531-3** (OOP 1D and F)

Coverage: Nine technical and one tutorial session discuss: moisture control; accelerated testing; bubble memories; LSI failure analysis;

GaAs devices; metallization; mechanisms and techniques of failure analysis; LSI reliability; packaging and assembly reliability.

Rocky Mountain Symposium on Microcomputers *see* Microcomputers: Systems, Software, Architecture, 3rd [1979] Rocky Mountain Symposium on

Rubber and Plastics Industries, 32nd [IEEE] Conference of Electrical Engineering Problems in the, held April 14-15, 1980 in Akron, OH; sponsored by IEEE IA and IEEE Akron Section. *Conf. Record,* 85 pp., LC 68-1277 (serials entry; not printed in this volume), $18.00. **80CH1556-0** (OOP 1B)

Coverage: Protective devices, application of inverters, and engineering liability are a few of the topics covered in the 12 technical papers.

Solid-State Circuits Conference, 5th [1979] European (ESSCIRC), held Sept. 18-21, 1979 in London, England; sponsored by IEE, IEEE Reg. 1, EUREL, et al. Selected papers in the *IEEE Journal of Solid-State Circuits,* Vol. SC-15, No. 3, June 1980. $10.00. **JH53264** (not distributed under OOP)

Coverage: These papers present a comprehensive range of research and development work from the application of device physics in voltage references to predictions of system behavior. Other topics are circuits for special applications, systems problems, and the use of analysis to produce solutions.

System Theory, 12th Southeastern Symposium on, held May 19-20, 1980 in Virginia Beach, VA; sponsored by IEEE C and Old Dominion University. *Proceedings,* 395 pp., LC 74-642491 (serials entry), $25.00. **80CH1576-8** (OOP 1E)

Coverage: Fifteen technical sessions cover the system theory in terms of applications, processing, microprocessors, control, communications, etc.

Textile Industry Technical Conference, 1980 [IEEE], held May 7-8, 1980 in Atlanta, GA; sponsored by IEEE IA. *Papers,* approx. 80 pp., LC 74-646073 (serials entry), ISSN 0094-9884, $18.00. **80CH1553-7** (OOP 1B)

Coverage: Applications of electrotechnology to the textile industry are discussed, including specific topics such as the Power Factor Controller (PFC); microprocessors; education; and conservation.

Thermoelectric Energy Conversion, 3rd International Conference on, held March 12-14, 1980 in Arlington, TX; sponsored by IEEE Reg. 5, IEEE Fort Worth Section, and University of Texas. *Proceedings,* 221 pp., $30.00 **80CH1546-1** (OOP 1H)

Coverage: Six technical sessions on: generators; materials; devices; novel applications; heat pumps; and international developments.

Trends and Applications: 1980 Computer Network Protocols, held May 29, 1980 in Gaithersburg, MD; sponsored by IEEE C, IEEE Washington Section, and National Bureau of Standards. *Proceedings,* 176 pp., LC 79-92267 (preassigned), $16.00. **80CH1529-7** (OOP 1E)

Coverage: The field of network technology is covered in three technical sessions. New technical advances along with the progress in network protocol development are discussed.

U.S. Technological Policy, [IEEE] Conference on, held April 28-30, 1980 in Washington, DC; sponsored by IEEE TAB and IEEE USAB. *Executive Summary—Global Competition in the 80's,* 26 pp., LC 80-82438 (preassigned), $19.00. **UH0139-6** (not distributed under OOP)

Coverage: Engineering professionals, government and legislative leaders, business executives, and others present viewpoints on future trends in the U.S. economy and industry.

Special Issues

The special issues listed below have become available since the last issue of this Bulletin. Special issues devoted entirely to conferences are listed in the Conference Publications section.

Computer Education; *Computer,* Vol. 13, No. 6, June 1980. $6.00. **JH50906**

Coverage: The areas of international activities, technological aspects, and curricula in computer education are covered in four articles and the introduction to this special issue.

