

IEEE Region Eight NEWS

VANDER VORST



24 MAY 1988

No. 82
May 1988

Editor

Dr. G. H. Byford,
"Sandstones", Crooksbury Road,
Runfold, Farnham,
Surrey, England, GU10 1QB

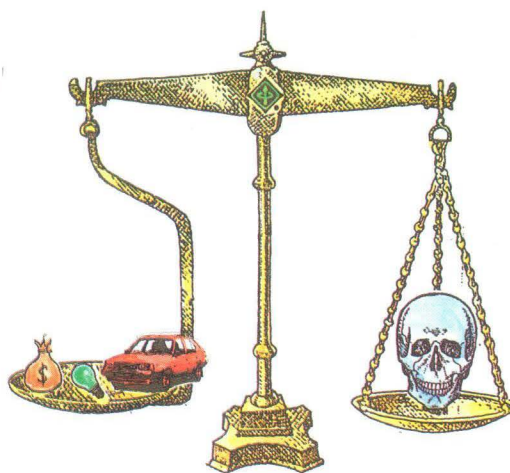
Telephone: (+44) 2518 2625 UK 02518 2625
Telex: 858623 BUR G Fax: (+44) 252 721521

ENGINEERS and THE BALANCE OF RISK

THAT at some time unknown, you will leave us to take up residence in the next world is at one extreme of probability. The duration and quality of your life here depends on probabilities, risks that you and others take, risks which in a large measure are inherent in the products of engineers – is it not reasonable to ask whether those engineers are able, qualified and willing to explain numerically the risks to which they are exposing us?

Perhaps uppermost in the public mind at the moment is the balance between the benefits and dangers of burning nuclear rather than more conventional fuels. Engineers can, and are, building alternatives such as wind-driven generators, but are they able to calculate for us the risk that those wind engines might be becalmed? – I doubt it.

It is I suppose inevitable that in any discussion of risk, the words Chernobyl and Three Mile Island will arise as examples of disasters which can overtake a society so imprudent as to generate "nuclear power". Someone has to start by explaining the simple fact that the public does not use "nuclear power", it uses the same old electricity that it has used for more than a century, generated by the same rotating machinery. The only difference is that instead of shovelling coal on to the fire under his boiler, the "engineer" now shovels uranium atoms into a concrete pot to produce the steam which turns the generators that produce electricity. To a trained engineer, accustomed to the "systems" approach, it is not the boiler risks alone which should be considered but the whole complex, including risks from the products of combustion, mortality and silicosis among miners who win coal, accidents to those who extract uranium ore from the earth, environmental pollution and so on.



Public attitudes

The medical prophets of doom in the early days of railways would not permit Queen Victoria of England to travel by train because it would undoubtedly have damaged the royal heart; and quite respectable medical opinion in the 1930s predicted that travelling faster than sound would result in the disintegration of the traveller. Trains have not been banned and if it were not for a Mach meter, the Concord traveller would not be aware that he had exceeded the sound barrier. Perhaps one day a similar comment will be made about boiling water with atoms.

Risks due to some new technology, must be put in the context of risks in general. Society's most potent weapon for autodestruction is the motor car and if the ever-vigilant Mr. Ralph Nader of the USA, a champion of consumer protection, is to be believed, hospital patients run no small risk on the operating table, not from incompetent surgery but from ordinary electrocution, the opportunity being provided by engineers. It has been shown that incompetent computers have caused the death of patients – engineers make computers, and write software (members of the Computer

Society?). Single aircraft accidents, even on the ground, have taken toll of more than 500 lives in a few seconds, but we still fly. Accidents at chemical plants may remove from this world great numbers of our fellow men in a few seconds, but the prize must go to nature's own population control system: disease, pestilence, starvation and natural disasters. Those who reside on the slopes of Vesuvius know that whole towns have been eliminated by its eruptions, but they still live there in their thousands – some kind of innate and innumerate personal perception of risk?

