



# 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.

**Advances in Information Technology, Trends & Applications 1982**, held May 27, 1982 in Gaithersburg, MD; sponsored by IEEE C, IEEE Washington Section, and U.S. NBS. *Proceedings*, 93 pp., LC 82-80365 (preassigned), \$16.00. **82CH1758-2** (OOP 1E)

**Coverage:** The field of information technology is examined in 17 papers on topics such as: software development; computing centers; data base machines; protocols; Bell Labs Network (BLN); languages; programming; health information systems; real-world data; teleconferencing.

**Aerospace and Electronics Conference, 34th IEEE National (NAECON '82)**, held May 18-20, 1982 in Dayton, OH; sponsored by IEEE AES and IEEE Dayton Section. *Proceedings*, 3 vols., 1433 pp., LC 79-640977, ISSN 0547-3578, \$100.00. **82CH1765-7** (OOP 1C)

**Coverage:** Topics covered in the 46 technical sessions and 3 mini-courses include: standards; electromagnetic compatibility; navigation; communications; air data sensors; microcomputers; life cycle cost management; technology in medicine; software; aerospace warfare; speech; digital technology; human-machine systems; environmental interactions; tactical guided weapons; spread-spectrum communications; engineer-manager; flight control; antennas; airborne fire control; display technology; simulation; programming languages memory; electronic combat; testability; radar.

**Antennas and Propagation Society International Symposium, 1982 IEEE (AP-S)**, held May 24-28, 1982 in Albuquerque, NM; sponsored by IEEE AP. *APS Symposium Digest*, 2 vols., 734 pp., LC 82-81881 (preassigned), \$56.00. **82CH1783-0** (OOP 1D)

**Coverage:** Topics covered in 28 technical sessions include: scattering basic EM; tolerance and distortions; antennas of the microstrip, lens, reflector, multibeam, satellite, helical and circular array, microwave and millimeter wave types; components; propagation; antenna measurements; antennas in systems; coherence, interference, polarization, and correlation; arrays; scattering and aperture problems; antenna modeling; inverse scattering; remote sensing.

**Bioengineering Conference, 10th Northeast**, held March 15-16, 1982 in Hanover, NH; sponsored by ASSEE, ASME, Dartmouth Medical School, IEEE EMB, et al.; edited by Eric W. Hansen. *Proceedings*, 356 pp., LC 82-80395 (preassigned), \$52.00. **82CH1747-5** (OOP 1F)

**Coverage:** New developments in the application of engineering and scientific concepts and methods to health care are described in 14 sessions on topics such as: tissue mechanics and hard tissue; bioelectrochemical phenomena; computer applications; biomaterials; hyperthermia and cancer treatment; instrumentation and signal processing; prosthesis design; biomechanics; modeling and control; hemodynamics and artificial organs; imaging; cardiology.

**Cement Industry Technical Conference, 23rd IEEE**, held May 10-14, 1981 in Lancaster, PA; sponsored by IEEE IA. *Record*, approx 300 pp., no LCCN for this volume (disregard the LCCN printed in the volume), \$50.00. **81CH1651-9** (OOP 1B)

**Coverage:** Electrical engineering applications in the cement industry are examined in 24 technical papers covering specific areas such as: drives and related products; general practices; maintenance and safety; automation; power generation and distribution.

**Circuits and Systems, 15th International Symposium on (ISCAS '82)**, held May 10-12, 1982 in Rome, Italy; sponsored by IEEE CAS, CNR, and the University of Rome. *Proceedings*, 3 vols., 1258 pp., no LCCN (the LCCN printed in the volume does not apply to this year's *Proceedings*), \$68.00. **82CH1681-6** (OOP 1A)

**Coverage:** ISCAS is devoted to all aspects of the theory, design, and application of circuits and systems. Its program features 41 technical sessions with papers on topics such as: active filters; digital filters; graph theory; fault analysis; circuit simulation; switched capacitor circuits; power applications and integrated circuit design; microwave circuits; system theory; VLSI; power systems; nonlinear circuits and systems; principal partition circuits for communications; computational methods.

**Computer Architecture, 9th Symposium on**, held April 26-29, 1982 in Austin, TX; sponsored by IEEE C and ACM. *Conf. Proceedings*, 335 pp., LC 76-351667, ISSN 0149-7111, \$28.00. **82CH1754-1** (OOP 1E). Also available through ACM Order No. 415820

**Coverage:** While the topics of interconnection networks, data flow and applicative language architectures, and VLSI are particularly emphasized in this year's Symposium Proceedings, topics such as these are also covered: integrated systems; high-level languages; design approaches; fault tolerant computing; database systems; distributed processing; multicomputers.

**Computers and Communications, 1st Phoenix Conference on**, held May 9-12, 1982 in Phoenix, AZ; sponsored by IEEE C, IEEE COM, IEEE Phoenix Section and Arizona State University. *Conference Proceedings*, 444 pp., LC82-80367 (preassigned), \$32.00. **82CH1756-6** (OOP 1C and E)

**Coverage:** The areas of solid-state electronics in computers and communications, computer-aided process for design and manufacture, and related software issues are covered in 24 technical sessions. Topics include: CAD; CAM; communicating with and between computers and software; signal processing; distributive processing; networks; computer architecture; fiber optics; new devices.