Computer Graphics; special feature, *Computer,* Vol. 13, No. 6, pp. 45-66, and No. 7, pp. 49-68, June and July 1980. $6.00 each. **JH50906 and JH50914**

Coverage: Aspects of computer graphics are discussed in four papers. They are: the interface between computer graphics and the user, an improved line drawing algorithm, and a VLSI geometry processor.

Computer Network Architectures and Protocols; *IEEE Transactions on Communications,* Vol. COM-28, No. 4, April 1980. $15.00. **JH51284**

Coverage: Computer network architecture is concerned with the design rules for constructing computer networks. The twenty-three technical papers contributed to this issue are concerned with these design rules. The papers cover the areas of design at the physical, link control, network, and higher levels; network interconnection; and formal specifications and their manipulation.

Computers in Education; *Computer,* Vol. 13, No. 7, July 1980. $6.00. **JH50914**

Coverage: Computer-based education is explored in five areas: microcomputer-based learning; computers in French schools; technology in science education; courseware; the automated dictionary.

Digital Encoding of Graphics; *Proceedings of the IEEE,* Vol. 68, No. 7, July 1980. $10.00. **JH50294**

Coverage: The sixteen technical papers discuss the "processing and communication of graphics...". A bibliography on binary image compression is included.

Discrete Component Parts and Subassemblies; special section, pp. 237-265, *IEEE Transactions on Components, Hybrids, and Manufacturing Technology,* Vol. CHMT-3, No. 2, June 1980. $10.00. **JH51227**

Coverage: Five technical papers cover these subjects: ceramic humidity sensors; solid tantalum capacitor with an integral fuse; failure mechanics and ceramic capacitors; ion implantation; low-pressure transducer.

Electrical History; *IEEE Transactions on Education,* Vol. E-23, No. 3, Aug. 1980. $10.00. **JH51458**

Coverage: The history of electrical science and engineering is the theme of the seven papers in this issue. They reflect a range of contributors from graduate students to engineer-historians. The guest editorial presents information on some electrical engineering history projects planned or already in progress.

Electronic Materials; special section, pp. 211-236, *IEEE Transactions on Components, Hybrids, and Manfuacturing Technology,* Vol. CHMT-3, No. 2, June 1980. $10.00. **JH51227**

Coverage: Three technical papers on subjects of concern to electronic circuit design, process, and packaging engineers: thick-film technology; connector finishes; molybdenum.

Electronic Systems in the Subscriber Loop Plant, Thrust of; special section, pp. 921-982, *IEEE Transactions on Communications,* Vol. COM-28, No. 7, July 1980. $10.00. **JH51318**

Coverage: This special section focuses on the application of electronics systems in the subscriber loop plant with special reference to the Bell System's integrated range extension system plan and to the future merger of digital technology and fiber optics.

Failure Analysis; *IEEE Transactions on Reliability,* Vol. R-29, No. 3, Aug. 1980. $10.00. **JH52449**

Coverage: The majority of the nine contributions in this special issue comprise a "status report on several approaches to reliability studies at the part level."

Fault-Tolerant Computing: *IEEE Transactions on Computers,* Vol. C-29, No. 6, June 1980. $10.00. **JH50781**

Coverage: Nine papers discuss fault-tolerant computing in the areas of test and diagnosis, system design, and system analysis.

Gigabit Logic for Microwave Systems; *IEEE Transactions on Microwave Theory and Techniques,* Vol. MTT-28, No. 5, May 1980. $10.00. **JH52118**

Coverage: The eleven papers in this special issue cover the state of the art in both high-speed GaAs ICs (gallium-arsenide integrated circuits) and Josephson junction logic with applications for microwave digital systems.

Highway Electronic Systems; *IEEE Transactions on Vehicular Technology,* Vol. VT-29, No. 2, May 1980. $10.00. **JH 52720**

Coverage: This special issue is considered by the editor to be "the most current and comprehensive review presently available" on highway electronic systems. Three areas are emphasized in the sixteen technical contributions: traffic control systems hardware; driver information and motorist aid hardware; advanced systems hardware.