Public education

For large projects: national power supplies, aircraft, oil wells and the like, the public is in no position to assess the potential hazards to which it may be exposed and it does not understand the words used by the "experts" – who then is to educate that public so that it might make an intelligent contribution to the debate? If you believe that the public is of no consequence then just remember that the most recent British enquiry into the siting of a nuclear fuelled power station cost several million pounds sterling and that in New York there is a similar but completed station which eats \$35 million a month to finance its idleness – this \$5 billion 820 Megawatt monster has yet to produce its first microwatt. It is the general public which has been largely responsible for enforcing these costly delays. Newspapers, television and radio are interested only in sensationalism and are not to be trusted with education; politicians have amply demonstrated their incompetence as educators, repeating like parrots their easily predicted party lines; mathematicians and physicists communicate well amongst themselves but fail to secure the public ear; and the well-meaning and enthusiastic protesters are clearly biased. None of these groups has sought to assess numerically the risks associated with the introduction of a new technology, their argument proceeds on the basis of half-truths, emotive phrases, and ignorance.

Engineers are nearest to the public, they make what the public uses and are compelled to have a practical outlook, but how many are qualified to assess risks? Regrettably very few. They are given a meagre statistical education and have most certainly demonstrated little competence in "Risk Analysis".

The Institute's "Spectrum" produced for engineers an excellent article on the problems at Three Mile Island; could not someone attempt the much more difficult task of producing a similar article for consumption by the reasonably educated layman? Might not the IEEE Professional Communication Society communicate understandable truths to the public, or perhaps that is the business of the IEEE Society on Social Implications of Technology? Surely we should not be reduced to a belief in that cynical observation of a well-known manufacturer "Safety has never sold a single motor car, why spend money on it?"

The Editor.

NEWS FROM THE SECTIONS

ISRAEL

By Professor Ezra Zeheb

The first International Conference on Control and its Applications (ICCON '89) will be held at the Hyatt Regency Hotel in Jerusalem from 3rd–6th April 1989. It is co-sponsored by the Control Systems Society of the IEEE and by the IEEE Israel Section. The IEEE Industrial Electronics Society, Israel Association of Automatic Control (IFAC) representative and INRIA are co-operating.

The Conference will provide an international forum for the presentation of technical papers that involve theory, design tools and the application of control systems methods, including case studies. ICCON '89 is an addition to the series of international conferences which will take place in Israel during the next few years. Two others in this series are: The Application of Industrial and Electronics Systems (1990), and CompEuro 1990.

Section Chairman:

Professor Ezra Zeheb, Technion-Israel Institute of Technology, Electrical Engineering Department, Haifa, Israel 32000.

SWEDEN

By Dr. Lars Olsson (Retiring Secretary)

At the annual meeting held in Lund on 11th January this year, a new Section board was elected; its members are as follows: Chairman–Pjotr Starski, CTH; Vice Chairman (1)–Folke E. Bolinder, CTH; Vice Chairman (2)–Sven Olof Öhrvik, LTH; Secretary–Anders Derneryd, ERA Mölndal; Treasurer–Lennart Lundgren, CTH.

There are two IEEE Chapters active in Sweden. Erik Kollberg, CTH is Chairman of the MTT/AP Chapter and Sven Olof Öhrvik, LTH is Chairman of the VT/COM Chapter.

Sweden Section also wishes to remind you that Eurocon 88 will be held in Stockholm on 13–17th June 1988. Four main topics in **Area Communications** will be covered:

- Digital Signal Processing
- Communication Networks
- Digital Mobile Communication Systems
- Future Pan-European Telecommunication Standards

The programme is available from: Eurocon 88, c/o Stockholm Convention Bureau, Box 6911, S-102 39 Stockholm, Sweden.

Section Chairman:

Prof. Sven Olof Öhrvik, Vinstavagen 20, S-16354, Spanga, Sweden.

GREECE

By Prof. B. C. Papadias

Several activities are developing in the Greece Section with the beginning on 1988. The first Technical Meeting of 1988 was held in Athens on 21st January, it was attended by 95 people. The meeting was followed by a reception with the aim of renewing relations among members and reinforcing the ties between members and the Section. Several other technical meetings and two local workshops on Electric Power Systems and on Digital Systems are planned for this year.