**Computers in Cardiology [Conference]**, 8th (CIC '81), held Sept. 23-25, 1981 in Florence, Italy; sponsored by NRC, IEEE C, NIH, ESC, AEI, and Associazione Italiana Ingegneria Medica e Biologica. *Conf.*



*Record*, 576 pp., LC 80-691097, ISSN 0276-6574, \$36.00. **82CH1750-9** (OOP 1E)

**Coverage:** The widespread use of computers in cardiology is reflected in the subjects of the five technical sessions and 16 workshops: echocardiography; ECG interpretation; nuclear cardiology; system evaluation and validation; monitoring techniques; clinical applications; experimental cardiology; ambulatory monitoring; ECG mapping; left ventricle (LV) performance and wall motion; ECG assessment of ischemia; patient management in the ICU; electrophysiology; digital techniques in angiography; signal processing in rhythm analysis; database management.

**Corona and Non-Spark Discharges, Symposium on**, held Oct. 27, 1981 as part of the 50th Conference on Electrical Insulation and Dielectric Phenomena (see NOTE) in Whitehaven, PA; sponsored by IEEE EI. Full invited papers in *IEEE Transactions on Electrical Insulation*, Vol. EI-17, No. 2, April 1982, 100 pp., \$12.00. **JH58354** (nto distributed under OOP). **NOTE:** The CEIDP Annual Report (81CH1668-3; see Jan. 1982 issue of the Bulletin) contains one-page abstracts of the invited papers published in full in this special issue.

**Coverage:** Aspects of the art and science of corona and non-spark discharges reported in the 14 invited contributions include: new developments in plasma etchings, chemical synthesis, particle charging, and prevention of arcs; adverse effects such as erosion and attack of insulator surfaces, charging of insulators, space charges; corona inception in compressed gases; corona pulse measurement techniques; general review of the field of corona and insulation.

**Custom Integrated Circuits Conference, 4th [IEEE] (CICC '82)**, held May 17-19, 1982 in Rochester, NY; sponsored by IEEE Rochester Section and IEEE ED. *Proceedings*, 332 pp., LC 81-85236 (preassigned), \$40.00. **82CH1726-9** (OOP 1D)

**Coverage:** The recent developments and future directions in custom integrated circuits discussed in 11 sessions include: gate arrays; VLSI; analog and digital circuits; fabrication technology; CMOS design; signal processing and image sensors; device and circuit modeling; communication circuits; CAD layout and simulation; packaging and interface circuits.

**Digital Communications: Man-Machine Interaction, 7th International Zurich Seminar on**, held March 9-11, 1982 in Zurich, Switzerland; sponsored by IEEE (Switzerland Section, ASSP, CAS, COM, C, etc.), EUREL, SEV-ASE, et al. *Proceedings*, 282 pp., LC 81-86224 (preassigned), \$52.00. **82CH1735-0** (OOP 1C)

**Coverage:** The area of digital communications systems especially as it relates to man-machine interaction (MMI) is explored in this volume with topics including: MMI impact on communication systems/terminal design: networks, software; terminal equipment: integration and interaction, pattern and speech generation/recognition, ergonomics/human factors; man-machine dialog: command languages, user guidance, operations and maintenance.

**Distributed Software and Database Systems, Symposium on Reliability in**, held July 21-22, 1981 in Pittsburgh, PA; sponsored by IEEE C, ACM, and University of Pennsylvania. Selected full papers in *IEEE Transactions on Software Engineering*, Vol. SE-8, No. 3, May 1982, 46 pp., \$12.00. **JH59337** (not distributed under OOP). The *Proceedings* (81CH1632-9) from this conference was listed in the October 1981 issue of the Bulletin.

**Coverage:** The special section contains five papers from the Symposium on subjects such as: nested transactions; an algorithm for robust concurrency control; conversion scheme mechanizations; global states of a distributed system; linguistic support for distributed programs.

**Electrical and Electronic Measurement and Test Instrument Conference and Exposition (EEMTIC 81)**, held Sept. 22-24, 1981 in Ottawa, Canada; sponsored by IEEE IM, IEEE Ottawa Section, and URSI. Selected papers in *IEEE Transactions on Instrumentation and Measurement*, Vol. IM-31, No. 1, March 1982, \$12.00. **JH58628** (not distributed under OOP). The Digest (81CH1710-3) from this conference was announced in the January 1982 issue of the Bulletin.

**Coverage:** Seventeen papers selected from EEMTIC '81 cover topics such as: digital measurements and systems; automated measurements;

basic measurement techniques; antennas; optical frequencies, lasers.

**Electrical Contacts, 27th Holm Conference on**, held Sept. 21-23, 1981 in Chicago, IL; sponsored by IEEE CHMT and IIT. Selected contributions in *IEEE Transactions on Components, Hybrids, and Manufacturing Technology*, Vol. CHMT-5, No. 1, March 1982, 101 pp., \$12.00. **JH58024** (not distributed under OOP)

**Coverage:** Topics such as these in the field of electrical contacts are covered in 16 technical papers: thermal analysis; erosion kinetics; electrical contact materials; arcs; fiber optic rotary joints; connectors; welding; contact resistance; oxidation; contamination.

**Electrical Insulation, 4th IEEE International Symposium on**, held June 7-9, 1982 in Philadelphia, PA; sponsored by IEEE EI. *IEEE Conf. Record*, 314 pp., LC 82-81483 (preassigned), \$60.00. **82CH1780-6** (OOP 1B)

**Coverage:** New theoretical analyses, advanced insulating materials, improved testing techniques and novel applications of insulating materials are the basic areas covered in the 73 papers divided by nine session topics: aging phenomena; materials; partial discharges; measurement techniques; power equipment insulation; outdoor insulation; polyethylene; gaseous insulation; insulating liquid systems.

