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*Al pour en parler elsewhere*

# IEEE Region 8 newsletter



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS  
INCORPORATED

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## REPORT FROM THE REGIONAL DIRECTOR

The IEEE-EUREL Conference EUROCON '77, held at Fondazione Cini on the island San Giorgio at Venice, Italy on May 3-6, was a success both technically and economically. The Steering Committee (Chairman: A Gigli), the Technical Programme Committee (Chairman: F Carassa), the Local Executive Committee and the Italian Arrangement Committee (Chairman: G del Monte), and the Publicity Committee (Chairman: A Bandini Buti) had all done an excellent job. The past Regional Directors Russell and Stumpers were both members of two enlarged Steering Committee Meetings during the Conference. The meetings were conducted in a very friendly atmosphere, and I hope that the evident co-operation between IEEE and EUREL will continue to develop during many successful joint events in the future.



For the first time the Conference Proceedings, two thick volumes of 1,350 pages, contained the complete papers. The content and the printing were of a high quality.

The Region 8 Student Paper Contest took place at Fondazione Cini on May 3, organized by the Region 8 Student Activities Chairman Prof J-G Remy. Members of the jury were Professors Antognetti, Bolinder, Stumpers, Vander Vorst and Voge. The winner was G A Marino from Università di Genova, Italy with the paper "A Computer-Aided Ultrasonic B-Scan System for Ophthalmology". The second prize went to T Laurent from the Catholic University of Louvain, Belgium, and the third to J Starr from the Katholieke Universiteit te Leuven, Belgium. I had looked forward to listening to the paper "Spectrophotometer with Integrated Solid State Image Sensor Arrays" by E Wuergler and G Brun, Swiss Federal Institute of Technology, Zurich, but an unfortunate misunderstanding about the exact time of the Contest prevented the authors from taking part.

The Region 8 Spring Committee Meeting was held on May 6 and 7 at

Fondazione Cini immediately following EUROCON. The meeting was honoured by the presence of the President, Prof R M Saunders, Vice-President D M Hinton (Chairman of the Regional Activities Board), General Manager Dr H A Schulke, Mr D Christiansen (Editor of SPECTRUM), and R K Asdal (Director of Field Services). Prof Stumpers handed over the gavel to the new Chairman who, in his introductory speech, promised, above all, to work for three things: the transnationality of the Institute, the technical excellence of the Institute, and a new EUROCON '80. The following Members attended the meeting: Stumpers (Vice-Chairman), de Vrijer (Secr/Treas), Russell (EUROCON), Poortvliet (Membership and Dev), Rannestad (Adv and Adm), Remy (SAC), Voge (Awards), Wellinger (Publ), Williams (R8 Editorial Board), Vander Vorst (Benelux), Rüchardt (F R Germany), Stubb (Finland), Shavit (Israel), Ercoli (M&S Italy), Egidi, Biorci, Antognetti (N Italy), Stette (Norway), Smolinski (Poland), Marin (Spain), Zetterberg (Sweden) and Winton (UKRI). Topics discussed were reports by the President, the RAB Chairman, and the Regional Director, the Region 8 Newsletter, SPECTRUM, the 1977 budget, cosponsoring of conferences, student activities, membership developments and section activities. The next Regional Meeting will take place on December 9 and 10, hopefully in Spain.

On May 6 all Region 8 Committee Members were invited by Ente Nazionale per l'Energia Elettrica (ENEL) and Società Italiana per l'Esercizio Telefonico p a (SIP) to a very pleasant dinner at the Gritti Palace.

The next series of meeting of the Board of Directors in the United States will be in Minneapolis in July. The meetings which traditionally were held in April in connection with the old IEEE Convention and Exhibition, now ELECTRO, have been cancelled for reasons of economy. This is, I feel, unfortunate as they provided an opportunity for Regional Directors — particularly from outside the United States — to keep abreast of new developments in the electrotechnical field.

Gothenburg, Sweden, June 6, 1977  
E Folke Bolinder

## EUROCON 77 — VENICE 3-6 MAY 1977

After arrival in Venice, we visited the registration office in the Fondazione Cini on the island of San Giorgio. About six efficient ladies took care that everyone who produced a registration card was given all the information needed, under the supervision of Mr Bandini Butti, Mr Sabattini, and some more of our friends from AEI. The Conference Proceedings made a good impression, and the photographic display in the lobby drew a lot of attention.



The Regional Director has described the Student Contest, held on the opening day. I would only add, speaking as a member of the jury, that the

differences were very small, and Region 8 has every reason to be proud of its representation in the student contest in comparison with all IEEE Regions.

