



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.

- Antennas and Propagation Society (AP-S) International Symposium, 1981 IEEE**, held June 16-19, 1981 in Los Angeles, CA; sponsored by IEEE AP. *Symp. Digest*, 2 vols., 730 pp., LC 81-81404 (preassigned), \$48.00. **81CH1672-5** (OOP 1D)

Coverage: Twenty-nine technical sessions discuss: antennas of aperture, lens, microstrip, horn, signal processing, adaptive, reflector, slot, low-frequency and wire types; scattering; horn feeds; antenna measurements; arrays; numerical methods and formulations; transients; SEM (singularity expansion method); propagation; radomes; radiation and electromagnetic resonance; dielectric waveguides; integral equation modeling; layered media.

- Communications, 17th [IEEE] International Conference on (ICC 81)**, held June 14-18, 1981 in Denver, CO; sponsored by IEEE CSCB and IEEE Denver Section. *Conf. Record—Communications: The Expanding Resource*, 4 vols., approx. 2000 pp., LC 72-194957, \$76.00. **81CH1648-5** (OOP 1C)

Coverage: A broad range of telecommunications disciplines are covered in 76 technical sessions including: satellite systems; transmultiplexer systems; switching systems; digital radio; networks; software; routing strategies; spread-spectrum communications; optical fibers; standards; information theory; communications systems for home and business; synchronization; digital communications; military communication systems; electronic mail; bit-rate reduction techniques; coding techniques; modulation/coding; telematics; channel distortion and fading channels; 1981 Integrated Services Digital Network Symposium; simulation and modeling; radio systems; long-wavelength systems; lightning protection; speech interpolation.

- Computer Aided Seismic Analysis and Discrimination, 2nd International Symposium on**, held Aug. 19-21, 1981 in North Dartmouth, MA; sponsored by IEEE C, IEEE ASSP, Pattern Recognition Society, and IEEE GRS. *Proceedings*, 157 pp., LC 81-82784 (preassigned), \$32.00. **81CH1687-3** (OOP 1E)

Coverage: With an emphasis on the topics of migration and geophysical inverse techniques, pattern recognition, and power spectrum analysis, the 24 contributions in this Proceedings also discuss the areas of filtering and deconvolution, modeling, adaptive digital filtering, statistical analysis and classification, and multiple sensor data analysis.

- Computer Architecture, 8th Symposium on**, held May 12-14, 1981 in Minneapolis, MN; sponsored by IEEE C and ACM. *Conf. Proceed-*

ings, 517 pp., LC 76-351667, ISSN 0149-7111, \$35.00. **81CH1593-3** (OOP 1E). Also available through ACM as order no. 415810

Coverage: The papers in the twelve technical sessions and abstracts of the two tutorials cover: architecture; performance analysis; VLSI architecture and applications; parallel processing; data flow machines; interconnection; data base management.

- Computer Society International Conference, 23rd IEEE (COMPCON Fall 81)**, held Sept. 15-17, 1981 in Washington, DC; sponsored by IEEE C. *Proceedings—Productivity, An Urgent Priority*, 362 pp., LC 81-82787 (preassigned), \$40.00. **81CH1702-0** (OOP 1E)

Coverage: With an emphasis on productivity, a prevailing concern nationally, the 25 technical sessions in this conference cover these topics: human factors; quality assurance; experience with tools; education; software and hardware design; software models; software productivity and product quality; data base standards; tool evaluation; evolution development; office automation; software development process; DoD's software technology; software productivity via hardware architecture.

- Crime Countermeasures, 15th Carnahan Conference on**, held May 13-15, 1981 in Lexington, KY; sponsored by University of Kentucky, IEEE AES, and IEEE Lexington Section; edited by John S. Jackson and R. William DeVore. *Proceedings*, 199 pp., LC 79-644630, ISSN 0196-1128, ISBN 0-89779-046-4, UKY BUI24, \$48.00. **81CH1661-8** (OOP 1C)

Coverage: Some of the topics discussed in the 35 papers include: computer crime; security in nuclear power plants; detection; satellite communications; police radar; automatic speaker verification; cable television security systems; ballistics; radio; etc.

- Dielectric Liquids, 7th International Conference on Conduction and Breakdown in (7.ICDL)**, held July 27-31, 1981 in Berlin, West Germany; sponsored by IEEE EI; edited by Werner F. Schmidt. *Proceedings*, 485 pp., LC 80-83222 (preassigned), \$60.00. **81CH1594-1** (OOP 1B)

Coverage: Fundamental and applied work in liquid dielectrics is reported in the papers presented at this conference. Sessions are devoted to: radiation-induced conductivity, geminate recombination; electronic charge carriers; photoconductivity; conduction; prebreakdown; breakdown; interface phenomena; electrokinetic phenomena; physicochemical effects; new dielectric liquids.

- Distributed Software and Database Systems, Symposium on Reliability in**, held July 21-22, 1981 in Pittsburgh, PA; sponsored by IEEE C, ACM, and Univ. of Pittsburgh. *Proceedings*, 205 pp., LC 80-85191 (preassigned), \$32.00. **81CH1632-9** (OOP 1E)

Coverage: Thirty-one papers concerned with research on increasing the reliability of software and database systems cover these topics: robust concurrency control; language constructs and their implementations; implementation and performance of distributed systems; development of robust system software and system structures; synchronization models; economics and performance of the various mechanisms used to achieve reliability.

- Electrical/Electronics Conference and Exposition, [27th] Cleveland (CECON 80)**, held May 20-22, 1980 in Cleveland, OH; sponsored by IEEE Reg. 2, IEEE Cleveland Section, ERA, et al. *Conf. Record*, 156

pp., LC 79-91316 (preassigned), \$32.50. **80CH1519-8** (OOP 1H)

Coverage: Twenty-two technical papers examine some of these topics: microprocessors; device technology; process control; reliability; education.

EPRI (Electric Power Research Institute) Workshop on Transmission Line Insulators, see Transmission Line Insulators

European Solid-State Circuits Conference (ESSCIRC 80), see Solid-State Circuits Conference, 6th European

Fault-Tolerant Computing, 11th [IEEE] International Symposium on (FTCS-11), held June 24-26, 1981 in Portland, ME; sponsored by IEEE C. *Digest of Papers*, 290 pp., LC 79-641257, \$36.00. **81CH1600-6** (OOP 1E)

Coverage: The theory and practice of reliable and fault-tolerant computing are explored in 19 technical sessions devoted to these topics: maintainability; distributed systems; design for testability; software for process control; dependability evaluation; system-level fault diagnosis; software reliability; recovery strategies; network models; reliable protocols; new testing techniques; sequential circuit testing; microprocessor systems; redundancy techniques.

