



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.

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. Commencing with this issue we are bringing all pre-assigned LC numbers to your attention. The standard availability of LC cards for pre-assigned numbers is approximately six months after publication date.

Acoustics, Speech and Signal Processing (ICASSP), [4th] 1979 IEEE International Conference on, held Apr 2-4, 1979 in Washington, DC; sponsored by IEEE ASSP. *Conf. Record*. 993p. **LC79-84703** (pre-assigned). \$30.00. **79CH1379-7 ASSP**. OOP 1A.

Sessions on: 2-D digital and underwater signal processing; narrowband, mediumband, and wideband speech communication; automatic recognition of phonemes and continuous speech; spectral and speech analysis; noise reduction in speech processing; underwater arrays and medium effects; audio and acoustical systems; roundoff noise and coefficient sensitivity in digital filters; system identification and modeling; speech quality evaluation and enhancement, aids for the handicapped, and synthesis; transforms and algorithms; discrete word and talker verification recognition; systems and processing; hardware-software structures; pitch detection; digital filter design; devices and applications; adaptive filtering.

Adaptive Processes, 17th Symposium on, see Decision and Control

Aerospace and Electronics Conference, [31st] 1979 National (NAECON), held May 15-17, 1979 in Dayton, OH; sponsored by IEEE AES and IEEE Dayton Section. *Proceedings*. 3v. 1364p. **LC61-2171**. \$30.00. **79CH1449-8 NAECON**. OOP 1C. **Sessions on:** Technologies—laser gyro, airborne antenna, tactical guided weapons, and navigational; software technology, management, and standardization; scene matching techniques; microcomputer technology and applications; avionics applicable to quick strike system and software test facilities; technology in medicine and industry; aerospace power system developments; cost estimating and applied cost considerations; flight control; advanced digital system and computer architectures; power conditioning electronics; Kalman filtering applications; tactical guided weapons systems; power system optimization; NAVSTAR GPS; optimal control of air-to-air missiles; airborne radar and electro-optical systems; advanced digital elements; pointing, tracking and stabilization; combat search and rescue; automatic test equipment and aircrew train-

ing devices software; air traffic control/energy control; communications systems; high order language (HOL) standardization; sensor and signal processing; four minicourses covering Kalman filtering, digital control systems, microprocessor applications, and digital signal processing devices.

Applications of Small Accelerators in Research and Industry, 5th Conference on (formerly Conference on Scientific and Industrial Applications of Small Accelerators), held Nov 6-8, 1978 in Denton, TX; sponsored by US DoE, US NBS, IEEE NPS, et al., edited by Jerome L. Duggan and I. L. Morgan. *Proceedings in IEEE Transactions on Nuclear Science* Vol. NS-26. No. 1. Pt. 2. Feb 1979. 864p. \$20.00. **JH49999**. (Not distributed under OOP). Abstracts in the *Bulletin of the American Physical Society* Vol. 23. No. 8.

Coverage: Two concurrent symposia: Symposium of the Use of Small Accelerators in Research, and Symposium on the Industrial Applications of Small Accelerators contain the following sessions: atomic physics; nuclear physics, CTR and related phenomena; stopping power; trace analysis with ion beams and microprobes; accelerator technology; geoscience and mineral exploration; radiological safety aspects; neutron activation analysis and bulk analysis; computed tomography; ion implementation; medical radioisotope production with accelerators; biological and chemical applications; radiation processing; material analysis with ion beams; radiation therapy.

Bioengineering Conference, 7th New England (Northeast), held Mar 22-23, 1979 in Troy, NY; sponsored by IEEE EMB; Rensselaer Polytechnic Institute and the ASEE, edited by Lee E. Ostrander. *Proceedings—Conference Edition*. 530p. \$40.00. **79CH1434-0 EMB**. OOP 1F.

Sessions on: Computer applications; instrumentation and transducers; transport phenomena; biochemical processes; biomaterials and structural analysis of bone; optical- and ultrasonic methods; ultrasound and imaging; fracture healing and cements; cell imaging; hemodynamics and devices; cancer, toxicology, and epidemiology; cardiovascular and pulmonary function; bioelectric analysis; rehabilitation; tomography and imaging; anesthesiology; electrodes; biomechanics; simulation models; electromyography.

Circuits, Systems and Computers, 12th Asilomar Conference on, held Nov 6-8, 1978 in Pacific Grove, CA; sponsored by University of Santa Clara, Naval Postgraduate School, and IEEE C, edited by Chi-Chia Hsieh. *Conf. Record*. 764p. **LC78-51637** (This LC number was printed in error on the title page. There is no LC for this publication). \$25.00. **78CH1369-8 C/CAS/CS**. OOP 1E.

Sessions on: Active networks; adaptive control, large-scale, and socio-economic systems; control, estimation, and topological applications; design automation; digital and switched-capacitor filters; estimation and detection; image and signal processing; impact of VLSI on education; linear systems and stability; microprocessors and digital systems; nonlinear circuits and systems; semiconductor for modeling; software engineering; systems identification.

Computer Architecture, 6th Symposium on, held Apr 23-25, 1979 in Philadelphia, PA; sponsored by IEEE C and ACM. *Proceedings*. 342p. **LC76-351667** (serials no.). ISSN 0149-7111.