At the official opening on Tuesday, Dr Sartori (Vice-President of the Fondazione Cini) and Dr Rigi (Mayor of Venice) spoke words of welcome, followed by short addresses from Professor Gigli, Mr van 't Groenewout (President of EUREL) and Professor Robert Saunders (IEEE President). Dr Postal (Italian Under-Secretary of State for Science and Technology) and Professor Gagliardi (Director of the Italian telephone system) spoke on the evolution of communications and Mr Reid (Deputy Director, UK Post Office Telecommunications Strategy Department) gave a fine invited paper, beginning with the words: "The challenge and justification of long term telecommunications planning lies in an acute conflict between uncertainty and inertia".

During the afternoon of Tuesday, the students tried to discover, in a discussion amongst themselves, what they really wanted from their Societies. The four sections of the Symposium also started on Tuesday and continued on Wednesday. All the meetings I saw or heard about were well attended and in most cases were followed by a good discussion. Tuesday evening saw many participants present at a Venetian folklore evening in the tavern "Al Musicanti". After dinner we all took a gondola ride along the canals and returned for Venetian songs. On Wednesday, the RAI offered a classical trio concert in the beautiful Palazzo Labia, much appreciated by all those present. On Thursday, the special session on Communications in the Developing

PUBLISHED QUARTERLY		JAN.	APRIL	JULY	OCTOBER
DEADLINES	News to Editor	Dec. 7	Mar. 7	June 7	Sept. 7
	Advertisements to County Secretarial Services	Dec. 15	Mar. 15	June 15	Sept. 15
	Delivery inserts to County Secretarial Services	Dec. 22	Mar. 22	June 22	Sept. 22

Countries was opened by the Secretary-General of the ITU, after short introductions by Professor Carassa, Dr Rao, Mr Kirby (Director of CCIR), Professor Voge (President of URSI), a representative of the Director-General of UNESCO, and Mr Clarke, the inventor of the stationary satellite communications system (1945). Mr Clarke, well known also as an author of science fiction, presented a television film on "The next hundred years in communications". No wonder he nearly stole the show. Mr Gupta and Mr Narayanan of India were rightly proud of the industrial achievements in their country. Mr Okundi represented Kenya and Mr Sesay Sierra Leone. Professor Wellanuis of Chile and the Minister of Communications of Brazil, Mr Albernaz, represented South America. The Arab countries were well represented by, among others, Mr Ali of the University of Riyadh, and Prof Almashat of the University of Baghdad. Mr van den Brink gave the keynote address in the session on industrial approaches suitable for developing countries, followed by Mr Aria, both representing well known firms from the Western world active in the Third World.

Also during Thursday, an interested audience heard Mr Mikulski of London speak on "The art of technological forecasting", followed by a discussion, ably led by Mr C R Russell.

In the evening, a round table discussion between developing and developed countries was chaired by Mr Kirby, with an interested and participating audience, which lasted beyond 10.30 pm. The recently opened Indonesian satellite communication system shows that technological progress can come pretty swiftly in a developing country and Mr Molnadir, the Indonesian representative on the organising committee for this day was understandably proud of it. At another successful meeting between students and young engineers and representatives of Societies, many students were asking for the international contacts that IEEE is already giving its students, as President Saunders remarked in the discussion. An interesting sociological study by Mr Raby, "The commitment of engineers to their employing organisation" had opened this meeting.

Friday saw some six still well attended sessions in parallel. Many representatives of IEEE Sections and of National Societies of EUREL were the

guests at a dinner in the evening, where welcoming speeches were made on both sides, and where there was a general feeling of satisfaction over the success of the conference. With about 700 participants, the inspiring surroundings of San Giorgio and the city of Venice, and the excellent lectures and discussions, it will long be remembered by all participants.

No account of EUROCON '77 would be complete without mentioning the superlative organisation of the conference and the enormous amount of detailed work done by many people. All of them deserve our thanks.

Eindhoven, Netherlands, May 21, 1977  
F. Louis Stumpers



**EUROCON '77 Opening Ceremony**

L to r: Prof R Carassa (Chairman, Technical Programme Committee), Dr G Postal (Under-Secretary of State for Science and Technology), Prof A Gigli (Chairman, Conference Steering Committee), Dr M Rigi (Mayor of Venice), Dr L Sartori (Vice-President, Fondazione Cini).

## INSTITUTE NEWS

### BOARD OF DIRECTORS' DECISIONS

**Board picks candidates, toughens IEEE position on registration, and votes down a proposed dues increase for 1978—all in one meeting.**

Action was the byword at the first meeting of the year of the IEEE's Board of Directors. Working largely in open sessions for the first time in Institute history, the Board moved on several fronts during its February 19-20 session in Washington, DC. Nominated for the post of 1978 IEEE President was Ivan A Getting, an IEEE Fellow who is presently president of the Aerospace Corp. Nominated to succeed himself in the role of Executive Vice-President was Carleton A Bayless, a division manager for the Pacific Telephone and Telegraph Co., who successfully achieved his present Institute position as a petition candidate. To date, no member has informed IEEE of an intention to run as a petition candidate.

A detailed discussion of the Board's debate on revisions in IEEE's policy regarding registration and the Institute's dues structure also appeared in the April Spectrum (page 17).