Frontiers of Computers in Medicine [Conference], 1st IEEE (COMPMED 81), held Sept. 21, 1981 in Houston, TX in conjunction with the IEEE 1981 Frontiers of Engineering in Health Care/3rd Annual Conference of the Engineering in Medicine and Biology Society of the Institute of Electrical and Electronics Engineers (81CH1621-2; see entry in this issue of the Bulletin); sponsored by IEEE EMB and IEEE C; edited by Robin B. Lake. *Proceedings*, 89 pp., LC 81-83654 (preassigned), \$32.00. **81CH1713-7** (OOP 1F). The abstracts appear in *IEEE Transactions on Biomedical Engineering*, Vol. BME-28, No. 8, Aug. 1981, pp. 601-606, \$10.00. **JH53991** (not distributed under OOP)

Coverage: This new IEEE conference is meant to focus on the interaction between computer engineering/technology and biomedical computing/information science and in its *Proceedings* features 24 papers divided into five sessions: medical decision making and pattern analysis; systems and signal analysis; medical imaging; medical computing at the University of Texas; microcomputers in medicine.

Frontiers of Engineering in Health Care, IEEE 1981 /3rd Conference of the Engineering in Medicine and Biology Society of the Institute of Electrical and Electronics Engineers, held Sept. 19-21, 1981 in Houston, TX; sponsored by IEEE EMB; edited by B. A. Cohen. *Conf. Proceedings*, 455 pp., LC 80-85144 (preassigned), \$42.00. **81CH1621-2** (OOP 1F). The abstracts appear in *IEEE Transactions on Biomedical Engineering*, Vol. BME-28, No. 8, Aug. 1981, pp. 577-601, \$10.00. **JH53991** (not distributed under OOP). NOTE: Frontiers of Computers in Medicine (81CH1713-7), held in conjunction with this conference, appears in this issue of the Bulletin.

Coverage: This Conference emphasizes recent technical advances that will influence or are now influencing the design, safe and effective use, and management of medical devices and systems in 110 technical papers on such subjects as: clinical engineering (transducers, electrodes, and instruments; surgical devices); cardio-pulmonary physiology (artificial organs; non-invasive diagnostics); neuro-electric physiology (bioelectric phenomena; quantitative neurological assessment); biomedical engineering systems (medical imaging; devices for the disabled; microprocessor hardware applications).

Geoscience and Remote Sensing Symposium, 1st International (IGARSS 81), held June 8-10, 1981 in Washington, DC; sponsored by IEEE GRS, AGU, CRSS, et al. *Digest*, 2 vols.; 1461 pp., LC 81-80854 (preassigned), \$75.00. **81CH1656-8** (OOP 1C)

Coverage: The theme "Recent Advances in Remote Sensing" is reflected in 30 technical sessions covering these aspects of remote sensing techniques and their applications: advanced sensors; Nimbus-7 Scanning Multichannel Microwave Radiometer; hydrology; meteorological and oceanographic remote sensing; geodynamics; remote sensing of soil moisture, planetary surfaces, snow and ice properties, coastal environment, cryosphere, and ocean dynamics; information extraction techniques; data preprocessing and analysis; microwave remote sensing; geophysical inversion practice; infrared data; synthetic aperture radars; etc.

Local Computer Networks, 6th Conference on, held Oct. 12-14, 1981 in Minneapolis, MN; sponsored by University of Minnesota, IEEE C, and IEEE Twin Cities Section. *Proceedings*, 111 pp., LC 81-82745 (preassigned), \$32.00. **81CH1690-7** (OOP 1E)

Coverage: Fourteen papers in five sessions focus on these aspects of local computer networks: system concepts; protocols; system strategies; performance; recent results.

Machine Processing of Remotely Sensed Data with special emphasis on Range, Forest, and Wetlands Assessment, 7th International Symposium [on], held June 23-26, 1981 in West Lafayette, IN; sponsored by American Society of Agronomy, Crop Science Society of America, IEEE C, IEEE GRS, et al; edited by P. G. Burroff and D. B. Morrison. *Proceedings*, 728 pp., LC 80-85518 (preassigned), \$40.00. **81CH1637-8** (OOP 1C)

Coverage: The state-of-the-art in machine processing of remotely sensed data, especially as related to forest, range, and wetland assessment, is emphasized in 16 technical sessions that examine: classifying forest cover; agronomic, geologic, rangeland, and land-use applications of remote sensing; classification accuracy of assessment procedures; wetlands and water resources assessment; image data modeling and analysis; understanding and characterizing the forest scene; georeference information systems; forest resource information; workshop reports.

Magnet Technology, 7th International Conference on (MT-7), held March 30-April 3, 1981 in Karlsruhe, Federal Republic of Germany; sponsored by Karlsruhe Nuclear Research Center and EURATOM. *Proceedings in IEEE Transactions on Magnetics*, Vol. MAG-17, No. 5, Sept. 1981, 864 pp., \$35.00. **JH55103** (not distributed under OOP)

Coverage: The majority of the papers in the 33 technical sessions deal with applications of and research for superconductivity and cryogenics instead of conventional magnets. Some specific technical session topics include: magnets of the fusion, hybrid, normal, special, and superconducting test and laboratory types; magnets for accelerators and high energy physics; conductor technology and small solenoids; irradiation effects; quench problems; energy storage, pulsed magnets, and superconducting machines; superconducting materials, losses, and stability; structural analysis and materials; magnets for medical applications and biological effects in magnetic fields.

Magnetics Conference, IEEE International (INTERMAG 81), held May 12-15, 1981 in Grenoble, France; sponsored by IEEE MAG, Société Française de Physique, and Société des Electriciens, des Electroniciens et des Radioelectriciens. *Digests of the INTERMAG Conference*, approx. 390 pp., LC 72-649866, \$40.00. **81CH1657-6** (OOP 1D). *Proceedings* will appear in *IEEE Transactions on Magnetics*, Vol. MAG-17, No. 6, Nov. 1981, \$35.00. **JH55111** (not distributed under OOP).

Coverage: Forty sessions are concerned with some of these aspects of magnetics: magnetic printing; recording processes; computer methods in magnetics; amorphous alloys; permanent magnets; bubble devices; recording systems; magnetic separation; iron silicon and related alloys; recording heads; soft materials; microwave materials; recording media; domains and walls; magneto-optics; eddy current and field calculations; power and transformers; magnetometry; superconductors.