\$22.00. **79CH1394-6C**. OOP IE.

Contents: Ring based implementation in concurrent computer architecture; pipeline architecture design; abstract data type implementation; adaptive computer and the prevention of sub-tract errors; ARCADE System; many operand registers for block-structured languages; video graphics; radar signal processing; bit-slice cache controller; tree organized minicomputer simulation; VLSI processor of X-tree; FLATS; new ring-structured microcomputer network performance models; virtual memory and the optimally designed computer system; pipelined central processors; function exchanging in a poly-processor system; Sperry Univac 1100 Series Systems; processor architecture for communication in parallel systems; packet switching in banyan networks; processor-memory interconnections; time-bound arbiter and inertial delay; modular multiprocessor communications network; Experimental Polyprocessor System (EPOS)—architecture and operating system; asynchronous circuit switching network; SISD processors; emulator network for SIMD networks.

Computer Society International Conference, 18th IEEE (COMPCON SPRING '79), held Feb 26–Mar 1, 1979 in San Francisco, CA; sponsored by IEEE C. *Digest of Papers—Exploding Technology/Responsible Growth*. 329p. **LC79-83866** (pre-assigned). \$25.00. **79CH1393-8C**. OOP IE.

Sessions on: Design automation for VLSI systems; computer technology and health care costs; voice systems; state of the art in computer security technology; reliable computer systems; small business and microcomputer operating systems; hardware testing; hardware and software standards; software design techniques; multiple microprocessor architecture and software; distributed data base management and architecture; architecture and technology for data management; novel technologies and computers; computer peripherals; integrating semiconductor memories into systems; interprocess communication; computer graphics; application; local area computer network technology; plug-compatible computers.

Computers in Cardiology, [5th], held Sep 12–14, 1978 in Stanford, CA; sponsored by IEEE C, National Institutes of Health; American Heart Asso., et al., edited by Kenneth L. Ripley and Harry G. Ostrow. *Proceedings*. 437p. \$25.00. **78CH1391-2C**. OOP IE.

Sessions and workshops on: Nuclear and computerized tomographic cardiovascular imaging; arrhythmia and intensive care monitoring, ventricular wall motion; cardiology databases; blood flow detection and analysis; intravenous contrast angiography; diagnostic and exercise electrocardiography; innovative techniques; ultrasonic cardiovascular measurements.

Consumer Electronics, 8th Annual Chicago Fall Conference on, held Nov 6–7, 1978 in Chicago, IL; sponsored by IEEE BCCE and IEEE Chicago Section. *IEEE Transactions on Consumer Electronics*. Vol. CE-25. Nos. 1 and 2. Feb and May 1979. \$10.00 each. **JH47811** and **JH47829**. (Not distributed under OOP).

Coverage: Mass market potential for home terminals; CRT gun design; trans-standards VTR; vertical interval reference (VIR) signal; microprocessor controlled cassette tape deck; microprocessor controlled room air conditioner; FM and AM receivers; one chip digital tuning system; varactor tuners without an RF amplifier; speech synthesizer; test cell for consumer products emission; LSIs in CTV sets; intrusion alarm system; cassette tape deck with a Hall effect magnetic head; FM spectral components.

Control of Power Systems Conference and Exposition, 1979, held Mar 19–21, 1979 in Houston TX; sponsored by IEEE Houston Section and Texas A&M University. *Conf. Record*. 166p. **LC79-84715**. (This is a pre-assigned number; LC77-94201 was printed in error on the title page). \$15.00. **79CH1377-1 REG5**. OOP 1H.

Coverage: Multivariable stabilizer design; linear programming and generation scheduling; optimal control system in a supercritical thermal power plant; distribution capacitors; design

economics for system reliability; automated distribution system planning; alternative numerical technique and optimum meter placement for power system state estimation; power security control; power control system paper mill; generated and purchased power for plant power demands; motor control center; scheduling hydro units in a hydro-thermal system; manipulation methods for the electricity generation problem; transient stability problem of multimachine power systems; coherent machines identification; multiterminal HVDC links in multimachine power systems; load management at the Florida Power Corporation; customer load management; residential energy programs and system planning; independently operating idealized synchronous generator; excitation control to damp SSR oscillations; corrective control for transient emergency state of power systems; power distribution system as a communications medium; substation and distribution automation; control with intelligent remotes and telephone systems; pumped storage stations for electric load management; improving exciter performance; adaptive control for closed-loop control; National Electric Control Center; satellite communications in power systems control; wind-assisted utility systems; variable speed alternator; multiarea power dispatch; time-moment matching technique; load demand prediction algorithm.

Decision and Control, [9th] 1978 Conference on (announced in error as 17th Conference in the Foreword), including the **17th Symposium on Adaptive Processes**, held Jan 10–12, 1979 in San Diego, CA; sponsored by IEEE CS. *Proceedings*. 1461p. \$80.00. **78CH1392-OCS**. OOP 1A.

Coverage: Robust control; adaptive control; optimal control; identification in biomedical systems; geodesy and engineering; robotics, manipulators and prostheses; algebraic and geometric system theory; multi-dimensional, large scale, linear and non-linear systems; games; continuous time nonlinear filtering; estimation and filtering; mathematical programming; aerospace applications; immunology and disease control; decision and classification; fuzzy sets and applications; adaptive noise cancelling; control of solar energy systems; computational aspects of estimation; surveillance in a multitarget environment; bifurcation analysis and catastrophe theory methodology; a proposed National Systems Center.