### Search Comm. offers profile of IEEE General Manager's job

To aid the hunt for a successor to IEEE General Manager and Executive Director H A Schulke, Jr, the Institute's ad hoc Search Committee, chaired by IEEE Past President Robert H Tanner, has recently released, with the approval of the Executive Committee, a detailed description of IEEE's senior staff post. For a copy of this document, which sums up both the responsibilities and authority of an IEEE Executive Director and General Manager, write to Emily Sirjane at Headquarters.

### Dr Richard M Emberson named Acting General Manager of IEEE as of June 1

Dr Richard M Emberson, Staff Director of Educational, Field, Standards and Technical Services, has been named Acting General Manager of the Institute effective June 1 as the Search Committee, which is seeking a permanent replacement for Dr Schulke, may take from 90 to 180 days to find such a qualified individual.

### PROFILES

#### Douglas M Hinton

IEEE's 1977 Vice-President for Regional Activities is Douglas M Hinton. A Senior Member of the Institute and a former Region 7 Director (1972-73), Mr Hinton is a Canadian who, since 1964, has been supervisor of engineering training at Bell Canada's Technical Training Centre in Belleville, Ont. In this capacity, he is responsible for training in transmission and radio design. Prior to this position, Director Hinton was involved in the design and analysis of mobile, HF, microwave, scatter and space systems for Bell Canada, which he joined in 1947. He has represented the Telephone Association of Canada on Committees of the

Canadian Radio Technical Planning Board, the Canadian Standards Association, the Canadian National CCIR (International Radio Consultative Committee), and at CCIR Conferences in Washington, DC, and Geneva, Switzerland. Mr Hinton has authored papers on the co-ordination of space and microwave systems and the design of mobile radio.

#### Richard Emberson

As part of the 1976 Headquarters staff reorganisation, the four activities, EAB, RAB, Standards and TAB, were physically moved together on the 15th floor at Headquarters. Administratively, they were made the responsibility of Richard Emberson, Staff Director EFST (Educational, Field, Standards and Technical). Each of the four areas is headed by a Director: John F Wilhelm, Educational Activities; Robert K Asdal, Field Services; Ivan E Easton, Standards; and Narendra P Dwivedi, Technical Activities. Assisting Dr Emberson in co-ordinating these diverse activities is Esmi Bidstrup, Administrator EFST.

By training a physicist with a PhD degree from the University of Missouri, Dr Emberson has served since the merger that formed the IEEE in 1963 as the head of offices that evolved into what is now the Technical Services Department. The keystone of this department is the Groups and Societies. At the time of merger, the IEEE Board made a fundamental decision to base IEEE's technical activities on the decentralized system of Groups and Societies in which the volunteer IEEE members exercise major, direct control.

Dr Emberson has observed that "other societies are surprised, even to disbelief, that IEEE can function in such a decentralized manner. But our system is continually rejuvenated as members move into new positions, bringing fresh ideas and enthusiasms, and our success through the years has been in helping these people achieve their goals while operating within the IEEE umbrella."

#### Narendra P Dwivedi

Dr Dwivedi joins the IEEE Headquarters staff as Director of Technical Activities. This position has been vacant for more than a year as a consequence of the reorganization that made Dr R M Emberson Staff Director for Educational, Field, Standards and Technical Activities. Dr Dwivedi comes to the Institute from the Jet Propulsion Laboratory of California Institute of Technology where he was responsible for the insertion of Viking Orbiters into Mars orbit as well as for the design, analysis and operations software. For this work as a member of the Viking Flight Team, he received the US Air Force Association's highest honour in science and engineering, the Theodore von Karman award. He holds a BS in engineering from Bihar Institute of Technology, an ME in electrical engineering from Texas A & M University, and a PhD in EE from Auburn University. Dr Dwivedi is a Senior Member of IEEE and also holds membership in Sigma Xi, Tau Beta Pi, Eta Kappa Nu and Phi Kappa Phi.

## REGION 8 NEWS

### News of Members

HM The Queen has awarded Mr W H Devenish (Editor, Region 8 Newsletter) a Silver Jubilee Medal in recognition of the significant contribution he has made to national and international standardization, and two members of the UK & RI Section, Professors E A Ash and A L Cullen, have been made Fellows of the Royal Society.

Similar information from other Sections would be welcomed and, if sufficient news items are submitted, not only by Section officers but by any member, a part of the Newsletter with the above title will be included regularly. If a separate heading is not justified, any items submitted will be inserted in the news of the appropriate Section.

### W R G Baker Prize

Dr Manfred R Schroeder has been selected to receive the W R G Baker Prize for his paper entitled "Models of Hearing" (Proc IEEE, Vol 63, No 9, Sept, 1975).

The award, which was established in 1956 by W R G Baker, is given for the most outstanding paper in the Transactions and Journals of the Groups and Societies or in the Proceedings of the IEEE issued between July 1 and June 30. The award consists of a certificate and one thousand dollars.