Multiple-Valued Logic, 11th International Symposium on (ISMVL 81), held May 27-29, 1981 in Oklahoma City, OK; sponsored by IEEE C and the University of Oklahoma. *Proceedings*, 298 pp., LC 79-641110, ISSN 0195-623X, \$32.00. **81CH1611-3** (OOP 1E and H)

Coverage: Forty-nine papers cover various aspects of multiple-valued logic including: algebraic and formal aspects; circuit/device instrumentation; fault detection and diagnosis; logic design and switching theory; probabilistic and variable-valued systems; high-speed computation; reliability; fuzzy logic; optical computing.

Oceans 81 [Conference], held Sept. 16-18, 1981 in Boston, MA; sponsored by IEEE COE, MTS, IEEE Boston Section, et al. *Conf. Record—The Ocean...An International Workplace*, 2 vols., 1222 pp., LC 81-82804 (preassigned), \$80.00. **81CH1685-7** (OOP 1C)

Coverage: This conference, which emphasized the technologies (especially new technologies) used by those who work in the ocean environment, features 67 technical sessions on these topics: acoustics;

autonomous undersea vehicles; bouy and mooring technology; cables and connectors; coastal zone management; cold water engineering; current measurements; data bases and data processing; economic potential of the ocean; education; instrumentation of the expendable and in-situ types; geology and geophysics; underwater structures; sensors; marine biofouling; marine sciences; marine law and policy; marine materials; navigation; modeling; ocean energy; ocean margin drilling; offshore engineering; outer continental shelf; position, localization, and tracking; remote sensing; research vessels; seismic exploration; wave data.

Overhead and Underground Transmission and Distribution Conference, see Transmission and Distribution, 8th IEEE/PES Conference and Exposition on Overhead and Underground

Parallel Processing, 10th International Conference on, held Aug. 25-28, 1981 in Bellaire, MI; sponsored by Ohio State University, IEEE C, and ACM; edited by Ming T. Liu and Jerome Rothstein. *Proceedings*, 360 pp., LC 79-640377, ISSN 0190-3918, \$36.00. **81CH1634-5** (OOP 1E)

Coverage: These topics are emphasized in the 15 technical sessions: history of parallel processing; languages and compilers; distributed systems and networks; numerical and non-numerical algorithms; associative processors and processing; multiprocessor architectures; recent results; special-purpose processors; interconnection networks; VLSI architectures; array processors and processing; performance evaluation; scheduling.

Particle Accelerator Conference: Accelerator Engineering and Technology, 9th, held March 11-13, 1981 in Washington, DC; sponsored by the US Nat'l Bureau of Standards, IEEE NPS, US DoE, et al. Selected papers in *IEEE Transactions on Nuclear Science*, Vol. NS-28, No. 4, Aug. 1981, pp. 3657-3665, \$10.00. **JH55277** (not distributed under OOP). The *Proceedings* (JH55269) from this Conference was listed in the July 1981 issue of the Bulletin.

Pattern Recognition and Image Processing, IEEE Computer Society Conference on (PRIP 81), held Aug. 3-5, 1981 in Dallas, TX; sponsored by IEEE C. *Proceedings*, 625 pp., LC 80-83214 (preassigned), \$60.00. **81CH1595-8** (OOP 1E)

Coverage: Twenty-two technical sessions cover topical areas such as: classification; shape; time-varying imagery; applications; approximation and compression; segmentation; hardware and techniques; extracting cartographic features from aerial imagery; architectures; enhancement and restoration; relaxation; transportable software; matching; texture; map data processing.

Petroleum and Chemical Industry Conference, 28th [IEEE], held Sept. 21-23, 1981 in Chicago, IL; sponsored by IEEE IA. *Record of Conf. Papers*, 240 pp., LC 73-641120, ISSN 0090-3507, \$40.00. **81CH1642-8** (OOP 1B)

Coverage: Forty technical papers discuss the applications of electrical engineering in the petroleum and chemical industries: petroleum manufacturing; chemical; production; transportation; electrochemical; and corrosion and cathodic protection.

Photovoltaic Specialists Conference, 15th IEEE, held May 12-15, 1981 in Kissimmee, FL; sponsored by IEEE ED, US DoE, US DoD, NASA, and Commission of the European Communities. *Conf. Record*, 1471 pp., LC 80-641911, ISSN 0160-8371, \$100.00. **81CH1644-4** (OOP 1D)

Coverage: This conference, considered to be the forum for specialists in all aspects of photovoltaic research, development, and demonstration for space and terrestrial applications, features 30 technical sessions that cover: photovoltaic concentrator technology; economics and feasibility analysis; theoretical studies; current and advanced photovoltaic technology assessments; low cost cell and array processes; GaAs cells and silicon solar cells for space applications; space radiation effects; space solar array technology; low cost Si and sheet technology; balance of system; flat-plate photovoltaic systems; solar cells of the amorphous silicon, cadmium sulfide and copper sulfide, and advanced material types; module failure/degradation mechanism and reliability; systems operating experience and reliability; measurement techniques; MIS/SIS and advanced solar cell structures.

Plasma Science, 8th IEEE International Conference on, held May 18-20, 1981 in Santa Fe, NM; sponsored by IEEE NPS, Los Alamos National Laboratory, University of New Mexico, et al. *IEEE Conf.*

Record—Abstracts, 171 pp., LC 81-80173 (preassigned), \$30.00. **81CH1640-2** (OOP 1B)

Coverage: Aspects of plasma science explored in the 50 technical sessions include: fusion; lasers; beams; plasma waves; instabilities and antennas; plasma heating, diagnostics, and focusing; compact toroids—field reversed rings; energy storage and magnetics; arc technology and gaseous electronics; magneto-fluid dynamics; thermionics and plasma diodes; plasma wall interactions; microwaves; computers; isotope separation; ultrafast Z-pinch; atomic physics of dense plasmas.

Power Electronics Specialists Conference, 12th IEEE (PESC 81), held June 29-July 3, 1981 in Boulder, CO; sponsored by IEEE AES, University of Colorado, IEEE Denver Section, et al. *Record*, 399 pp., LC 80-646675, ISSN 0275-9306, \$44.00. **81CH1652-7** (OOP 1C)

Coverage: State-of-the-art technology in the field of power electronics is discussed in 39 papers covering these broad topic divisions: control techniques; components and circuits in high-technology applications; dc-to-dc conversion; power semiconductor devices; high-power systems; modeling and analysis techniques.

Power Engineering Society Winter Meeting, 1981 IEEE, held Feb. 1-6, 1981 in Atlanta, GA and 1981 IEEE Power Engineering Summer Meeting, held July 26-31, 1981 in Portland, OR; both sponsored by IEEE PE. All papers accepted for presentation at these Power Engineering Society meetings will be published with their full text plus 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. Summaries of these papers will appear in forthcoming issues of the *IEEE Power Engineering Review*. Preprints of the technical papers are available from the IEEE Service Center; write for the list of titles.