Integrated Filters for Communications; *IEEE Transactions on Circuits and Systems,* Vol. CAS-27, No. 6, June 1980. $10.00. **JH51029**

Coverage: Different approaches to the design of single-chip integrated filters are explored in eighteen technical papers which cover digital, charge-transfer device, surface-acoustic-wave device, switched-capacitor, anti-aliasing, and smoothing filters.

Machine Perception for Industrial Applications; *Computer,* Vol. 13, No. 5, May 1980. $6.00. **JH50898**

Coverage: The six articles in this special issue emphasize visual machine perception in relation to the inspection process as opposed to the assembly process.

Medical Imaging; *IEEE Transactions on Nuclear Science,* Vol. NS-27, No. 3, June 1980 (erroneously titled Special Issue on Nuclear Medicine). $10.00. **JH52209**

Coverage: Twenty-one papers explore selected research topics in medical imaging such as diagnostic radiology, nuclear medicine, computer tomography, ultra sound, and other medical imaging techniques. The issue includes six additional papers which were presented at the IEEE Short Course on Nuclear Magnetic Resonance Imaging for Physicians and Engineers in Oct. 1979.

Multiprocessors; special feature, pp. 75-116, *Computer,* Vol. 13, No. 5, May 1980. $6.00. **JH50898**

Coverage: This special section contains a survey of five commercial multiprocessing systems and an annotated bibliography on multiprocessing.

Nuclear Waste Management and Storage; *IEEE Transactions on Nuclear Science,* Vol. NS-27, No. 4, Aug. 1980. $10.00. **JH52217**

Coverage: Six technical papers provide an introduction to the problem of nuclear waste management and storage by discussing such topics as current isolation projects; instrumentation requirements; measurements; etc.

Photovoltaic Devices; *IEEE Transactions on Electron Devices,* Vol. ED-27, No. 4, April 1980. $10.00. **JH51508**

Coverage: Thirty-eight papers discuss recent research developments in photovoltaic technology, materials properties, and device physics but

generally leave out the questions of economics, applications, and systems. Specific areas such as single-crystal silicon, thin-film devices of various semiconductors on inexpensive substrates, and multijunction devices are highlighted.

Power, Logic, and Special Devices in III-IV Compounds; *IEEE Transactions on Electron Devices,* Vol. ED-27, No. 6, June 1980. $10.00. **JH51524**

Coverage: GaAs metal–semiconductor field-effect transistor (GaAs MESFET) technology is discussed in twenty-six technical papers divided into three sections: GaAs MESFETs; logic; and special devices.

Ray Tracing in Plasmas for Fusion Research; *IEEE Transactions on Plasma Science,* Vol. PS-8, No. 2, June 1980. $10.00. **JH52399**

Coverage: In 11 technical papers, this special issue provides an introduction to the basics of ray tracing (also known as geometric optics, among other names) and its present applications.

Seasat-1 Sensors; *IEEE Journal of Oceanic Engineering,* Vol. OE-5, No. 2, April 1980. $10.00. **JH52761**

Coverage: The 12 papers in this special issue focus on the multisensor satellite instruments of Seasat: their description, performance, and evaluation along with the algorithms associated with their operation and data acquisition. Seasat's purpose was the observation of the earth's oceans from space.

Translator Writing Systems; *Computer,* Vol. 13, No. 8, Aug. 1980. $6.00. **JH50922**

Coverage: This special issue views the latest in language development tools in use along with current research in experimental compiler-compilers.

IEEE Standards

Unless otherwise noted, Standards listed in this section are distributed under OOP Option 5.