Manfred Schroeder was born in Ahlen, Germany in 1926. After graduating from the University of Göttingen with the degrees of Diplom Physiker in 1951 and Dr rer nat in physics in 1954, he joined Bell Telephone Laboratories in Murray Hill, NJ. His work at Bell has encompassed many phases of the fields of acoustics and the communications sciences. In 1958, he was appointed head of the Acoustics Research Department; in 1963, he became director of the Acoustics and Speech Research Laboratory; and in 1964 he assumed the post as director of the Acoustics, Speech and Mechanics Research Laboratory, with responsibility for all areas of Bell's acoustics and ultrasonics research. He was named professor of physics and director of the Drittes Physikalisches Institut at the University of Göttingen in 1969, and in 1972 served as chairman of the Physics Department.

Dr Schroeder has served on the National Stereophonic Radio Committee, and on the New Technologies Panel of the National Advisory Commission on Health Manpower. A Fellow of IEEE he is also a Fellow of the Acoustical Society of America and of the Audio Engineering Society, which awarded him its Gold Medal in 1972. He also is a Foreign Scientific Member of the Max Planck Society.



### Morris N Liebmann Award

Dr Horst H Berger and Dr Siegfried Wiedmann have been selected to be co-recipients of the Morris N Liebmann Award for 1977 with the following citation:

"For the invention and exploration of the Merged Transistor Logic, MTL."

The award was established in 1919 to perpetuate the memory of Colonel Morris N Liebmann, and is made by the Board of Directors on the recommendation of the Field Awards Committee and the Awards Board for the most important contribution to emerging technologies recognized not earlier than three calendar years preceding the adjudication year. It consists of a certificate and \$2,000.

Horst Berger was born in Liegnitz, Germany in 1933. He attended the Technical Universities of Dresden and of Stuttgart, Germany and received the Diplom-Ingenieur degree in 1961. In 1970 he received the Doctor-Ingenieur degree from The Technical University of Aachen, Germany.

From 1959 to 1963 he was employed with Standard Electric Lorenz AG in Stuttgart, where he worked as a development engineer on mechanical aspects of digital magnetic tape units as well as on their control electronics. Later he was involved in cord memory development. In 1963 he went to the IBM Laboratories in Boeblingen, Germany. Initially he worked on the characterization of GaAs material and devices. From 1965 to 1967 he was assigned to IBM Corporation, East Fishkill, New York, where he participated in the development of the IBM MST logic circuit family. After returning to IBM Germany, he became interested in investigating the potential of bipolar technology for Large Scale Integration.

Together with his partner, Dr S K Wiedmann, he developed the concept of merging device/circuit functions in bipolar technology. From this work a number of new ideas for high-density low power circuits resulted, culminating in the invention of Merged Transistor Logic in 1969. Horst



Berger has also contributed to the detailed understanding and modelling of these new devices.

He has published 14 technical articles and holds 14 patents. In 1972 he was co-recipient of the Outstanding Publication Award of the German Nachrichtentechnische Gesellschaft, and in 1975 he received the Annual Electronics Magazine Award for leadership in electronics technology. Dr Berger is continuing device/circuit research work.

Siegfried K Wiedmann was born in Plochingen, Germany in 1938. He attended the Technical University of Stuttgart, Germany and received the Diplom-Ingenieur degree in electronic engineering in 1963. In 1967 he received the Doctor-Ingenieur degree from the same university. From 1963 to 1967 he worked in the Department of Semiconductor Technologies at the University of Stuttgart. Besides teaching students, he was occupied with research work on semiconductor physics and circuit technologies with emphasis on the high-frequency behaviour of p-n-junctions at large sinusoidal signals. In 1967 he joined the Applied Physics Department of the IBM Laboratories in Boeblingen, Germany. He was engaged in the basic development of novel bipolar memory devices later applied to large-volume memory chip products. He was also involved in circuit and layout design of bipolar digital integrated circuitry. In 1969 he went on a temporary assignment to the IBM Corporation, Components Division, East Fishkill NY, carrying on his work on low-power, high-density bipolar device/circuit techniques. He returned to IBM Germany in 1971. He has devised several new concepts for improving the density and performance of bipolar circuitry, and together with his partner, Dr H H Berger, he has invented and explored the concept of Merged Transistor Logic.

Since 1973 Siegfried Wiedmann has been manager of a circuit design group in the Component Development of the Boeblingen IBM Laboratories. Presently, this group is mainly occupied with the development of high-density bipolar memory chips.

He has published 15 technical articles and holds 24 patents. In 1972 he received an Outstanding Publication Award of the Nachrichtentechnische Gesellschaft for a paper on a bipolar memory device. He was also honoured with the 1975 Annual Electronics Magazine Award for his leadership in electronics technology.