Coverage: The Winter Power Meeting, which is devoted to power apparatus and systems, featured in 60 technical paper sessions on such topics as: control and reliability of power systems; nuclear power plants; distributed systems; transmission; computer-aided instrumentation; insulation; surge protection; corona and field effects; communications; relaying; etc. The Summer Power Meeting with approximately the same number of technical paper sessions, covered many of the same topics and included these others: hydroelectric power; fiber optics; switchgear; load management; state estimation; etc.

Power Industry Computer Application Conference, 12th (PICA 81), held May 5-8, 1981 in Philadelphia, PA; sponsored by IEEE PE. All the papers accepted for presentation at PICA 81, together with discussions and closures, will be published in scattered issues of the *IEEE Transactions on Power Apparatus and Systems*, not as a group, but with each paper's first page identifying it as having been presented at PICA 81. Summaries of all accepted papers will be published in the *IEEE Power Engineering Review*.

Coverage: The field of computer applications in the electric utility industry is explored in 16 technical sessions on such topics as: power flow; energy control centers; reliability; transmission planning techniques; parallel and special processing; distribution planning and control; operations, forecasting, and scheduling; real-time network analysis; resource and strategic planning; systems protection; etc.

Professional Communication Society Conference on Communications with/for/by Government, 1981 IEEE, held Sept. 16-18, 1981 in Arlington, VA; sponsored by IEEE PC. *Conf. Record*, 82 pp., no LCN printed in the vol., \$32.00. **81CH1706-1** (OOP 1F)

Coverage: The purpose of the conference is to clarify the channels of communication that exist between the Federal Government and the technical community. There are 31 papers on these topics: communications technology; self-protection (i.e. patents and copyrights); job preservation; stress management; written and oral technical presentations; public interface; management tools.

Reliability Physics Symposium, 19th [IEEE] International, held April 7-9, 1981 in Orlando, FL; sponsored by IEEE ED and IEEE R. *Proceedings*, 310 pp., LC 80-85147 (preassigned), \$32.00. **81CH1619-6** (OOP 1F)

Coverage: Eleven technical sessions discuss: LSI reliability; LSI circuits; moisture effects and measurements; packaging; failure analysis techniques; failure mechanisms; oxide breakdown and ESD (elec-

trostatic discharge); metallization and ESD; surface phenomena and advanced failure analysis.

Security and Privacy, [2nd IEEE] Symposium on, held April 27–29, 1981 in Oakland, CA; sponsored by IEEE C. *Proceedings*, 179 pp., LC 80-85216 (preassigned), \$30.00. **81CH1629-5** (OOP 1E)

Coverage: The Proceedings of this symposium, concerned with security and privacy in computer systems, data bases, and operating systems, contains 20 technical papers on some of these subjects: information flow; auditing process; validation; cryptography; security kernel.

Software Engineering Standards Application Workshop, [IEEE], held Aug. 18–20, 1981 in San Francisco, CA; sponsored by IEEE C. *Conf. Record*, 151 pp., LC 80-85192 (preassigned), \$32.00. **81CH1633-7** (OOP 1E)

Coverage: This Workshop, devoted to the exchange of information on the implementation of software standards, features 22 papers from eight sessions that discuss: the need for standards; general approaches; quantitative methods; specific approaches; other efforts (i.e. style guide and documentation standard for Ada; tool standards); principles of software standardization; standards for standards writers.

Solid-State Circuits Conference, 6th European (ESSCIRC 1980), held [Sept. 22–25, 1980] (incorrectly cited as Sept. 15–18, 1980 in the "Foreword") in Grenoble, France; [sponsored by European Physical Society, Société Française de Physique, EUREL, and Société des Electriciens, des Electroniciens, et des Radioelectriciens]. Selected papers in *IEEE Journal of Solid-State Circuits*, Vol. SC-16, No. 3, June 1981, 125 pp., \$10.00. **JH56440** (not distributed under OOP)

Coverage: Nineteen papers and three correspondence items focus on various areas including: integrated filters; converters; circuits for signal processing; memories; and various peripheral circuits.

Telecommunications Energy Conference, 3rd International (INTELEC 81), held May 19–21, 1981 in London, England; sponsored by IEE, IEEE COM, IERE, et al. *Conf. Record*, 356 pp., ISBN 0 85296236 3, ISSN 0537-9989, IEE Conf. Pubn. No. 196, \$80.00. **81CH1653-5** (OOP 1C)

Coverage: This conference features 20 sessions covering the theory and practice of telecommunications power, energy, and related systems: microprocessors; distribution and economics; energy conservation and building environment; batteries; inverters; solar and wind power systems; uninterruptible power supplies; dc-dc converters; ac standby systems; reliability; dc power plant and rectifiers.

Transmission and Distribution, 8th IEEE/PES Conference and Exposition on Overhead and Underground (also referred to as IEEE/PES Transmission and Distribution Conference and Exposition), held Sept. 20–25, 1981 in Minneapolis, MN; sponsored by IEEE PE. The full text of all the papers accepted and presented at this conference plus discussions and closures will be published 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. Summaries of all accepted papers will appear in the *IEEE Power Engineering Society Review*. Preprints of the technical papers are available from the IEEE Service Center; write for the list of titles.

Coverage: The technical sessions were formulated by ten committees of the IEEE PES Technical Operations Department concerned with: insulated conductors; communications, engineering, instrumentation and measurements, and relaying in power systems; substations; surge protective devices; switchgear; transformers; transmission and distribution.

Transmission Line Insulators: The Next Generation, EPRI Workshop on, held Dec. 10–11, 1980 in Los Angeles, CA; sponsored by EPRI. Selected papers in *IEEE Transactions on Electrical Insulation*, Vol. EI-16, No. 3, June 1981, 124 pp., \$10.00. **JH54700** (not distributed under OOP)

Coverage: The fifteen papers in this special issue cover the technical areas of contamination and flashover processes; testing of contaminated insulators; insulator design consideration.

Ultrasonics Symposium, 1980, [19th IEEE], held Nov. 5–7, 1980 in Boston, MA; sponsored by IEEE SU. Abstracts in *IEEE Transactions*

on *Sonics and Ultrasonics*, Vol. SU-28, No. 5, Sept. 1981, 45 pp., \$10.00. **JH55830** (not distributed under OOP). NOTE: Please note that the abstracts from the 1980 IEEE Ultrasonics Symposium appear in the Sept. 1981 issue of *T-SU* instead of the July 1981 issue of *T-SU* as was announced in the April 1981 issue of the IEEE Publications Bulletin. Due to a space problem, the inclusion of the abstracts had to be postponed.