**Electronic Components Conference, 32nd (ECC'82)**, held May 10-12, 1982 in San Diego, CA; sponsored by IEEE CHMT and EIA. *Proceedings*, 550 pp., LC 78-647174, ISSN 0569-5503, \$68.00. **82CH1781-4** (OOP 1D)

**Coverage:** Subjects covered in the 26 technical sessions include: circuit packaging; connectors; manufacturing technology; optical hybrids; capacitors; reliability; bonded interconnections; hybrid components; semiconductor processing and technology; soldered interconnections; materials; resistors.

**Engineering in Medicine and Biology, 34th Conference on (ACEMB '81)**, held Sept. 21-23, 1981 in Houston, TX; sponsored by the AEMB. *Proceedings*, Vol. 23, 414 pp., LC 61-24788, ISSN 0589-1019, \$40.00. **81CH1622-0** (OOP 1F)

**Coverage:** One-page contributions are divided into 35 technical sessions, 6 poster sessions, and 2 short courses covering topics such as: microcirculation; bio-heat transfer; cardiology; respiratory system; neurology/EMG; clinical engineering biorheology; cancer therapy; EEG analysis; visual systems; imaging; biomechanics; vascular dynamics; spinal cord stimulation; biomaterials; hemodynamics and atherosclerosis; rehabilitation; instrumentation; dentistry; microprocessor systems; codes, standards, and regulations.

**High Temperature Electronics, Conference on**, held March 25-27, 1981 in Tucson, AZ; sponsored by IEEE IECI (now IEEE IE), IEEE SSC, NASA, et al. Selected papers in *IEEE Transactions on Industrial Electronics*, Vol. IE-29, No. 2, May 1982, 64 pp., \$12.00. **JH58594** (not distributed under OOP). The *Proceedings* (81CH1658-4) from this Conference was listed in the July 1981 issue of the Bulletin.

**Coverage:** Thirteen papers selected from this 1981 conference cover aspects of high temperature electronics such as: user requirements; passive devices and metalizations; gain devices; circuits and systems; packaging.

**Holm Conference on Electrical Contacts**, see *Electrical Contacts*

**IEEE Region 5 Conference & Exposition: Emerging Technology—A Bridge to the Twenty-First Century**, held May 3-9, 1982 in Colorado Springs, CO; sponsored by IEEE Region 5. *Proceedings*, 193 pp., LC 81-85652 (preassigned), \$32.00. **82CH1728-5** (OOP 1H)

**Coverage:** The *Proceedings* contains 50 papers on topics such as: power; communication hardware; electrical engineering labs; flight instrumentation and control systems; electrical engineering: dependent and independent; electromagnetic pulses; target identification; instrumentation; electrical engineering education; semiconductor processes; data transmission; VLSI; computers for the handicapped; thermography applied to EMC scattering problems; military space operations.

**IEEE Southeastcon '82**, held April 4-7, 1982 in Sandestin, Destin, FL;

sponsored by IEEE Reg. 3 and IEEE Fort Walton Section. *Conf. Proceedings*, 581 pp., LC 82-80364 (preassigned), \$64.00. **82CH1749-1** (OOP 1H)

**Coverage:** Topics such as these are covered in 24 technical sessions: radar-sonar; control theory; software; electromagnetic fields; communications; dynamic systems; electro-optics; computer simulation; microprocessors; non-classical systems; simulation; image processing; weapon systems; speech recognition; microelectronics; estimation and modeling; instrumentation; robotics; power; circuits; missiles; bioengineering.

**Industrial and Commercial Power Systems Technical Conference, 1982 [IEEE]**, held May 10-13, 1982 in Philadelphia, PA; sponsored by IEEE IA and IEEE Philadelphia Section. *Conf. Record*, 119 pp., LC 81-86484 (preassigned), \$32.00. **82CH1740-0** (OOP 1B)

**Coverage:** Topics covered in the 20 technical papers include: induction motors/generators; industrial cogeneration; voltage cables; switchgear; PCB electrical equipment; control; cost effectiveness; reliability; AC-DC converters.

**INFOCOM '82, 1st Conference of the IEEE Computer Society and IEEE Communications Society**, held March 30-April 1, 1982 in Las Vegas, NV; sponsored by IEEE C and IEEE COM. *Proceedings*, 247 pp., LC 82-80132 (preassigned), \$25.00. **82CH1745-9** (OOP 1 C and E)

**Coverage:** The interface between computer and communication technology is explored in this new conference. The theme of the meeting is "Data Processing—Data Communications: The Illusory Boundary." Subjects covered in 31 contributions include: networks and internetworks; distributed computer systems; protocols; database management systems; design; formal protocol analysis and verification; computer communication and VLSI; hardware design considerations for local area networks.

**Lasers and Electro-Optics, 2nd Conference on (CLEO '82)**, held April 14-16, 1982 in Phoenix, AZ; sponsored by IEEE QEA and OSA. *Digest of Technical Papers* (Technical Digest on the cover), 208 pp., LC 81-82749 (preassigned), \$40.00. **82CH1684-0** (OOP 1D)

**Coverage:** Some of the new and emerging developments in the fields of lasers and electrooptics are examined in abstracts divided into 64 technical sessions: specific types of lasers including excimer, CO<sub>2</sub> and CO, Raman, free-electron, ultraviolet and visible, chemical and optically pumped, etc.; diagnostics; laser applications including medical, general industrial, military, etc.; picosecond optics; laser fusion; chemical processing; optical storage; laser metrology; personalization and lithography; optical signal processing; infrared multiphoton processes; detectors and arrays, nonlinear optics/spectroscopy; communications; meteorological parameter measurements; optical devices; laser annealing and processing; laser scanning and recording.