ANSI C63.2–1980. *American National Standard: Specifications for Electromagnetic Noise and Field Strength Instrumentation, 10 kHz to 1 GHz;* June 11, 1980. 24 pp., $6.00. **SH07740**

ANSI N317-1980. *American National Standard: Performance Criteria for Instrumentation Used for Inplant Plutonium Monitoring;* July 28, 1980. 16 pp., $5.00. **SH07559**

ANSI/IEEE C37.04-1979 (Revision of ANSI/IEEE C37.04-1964). *American National Standard: IEEE Standard Rating Structure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis;* July 28, 1980. 29 pp., $6.00. **SH06288**

ANSI/IEEE C37.011-1979. *American National Standard: IEEE Application Guide for Transient Recovery Voltage for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis;* June 30, 1980. 30 pp., $6.00. **SH07005**

ANSI/IEEE C37.012-1979. *American National Standard: IEEE Application Guide for Capacitance Current Switching for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis;* June 30, 1980. 51 pp., $7.50. **SH06957**

ANSI/IEEE C37.18-1979. *American National Standard: IEEE Standard Enclosed Field Discharge Circuit Breakers for Rotating Electric Machinery;* June 30, 1980. 25 pp., $6.00. **SH06874**

ANSI/IEEE C37.48a (Issued July 1980 for trial use). *Draft American National Standard: IEEE Guide for Application of Current Limiting Fuses in Enclosures,* Supplement to ANSI C37.48-1969 (R 1974; American National Standard: Guide for Application, Operation, and Maintenance of Distribution Cutouts and Fuse Links, Secondary Fuses, Distribution Enclosed Single-Pole Air Switches, Power Fuses, Fuse Disconnecting Switches, and Accessories); July 25, 1980, 8 pp., $4.00. **SH08086.** NOTE: Distribution of this draft standard for comment shall not continue beyond 12 months from the date of publication.

IEEE Std 99-1980 (Revision of IEEE Std 99-1970). *IEEE Recommended Practice for the Preparation of Test Procedures for the Thermal Evaluation of Insulation Systems for Electric Equipment;* July 18, 1980. 11 pp., $5.00. **SH07823**

IEEE Std 446-1980 (Revision of IEEE Std 446-1974). *IEEE Recommended Practice for Emergency and Standby Power Systems for Industrial and Commercial Applications;* March 31, 1980. 208 pp., LC 80-81019, ISBN 0-471-08031-4, $19.95. **SH07799**

IEEE Std 487-1980. *IEEE Guide for the Protection of Wire-Line Communication Facilities Serving Electric Power Stations;* August 8, 1980. 84 pp., $12.00. **SH07807**

IEEE Std 586-1980. *IEEE Standard Definitions of Laser–Maser Terms;* August 22, 1980. 10 pp., $4.00. **SH06726**

IEEE Std 635-1980. *IEEE Guide for Selection and Design of Aluminum Sheaths for Power Cables;* May 7, 1980. 28 pp., $6.00. **SH07690**

IEEE Std 771-1980. *IEEE Guide to the Use of ATLAS (Abbreviated Test Language for All Systems);* April 30, 1980. 157 pp., LC 80-81469, ISBN 0-471-08372-0, $17.50. **SH07781**

IEEE Press

Semiconductor Injection Lasers, a Book of Selected Reprints, edited by Jerome K. Butler (Southern Methodist University). © 1980. 395 pp. ISBN Clothbound 0-87942-129-0, LC 79-91615 (preassigned). $36.95. **PC01248** (OOP 2). Also distributed through John Wiley & Sons, Inc. Wiley Order No. Clothbound: 0-471-08156-6

Coverage: The design, characteristics, and applications of injection lasers are the focus of the articles in this volume which is divided into six sections: historical; stimulated emission and gain; laser modes and structures; electrical and optical properties of laser materials; degradation; and modulation.

Sensory Aids for the Hearing Impaired, a Book of Selected Reprints, edited by Harry Levitt (City University of New York), James M. Pickett (Gallaudet College), and Robert A. Houde (Center for Communications Research). © 1980. 566 pp. ISBN Clothbound 0-87942-133-9, LC 76-28875 (preassigned). $46.95. **PC01289** (OOP 2). Also distributed through John Wiley & Sons, Inc. Wiley Order No. Clothbound: 0-471-08436-0

Coverage: In ten parts, this volume brings together from a wide variety of sources a set of papers to present the background, key developments, and the central problems underlying research in sensory aids for the hearing impaired.