Design Automation Conference, 16th, held June 25–27, 1979 in San Diego, CA; sponsored by IEEE C and ACM. *Proceedings*. 567p. **LC76-150348**. \$25.00. **79CH1427-4C**. OOP IE.

Sessions on: LSI placement techniques and layout; interactive graphics; high level design techniques; building architectural design automation; test generation and evaluation; design automation systems and databases; mechanical computer-aided design and drafting; digital design simulation; Cal Tech silicon structures project; layout methods and systems; real world of design automation; design correctness and verification; design automation at Hughes Aircraft Company; VLSI design aids and methodology; routing algorithms; graphical integrated circuit design; Case-Western N.mPC multi-microprocessor system; tutorials—computer hardware description languages and their applications; computer simulation of gate level physical logic.

Electric Contact Phenomena, 9th International Conference on, held jointly with the **24th Holm Conference on Electrical Contacts** Sep 11–15, 1978 in Chicago, IL; sponsored by IEEE CHMT and the Illinois Institute of Technology. Papers in *IEEE Transactions on Components, Hybrids, and Manufacturing Technology*. Vol. CHMT-2. No. 1. Mar 1979. \$10.00. **JH47852**. (Not distributed under OOP).

Coverage: Selected papers from both conferences with major topics being make-break contacts—high current and low current; silver CdO contacts; aluminum connections; contact contamination, theory, attachment; contacts—sliding and reed relay.

Electronic Components Conference, 29th, held May 14–16, 1979 in Cherry Hill, NJ; sponsored by IEEE CHMT and EIA. *Proceedings*. 422p. **LC78-647174** (no. is for serials cataloging;

LC79-87483 printed in error on title page) \$40.00. **79CH1457-1 CHMT**. OOP 1D.

Sessions: Manufacturing technology; semiconductors; hybrid interconnections, components, and applications; substrate development; thick and thin film developments; bonding; interconnections/connections; alpha radiation in FET packages; capacitors/resistors; reliability.

Holm Conference on Electrical Contacts, 24th, see Electric Contact Phenomena, 9th International Conference on.

IEEE Region V Conference, 1979, held Apr 3–5, 1979 in El Paso, TX; sponsored by IEEE Region V, AIAA, and the University of Texas, edited by Michael E. Austin, Willis L. Webb and Joseph H. Pierluissi. *Conf. Record—Space Instrumentation for Atmospheric Observation*. 169p. **LC79-84648** (pre-assigned). \$28.00. **79CH1380-5 REG 5**. OOP 1H.

Objective: Bring into clear focus the impact of the Space Shuttle on the national Space Transportation System (STS). The meeting focused on new experimental techniques which will be available to universities, faculty members and graduate students. Sessions covered the physics of remote sensing, Space Shuttle capabilities, parameter extractions and display systems, getaway special payload workshop, and advanced concepts.

IEEE Region 6 (Western USA) Conference, 1979, held Apr 25–27, 1979 in Sacramento, CA; sponsored by IEEE Region 6 and IEEE Sacramento Section. *Conf. Record Engineering—Key to the Future*. 158p. **LC79-87710** (pre-assigned). \$15.00. **79CH1420-9 REG 6**. OOP 1H.

Sessions: Electricity in agriculture; communications; power systems; personal and industrial microprocessors; conventional central power plants; computer software/hardware; biomedical electronics; utility application of citrate.

Industrial and Commercial Power System Technical Conference, 1979, held May 14–17, 1979 in Seattle, WA; sponsored by IEEE IA and IEEE Seattle Section. *Conf. Record*. 130p. **LC65-53571** (LC65-35371 printed in error in publication). \$16.00. **79CH1460-5 IA**. OOP 1B.

Coverage: Transformer voltages and standards; new rating for transformers; cast coil and conventional dry type transformers; costs of distribution transformers; effective grounding for personnel protection; automatic motor reacceleration; Red Book revision; cost of power outages; power, rectifier and arc-furnace transformers' new reliability survey; steady state transients in distributed low voltage power systems; transient surges and motor protection; electric space conditioning; permanent power fuse with molded case circuit breakers; single phase a.c. circuit breaker; instantaneous devices; 600 volt dc time-delay fuses; enclosed switches 600 volts and less; Buf^c Book—IEEE Standard 242, report on revision of chapter 5 "Fuse Characteristics."

Microcomputer Conference (MICRO-DELCON), [2nd] Delaware Bay, held Mar 20, 1979 in Newark, DE; sponsored by IEEE C and IEEE Delaware Bay Section. *Proceedings*. 122p. \$14.00. **79CH1426-6C**. OOP IE.

Scope: Forum for exchange of ideas between computer professionals in the Delaware Bay area in all areas of computer science and engineering, including: microcomputer systems and applications; software development; industrial power systems design; computer languages and architecture; digital processing; a proposal for an electronic file cabinet and a system for electronic type.