Very Large Data Bases, 7th International Conference on (VLDB 81), held Sept. 9–11, 1981 in Cannes, France; sponsored by INRIA, ACM, and IEEE C; edited by Carlo Zaniolo and Claude Delobel. *Proceedings*, 570 pp., LC 81-82785 (preassigned), \$52.00. **81CH1701-2** (OOP 1E). Also available through ACM as order no. 471810

Coverage: The identification and encouragement of research, development, and application of data base and related systems is the intent of 20 technical sessions devoted to: the machinery, design, system implementation, transactions, and theory of data bases; data modeling, concurrency control; pictorial data bases; performance evaluation; logic and data bases; views and derived relations; physical storage organization; office information systems; distributed processing; data compression; software; query optimization; data dictionaries.

World Administrative Radio Conference (WARC-79), held Sept. 24–Dec. 6, 1979 in Geneva, Switzerland; sponsored by the International Telecommunication Union (ITU). Review of WARC-79 published simultaneously as *IEEE Transactions on Electromagnetic Compatibility*, Vol. EMC-23, No. 3, Pt. 2, Aug. 1981, 169 pp. (\$10.00, **JH56978**) and *IEEE Transactions on Communications*, Vol. COM-29, No. 8, Aug. 1981, 169 pp. (\$10.00, **JH54478**) (not distributed under OOP)

Coverage: The purpose of WARC-79 was to review and modify the international regulations for spectrum use. This special issue describes the outcome and some of the consequences of WARC-79 for telecommunication engineers and managers involved in the design, implementation, and operation of radio systems. The 26 papers are divided into four basic sections: conference perspectives (i.e. nontechnical overview of WARC-79; frequency situation in Central Europe after WARC); general summary—conference results (i.e. regulatory procedures; spectrum allocations above 40 GHz); radio services—results and issues (i.e. mobile services; radar); future conferences.

Special Issues

Acousto-optic signal processing; special section, pp. 48–120, *Proceedings of the IEEE*, Vol. 69, No. 1, Jan. 1981. \$10.00. **JH53520**

Coverage: The six papers in this special issue focus on these aspects of acousto-optic signal processing: fundamentals; acousto-optic devices design considerations; acousto-optic devices used in real-time signal convolution and correlation; spectrum analysis; acousto-optic channel receivers; photodetectors.

Adaptive signal processing; Joint Special Issue published simultaneously as *IEEE Transactions on Acoustics, Speech, and Signal Processing*, Vol. ASSP-29, No. 3, Pt. 3, June 1981 (\$10.00, **JH53397**) and *IEEE Transactions on Circuits and Systems*, Vol. CAS-28, No. 6, June 1981 (\$10.00, **JH54213**)

Coverage: The 14 papers in this joint special issue represent recent advances in adaptive signal processing and are divided into three sections: theory, applications, and realizations. One particularly emphasized area is the lattice or ladder-based algorithm.

Antennas; special section, pp. 4–35, *IEEE Communications Magazine*, Vol. 19, No. 5, Sept. 1981. \$6.00. **JH56093**

Coverage: An overview of the development of antennas from their beginning in the 1840's; formulas to aid in analyzing the performance claims made by manufacturers of antennas; and antennas for communications are presented in this special section.

Array processor architecture; Computer, Vol. 14, No. 9, Sept. 1981. \$6.00. **JH55970**

Coverage: The six articles in this special issue provide an overview of array processors; product design details of some popular array processors such as the AP-120B/FBS-164 Family; integrating an array processor into a scientific computing system; precompilation of Fortran

programs to facilitate array processing; a selected bibliography on array processors that includes most of the trade journal articles, conference papers, and technical reports on array processors published in the English language, since 1975.

Bellman (Richard E.) special issue; *IEEE Transactions on Automatic Control*, Vol. AC-26, No. 5, Oct. 1981. \$10.00 JH53686

Coverage: Richard E. Bellman, a noteworthy contributor to modern control theory and systems analysis and the inventor of dynamic programming, is honored with this special issue consisting of 26 papers that discuss dynamic programming as well as many other topics that reflect the influence of Bellman's ideas including: adaptive control; inequalities; differential equations; nonlinear analysis; perturbation techniques in mathematics, physics, and engineering; invariant-embedding and time-dependent processes; etc. There is also a comprehensive list of Bellman's publications including 38 books and 609 papers.

Communications aspects of single-mode optical fiber and integrated optical technology; *IEEE Journal of Quantum Electronics*, Vol. QE-17, No. 6, June 1981. \$15.00. JH56358

Coverage: This special issue, devoted to the relatively new field of single-mode communication technology, contains 30 technical papers divided into four sections: optical fiber properties and fabrication techniques; transmission links and system concepts; signal-mode devices and integrated optics; single-mode diode lasers.

Computer-aided geometric design: A bibliography with key-words and classified index; special feature, pp. 67-109, *IEEE Computer Graphics and Applications*, Vol. 1, No. 3, July 1981. \$12.00. JH56168

Coverage: This bibliography contains 1340 items in alphabetical order according to the last name of the author. Each entry has its subject matter identified by key words at the end of the entry. These keywords are listed in an index that will aid research in the area of computer-aided geometric design, which is interdisciplinary in nature.

Computer analysis of time-varying images; *Computer*, Vol. 14, No. 8, Aug. 1981. \$6.00. JH55962

Coverage: Six experts in computer analysis of time-varying images (CATVI) present their research activities in these areas: analysis of difference pictures; low-level approaches to visual motion; inferring three-dimensional structure from motion information; target tracking; analysis of visual motion by biological and computer systems; dynamic scene analysis.

Computer graphics, A guide to sources of information about, special feature in *IEEE Computer Graphics and Applications*, Vol. 1, Nos. 1 and 3, Jan. and July 1981, pp. 73-85 (Jan.) and pp. 63-65 (July). \$12.00 each. JH56143 (Jan.) and JH56168 (July)

Coverage: This guide lists selected books, magazines, and journals; specific articles from magazines and journals; names and addresses of professional societies; names and dates of conferences, symposia, meetings, and short courses; and the names and addresses of product review and market data sources.

Computer network security; special section, pp. 761-786, *IEEE Transactions on Communications*, Vol. COM-29, No. 6, June 1981. \$10.00. JH54452

Coverage: Network security incorporating such techniques as the Data Encryption Standard is addressed in three papers.

Digital radio; special section, pp. 4-14, *IEEE Communications Magazine*, Vol. 19, No. 4, July 1981. \$6.00. JH56085

Coverage: Two articles discuss the economic factors of digital radio and the technology of digital radio.