**Machine Vision, Workshop on Industrial Applications of**, held May 3-5, 1982 in Research Triangle Park, Raleigh, NC; sponsored by IEEE C and RTI. *Conference Record*, 237 pp., LC 82-80368 (preassigned), \$25.00. **82CH1755-8** (OOP 1E)

**Coverage:** Topics covered in 28 technical papers include: overview of machine vision; inspection in lithographic technologies; systems for prototyping; inspection applications; inspection techniques; 3D vision techniques; robot vision systems.

**Magnetic Filtration, International Symposium on**, May 18-19, 1981 in Salford, England; sponsored by IEEE MAG and the University of Salford. *Proceedings in IEEE Transactions on Magnetics*, Vol. MAG-18, No. 3, May 1982, 56 pp., \$20.00. **JH58743** (not distributed under OOP)

**Coverage:** Ten papers in the *Proceedings* of this Symposium cover topics such as: high-gradient magnetic separation (HGMS); particle buildup; magnetic filter performance; theory of magnetic filtration; high intensity drug magnetic separation; hydrogenation; open gradient magnetic separation (OGMS); influence of surface forces.

**Micro-Delecon '82, 5th [IEEE] Delaware Bay Computer Conference**, held March 9, 1982 in Newark, DE; sponsored by IEEE C and IEEE Delaware Bay Section. *Proceedings*, 119 pp., LC 82-80903 (preassigned), \$20.00. **82CH1768-1** (OOP 1E)

**Coverage:** This meeting provides a forum for the exchange of ideas among people in the Delaware Valley who are interested in computing. Topics covered in the 19 technical contributions include: man-machine interface; software development; signal processing; algorithms; microprocessor applications; network systems.

**Microwave and Millimeter-Wave Monolithic Circuits Symposium, 1st IEEE**, held June 18, 1982 in Dallas, TX; sponsored by IEEE MTT and IEEE ED. *Digest of Papers*, 63 pp., LC 82-81908 (preassigned), \$32.00. **82CH1784-8** (OOP 1D)

**Coverage:** "Original work in the field of microwaves and millimeter waves where technology is employed to process circuits and devices on semiconductor substrates with current or potential applicability to the 1 to 300 GHz frequency range" is presented in 16 papers.

**Multiple-Valued Logic, 12th International Symposium on**, held May 25-27, 1982 in Paris, France; sponsored by IEEE C, Conservatoire National des Arts et Metiers (CNAM), CNRS, et al. *Proceedings*, 341 pp., LC 79-641110, ISSN 0195-623X, \$28.00. **82CH1757-4** (OOP 1E)

**Coverage:** Fourteen technical sessions cover topics such as: circuits and technology; algebra; arithmetic circuits; fault tolerance; algebra and philosophy; conception; fuzzy logic; switching theory; MVL simulations.

**Northeast Bioengineering Conference**, see *Bioengineering Conference, 10th Northeast*.

**Nuclear Science Symposium, 28th (NSS)**, and **13th Symposium on Nuclear Power Systems (SNPS)**, held Oct. 21-23, 1981 in San Francisco, CA; sponsored by EPRI, IEEE NPS, Lawrence Berkeley Laboratory, et al. *Proceedings in IEEE Transactions on Nuclear Science*, Vol NS-29, No. 1, Feb. 1982, 1039 pp., \$30.00. **JH58941** (not distributed under OOP)

**Coverage:** There were 13 technical sessions in the program of the 28th NSS with 200 papers on topics such as: data acquisition systems; space instrumentation; photomultipliers and microchannel plates; instrumentation and measurements for radioactive waste disposal; physics instrumentation; medical instrumentation; circuits and systems; reactor instrumentation; detectors; environmental measurements; safeguards; fusion. The 15 papers from the 13th SNPS are on subjects such as: IEEE/PES/Nuclear Power Engineering Committee Nuclear Power Standards Status Report; data acquisition; Emergency Response Systems—NUREG-0696; computer hardware and software systems; display-control concepts; verification and validation (V&V); probabilistic risk assessment (PRA) studies; NRC hands-on equipment qualification programs; economics of effective assurance; self-testing; isolators.

**Optical Fiber Communication, 5th Topical Meeting on (OFC '82)**, held April 13-15, 1982 in Phoenix AZ; sponsored by IEEE QEA and OSA. *Digest of Technical Papers* (Technical Digest on the Cover), 80 pp., LC 81-84737 (preassigned), \$40.00. **82CH1722-8** (OOP 1D)

**Coverage:** The 18 technical sessions composed of abstracts explore the research, technology, and application of optical fibers in specific areas such as: materials and processes; transmission systems and subsystems; production and engineering; local systems; manufacturing; performance and characterization; passive components; coating and strength; long-wavelength light emitting diodes and detectors; interconnections and cables; lasers; single-mode fiber design and fabrication; single-mode fiber characterization; coherent systems; fiber sensors.