Microwave Symposium, 1979 IEEE MTT-S International, held Apr 30–May 2, 1979 in Orlando, FL; sponsored by IEEE MTT, edited by John E. Tracy. *Digest*. 590p. **LC77-645125**. \$25.00. **79CH1439-9 MTT**. OOP 1D.

Sessions: Millimeter wave devices, integrated circuits, and mixers/low-noise amplifiers; microwave measurements, systems, and field theory; microwave filters, ferrites, integrated circuits, acoustics and magnetostatic waves; high power; devices and circuits for gigabit, digital systems; solid state sources and power combining; microwaves in the bioenvironment; six-ports; Japanese session; semiconductor control;

computer aided design; FET's and FET modeling; active microwave integrated circuits; active and passive components and remote sensing; fiber and guided wave optics; workshops.

Multiple-Valued Logic, 9th International Symposium on, held May 29–31, 1979 in Bath, England; sponsored by IEEE C. *Proceedings*. 304p. **LC79-87914** (pre-assigned). \$22.00. **79CH1408-4C**. OOP IE.

Coverage: Multiple-valued logic: 1974–1978 survey and analysis; extensions of multiple-valued threshold logic; logic design of multiple-input quad I² circuits; hardware; circuit design; fuzzy logic; philosophic aspects; algebraic topics; applications.

Nuclear Power Systems, 1978 Symposium on, see Nuclear Science Symposium.

Nuclear Science Symposium, 25th [and] 10th Symposium on Nuclear Power Systems, held Oct 18–20, 1978 in Washington, DC; jointly sponsored by IEEE NPS, US DoE, NASA, et al., edited by H. W. Kraner. *Proceedings of the majority of the papers in IEEE Transactions on Nuclear Science*. Vol. NS-26. No. 1. Pt. 1. Feb 1979. 981p. \$20.00. **JH48835**. (Not distributed under OOP).

Sessions on: Detectors: drift chambers, calorimetry, multiwire proportional chambers, signal processing, semiconductors, photo/optical; circuits; instrumentation for space; nuclear medicine, environmental and reactor instrumentation; data acquisition and systems; nuclear power systems: nuclear power plant equipment; control and instrumentation of nuclear power generating stations; incore monitoring instrumentation; reactor instrumentation; standards.

Optical Computing Conference, [5th] International, held Sep 5–7, 1978 in London, England; sponsored by IEEE C, US ONR and SPIE. *Proceedings*. 210p. \$20.00. **78CH1305-2C**. OOP IE.

Coverage: Advances in supporting technologies, particularly spatial light modulators and acousto-optic devices; applications of optical processing with special emphasis on radar and sonar; continuing developments in new areas, including non-coherent optical processing, optical mathematical operations, and the use of integrated optics.

Optical Fiber Communication, Topical Meeting on, (formerly Topical Meeting on Optical Fiber Transmission), held Mar 6–8, 1979 in Washington, DC; sponsored by IEEE QEA and OSA. *Technical Digest*. 128p. \$25.00. **79CH1431-6 QEA**. OOP 1D.

Sessions on: Fiber design, manufacturing, measurements, strength, and systems; optical fiber cables; terminal and specialized components; modal noise; couplers and connectors; splice and connector measurements; microbend and radiation effects; sources, detectors, and switches.

Pacific Telecommunications Conference, held Jan 8–9, 1979 in Honolulu, HA; sponsored by IEEE CS, State of Hawaii Department of Planning and Economic Development, Hawaii Tele-Communications Assoc., et al., edited by Dan J. Wedemeyer and David L. Jones. *Proceedings*. 592p. \$40.00. **79CH1443-1 CSCB**. OOP 1C.

Coverage: Toward an international telecommunications and information policy; international data networks. Sessions on analysis of packet networks; satellite communication systems present and future, advances, new services; development in the Pacific area; the Alaskan experience; cost and rate structures; technical innovations in the communications industry; new applications; telecommunications past, present, and future with an emphasis on satellites; government policy in regards to regulation, privacy, and decentralization; new public data/text/fax/video communication network; statistical communication theory.

Power Industry Computer Applications Conference (PICA), 11th 1979, held May 15–19, 1979 in Cleveland, OH; sponsored by IEEE PE and IEEE Cleveland Section. *Proceedings*. 407p.

LC66-95936. \$33.00. **79CH1381-3-PWR.** OOP 1G.

Sessions on: State and load estimation and prediction; generator/network interaction; transients and protection; system security functions, planning tools, and disturbance simulation; optimal power flow; control center design; operations planning; software concepts and computer networks; remote station monitoring and control; stability and coherency; vector and parallel processors; computer-aided distribution planning techniques.

Pulp and Paper Industry Technical Conference, 1979 [25th] Annual, held May 15-18, 1979 in Pittsburgh, PA; sponsored by IEEE IA. *Conf. Record.* 136p. **LC74-136000.** \$10.00. **79CH1419-1 IA.** OOP 1B.

Coverage: Power distribution; energy management; maintenance and construction practices; drives and controls; including microprocessors and variable frequency; training and safety standards methods; transformers; PCB's.