### Student Meeting at EUROCON '77

The following recommendations were put forward by students and young engineers at EUROCON '77 and accepted by a panel of senior engineers for transmission to the Convention of National Societies of Electrical Engineers of Western Europe (EUREL):

- Member societies which do not have a section devoted to student activities should provide one;
- EUREL should arrange further international student meetings;
- Member societies should promote better communication between senior members and students and young engineers.

The experiment of incorporating special student sessions in EUROCON '77 was a success, not least for the experience it gave the students and young engineers of the atmosphere of an international meeting, and for the informal contacts and discussions between them. Participants came from Finland, France, Germany, Italy, Norway, Sweden, Switzerland and UK, and were sponsored by their national societies. A student sponsored by UKRI Section chaired the initial session which decided what matters were to be discussed at the subsequent panel session. During this session IEEE President, Bob Saunders, described what IEEE is already doing and can do to promote international student contacts.

### Co-operation within Region 8 on EMB

Dr G H Byford, a member of the UKRI Section Committee, is trying to find out whether members in Region 8 are interested in some form of Regional activity and co-operation in the field of engineering in medicine and biology. Would members who support this idea please write to Dr Byford at the RAF Institute of Aviation Medicine, Farnborough, Hants, UK, mentioning what kind of activity interests them and whether they would be prepared to take an active part in the organization.

### Foundation for television research

The German physicist, author and journalist, Eduard Rhein (76), has established a foundation in Hamburg for promoting international research in the television sector. The income from a capital of two million DM is to be used to provide an annual prize of 100,000 DM "to be awarded to scientists and technicians who have achieved outstanding results in research aimed at the further development of improved picture quality (performance), particularly in the area of the slimline design of telecreens".

An Advisory Council, composed of internationally renowned scientists, headed by Prof Dr Walter Bruch, inventor of the PAL system, and

including Joseph Polonsky of France, Dr F Willem de Vrijer of Holland (Secretary/Treasurer of IEEE Region 8 Committee), James Hillier of the USA, and Prof Karl Tetzner of Germany, will choose each year's winner. Nominations for the Eduard Rhein prize 1977 may be submitted from all over the world by experts, organizations or institutions active in tele-

vision technology but the supporting documents must be in the German or English language. Detailed guide lines for nominations may be obtained from the Board of Governors of the Eduard Rhein Foundation, Klopferstieg 3, 2000 Hamburg 67, FR Germany, and the closing date for entries is September 15, 1977 (the date of the postmark will be decisive).

## MEETINGS IN REGION 8

### 1978 European Conference on Circuit Theory and Design

The European Conference on Circuit Theory and Design is the biennial international conference sponsored by European electrical engineering organizations and the IEEE. The 1978 European Conference on Circuit Theory and Design will be held on the Lausanne campus of the Swiss Federal Institute of Technology from September 4-8, 1978.

As in the past, the conference will be devoted to all aspects of the theory and design of lumped, distributed, active and digital networks, as well as to system and non-linear circuit theory, network optimization and computer-aided design. Papers covering broader applications of network concepts and techniques, eg to biological and economical systems, will also be accepted. Special emphasis will be placed on the interaction between theoretical research and engineering practice, and on the application of modern network theoretical concepts and methods to practical engineering design and manufacture.

Authors are invited to submit four copies of papers suitable for a 20 minute presentation; deadline February 1, 1978. The format of the papers should be in accordance with the "Information for Authors" which is printed on the back cover of each issue of the IEEE Transactions on Circuits and Systems.

Further information from Conference Secretariat: EPFL—Dept of Electrical Engineering, ECCTD-78, Mrs R Vez, 16 chemin de Bellerive, CH - 1007 Lausanne, Switzerland. Telephone (021) 26 46 21, Telex 24 478.

### International Conference on Information Theory and System Theory in Digital Communications

An International Conference on Information Theory and System Theory in Digital Communications will be held in Berlin on September 18-20, 1978 organized by Section 1 "Information Theory and System Theory" of the German "Nachrichtentechnische Gesellschaft" (NTG) of VDE, in co-operation with Commission C, "Signals and Systems" of URSI National Board in the Federal Republic of Germany; German Section of IEEE; Elektrotechnischer Verein, Berlin.

The aim of this conference will be to demonstrate the stimulus of Information Theory, System Theory and Statistical Signal Theory on Digital Communications Systems. Recent advances and summarizing

reviews will be presented. Papers on fundamental aspects as well as on practical applications of the above theories in the area of digital communications will be accepted.

The topics of special interest will be: Source models and source encoding; Channel models and channel encoding; Digital transmission; Synchronization and stability of transmission networks; Optimization and simulation of transmission networks.

Contributed papers—of 25 minutes duration—may be given in English or German.

Contributions will be reviewed and selected by the programme committee of NTG-Section 1 before January 15, 1978 on the basis of a summary of no more than two pages (DIN A4) which is expected by November 30, 1977.