Membership development is doing very well and many new members' subscriptions have been received recently. The list of 10 Standing Committees has been completed with their new Chairmen. The petition for the establishment of a Cypriot Subsection has already been submitted. Also submitted is the petition for the creation of a new Chapter of Instrumentation and Measurements and the establishment of two other new Chapters: Control Systems and Communications is in preparation.

Section Chairman:

Basil C. Papadias, Professor, Dept. of Electrical Engineering, National Technical University of Athens, 42 Patission St., Athens 106 82, Greece.

GERMANY

By Professor Hans J. Schmitt

The recently elected Executive Committee met on 28–29th January in Erlangen. Appointments were made for Assessors (Dr. K. V. Boos, Mannheim and Professor P. Kühn, Stuttgart), Membership Development (Prof. W. E. Proebster, Böblingen), Student Activities (A. Faßbender, Hildrizhausen), Conferences (Dr. W. Schilz, Hamburg).

Membership increased by more than 16%. Three student branches exist (Munich, Stuttgart and Furtwangen) and additional efforts are being discussed to enhance student membership by nominating "contact" persons in various other universities.

The Section supports leading conferences in Germany in close co-operation with the national German organisation VDE, with URSI and IEEE Region 8. This includes, for the second time, CompEuro, scheduled to take place in Hamburg from 8–12th May 1989. The 25th Anniversary of Region 8 will be celebrated in Munich on 6–7th October; shortly afterwards the 25th Jubilee of the Germany Section will take place, details to be announced later.

This year marks the 100th year of Heinrich Hertz's major discoveries. A special Commemoration has been arranged, with IEEE participation, for 14–15th March in Karlsruhe, with many famous speakers from all parts of the world (contact Prof. W. Wiesbeck, Universität Karlsruhe, Kaiserstr. 12, 7500 Karlsruhe 1).

The joint MTT/AP–Chapter (Prof. P. Russer, TU Munich, membership now 216) plans to arrange workshops on CAD in Munich and a meeting on antennas in Lindau. The Computer Chapter (Mr. R. L. Baber, Bad Homburg) has met several times in the Frankfurt area and is presently arranging the plans for 88/89.

The next Exco and regional member meeting will be held in Stuttgart on 16–17th January 1989.

Section Chairman:

Professor Dr.-Ing. A. J. Schwab, University of Karlsruhe, Hochspannungsinstitut, Kaiserstrasse 12, D-7500 Karlsruhe 1, West Germany.

COMPUTATIONAL INTELLIGENCE

From the IEEE Computer Society Office in Brussels I have just received, by a devious route, news of this Conference which will be held in Milan on 26–30th September 1988. It is sponsored by the Italian Chapter of ACM, with the co-operation of some European IEEE C.S. Chapters. Further information may be obtained from: Professor Giorgio Valle, Dip. di Scienze dell'Informazione, Università di Milano, via Moretto de Brescia 9, 20133 Milano, Italy. [Editor].

YOU MIGHT

Joel S. Engel, Richard H. Frankiel and William C. Jakes, Jr., deserve our congratulations; they have each been awarded an Alexander Graham Bell Medal for their fundamental contributions to the development of cellular radio systems.

Dr. Rudolf A. Stampfl has been appointed Director of Educational Activities for the IEEE, his responsibilities include: Continuing Education, Home Study courses, Satellite-distributed seminars and Videoconferences. His address is 345 East 47th Street, 10017 New York, N.Y.

Nuclear Magnetic Resonance Imaging has profoundly changed many medical diagnostic procedures; the technique improves image quality, makes it possible to produce some images which hitherto could not have been obtained and avoids the radiation dose inseparable from conventional X-ray pictures. For his pioneer work in this field, Dr. Paul Lauterbur has been awarded an IEEE Medal of Honour.

The Regional Activities Board declined to approve proposed revisions to IEEE Policy and Procedures manual Section 3.1 – Objectives, pending further review by a RAB ad hoc committee appointed by the Vice-president Regional Activities, to specifically include transnational interests in the text.