Railroad Conference, 1979 [22nd] Joint ASME/IEEE/AAR, held Apr 12-14, 1979 in Colorado Springs, CO; sponsored by IEEE IA and ASME. *Conference Publication—IEEE Technical Papers.* 59p. \$15.00. **79CH1454-8 IA.** OOP 1B. **Sessions on:** Rail car identification using pattern recognition techniques; electric and diesel locomotives in operation; energy requirements and rail transportation systems; automatic control of ultrasonic rail-inspection transducers; site-specific analysis of regeneration on the PATCO and PAT Castle-Shannon Trolley Lines; safe braking model for a rail rapid transit system; railroad electrification system design.

Reliability and Maintainability Symposium, 1979, held Jan 23-25, 1979 in Washington, DC; sponsored by IEEE R, AIAA, AIEE, et al. *Proceedings.* 415p. + cumulative author index (1970-1979), cumulative ASQC descriptor index (1970-1976), and cumulative key-word index (1975-1979). **LC78-132873.** ISSN 0149-144X. \$18.00. **79CH1429-OR.** OOP 1F. **Sessions on:** Managing R&M; analytic applications; life-cycle costing; R&M warranties and case histories; product liability; energy systems; R&M requirements and testing; repairable vs. nonrepairable systems; safety; logistics; system effectiveness; operational influences on R&M; software reliability; reliability theory and growth; specification tailoring.

Rubber and Plastics Industries, 1979 31st Conference of Electrical Engineering Problems in the, held Apr 9-10, 1979 in Akron, OH; sponsored by IEEE IA and IEEE Akron Section. *Conf. Record.* 74p. **LC68-1277.** \$15.00. **79CH1455-5 IA.** OOP 1B. **Coverage:** Specifications and distributed processing in material handling systems; acceptance testing; energy management systems; solid state AC reduced voltage controllers; tread extrusion process; digital vs. analog control for process lines; automated microprocessor speed/stretch instrumentation; heat shrinkage material for jointing cables up to 8.7 kV, non-flammable vaporization cooled industrial transformer, infra red detection.

Rural Electric Power Conference, 23rd 1979, held Apr 22-24, 1979 in Indianapolis, IN; sponsored by IEEE IA and IEEE Central Indiana Section. *Digest of papers.* 155p. **LC79-87554** (pre-assigned number). \$20.00. **79CH1453-0 IA.** OOP 1B. **Coverage:** Underground corrosion control and power cable fault locating; distribution system performance analysis; small rural electric utilities and end-use forecasting; evaluation of cost performance of construction programs, distribution transformer losses, and capacitors; productivity measurement; corrosion detection of copper concentric neutrals on URD cable; three phase LTC vs. single phase regulation.

Scientific & Industrial Applications of Small Accelerators See Applications of Small Accelerators in Research and Industry.

Simulation Symposium, 12th, held Mar 14-16, 1979 in Tampa, FL; sponsored by IEEE C, ACM, and SCS, edited by R. Dysart Conine, Ephraim D. Katz, and John E. Melde. *Proceedings.* 361p. **LC71-149514** (LC78-51723 printed in error on

verso of title page). \$22.00. **79CH1376-3C.** OOP 1E.

Coverage: Stochastic model of law enforcement and speed limit compliance; coast guard search and rescue process; portable discreet event simulation package for microcomputers; electronic fund transfer system; examining alternative End-Stage Renal Disease (ESRD) therapies through simulation; optimal parameters in simulation models; quasi-real simulation for modular software replacement; taxonomy and analysis of event set management algorithms; steel processing; building modelers; information system design, evaluation, and planning model; dynamic storage management evaluation; multi-level distribution system; spacecraft tape recorder control servos; storage systems; cruise missile logistics; real natural gas reservoir data vs. natural gas reservoir models; resource allocation for tax audit activity in Canada.

Solid-State Circuits Conference, 1979 [26th] IEEE International (ISSCC), held Feb 14-16, 1979 in Philadelphia, PA; sponsored by IEEE SSC, IEEE Philadelphia Section, and the University of Pennsylvania, edited by Lewis Winner. *Digest of Technical Papers—Vol. 22.* 300p. **LC59-44023.** \$30.00. **79CH1375-5 SSCC.** OOP 1A.

Sessions on: Memory technology; telecommunications and linear circuit techniques; logic innovations; LSI applications and logic arrays; analog signal processing; advances in devices and technology; static RAMs; microwave transistor amplifiers; data acquisition; dynamic memories; microwave circuits; solid-state imaging and biomedical applications; computer-aided design techniques for VLSI.

SOUTHEASTCON '79 (Region 3 Conference), held Apr 1-4, 1979

in Roanoke, VA; sponsored by IEEE Region 3 and IEEE Virginia Mountain Section. *Proceedings.* 442p. **LC79-83654** (pre-assigned). \$30.00. **79CH01432-4 REG 3.** OOP 1H.

Sessions on: Microcomputer applications; photovoltaic energy conversion; control systems; education; optical engineering; computer software and simulation; energy conservation and management; digital signal processing; acousto-optics; computer architecture and logic design; signal processing applications; control theory; electromagnetics; electron device fabrication; electric transportation; large data acquisition systems; networks; instrumentation; pattern recognition; power systems; physics of electronic materials.

Space Instrumentation for Atmospheric Observation see IEEE Region V Conference, 1979.

Specifications of Reliable Software, held Apr 3-5, 1979, in Cambridge, MA; sponsored by IEEE C. *Proceedings.* 237p. \$20.00. **79CH1401-9C.** OOP 1E.