Energy and energy-related studies; *IEEE Transactions on Education*, Vol. E-24, No. 3, Aug. 1981. \$10.00. JH54544

Coverage: The ten papers in this special issue are concerned with "energy studies, energy education, and education on energy matters" and reflect the work in both higher education and in industry. Topics covered include: productivity of energy; computer-aided instruction for

energy source utilization; distribution voltage reduction; education of power system engineers; solar power satellites; energy conservation in the Bell System; cogeneration; thin-film photovoltaic cells; renewable energy resources; and energy information resources.

Engineering in health care; special section, pp. 481-505, *IEEE Transactions on Biomedical Engineering*, Vol. BME-28, No. 7, July 1981. \$10.00. JH53983

Coverage: Four invited papers originally presented at the Frontiers of Engineering Health Care; IEEE/Engineering in Medicine and Biology 2nd Conference (Sept. 28-30, 1980 in Washington, DC) appear in revised and updated form. They discuss: somato-sensory evoked potentials; scanning laser ophthalmoscope; longitudinal mixing in a cast of the human larynx; computerized tomography.

Free-electron lasers; *IEEE Journal of Quantum Electronics*, Vol. QE-17, No. 8, Aug. 1981. \$15.00. JH56374

Coverage: Many aspects of free-electron lasers (FEL's) and similar devices are discussed in the 21 papers divided by wavelength regions: long wavelength (millimeter) devices (i.e. gyrotrons, orotrons, Raman-type FEL's); theoretical works on short wavelength free-electron lasers (i.e. Stanford free-electron laser); and efficiency enhancement schemes and novel arrangements (i.e. variable parameter wigglers; transverse gradient wiggler).

High-level computer architecture; *Computer*, Vol. 14, No. 7, July 1981. \$6.00. JH55954

Coverage: The two types of high-level computer architecture, indirect-execution type and direct-execution type, are discussed in the six articles and guest editor's introduction that concentrate on these aspects: Scheme-79 single-chip microcomputer; programming languages and direct-execution computer architecture; compilers; Symbol IIR; Symbol computer system; high-level language machines in Japan.

Hot electron effects in short-channel devices; *IEEE Transactions on Electron Devices*, Vol. ED-28, No. 8, Aug. 1981. \$10.00. JH54635

Coverage: The study of hot electron phenomena as an aid in the physical understanding of nonlinear submicron devices is the main topic of the thirteen papers that are divided into four sections: general; hot carrier injection into oxide; ballistic transport; and field-effect transistors.

Hybrid microelectronics; *IEEE Transactions on Components, Hybrids, and Manufacturing Technology*, Vol. CHMT-4, No. 3, Sept. 1981. \$10.00. JH54387

Coverage: The twelve papers are concerned with lower cost hybrid microelectronic technology and describe circuit design, lower cost materials and processes, testing, and reliability.

IEEE Transactions on Automatic Control Cumulative Index 1956-1980, Volumes PGAC-1 to AC-25; *IEEE Transactions on Automatic Control*, Vol. AC-26, No. 4, Pt. 2, Aug. 1981. \$20.00. JH56986

Coverage: This index covers all papers, short papers, editorials, and correspondence items that appeared in the *IEEE Transactions on Automatic Control* and its predecessor publication, *IRE Transactions on Automatic Control*, from 1956 through 1980 and is divided into two sections: an Author Index and a Subject Index.

Index to AES Conference Papers 1979-1980; *IEEE Transactions on Aerospace and Electronic Systems*, Vol. AES-17, No. 5, Sept. 1981, 148 pp., (follows page 736 in T-AES). \$10.00. JH53744

Coverage: The papers that this index covers came from the technical meetings held by IEEE in 1979 and 1980 that were sponsored or cosponsored by IEEE AES and were available in the form of a published IEEE Conference record. The structure of the index is similar to the 1980 year-end index to the *Transactions* and is arranged in two parts, an Author Index and a Subject Index. Some of the technical meetings covered in this index include Autotestcon; Digital Avionics Systems Conference; IEEE International Conference on Communications; etc.

Integrated circuits for telecommunications; *IEEE Journal of Solid-State Circuits*, Vol. SC-16, No. 4, Aug. 1981. \$10.00. JH56457

Coverage: These aspects of integrated circuits (IC's) are addressed in the 21 papers and one correspondence item: overviews; subscriber line interfacing and switching; voice coding and decoding; frequency division multiplexing; digital network data processing; signal processing.

Magnetic fusion development; *Proceedings of the IEEE*, Vol. 69, No. 8, Aug. 1981. \$10.00. JH53595

Coverage: One of the goals of the national magnetic fusion program, the demonstration of the engineering feasibility of magnetic fusion, is addressed by thirteen papers in three basic ways: 1) a review of the scientific and technological basis that warrants proceeding into the engineering phase of magnetic fusion development; 2) identification of scientific and technological advances necessary for these engineering applications; and 3) discussion of issues associated with fusion power generation.

Maintainability; *IEEE Transactions on Reliability*, Vol. R-30, No. 3, Aug. 1981. \$10.00. JH55582

Coverage: These three topics are the focus of the twelve papers in this special issue: fault-detection and fault-isolation characteristics; the interaction of system hardware and software elements; and the cost for maintenance.

Microelectronic packaging; *IEEE Transactions on Components, Hybrids, and Manufacturing Technology*, Vol. CHMT-4, No. 2, June 1981. \$10.00. JH54379

Coverage: The nine papers represent selections from various meetings including the IEEE Computer Society's Computer Packaging Technical Committee Workshop (May 28-30, 1980 at Split Rock Lodge, PA) and the 30th Electronic Components Conference (April 28-30, 1980 in San Francisco, CA) and are concerned with these topics: packaging tradeoffs for the HITAC M-200H computer; low-energy LSI and packaging; CRAY-1 computer technology; LSI packages; and chip carriers.

Microprogramming tools and techniques; *IEEE Transactions on Computers*, Vol. C-30, No. 7, July 1981. \$10.00. JH54106

Coverage: Six papers discuss solutions to the problems of optimization of parallelism and microprogram verification.

Open guided wave structures; *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-29, No. 9, Sept. 1981. \$10.00. JH55202

Coverage: A state-of-the-art perspective on the highly theoretical and academic-oriented area of open guided wave structures is provided in 19 papers and three short papers. Six papers analyze isotropic planar dielectric waveguides; seven cover other open structures representing a broad range of waveguide forms; six are applications papers; three short papers.

Programming Environments; special section, pp. 449-493, *IEEE Transactions on Software Engineering*, Vol. SE-7, No. 5, Sept. 1981. \$10.00. JH55657

Coverage: This small, four paper section discusses these aspects of programming environments: incremental programming environment (IPE); dynamic data types in programming environments; small-scale applications of software engineering; automatic programming.