**Phoenix Conference on Computers and Communications**, see *Computers and Communications, 1st Phoenix Conference on*.

**Power Engineering Society Summer Meeting, 1982 IEEE**, held July 18-23, 1982 in San Francisco, CA; sponsored by IEEE PE. All papers accepted for presentation at the Power Engineering Society Meetings will be published with their full discussions and closures in various issues of the *IEEE Transactions on Power Apparatus and Systems*, not as a group, but with each paper's first page identifying the meeting at which it was presented and displaying the paper's number. Summaries of the papers will appear in forthcoming issues of the *IEEE Power Engineering Review*. Preprints of technical papers are available from



the IEEE Service Center at \$6.00 each; write for the program which lists the papers.

**Coverage:** Topics covered in 46 technical sessions include: insulated conductors; control; system planning; substations; transformers; distribution; energy development; excitation systems; surge protection; switchgear; machine monitoring; insulators; power system relaying; synchronous machines; interference; equalizing and state estimation methods; interconnected systems; reliability; measurements; communications engineering; load management; system dynamics; induction and direct current machines; transmission; corona and field effects.

**Pulp and Paper Industry Technical Conference, [IEEE],** held June 8–11, 1982 in Niagara Falls, Ontario, Canada; sponsored by IEEE IA. *IEEE Conf. Record*, 156 pp., LC 74-136000, ISSN 0190-2172, \$32.00. **82CH1782-2** (OOP 1B)

**Coverage:** The applications of electrotechnology to the pulp and paper industry covered in 24 contributions include: induction motors; relays; drives; transformers; capacitors; insulated conductors; computer aided design; PCBs; safety; communications; reliability; control; synchronous motors; microprocessors; cogeneration.

**Pulsed Power Conference, 3rd IEEE International,** held June 1–3, 1981 in Albuquerque, NM; sponsored by IEEE NPS, IEEE Reg. 6, IEEE Albuquerque Section, Air Force Aero-Propulsion Laboratory, et al.; edited by T. H. Martin and A. H. Guenther. *Digest of Technical Papers*, 565 pp., LC 81-81007 (preassigned), \$68.00. **82CH1662-6** (OOP 1 B and H)

**Coverage:** Topics such as these are covered in 29 technical sessions: accelerators; insulation; applications; switching; pulse forming networks; electromagnetic storage; diagnostics; electrical breakdown; magnetic insulation; energy storage technology; liquid and solid insulation; electron, ion beam diodes and beams; pulsed power education.

**Railroad Conference, Joint ASME/IEEE,** held April 19–22, 1982 in Erie, PA; sponsored by ASME and IEEE IA. *IEEE Technical Papers*, 68 pp., \$32.00. **82CH1778-0** (OOP 1B)

**Coverage:** These topics are covered in eight technical papers: propulsion hardware; dual-mode locomotive; electrified railroads; transformers; failure component detection systems; electromagnetic compatibility.

**Reliability and Maintainability Symposium, 1982,** held Jan. 26–28, 1982 in Los Angeles, CA; sponsored by IEEE R, ASQC, IES, AIAA, et al. *Proceedings*, 523 pp., LC 78-132873, ISSN 0149-144X, \$40.00. **82CH1732-7** (OOP 1F)

**Coverage:** Topics covered in 21 technical sessions include: rare events; life-cycle costing; case histories; mechanical reliability; screening; analysis; software; consumer and industrial products; equipment readiness; productivity, mathematics and modeling; R&M design and data systems; testing; parts; transportation; manufacturing; military and aerospace applications.

**Rural Electric Power Conference, 26th [IEEE],** held April 25–27, 1982 in Oklahoma City, OK; sponsored by IEEE IA and IEEE Oklahoma City Section. *Papers*, approx. 200 pp., LC 81-85947 (preassigned), \$36.00. **82CH1733-5** (OOP 1B)

**Coverage:** The topics covered in 16 technical papers include: supervisory control and data acquisition (SCADA); load management; distribution systems; cables; computer applications; research and development; capacitors; National Electric Safety Code (NESC).

**Security Technology, 1982 Carnahan Conference on,** held May 12–14, 1982 in Lexington, KY; sponsored by University of Kentucky, IEEE Lexington Section, and IEEE AES; edited by John S. Jackson and R. William DeVore. *Proceedings*, 194 pp., ISSN 0731-7875, ISBN 0-89779-046-4, UKY BU 127, \$32.00. **82CH1775-6** (OOP 1C)

**Coverage:** The Proceedings includes 29 technical contributions focusing on security systems, telecommunications privacy and security, surveillance, and protecting information.

**Semiconductor Power Converter Conference, [IEEE/IAS 7th] International (ISPC '82),** held May 24–27, 1982 in Orlando, FL; sponsored

by IEEE IAS. *Conf. Record*, 437 pp., LC 81-83230 (preassigned), \$60.00. **82CH1682-4** (OOP 1B)

**Coverage:** The application of power semiconductor switching devices and controls to power conversion technology is covered in seven technical sessions on topics such as: industrial power electronics; power switching devices; inverters and propulsion systems; analysis and control; induction motor drives; synchronous motor drives and cycloconverters.

**Simulation Symposium, 15th,** held March 17–19, 1982 in Tampa, FL; sponsored by ACM, IEEE C, SCS, and IMACS; edited by Robert Massarotti. *Record of Proceedings*, 359 pp., LC 71-149514, ISSN 0272-4715, \$25.00. **82CH1744-2** (OOP 1E). Also available through ACM Order No. 577820

**Coverage:** Topics such as these are covered in 20 technical sessions: simulation languages; emulation; information system modeling; applications of simulation in the areas of military, aerospace, product development, computer communications; robotics; networks; hierarchical multigranular modeling; database system simulator (DBSS); supportive simulation architecture.