Tutorials

Computer Networks: Text and References for a Tutorial; edited by Marshall Abrams, Robert P. Blanc, and W. Cotton. Revised and updated edition, © 1980, approx. 500 pp., $16.00. **EH0162-8** (OOP 8)

Coverage: Nine chapters cover the topic of computer networks in areas such as special vocabulary; network configuration and vocabulary; hardware and software components; utilization; measurement and evaluation; costs; management; security. The tutorial's aim is not comprehensiveness but a basic understanding of the state of the art.

Distributed Processing Systems Tutorial, A Pragmatic View of; edited by Kenneth J. Thurber. © 1980, 626 pp., LC 80-81350 (preassigned), $25.00. **EH0160-2** (OOP 8)

Coverage: The organization of this volume progresses from an exploration of the overall concept of distributed processing systems towards implemented hardware structures in eight sections: overview; alternatives; standards; case studies; design issues; connection; implementations; future.

Microcomputer System Design and Techniques, Tutorial; edited by Carol Anne Ogdin. © 1980, 374 pp., LC 80-80772 (preassigned), $16.00. **EH0159-4** (OOP 8)

Coverage: While taking advantage of past experience with systems and software, this tutorial explores the differences between microcomputers. It contains fifty-three technical papers divided into seven areas: micros and their applications; microprocessor architecture; microcomputer buses and systems; storage technology; input/output interfacing; programming and languages; management and tools.

Software Design Techniques, Tutorial on; edited by Peter Freeman and Anthony I. Wasserman. 3rd edition, © 1980, 455 pp., LC 80-81351 (preassigned), $25.00. **EH0161-0** (OOP 8). The 2nd edition (76CH1145-2 C) was published in 1977.

Coverage: This tutorial provides a broad introduction to software engineering methods. It contains reprints of some classic papers on the subject, original papers, and an annotated bibliography. There are eight sections that cover areas such as basic concepts; analysis and specification; architectural, data, and detailed design techniques; and management issues.

Miscellaneous Publications

Age Discrimination Digest; prepared by Fairman, Frisk & Monaco for the IEEE United States Activities Board (USAB). © 1979, approx. 100 pp., LC 80-82818 (preassigned), $22.00. **UH0138-8** (not distributed under OOP)

Coverage: This digest was written for IEEE members and staff "in the belief that such a reference manual or digest could offer IEEE

members, employees and employers alike, meaningful assistance in addressing issues of age discrimination in the employment of professionals." There are seven chapters, a bibliography, a glossary, and appendices. It was designed to accommodate periodic supplementation.

Energy Development V; IEEE Power Engineering Society papers originally presented at various IEEE PES meetings in 1978-1979, © 1980, 212 pp., $12.00. **TH0071-1** (not distributed under OOP)

Coverage: Reports on the state of the art in nonconventional areas of energy development.

People Priorities: The Moral and Ethical Issues of Energy vs. Human Health and Well-being; Special Publication No. 18 of the IEEE PES, presented at the 1980 IEEE Power Engineering Society Winter Meeting held on Feb. 5, 1980 in New York, NY. 18 pp., $6.00. **80TH0078-6** (OOP 6).

Coverage: Three panel presentations with discussion which cover ethical considerations in technological development, energy, and environmentalism.

Changes in IEEE Periodicals

New Publication: *IEEE Computer Graphics and Applications.* Published quarterly, commencing with Vol. 1, No. 1, January 1981. Subscription price: $23.00.

Coverage: This magazine will deal with CAD/CAM (computer aided design/computer aided manufacturing); process control; real-time systems (command and control, aircraft flight control, etc.); civil engineering applications; computer animation; image processing; business data graphics.

New Publication: *IEEE Micro.* Published quarterly, commencing with Vol. 1, No. 1, February 1981. Subscription price: $23.00.

Coverage: This magazine will deal with microcomputer architecture and systems; hardware: chips, boards, and buses; application software; draft standards.