Coverage: Primarily theoretical discussions on specifications and their bearing on software reliability and maintenance. Sessions on specifying software requirements for complex systems; ensuring correctness in requirements specifications; notes on type abstraction; abstract data type specification in the AFFIRM System; specification language; specification method for interactive information systems; and/or programs; Unified Design Specification System (UDS²); synchronization specifications for data abstractions; abstract monitor types; NPN and distributed software; applicative techniques and design distributed systems; specification and verification of abstract data types; OBJ and algebraic program specifications; algebraic specification technique and partial operations; the Delta Experiment: multiple-user file updating module; verification condition generators; Alghard specification and transformation on data structures.

System Theory, 11th Southeastern Symposium on, held Mar 12-13, 1979 in Clemson, SC; sponsored by Clemson U. and IEEE Piedmont Section. *Proceedings.* 249p. \$22.00. **TH00612.** OOP 6.

Sessions on: Systems control; digital signal processing; software and numerical techniques; multidimensional signal processing and pattern recognition; communications, digital, optical and power systems; modeling and system identification; microcomputer and minicomputer system applications.

Textile Industry Technical Conference, 1979 Annual, held May 2-3, 1979 in Charlotte, NC; sponsored by IEEE IA. *Conf. Record.* Approx. 79p. **LC74-646073.** ISSN 0094-9884. \$15.00. **79CH1451-4 IA.** OOP 1B.

Sessions on: Continuing education; instrumentation documentation system; digital stretch control in a tire cord treating unit; energy efficient motor evaluation; electric power company service; safety and dividends; computer controls in dye house and drug room; solar process hot water systems; variable frequency motor protection; torque measurement and the slip of an AC induction motor; recovery after a flood—American Enka Company; energy management with utility monitoring and reporting systems; electric cable design and applications.

Transmission and Distribution Conference and Exposition, 7th IEEE/PES (formerly the Underground Transmission and Distribution Conference), held Apr 1-6, 1979 in Atlanta, GA; sponsored by IEEE PE. *Proceedings.* 623p. **LC78-70468** (pre-assigned). \$24.00. **79CH1399-5 PWR.** OOP 1G.

Scope: All elements of overhead and underground systems. Sessions on designing for transmission system reliability; international and regional U.D. practices; 5kV distribution overhead and underground; transmission system cost analysis; transmission and distribution; insulated conductors; switchgear; transformers; overhead and underground transmission; station equipment; surge protective devices.

Trends and Applications: 1979 [Advances in Systems Technology Symposium], held May 17, 1979 in Gaithersburg, MD; sponsored by IEEE C, IEEE Washington Section, US NBS, et al. *Proceedings.* 145p. **LC79-87969** (pre-assigned). \$14.00. **79CH1402-7C.** OOP 1E.

Sessions on: Distributed processing system design; routing and protocols; trends and applications including computer technology of the 1980's, office automation, computer technology and education, information system within the organization, medical information-systems, software life cycle costing; distributed processing.

Ultrasonics Symposium, 1978 IEEE, held Sep 25-27, 1978 in Cherry Hill, NJ; sponsored by IEEE SU, edited by J. deKlerk and B. R. McAvoy. *Proceedings.* 792p. **LC73-641406.** \$32.00. **78CH1344-1 SU.** OOP 1D.

Sessions on: Acousto-electric devices; acousto optics; bulk waves; imaging; industrial applications; medical; physical acoustics; surface acoustic waves—filters and resonators; Fourier transform and spread spectrum techniques; new materials and aging characteristics; propagation; surface skimming bulkwaves and magneto-elastic wave devices; transducer design; wide band devices.

U.S. Technological Policy, [2nd] 1978 Conference on, held Sep 19-21, 1978 in Washington, DC; sponsored by IEEE Technical Activities Board and IEEE United States Activities Board. *Proceedings.* 112p. **LC79-84517** (pre-assigned). \$15.00., gratis to OOP 1A-H., **78CH1450-6 USAB/TAB.**

Conference focus: Problem of decreasing level of R&D funding in the U.S. and how to deal with it. Major addresses: ambience for progress; exploring technological policy; impact of the Telecommunications Act of 1978; science and technology in the developing world; Defense Department R&D with an emphasis in electronic devices; radiation R&D; National Science Foundation efforts to stimulate R&D; antitrust enforcement; Administration plans for R&D; U.S. export of high technology; IEEE interaction with government; civilization in space: the Chronicles Plan. Workshops on energy; telecommunications; radiation; health care; patents. Congressional interaction. IEEE position papers on America's future in science and technology; the U.S. Government's role in civilian communications satellite R&D; electricity in the U.S. economy; energy conservation; solar energy; fusion power; exporting high technology.

Vehicular Technology Conference, 29th IEEE, held Mar 27-30, 1979 in Arlington Heights, IL; sponsored by IEEE VT and IEEE Chicago Section. *Conf. Record.* 407p. **LC75-643443**

(LC74-156349 printed in error on title page). \$45.00. **79CH1378-9VT.** OOP 1B.