**System Theory, 14th Southeastern Symposium on (SSST),** held April 15–16, 1982 in Blacksburg, VA; sponsored by IEEE C, IEEE Virginia Mountain Section, and IEEE SMC. *Proceedings*, 318 pp., LC 74-642491, ISSN 0094-2898, \$25.00. **82CH1752-5** (OOP 1E)

**Coverage:** The purpose of this symposium is to aid in communications and contacts between the electrical engineering and systems faculties of universities in the Southeast. The proceedings contains papers divided into 15 technical sessions according to topics such as: parallel processing/interconnection networks; biosystems; control systems; power systems; network design and analysis; robotics; computer design; microprocessor applications; optics; image processing/pattern recognition; signal processing architectures; applied communications; system analysis and identification; fault tolerant systems.

**Textile Industry Technical Conference, 1982 IEEE,** held May 5–6, 1982 in [Greenville, SC]; sponsored by IEEE IA. *Conf. Record*, 44 pp., LC 74-646073, ISSN 0094-9884, \$32.00. **82CH1777-2** (OOP 1B)

**Coverage:** Nine technical papers cover applications of electrotechnology to the textile industry including: microprocessors; solid-state; control; automated support; photoelectric sensors; electronic motor braking.

**Thermoelectric Energy Conversion, 4th International Conference on,** held March 10–12, 1982 in Arlington, TX; sponsored by IEEE Reg. 5, IEEE Fort Worth Section, and University of Texas at Arlington. *Proceedings*, 165 pp., \$52.00. **82CH1763-2** (OOP 1H)

**Coverage:** The aspects of thermoelectric energy conversion covered in 31 papers include: generators; materials; analysis; silicon-germanium (Si-Ge) alloys; heat pumps.

**Trends & Applications 1982,** see *Advances in Information Technology*.

**University/Government/Industry Microelectronics Symposium, 4th (UGIM '81),** held May 26–28, 1981 in Starkville, MS; sponsored by IEEE CHMT, IEEE ED, IEEE Mississippi Section, IEEE Reg. 3, NSF, and ISHM. Selected papers in *IEEE Transactions on Components, Hybrids, and Manufacturing Technology*, Vol. CHMT-5, No. 1, March 1982, 40 pp., \$12.00. **JH58024** (not distributed under OOP). The Proceedings(81CH1620-4) from this Symposium was listed in the July 1981 issue of the Bulletin.

**Coverage:** Topics covered in the nine revised papers include: integrated circuits; electrical engineering education; lasers; MOS devices; VLSI; VHSIC.

**Vehicular Technology Conference, 31st IEEE,** held April 6–8, 1981 in Washington, DC; sponsored by IEEE VT and IEEE Washington Chapter. *Conf. Record*, 415 pp., LC 75-643443 (not exact), \$54.00. **81CH1638-6** (OOP 1B)

**Coverage:** The theme of the 1982 meeting "Vehicular Technology—Always in the Public Interest" is reflected in the topics of the 14 technical sessions: new applications in automotive technology; electric vehicles; personal radio; guided radio communication; mobile

radio; mobile digital applications; automatic multiple channels; automatic vehicle location and monitoring; transportation systems; highway electronics.

**Visual Psychophysics and Medical Imaging, 2nd International Conference on,** held July 2–3, 1981 in Brussels, Belgium; sponsored by IEEE EMB, VUB-VRIJE Universiteit Brussels, IEEE Reg. 8, and IEEE Benelux Section; edited by C. Carl Jaffe. *Proceedings*, 201 pp., LC 81-82190 (preassigned), \$40.00. **81CH1676-6** (OOP 1H)

**Coverage:** The mutual interdependence of two seemingly unrelated subjects, visual psychophysics and medical imaging, is demonstrated in this proceedings' 37 papers on topics such as: diagnostic imaging; visual perception; observer performance; image processing; systems.

**Western Mining Industry Electrotechnology Conference,** held Sept. 14–16, 1981 in Reno, NV; sponsored by University of Nevada-Reno, U.S. Bureau of Mines, U.S. Dept of Interior, and IEEE IA. *Proceedings*, 542 pp., LC 80-82430 (preassigned), \$56.00. **81CH1585-9** (OOP 1B)

**Coverage:** Twenty-five papers cover topics such as: safety; instrumentation and control; power; communications; energy.

### Special Issues

**Application-oriented specifications; Computer,** Vol. 15, No. 5, May 1982. \$12.00. **JH59576**

**Coverage:** The five articles in this special issue illustrate some of the principles of application-oriented specifications in areas such as: process control systems; requirements languages; meta systems; development support systems; requirement specification languages.

**Bit-rate reduction and speech interpolation; IEEE Transactions on Communications,** Vol. COM-30, No. 4, April 1982. \$18.00. **JH58099**

**Coverage:** The topics covered in 26 papers are: waveform coding—implementation, techniques, subjective testing; LPC coding; trees, trellises, and vector quantization; speech interpolation techniques and systems.