Reliability; *IEEE Spectrum*, Vol. 18, No. 10, Oct. 1981. \$8.00. JH53496

Coverage: The disciplines of reliability and its subset, quality control, are examined in eight articles that concentrate on these topics: how parts fail; computer failure; modeling and systems; test procedures; military systems and reliability; NASA projects and reliability; overlooking the obvious; quality assurance. A bibliography of journals, books, standards, and journal articles on the topics of the papers is included.

Time delay estimation; *IEEE Transactions on Acoustics, Speech, and Signal Processing*, Vol. ASSP-29, No. 3, Pt. 2, June 1981. \$10.00. JH53389

Coverage: The majority of the 22 papers and seven correspondence items are concerned with techniques for estimating the travel time of an acoustic wavefront between two receiving sensors or hydrophones and roughly cover fixed time delay and variable time delay.

VLSI design aids; special section, pp. 617-680, *IEEE Transactions on Circuits and Systems*, Vol. CAS-28, No. 7, July 1981. \$10.00. JH54221

Coverage: Five American universities discuss how they went about creating an integrated set of design aids for VLSI.

IEEE Standards

National Electrical Safety Code Archives 1914-1972 (NESC; C2 Archives). 12 vols., approx. 4500 pp., \$425.00. SH08276 (not distributed under OOP)

Coverage: This republication of all NESC editions issued from August 1, 1914 through June 1972 was considered necessary because few technical libraries own complete sets of the NESC, NTIS is not able to supply complete sets, and the one complete set in the IEEE archives is deteriorating. Engineers, utilities, and legal consultants also indicated a need for this information because many electrical and communication lines were originally installed under the provisions of these early editions. The paper used for the reprint volumes was specially manufactured for archival purposes. Contents of all twelve volumes appear on the front and back endpapers of each volume.

Nuclear IEEE Standards; June 1981. 2 vols. (Vol. 2 also contains ANSI Standards on Nuclear Instrumentation published by IEEE), approx. 1000 pp., LC 81-81573 (preassigned), \$95.00. SH08243 (not distributed under OOP). Each volume available separately for \$55.00 each as SH08250 (Vol. 1) and SH08268 (Vol. 2) (also not distributed under OOP)

Coverage: Fifty-five Nuclear IEEE Standards and ANSI Standards on Nuclear Instrumentation published by IEEE from 1965 through 1980 are presented. Each volume contains an index to both volumes.

ANSI/IEEE C37.081-1981. American National Standard: IEEE Guide for Synthetic Fault Testing of AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis; June 12, 1981. 27 pp., \$7.00. SH08227

ANSI/IEEE C57.91-1981 (Revision of ANSI C57.91-1974). American National Standard: IEEE Guide for Loading Mineral-Oil-Immersed Overhead and Pad-Mounted Distribution Transformers Rated 500kVA and Less with 65°C or 55°C Average Winding Rise; July 31, 1981. 32 pp., \$8.00. SH08177

IEEE Press

Geometric Theory of Diffraction, a Book of Selected Reprints; edited by Robert C. Hansen. © 1981. 406 pp. ISBN clothbound 0-87942-149-5, LC 81-6198 (CIP Data on verso of title page). \$40.95. PC01446 (OOP 2). Also distributed through John Wiley & Sons, Inc. Wiley Order No. clothbound: 0-471-09842-6

Coverage: The geometric theory of diffraction (GTD) has, in the last two decades, contributed considerably to the transformation of antenna design from an empirical art to an engineering science. This book contains 51 reprinted papers grouped into four parts: early papers; canonical problems; applications; and GTD and moment method.

Modern Active Filter Design, a Book of Selected Reprints; edited by Rolf Schaumann (University of Minnesota), Michael A. Soderstrand (University of California, Davis), and Kenneth R. Laker (Bell Telephone Laboratories). © 1981. 426 pp. ISBN clothbound 0-87942-147-9, LC 81-2368 (CIP Data on verso of title page). \$30.95. PC01420 (OOP 2). Also distributed through John Wiley & Sons, Inc. Wiley Order No. clothbound: 0-471-09734-9

Coverage: This volume is the second in the IEEE Press Selected Reprint series pertaining to active filters. The first, *Active Inductorless Filters* by S.K. Mitra published in 1971, is still available from IEEE (\$17.50, PC00034). The 42 reprinted articles in this book and its bibliography start in 1971 where Mitra's book left off. These papers are divided into six parts: design considerations; second-order filter sections; design of high-order filters; fabrication; monolithic continuous analog active filters; monolithic switched-capacitor filters.

Tutorials

Automated Arrhythmia Detection, Introduction to, initially presented at the 7th Computers in Cardiology Conference, held Oct. 22-24, 1980 in Williamsburg, VA; edited by Kenneth L. Ripley and Alan Murray. © 1980, 335 pp., LC 80-53634 (preassigned). \$25.00, EH0171-9 (OOP 8)

Coverage: To respond to the increased use of patient monitoring systems to detect cardiac arrhythmias, this tutorial provides a general introduction to both cardiac arrhythmias and the computer systems used to detect them; the establishment of different detector decision-rules; a detailed discussion of component sections of the detection devices; clinical applications; and selecting an arrhythmia monitoring system. There are two appendices: one consists of several major review papers; the other includes lists of equipment manufacturers and some equipment characteristics.

Computers and Business: How Managers Are Using Computers to Support Their Decision-Making; edited by Harold J. Podell and Madeline Weiss. © 1981, 477 pp., LC 80-85247 (preassigned). \$20.00, EH0177-6 (OOP 8)

Coverage: This tutorial, which provides a brief overview of present computer and systems design technology, consists of 55 reprinted articles divided into five units: issues in information systems development; technology trends; data base considerations; privacy and security issues; applications.

Design of a Small Business Data Processing System (Tutorial Series 12); *Computer*, Vol. 14, No. 9, Sept. 1981, pp. 77-93, \$6.00. JH55970

Coverage: This tutorial presents the problem of small business system designers who must design computer systems including complex functions that can be easily used by those with limited skills.

Distributed Processing Tutorial; edited by Burt H. Liebowitz and John H. Carson. 3rd edition, © 1981, 640 pp., LC 80-85249 (preassigned). \$25.00, EH0176-8 (OOP 8)

Coverage: An introduction to distributed processing concepts is provided in nine chapters covering these topics: introduction; computer technology; computer communications; intelligent terminals/point-of-use systems; resource-sharing networks; multiple processor systems; multiprocessors; distributed data bases; local area networks.