Sessions on: Automotive braking and safety-related systems, microprocessor applications and supporting electronics, transducers, displays, control systems and methodology; new techniques and technologies, mobile systems, tests, regulatory aspects, and radio propagation and interference in communications; people mover programs; simulation of "real world" transit systems; automated highway and guideway vehicles with their lateral and longitudinal considerations; automatic locating and monitoring; control and communications systems.

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.

Acoustic Imaging; Proceedings of the IEEE. Vol. 67. No. 4. Apr 1979. \$10.00. **JH47027.**

Coverage: The objectives of this special issue on acoustic imaging are to aid the readers in obtaining a basic understanding of the breadth and trend of acoustic imaging, some of its applications and the latest research progress. Most of the papers are written as tutorial-review papers. Some of the topics covered are measurement and visualization of ultrasonic wavefronts, the application of holography to acoustic imaging, array imaging, signal processing, acoustic imaging for nondestructive evaluation, acoustic microscopy, underwater imaging, reconstructive tomography and applications to ultrasonics, Bragg-diffraction imaging, and medical ultrasonic imaging.

Electromagnetic Compatibility, 20 Year Index of the IEEE Transactions on; IEEE Transactions on Electromagnetic Compatibility. Vol. EMC-21. No. 1. Feb 1979. \$10.00. **JH49593.** **Coverage:** This index includes all technical papers (and one editorial) published in the first 20 years, 1959-1978, of this TRANSACTIONS. The index is arranged according to author and subject.

Excimer Lasers; IEEE Journal of Quantum Electronics. Vol. QE-15. No. 5. May 1979. \$10.00. **JH49114.**

Coverage: Excimer systems currently serve as bright, efficient light sources throughout the ultraviolet region. We are in a period exhibiting substantial growth in the variety of these systems and their applications. Steady improvements are being registered in the available peak power, energy, and linewidth control. The articles included in this volume reflect many aspects of current activity ranging through an analysis of molecular properties, device development, and applications. It is felt that the material covered represents many of the important areas presently under study.

Patents; IEEE Transactions on Professional Communication. Vol. PC-22. No. 2. June 1979. ISSN 0361-1434. \$10.00. **JH49007.**

Coverage: Two goals—to encourage engineering innovation and patenting by explanation of some legal and business decision procedures related to invention; to turn the technical community on to the information value of patents as engineering and scientific communications. Specific areas dealt with include: introduction and historical survey, independent inventors, management criteria for effective innovation, correct procedures in patent application preparation, bars to patenting, patenting inventions based on algorithms, U.S. patent classification system, invention disclosures, reading a patent, patenting U.S. inventions abroad, trade secret vs. patent protection, and a selective bibliography of 170 items on creative and business aspects of invention, general and specific aspects of patenting, and retrieval and use of patent information.

Pattern Recognition and Image Processing; *Proceedings of the IEEE*. Vol. 67. No. 5. May 1979. \$10.00. **JH47035**.

Coverage: This special issue emphasizes the recent progress in pattern recognition and image processing which have applications ranging from medical diagnosis to machine part recognition to archeology. Information is presented on a composite classifier system design, linguistic analysis and experimental curves, hierarchies in pattern recognition, local vs. global decisions in image recognition, enhancement/thresholding edge detectors, image segmentation and image models, image segmentation by clustering, statistical and structural approaches to texture, computer analysis of curved objects, coherent optical pattern recognition, and cellular logic in medical image processing.

Project Management; *IEEE Transactions on Engineering Management*. Vol. EM-26. No. 3. Aug 1979. ISSN 0018-9391. \$10.00. **JH48355**.

Coverage: This Special Issue on Project Management brings together some of the latest research and practices in project management in Europe, South America, and the United States. The papers in this issue deal with organizational structures for project management, the role and authority of the project manager, the use of matrix structures, project control methods, and managing large-scale project risks. To provide a proper context for these papers, an examination is made of the origins of project management, types of project management, potential problems, and the future of project management. The papers cover theoretical as well as actual practices in project management.

Semiconductor Memory; *IEEE Transactions on Electron Devices*. Vol. ED-26. No. 6. June 1979. ISSN 0018-9383. \$10.00. **JH48207**.

Coverage: Three papers on 4096-bit static RAM's are interesting in that two fabrication technologies, Hi-CMOS and V groove isolated bipolar, achieve similar performance objectives, and an NMOS technology using a self-refreshing dynamic memory cell is used to achieve power dissipation levels comparable to CMOS. The dynamic RAM area is represented by four papers: one on a new memory cell, two which survey and compare various cell concepts, and a revival of the idea of enhancing yield by substituting spare rows and columns for defective elements by laser. There is a single paper on high performance CCD's. Three papers cover electronically alterable nonvolatile memories.

Very Large-Scale Integration; Joint Special Issue published simultaneously as *IEEE Transactions on Electron Devices*. Vol. ED-26. No. 4. Apr 1979. \$15.00. **JH48181** and *IEEE Journal of Solid-State Circuits*. Vol. SC-14. No. 2. Apr 1979. \$15.00. **JH49254**.