**Communication software; IEEE Transactions on Communications,** Vol. COM-30, No. 6, June 1982. \$12.00. **JH58115**

**Coverage:** The difficult issues of designing communications software addressed by the 23 technical papers and Guest Editor's Prologue include: software methodology; Comité Consultatif International Télégraphique et Téléphonique (CCITT) programming languages; software tools; switching software architecture; communication software for computers.

**Electronic aspects of modern prostheses; IEEE Transactions on Biomedical Engineering,** Vol. BME-29, No. 4, April 1982. \$12.00. **JH57570**

**Coverage:** Nine papers in this special issue review areas where electronics and computers are affecting modern prostheses such as: talking with computers; cochlear prostheses; electronics and the diabetic; Utah Artificial Arm; physiological stimulators; aids for the blind; implantable electrodes; tactile artificial sight; electrocutaneous stimulation.

**Lightning and its interaction with aircraft; IEEE Transactions on Electromagnetic Compatibility,** Vol. EMC-24, No. 2, Pt. 1, May 1982. \$12.00. **JH58453**

**Coverage:** Nine technical papers examine the occurrence, measurement, and detection of natural and triggered lightning and the results of their interaction with aircraft. The applications of simulation and test methods, protection measures, and safety assessment to the problem are also discussed.

**Optical guided wave technology; Joint special issue published simultaneously as IEEE Journal of Quantum Electronics,** Vol. QE-18, No. 4, April 1982 (\$18.00. **JH60038**) and *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-30, No. 4, April 1982 (\$18.00. **JH58859**)

**Coverage:** State-of-the-art and technological trends in guided wave optics are presented in 43 papers divided into five principal subsections: optical fiber properties and fabrication techniques; semiconductor

diode sources; topical fiber sensors; planar waveguides and devices; transmission links and optical fiber componentry.

**Quantization; IEEE Transactions on Information Theory,** Vol. IT-28, No. 2, Pt. 1, March 1982. \$12.00. **JH58677**

**Coverage:** The field of quantization is explored in 14 papers and two correspondence items. Three of the papers are considered seminal in the field and were produced at Bell Laboratories. The remaining contributions are invited papers whose contents were influenced by the original works.

**Spread-spectrum communications; IEEE Transactions on Communications,** Vol. COM-30, No. 5, Pt. 1, May 1982. \$18.00. **JH58107**

**Coverage:** Aspects of spread-spectrum communications covered in 23 technical papers include: perspective papers; interference rejection; code division multiple access (CDMA); nonlinear effects; new systems, technology and uses.

**Supersystems; IEEE Transactions on Computers,** Vol. C-31, No. 5, May 1982. \$12.00. **JH57703**

**Coverage:** A current state-of-the-art report on Supersystems is presented in 10 technical papers and the Guest Editor's Introduction. Nonreal-time and real-time processes are covered along with relevant research problems such as optimal supersystem configurations, optimal file allocation, conflict-free memory access, improving interconnection networks, and novel architectural ideas.

**Very large scale integration; Joint special issue published simultaneously as IEEE Journal of Solid-State Circuits,** Vol. SC-17, No. 2, April 1982 (\$18.00. **JH60137**) and *IEEE Transactions on Electron Devices*, Vol. ED-29, No. 4, April 1982 (\$18.00. **JH58255**)

**Coverage:** These are some of the technical achievements in the area of VLSI that are covered in 47 full articles and 3 briefs: device processing and patterning; technologies; device structures and characteristics; device/circuit modeling; circuits; circuit/system design.

### Non-Conference Special Sections

Listed below are regular issues of TRANSACTIONS/JOURNALS/MAGAZINES which include, for those issues only, groups of papers devoted to specific topics.

**Information control; special report,** pp. 64–73, *IEEE Spectrum*, Vol. 19, No. 5, May 1982. \$12.00. **JH57067**

**Coverage:** Two articles examine the issue of proposed government limitations on the transfer of technology from the academic and industry viewpoints.

**Integrated optical circuits and devices, Fabrication and evaluation of; special section,** pp. 210–216, *IEEE Transactions on Components, Hybrids, and Manufacturing Technology*, Vol. CHMT-5, No. 2, June 1982. \$12.00. **JH58032**

**Coverage:** The four technical papers in this special section cover the "fabrication of masks for integrated optical circuits, the machining of geodesic lenses, and the materials processing involved in the fabrication of waveguides."

**Medical electronics: Technology for the deaf; special section,** pp. 37–49, *IEEE Spectrum*, Vol. 19, No. 4, April 1982. \$12.00. **JH57059**

**Coverage:** In three articles, experts describe how electronic devices and systems can aid the deaf with speech difficulties.

### IEEE Standards

**ANSI/IEEE C37.29-1981** (Revision of ANSI/IEEE C37.29-1974). *American National Standard: IEEE Standard for Low-Voltage AC Power Circuit Protectors Used in Enclosures*; Dec. 17, 1981. 14 pp., \$5.00. **SH08540**

**ANSI/IEEE C37.100-1981** (Revision of ANSI C37.100-1972). *American National Standard: IEEE Standard Definitions for Power Switchgear*; Dec. 17, 1981. 56 pp., \$8.00. **SH08375**

**ANSI/IEEE Std 583-1982** (Revision of ANSI/IEEE Std 583-1975). *American National Standard: IEEE Standard Modular Instrumenta-*



*tion and Digital Interface System (CAMAC)\**; Feb. 26, 1982. 81 pp., \$12.00. **SH08524**