A complete final ready-for-print manuscript of the accepted papers shall be sent before May 31, 1978 for publication in the conference proceedings.

Summaries and manuscripts should be mailed to the Conference Chairman, Dr H Ohnsorge, c/o Heinrich-Hertz-Institut, Einsteinufer 37, D-1000 Berlin 10.

### ESSCIRC '77 Third European SSC Conference

ESSCIRC '77 is to be held in Ulm, FR Germany, September 20-22, 1977. It is organized in a similar fashion to the first two conferences and is co-ordinated with ESSDERC (European Solid-State Device Research Conference) to be held in Brighton.

The aim of ESSCIRC series of conferences is to provide an annual European Forum for presentation and discussion of recent advances in Solid-State Circuits.

In addition to contributed papers in a wide field, it is planned to have invited papers by recognized scientists in the following fields: Analogue integrated circuits; Potential of MOS technologies for analogue integrated circuits; Impact of very large scale integration (VLSI) on circuits and systems; Approaches to VLSI (technologies and devices); Applications of ICs.

Final deadline for receipt of submissions was May 6, 1977. For further information write to: J Dangel, AEG-Telefunken, Elisabethenstrasse 3, D-7900 Ulm, FR Germany.

# EMI/EMC SEMINARS

## ● GROUNDING AND SHIELDING

MADRID, SPAIN — AUGUST 29-31, 1977 —  
FEE: \$475 U. S. DOLLARS/STUDENT

This is a three-day seminar covering the design of shields for cables, circuits, compartments, boxes, equipment, sub-systems, systems, and complete vehicles. Grounding covers an exciting new systems-approach, viz., a methodology with supporting rationale and techniques for controlling EMI. Grounding for safety is also covered.

## ● EMC—DESIGN & MEASUREMENT FOR CONTROL OF EMI

TEL AVIV, ISRAEL — SEPTEMBER 4-8, 1977 —  
FEE: \$695 U. S. DOLLARS/STUDENT

This five-day course covers the EMI/EMC field including system, sub-system, and equipment prediction and analysis, EMC design, control, fix, and retrofit techniques and EMC specifications, control and test plans, instruments, test methods and procedures. EMC design includes wiring, grounding, bonding, shielding, filtering and active circuits.

### SUMMER/FALL 1977 TRAINING SEMINAR SCHEDULE

COURSE TITLES	LOCATIONS	SEATTLE, WASHINGTON	OTTAWA, CANADA	SAN FRANCISCO, CALIFORNIA	WASHINGTON, D. C.	CHICAGO, ILLINOIS	SAN DIEGO, CALIFORNIA	BOSTON, MASSACHUSETTS	ATLANTA, GEORGIA
	EMC—DESIGN & MEASUREMENT			AUG. 8-12	SEPT. 26-30	OCT. 24-28			
GROUNDING & SHIELDING		JULY 26-28			SEPT. 13-15		OCT. 4-6		NOV. 15-17
EMI CONTROL FOR EDP EQUIPMENT								OCT. 4-7	
MOBILE COMMUNICATIONS						SEPT. 20-22			
MICROWAVE COMMUNICATIONS & CIRCUITS					OCT. 18-20				

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# new from NORTH- HOLLAND



## Modelling and Performance Evaluation of Computer Systems

edited by E. GELENBE and H. BEILNER.

1977 x + 490 pages  
Price: US \$39.00/Dfl. 95.00

A meeting sponsored by EURATOM-CETIS and held in Varese, Italy on 4-6 October, 1976 attracted leading experts in the field of computer modelling and performance evaluation, and out of their contributions to this conference grew a collection of studies, reports and papers of great practical value to the EDP practitioner, and of prime importance to the theorist. Significantly broader in scope than the previously published preprints, this volume treats such problems as memory management strategies, task sequencing, queueing policies in multi-processor computers, programmable hardware monitors and performance evaluation of batch-time sharing computer systems.

## Elements of System Theory

by P. FAURRE and M. DEPEYROT.

1976 xii + 282 pages  
Price US \$24.95/Dfl. 65.00

This textbook provides a concise, rigorous and up-to-date introduction to the theory of dynamical system and is intended to prepare the upper-level student for work with advanced and specialized texts. Although written in an applied mathematical style with precise statements and proofs, it does not demand any advanced mathematical background and is illustrated with many examples and exercises.

CONTENTS: Chapters: 1. Introduction to system theory. **Part One. Continuous**

**System Theory.** 2. Elementary PID control and process control. 3. Linear dynamical systems: external description. 4. Linear dynamical systems: internal description. 5. Stability and compensation. 6. Optimal control. 7. Signal processing. 8. Identification. **Part Two. Digital Systems.** 9. Combinational logic. 10. Sequential logic and finite automata. 11. Introduction to computation. Bibliography. Index.

## Informal Introduction to ALGOL 68

Revised Edition

by C. H. LINDSEY and S. G. VAN DER MEULEN.