Coverage: The first joint issue on very large-scale integration (VLSI) of *IEEE Transactions on Electron Devices* and *IEEE Journal of Solid-State Circuits* presents the results currently available from Europe, Japan, and the United States on the state of the art in VLSI technology and applications. Papers cover categories including reviews and overviews, VLSI technologies, scaling and performance and bipolar and MOS devices and circuits, short-channel MOSFET's and MESFET's, process and device modeling, layout analysis and testing, and VLSI applications. Additionally, *IEEE Transactions on Electron Devices* includes process-oriented articles in areas such as processing technologies for VLSI, electron-beam and x-ray lithography, and optical lithography. The editorial boards of both journals are planning to have annual Joint Special Issues on VLSI, the next such issue being scheduled for August 1980.

IEEE Standards

ANSI/IEEE C2 61-77 Interpretations. National Electrical Safety Code Interpretations 1961-1977 inclusive. 1978. 210p. \$18.00. **SH07112** (SH01172, published in book, incorrectly). OOP 5.

ANSI/IEEE Std C37.073a-1978 (Supplement to ANSI C37.073-1972, IEEE Std 341-1972) **IEEE Standard Requirements for Capacitance Current Switching for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis;** Jul 28, 1978. 1p. \$1.50.

ANSI/IEEE Std C37.20d-1978 (Supplement to IEEE Std 27-1974, ANSI C37.20-1969) **American National Standard-IEEE Standard for Switchgear Assemblies Including Metal-Enclosed Bus;** Mar 17, 1978. 1p. \$1.50.

ANSI/IEEE C57.12.00a and b-1978 Thermal and Short-Circuit Requirements; Supplement to ANSI C57.12.00-1973 **General Requirements for Distribution, Power, and Regulating Transformers;** May 24, 1978. 8p. \$3.00. **SH06635** OOP5.

ANSI/IEEE Std C57.12.80-1978 Terminology for Power and Distribution Transfers; (Revision of ANSI C57.12.80) Feb 17, 1978. 31p. \$6.00. **SH06742**. OOP 5.

ANSI/IEEE Std 112-1978 Standard Test Procedure for Polyphase Induction Motors and Generators; (Revision of IEEE Std. 112A-1964) May 28, 1978. 31p. \$6.50. **SH07153**. OOP 5.

IEEE Press

Automatic Speech and Speaker Recognition, edited by N. Rex Dixon, IBM and Thomas B. Martin, Threshold Technology, Inc. ©1979. 433p. **ISBN 0-87942-117-7. LC 78-65703** (pre-assigned). \$29.95. **PC01149**. A Book of Selected Reprints. **Contents:** Reviews of Speech Recognition; Discrete Utterance Recognition; Word Spotting; Continuous Speech: Automatic Speech Recognition and Speech Understanding Systems; Reviews of Speaker Recognition; Speaker Recognition Systems.

Speech Analysis, edited by Ronald W. Schafer, Georgia Institute of Technology and John D. Markel, Signal Technology, Inc. ©1979. 469p. **ISBN 0-87942-119-3. LC 78-65706** (pre-assigned). \$33.95. **PC01123**. A Book of Selected Reprints. **Contents:** Properties of the Speech Signal; Speech Analysis Methods; Estimation of Excitation Parameters—Pitch and Voicing Estimation, Estimation of Vocal Cord Waveform; Estimation of Vocal Tract Parameters—Spectrum and Formant Frequency Estimation, Vocal-Tract Area Function Estimation; Analysis/Synthesis Systems. A total of 43 reprinted papers.

Miscellaneous Publications

BPA 1100 kV Transmission System Development; papers presented at the IEEE Power Engineering Society 1979 Winter Meeting, Feb 9, 1979, New York, NY; sponsored by IEEE PE. 38p. \$4.00. **79TH0057-0-PWR**. OOP 6.

Coverage: Important features are the development and planning of BPA 1100 kV transmission systems including corona and electric field studies, environmental studies, mechanical studies, and insulation studies. The papers on planning, corona and electric field studies, and environmental studies will be published in future issues of *Transactions on Power Apparatus and Systems* along with available discussion. The papers on mechanical studies and insulation studies will be published in the *1979 IEEE Power Engineering Society Text of "A" Papers From the Winter Meeting*, IEEE Catalog No. **79CH1417-5-PWR**. Available discussions will be separately published in IEEE Catalog No. **79CH1418-3-PWR**.

Engineer at Mid-Career: Utilization or Discrimination, The held Dec 8-9, 1977 in Washington, DC; sponsored by IEEE USAB and NSF, edited by Martin Hamburger and Joseph Arleo. *Proceedings*. 129p. \$7.00. **UH0132-1**. OOP 3. **Sessions on:** Aging and engineering: myth vs. reality; the impact of aging on the individual and his working environment; alternatives for the future.

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IEEE 1977 Student Papers, [winners of 1977 Student Paper Contest]; 270p. \$14.00. **TT01123**.

Scope: Third annual publication of student-authored papers which have been judged to be the best in the ten regional IEEE Student Paper Contests.

The National Energy Policy—Its Impact on the Electric Power Industry, presented at the IEEE Power Engineering Society 1978 Winter Meeting in New York, NY, IEEE PE Sp. Publ. No. 14. 19p. \$4.00. **78TH0051-3 PWR**. OOP 6.

Scope: Discussion of the proposed National Energy Plan and for the electricity future by a journalist and representatives from the Edison Electric Institute, the U.S. Department of Energy and the electrical equipment manufacturing industry.

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