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These condensed histories of conferences/symposiums/meetings feature years of the conference; title for each year; dates; publication; cataloging information; other important miscellaneous information. More detailed information is available from the IEEE Information Services Dept., if needed.

SEMICONDUCTOR TEST SYMPOSIUM (or CONFERENCE)

YEAR	NUMBER	TITLE	DATES	PUBLICATIONS
1970	1st*	Impact of Minicomputers on Automatic Testing (Symposium)	March 18, 1970	No publication for this year
1971	2nd*	Computer Control Instrumentation Symposium—Methods and Applications	March 3, 1971	Digest (125 copies printed; available at Symposium)
1972	[3rd]	Semiconductor Memory Test Symposium	Oct. 4, 1972	Testing to Integrate Semiconductor Memories into Computer Mainframes: Digest of Papers. IEEE Catalog No. 72CH0810-2C
1973	4th	Symposium on Semiconductor Memory Testing	Oct. 2-3, 1973	Digest of Papers. IEEE Catalog No. 73CH0827-6C
1974	5th	Semiconductor Test Symposium	Nov. 5-7, 1974	Memory & LSI: Digest of Papers. IEEE Catalog No. 74CH0909-2C
1975	6th	Semiconductor Test Symposium	Oct. 14-16, 1975	Memory, LSI, Linear IC: Digest of Papers. IEEE Catalog No. 75CH1041-3C
1976	7th	Semiconductor Test Symposium	Oct. 19-21, 1976	Memory & LSI: Digest of Papers. IEEE Catalog No. 76CH1179-1C
1977	8th	Semiconductor Test Symposium	Oct. 25-27, 1977	Memory & LSI: Digest of Papers. IEEE Catalog No. 77CH1261-7C
1978	[9th]	Semiconductor Test Conference	Oct. 31–Nov. 2, 1978	LSI & Boards: Digest of Papers. IEEE Catalog No. 78CH1409-2C
1979	10th	Test Conference	Oct. 23-25, 1979	LSI & Boards: Digest of Papers. IEEE Catalog No. 79CH1509-9C

*The information on titles, dates, and publications for both 1970 and 1971 was given by Ned Kornfield of Widener College, who has been associated with this meeting for a number of years.

NORTHEAST BIOENGINEERING CONFERENCE (formerly New England Bioengineering Conference)

YEAR	NUMBER	TITLE	DATES	PUBLICATION
1973	[1st]*	New England Conference on Bioengineering	April 19-20, 1973	Proceedings available from Pergamon Press as copyflo/microfiche/microfilm
1974	2nd*	New England Bioengineering Conference	March 29-30, 1974	Same form as 1973
1975	3rd*	Same title as 1974	May 9-10, 1975	Same form as 1973
1976	4th	Same title as 1974	May 7-8, 1976	Proceedings ©1976 Pergamon Press. LC 76-11597. ISBN 0-08-021061-9
1977	5th	Same title as 1974	April 14-15, 1977	Proceedings ©1977 Pergamon Press. LC 77-4196. CIP Data on p. iv. ISBN 0-08-021937-3 pbk
1978	6th	Same title as 1974	March 23-24, 1978	Proceedings ©1978 Pergamon Press. LC 78-51811. IEEE Catalog No. 78CH1340-9 EMB. ISBN 0-08-022678-7
1979	7th	New England (Northeast) Bioengineering Conference	March 22-23, 1979	Proceedings ©1979 Center for Biomedical Engineering, Rensselaer Polytechnic Institute. LC 79-83927. IEEE Catalog No. 79CH1434-0 EMB
1980	8th	Northeast Bioengineering Conference**	March 27-28, 1980	[Proceedings] ©1980 Dept. of Mechanical Engineering, MIT. IEEE Catalog No. 80CH1574-3

*Information on this year of the Conference came from the back cover of the 1977 Proceedings in a list of available Proceedings from Pergamon Press.

**Verso of title page lists title as Northeast (New England) Bioengineering Conferences.