1977 370 pages  
Price: US \$28.75/Dfl. 70.00  
Paperback price: US \$14.50/Dfl. 35.00

This completely revised edition of the *Informal Introduction* is based on the Revised Report of the Algorithmic Language ALGOL 68.

The language ALGOL 68 was designed by an IFIP Working Group and formally defined in a Report in 1969. Since that time the language, in whole or in part, has been implemented on a variety of computers and substantial experience has been gained by its use. One leading computer manufacturer has released an implementation in virtually complete agreement with the current official definition, and it should only be a matter of time before others follow. The experience of implementation and use lead to many proposals for changes to the language, which are now incorporated in the Revised Report - the official, rigorous and final definition of the machine independent programming language ALGOL 68.

This new edition should prove an indispensable tool for all users of ALGOL 68; it could also serve as a text in courses on advanced machine independent programming languages, as well as a valuable reference source.

## Simulation of Systems

8th AICA Congress, Delft, The Netherlands, 23-28 August, 1976

edited by L. DEKKER.

1977 xxii + 1122 pages  
Price: US \$89.50/Dfl. 225.00

These proceedings reflect the present state and the future trend of system simulation. The papers have been divided into papers concerning mainly system simulation methodology like system modeling

and simulation tools, and those about simulation studies of specific systems where the specific modeling, simulation experiments and results about model justification/validation.

**Introductory Papers.** Opening address (*E. van Spiegel*). The impact of computer simulation on applied science (*R. Vichnevetsky*). **Invited Survey Papers.** The Spectrum of mathematical modeling and systems simulation (*W. J. Karplus*). Simulation - is it worth it? (*R. E. Crosbie*). Tools for continuous systems simulation: Hardware and software (*R. M. Howe*). Discrete simulation: Types, application and problems (*J. P. C. Kleynen*). Simulation in life sciences (*V. C. Rideout*). In addition the volume contains all 131 contributed papers.

## Microprocessing and Microprogramming

edited by J. WILMINK, M. SAMI and R. ZAKS.

1977 350 pages  
Price: US \$29.50/Dfl. 75.00

The present work provides a state-of-the-art report, covering the full range of microprocessing and microprogramming. Amidst the wealth of papers included, the recent dramatic advent of LSI and MSI techniques is particularly well reflected in the papers on special custom-tailored hardware and software, which shows that the hardware-software balance is exploited deeper than ever before. In many papers the synchronisation of multi-processor systems is a main topic. Software support for microprocessor systems, the application of microprocessors in the fields of data transmission and signal processing and the increasing importance of microprogramming, due to the present availability of user microprogrammable computer systems and bit slice processors, are only a selection of the subjects treated. This report, the substantially enlarged version of the Proceedings of the 2nd Symposium on Microprocessing and Microprogramming organized by EURO-MICRO in Venice, October 1976, is **required reading** for anybody involved in any way in the field of microprocessing and microprogramming.

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## NEWS OF THE SECTIONS

### GERMANY SECTION

Attention of members is drawn to the reports of Awards given in News of Region 8.

**Advances in Electron tubes and components with adjacent technology.** This conference held in Garmisch Partenkirchen May 17-18, 1977 was organized by the NTG, Nachrichtentechnische Gesellschaft im VDE in association with the German Section of the IEEE. The conference programme was divided into four themes: Transmitting and microwave tubes, Technology and X-ray tubes, TV-picture tubes and their technology, as well as optoelectronic displays and -transducers. Thirty-one lectures were given by research engineers and specialists working in industry and in official research institutes. Among these lectures contributions to Klystron and Travelling wave tube developments as well as to optoelectronic devices were specially regarded by the approximately 130 members of the audience.

### Sweden Section

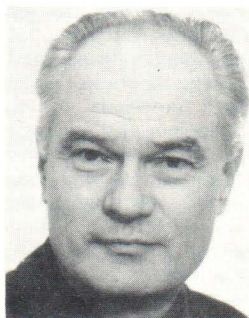
### SWEDEN SECTION

**Officers for 1977:** Chairman: Professor Lars H Zetterberg; Vice-Chairman: Univ lektor Gunnar Pettersson; Secretary-Treasurer: Univ lektor Gunnar Markesjö; Vice-Secretary-Treasurer: Prof Tore Fjällbrant; Former Chairman: Civ ing Carl-Axel Wannerskog.

Among the meetings and events during 1976 the following may be mentioned:

May 6: "Digital Signal Processing." Speaker Dr J F Kaiser at Bell Laboratories.

June 21-24: 1976 IEEE International Symposium on Information Theory held at Ronneby. 250 papers were presented.



Prof Lars H Zetterberg

- October 5: Excursion to Råö Radio-Telescope. Guide and speaker Professor Olof Rydbeck.
- October 25: "Data Communication." Speaker Dr David Falconer from Bell Laboratories.
- November 23: "Recent Developments in Science and Technology." Speaker Professor Gunnar Hambræus from the Swedish Academy of Eng Sciences.