**ANSI/IEEE Std 595-1982** (Revision of ANSI/IEEE Std 595-1976). *American National Standard: IEEE Standard Serial Highway Interface System (CAMAC)\**; Feb. 26, 1982. 85 pp., \$12.00. **SH08516**

**ANSI/IEEE Std 596-1982** (Revision of ANSI/IEEE 596-1976). *American National Standard: IEEE Standard Parallel Highway Interface System (CAMAC)\**; Feb. 26, 1982. 42 pp., \$6.50. **SH08508**

**ANSI/IEEE Std 675-1982** (Revision of ANSI/IEEE Std 675-1979). *American National Standard: IEEE Standard Multiple Controllers in a CAMAC\* Crate*; Feb. 26, 1982. 32 pp., \$6.00. **SH08474**

**ANSI/IEEE Std 726-1982** (Revision of ANSI/IEEE Std 726-1979). *American National Standard: IEEE Standard Real-Time BASIC for CAMAC\**; Feb. 26, 1982. 20 pp., \$6.00. **SH08490**

**IEEE Std 442-1981**. *IEEE Guide for Soil Thermal Resistivity Measurements*; Nov. 24, 1981. 16 pp., \$6.00. **SH08409**

**IEEE Std 532-1982**. *IEEE Guide for Selecting and Testing Jackets for Cables*; March 18, 1982. 25 pp., \$6.00. **SH08201**

\*Computer Automated Measurement and Control

### IEEE Press

**Electronic Switching: Digital Central Office Systems of the World**; edited by Amos E. Joel, Jr. (Bell Laboratories). ©1982 by IEEE. 268 pp., ISBN 0-87942-159-2, LC 81-20041 (CIP Data on version of title page). \$30.95. **PC01545** (OOP 2). Also distributed through John Wiley & Sons, Inc. Wiley Order No. Clothbound: 0-471-86884-1

**Coverage:** Twenty-six digital time-division switching systems are described in 29 reprinted papers in this volume. The systems were chosen to illustrate both the impact of digital signals and the trend from centralized to distributed stored program controls. The systems are located in the U.S., Canada, France, Italy, the Netherlands, West Germany, East Germany, Belgium, the U.K., Japan, and Sweden. The developments in this field since the 1976 IEEE Press Book, **Electronic Switching: Central Office Systems of the World**, also by A.E. Joel, Jr. (PP00778; \$11.95) are shown.

### Tutorials

**Computer Graphics Tutorial**; edited by John C. Beatty and Kellogg S. Booth. 2nd edition, ©1982 by IEEE, 570 pp., LC 82-80837 (preassigned). \$30.00. **EH0194-1** (OOP 8)

**Nuclear Science Symposium, Tutorial Short Courses Held in Conjunction with the 1981**, held Oct. 20 and 24, 1981 in San Francisco, CA; sponsored by EPRI. IEEE NPS, Lawrence Berkeley Laboratory, et al. Four tutorial short courses in *IEEE Transactions on Nuclear Science*, Vol.

NS-29, No. 3, June 1982, 176 pp. \$12.00. **JH58966** (not distributed under OOP)

**Power System Reliability Evaluation**, held July 21, 1982 at the IEEE Power Engineering Society Summer Meeting in San Francisco, CA; sponsored by IEEE PE. *IEEE Tutorial Course—Course Text*, 59 pp., \$16.00. **82EH0195-8** (OOP 8)

**Programming Languages** (Tutorial Series 15); *Computer*, Vol. 15, No. 4 April 1982, pp. 70–83, \$12.00. **JH59568** (not distributed under OOP)

**VLSI Technologies: Through the 80's and Beyond**; edited by Denis J. McGreivy and Kenneth A. Pickar. ©1982 by IEEE, 343 pp., LC 82-80242 (preassigned). \$25.00. **EH0192-5** (OOP 8)

### Miscellaneous Publications

**Applications of Computers in Medicine**; edited by Morton D. Schwartz. ©1982 by IEEE, 274 pp., LC 82-80177 (preassigned), \$24.00. **TH0095-0** (OOP 6)

**Coverage:** This volume, published under the auspices of the IEEE Engineering in Medicine and Biology Society, includes 26 original papers divided into five sections: physiological modeling and simulation; cardiovascular, patient monitoring and pulmonary systems; medical imaging; medical decision making; hospital information systems.

**Carbon Dioxide Proliferation; Will the Icecaps Melt?**; Special Publication No. 21 of the IEEE PES, presented at the 1982 IEEE Power Engineering Society Summer Meeting held on July 28, 1981 in Portland, OR. 36 pp., \$6.00. **82TH0097-6** (OOP 6)

**Coverage:** Scientists involved in atmospheric research and data recording worldwide explore the impact of carbon dioxide on weather, climate, and other aspects of the environment in an introduction, four papers, a discussion section, and a summary.

**1981 Index to IEEE Publications**. ©1982, 726 pp., LC 75-646004, \$170.00. **JH60715** (OOP 1-All and All Transactions Subscribers; OOP 7 will receive mail solicitation)

**Coverage:** Author and Subject indexes to all papers in IEEE periodicals and conference publications, as well as to IEEE Press books, Standards, and miscellaneous publications.

**Patents and Patenting For Engineers and Scientists**; edited by R. J. Joenk. ©1982 by IEEE, 105 pp., ISBN 0-87942-700-0, \$7.50. **TH0096-8** (not available under OOP)

**Coverage:** The volume's 24 contributions explain the necessary circumstances for patenting, how to research information on existing patents, how to protect ideas, and the patenting process.

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