LSI/VLSI Building Blocks (Tutorial Series 11); *Computer*, Vol. 14, No. 8, Aug. 1981, \$6.00. JH55962 (not distributed under OOP)

Coverage: This tutorial discusses how the trend of placing more circuits on smaller chips results in modular building blocks for electronic systems.

LSI/VLSI Design Automation (Tutorial Series 10); *Computer*, Vol. 14, No. 7, July 1981, \$6.00. JH55954 (not distributed under OOP)

Coverage: With an emphasis on the functions provided for each phase of design, this tutorial examines the modern LSI/VLSI design automation system.

Microcomputer System Software and Languages Tutorial, initially presented at Tutorial Week 80, held Dec. 15-19, 1980 in San Diego, CA; edited by Belton E. Allen. © 1980, 231 pp., LC 80-84352 (preassigned). \$14.00, EH0174-3 (OOP 8)

Coverage: The software development process for microprocessor-based products is examined in six sections: development facilities and tools; microprogramming languages; automated language processor; microprocessor operating systems; testing microprocessor systems; and 16-bit microprocessor support.

Parallel Processing, Tutorial on, initially presented at the 10th International Conference on Parallel Processing, held Aug. 25-28, 1981 in Bellaire, MI; edited by Robert H. Kuhn and David A. Padua. © 1981, 498 pp., LC 81-82800 (preassigned). \$30.00, EH0182-6 (OOP 8)

Coverage: This tutorial is organized into two parts: Part I on parallel architectures consists of five chapters covering pipeline processors, array processors, multiprocessors, dataflow processors, and special purpose processors; Part II, parallel processing software, features four

chapters on the subjects of parallel programming languages, parallelism extraction, operating systems for parallel computers, and algorithms for parallel computers.

Structured Programming: Integrated Practices, Tutorial on; edited by Victor R. Basili and F. Terry Baker. © 1981, 290 pp., LC 80-85248 (preassigned). \$20.00, EH0178-4 (OOP 8)

Coverage: This volume is a reworking of an earlier tutorial entitled *Structured Programming* (77CH1049-6, 1975, rev. 1977) by the same authors. It provides a set of techniques usually called Structured Programming Methodology that is used throughout the software development process. Its eight sections cover: fundamentals; design; segmentation; development; program libraries; walk-throughs and inspections; and organization.

Miscellaneous Publications

Acid Precipitation; Special Publication No. 20 of the IEEE PES, presented at the 1981 IEEE Power Engineering Society Winter Meeting held on Feb. 3, 1981 in New York, NY. 31 pp., \$6.00. 81TH0085-1 (OOP 6)

Coverage: Five panel presentations with discussion cover the worldwide concern with acid precipitation.

Energy Development VI; IEEE Power Engineering Society papers originally presented at various IEEE PES meetings in 1979-1981, © 1981, 256 pp., \$12.00. 81TH0089-3 (OOP 6)

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

IEEE Membership Directory, 1981. 1323 pp., \$50.00. JH53355 (not distributed under OOP)

Coverage: This directory contains not only the IEEE membership roster, but also such features as officers and directors 1963-1981; biographies of fellows; and honorary members. Telephone numbers (when authorized) are included in the membership roster.

1980 Index to IEEE Publications. © 1981, 695 pp., LC 75-646004, \$120.00. JH56945 (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.

Subsynchronous Resonance, Symposium on Countermeasures for, presented at the 1981 IEEE Power Engineering Society Summer Meeting held on July 30, 1981 in Portland, OR; sponsored by IEEE PE. *Papers*, 97 pp., \$12.00. 81TH0086-9 (OOP 6)

Coverage: Sixteen papers are concerned with the analysis, detection, and prevention of subsynchronous resonance (SSR).

Changes in IEEE Periodicals

Decreased frequency of publication: *IEEE Transactions on Systems, Man, and Cybernetics* will change from monthly to bimonthly commencing with Vol. SMC-28, No. 1, Jan./Feb. 1982.

Title Change: from *IEEE Transactions on Industrial Electronics and Control Instrumentation* (Vol. IECI, ISSN 0018-9421) to *IEEE Transactions on Industrial Electronics* (ISSN 0278-0046) commencing with Vol. IE-29, No. 1, February 1982, due to the Society's changing its name accordingly.

New Publication: *IEEE Engineering in Medicine and Biology Magazine*. ISSN 0278-0054. Published quarterly, commencing with Vol. 21, No. 1, March 1982. Subscription price: \$23.00.

Coverage: This publication continues, in its numbering, the *IEEE/EMBS Newsletter* (Engineering in Medicine and Biology Society Newsletter) that was available only to members of the IEEE Engineer-

ing in Medicine and Biology Society, not to members of other IEEE societies or to nonmembers. The new Magazine will contain both general and technical short articles on current technologies and methods used in biomedical and clinical engineering. Also included will be news items, book reviews, patent descriptions, and a correspondence section.

New Publication: *IEEE Technology & Society Magazine*. ISSN 0278-0097. Published quarterly, commencing with Vol. 10, No. 1, March 1982. Subscription price: \$11.00.

Coverage: With the formation of the new IEEE Society on Social Implications of Technology (SSIT), the newsletter of its predecessor, the Committee on Social Implications of Technology (CSIT), which was titled *Technology and Society*, will become a magazine. Its numbering sequence will continue the newsletter's. Some of its themes include the impact, both positive and negative, of technology on society; how society affects the engineering profession; the history of electrotechnology as it pertains to society; and engineering ethics and professional responsibility.

New Publication: *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*. ISSN 0278-0070. Published quarterly,

commencing with Vol. CAD-1, No. 1, January 1982. Subscription price: \$50.00.

Coverage: This new Transactions will present methods, algorithms, and man-machine interfaces for physical and logical design including: planning, synthesis, partitioning, modeling simulation, layout, verification, testing, and documentation of integrated circuit and system designs of all complexities. Practical applications of aids resulting in producible analog, digital, optical, or microwave integrated circuits are emphasized.

New Publication: *IEEE Transactions on Medical Imaging*. ISSN 0278-0062. Published quarterly, commencing with Vol. MI-1, No. 1, March 1982. Subscription price: \$50.00.

Coverage: This joint publication of four IEEE Societies: EMB, NPS, SU, and ASSP, will emphasize the interdisciplinary aspects of instrumentation, systems, transducers, computing hardware and software, mathematics, and physics in research areas such as: ultrasonics; x-ray imaging and tomography; nuclear isotope imaging systems; image processing by computers; microwaves and nuclear magnetic resonance imaging; radiation sensors and detectors; mathematical tools and analysis of image formation; perception; display; and pattern recognition.

Supplementary Information

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