### UNITED KINGDOM AND REPUBLIC OF IRELAND SECTION

All members will wish to congratulate Prof Ash and Prof Cullen on being made Fellows of the Royal Society.

**Professional Communication Chapter.** A meeting of the Chapter, to which all Members of the Section, as well as visitors, are invited, will be held on November 2, 1977 at Imperial College, London, when Robert Spence, Fellow IEEE, will speak, with a demonstration and film, on "Man-Computer Interaction: A Key Component of Computer-Aided Circuit Design". It is believed that the major impediment to the effective use of computer-aided design techniques is the lack of attention paid to the man-computer dialogue and Mr Spence will emphasize this aspect of the subject. The film will show the MINNIE interactive-graphic system for circuit design together with a live demonstration of circuit drawing, the presentation of sensitivity information, the identification of hazardous parasitics, model simplification, tracking sensitivity and circuit optimization, all carried out interactively by a graphical display associated with a large minicomputer. Attention will also be drawn to the wide range of sensitivity algorithms associated with MINNIE. The talk will conclude by describing an experiment to investigate the effect of computer response time on problem solving, and will report early results. The lecture will be held on Wednesday, November 2 in the Department of Electrical Engineering, Imperial College, Exhibition Road, London SW7 at 6 pm. Tea will be available from 5.30 pm (free of charge).

## MEETINGS OUTSIDE THE REGION

### 1977 International Electron Devices Meeting

The Annual Technical Meeting of the Electron Devices Group will be held in Washington, DC, December 5-7, 1977.

The following areas will be covered: solid state devices; device technology; integrated electronics; electron tubes; energy conversion devices; quantum electronic devices; detectors and displays.

The deadline for abstracts is August 8, 1977. Authors are asked to submit 200-word abstracts that define their planned 20-minute papers and emphasize their findings. The abstract, which should be type-written on one side of the page only and double spaced, must include the title, name of author, telephone number, mailing address, company affiliation and company address. The abstract should clearly state: (a) the purpose of the work, (b) how much it advances the art, and (c) what specific results have been obtained. Additional supporting material (for review purposes) may be submitted at the discretion of the author(s). Please indicate specifically the area in which your abstract fits. An original and 15 copies of all material should be sent to A U MacRae at the address given below. Authors will be notified before September 14, 1977 whether their papers have been accepted.

Consideration is being given to the inclusion of "Poster Sessions". In this type of session, each author is assigned table and wall space, and the audience moves around at will. Authors are on hand to discuss their work and may use copies of their papers, photographs or charts, etc. Authors interested in participating in this kind of session should contact: Professor Raye Thomas, Department of Electronics, Carleton University, Colonel-By Drive, Ottawa, Ontario, Canada K1S5B6.

Late papers will be considered if comprehensive 200-word abstracts (one typed page) for ten-minute papers are received for review by the Programme Chairman before October 21, 1977. The format for these abstracts is the same as for regular abstracts.

Further information from: A U MacRae, 1977 IEDM Technical Programme Chairman, Bell Laboratories, 600 Mountain Avenue, Room 2D-434, Murray Hill, New Jersey 07974.

### 1978 Power Engineering Society Winter Power Meeting

The 1978 Winter Meeting of the IEEE Power Engineering Society will be

held January 29-February 3, 1978 in New York City. The Winter Meeting is a general meeting and covers the entire field of power and its many areas of technical interest. Authors who have important information to contribute are invited to submit papers for presentation and discussion at the meeting.

Prospective authors should immediately request an author's kit from the Technical Conference Services Office at IEEE Headquarters, 345 East 47th Street, New York, NY 10017. The kit includes a Declaration of Intent form, the newly revised Publication Guide for Power Engineers (January, 1977) outlining the current requirements, and a supply of model paper on which the manuscript is to be typed. The completed Declaration of Intent form should be returned immediately so that preliminary plans may be made to include the paper in the technical programme. There are a number of mandatory requirements regarding the preparation of manuscripts which must be met if the paper is to be accepted. These are discussed in the Publication Guide. Authors are urged to study the guide carefully, to be sure their paper conforms with the instructions. September 1, 1977 is the deadline date for the receipt of the original manuscript at IEEE Headquarters, if it is to be considered for the 1978 Winter Meeting. Papers submitted should be within the scope of interest of the Power Engineering Society, technically sound, contribute to existing knowledge, or reveal new knowledge.

### ENGINEERING FOUNDATION RESEARCH GRANTS

A grant of \$10,000 is available to members of IEEE not more than two years after receiving their Doctor's degrees who are without research support. The grant is for projects directed toward innovative engineering approaches to the solution of major national problems on the development of new engineering principles, applications and techniques.

Full details available from Dr Richard Emberson, Acting General Manager, IEEE, United Engineering Centre, 345 East 47th Street, New York, NY10017. All proposals must be postmarked by December 1, 1977.

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