DIRECTOR'S COLUMN

This year we shall see much more of IEEE Headquarters, particularly in Europe. President Russell Drew will visit Moscow to reactivate the Institute's relations with the Popov Society; associated with this Perestroika-related initiative I have myself just spent a week in the USSR and was received with great friendliness by the Soviet Academy of Sciences. I was able to meet several important scientists and saw some quite original research work, but unfortunately industrial activities could not be discussed. This was quite disturbing since all engineering activities must aim for industrial realisation and most of the present-day challenges are in exactly this transition area. I found among the Soviet engineers a great interest in the IEEE and I pointed out that we would welcome an increase in the number of IEEE members in USSR. I am quite convinced that only with an appropriate bottom-up effort any top-down agreement can bring factual progress in our relations.

In June President Drew plans to visit EUROCON 88 in Stockholm and in October we expect him and the complete Executive Committee to be present at our Region 8 25th anniversary in Munich. In September our distinguished board of Technical Directors (TABOPCOM) will visit Spain and Germany, with a particular interest in Society related Chapters. All Sections are asked to give this visit their best support by appropriate delegations as they will be requested by the TAB Vice-president Rex Dixon.

In the March edition of "The Institute" you will find an article on Region 8, based on an interview in which I tried to shed some light on our challenges, interests and problems which make this region so different. I would welcome your opinions too.

During a recent visit to the Egyptian Section I learned of the very poor mail service, particularly for Region 8 news, and I have started to work on possible improvements. The main purpose of the visit to our Egyptian friends was to explore the possibility of having the next Africon conference in that country. As we were able to present to Egyptian government officials the first copy of our fine Africon 87 proceedings, I am quite optimistic that before long we shall obtain their support.

It requires an enormous effort to organise an attractive and financially balanced series of conference events. CompEuro '88 is starting soon and EUROCON '88 shows great promise for June. Many future events are on the way; they involve considerable work on the part of our Conference Committee: Jacob Baal-Schem, Kurt Richter and Rolf Remshardt.

The next R8 News will be a special issue, dealing with the 25th anniversary of our Region; I hope that one of its headlines will announce a further steep increase in membership, thereby proving that we are providing our clients with the service they need.

WISH TO KNOW

It produces 150 terawatts (1 million megawatts) for 1 nanosecond (1 thousandth of a microsecond) and in that brief period yields more than 200 times the total generating capacity of the United States. It is the most complex optical system ever built and is the \$186 million Fusion Laser at Lawrence Livermore National Laboratory, USA. For his work in designing this monster flash-light, Mr. William W. Simmons has been awarded the IEEE Simon Ramo Medal.

The Computer Society office has moved to 13 avenue de L'Aquilon, B-9200 Brussels, Belgium (Tel: (2) 770 2198) in order to expand its operations. Manager Mrs. Nell Nachtergal has been joined by Assistant Malou Fievez. Note that the office deals only with Computer Society business – not with any other IEEE affairs.

The Editor of the "Rochester Engineer", a Newsletter dealing with all branches of engineering in the Rochester, N.Y., USA area, would like to hear from the Editor of any IEEE Section Newsletter with a view to the exchange of Newsletters. His address is: Mr. Jacob Schanker, Newsletter Publicity Chairman, 65 Crandon Way, Rochester N.Y., 14618, USA.

THE SOCIAL IMPLICATIONS OF TECHNOLOGY

By Dr. Subrata K. Sarker

Of increasing importance to society in general is the way in which technology, sometimes almost subconsciously, changes the relationship between engineers, who provide a great deal of society's needs, and the general public which uses those engineering products. The Institute has a Society – The Social Implications of Technology – which deals with many facets of this diffuse subject: systems analysis in public policy decisions, social consequences of information technology, energy generation, health and safety, engineering ethics and professional responsibility and many others.

The Society publishes its Transactions and a Magazine, of which Dr. Subrata K. Sarker is the European Associate Editor. Dr. Sarker will provide members with information concerning the Society's activities and he would appreciate articles on any related topic for publication in his Magazine or the Transactions. His address is: General Direktion PTT, Viktoriastrasse 21, CH-3030 Berne, Switzerland. Telephone: 031 62 3871.

TECHNOLOGY AND A 100 YEAR LIFE EXPECTANCY

By Dr. Jacob Baal-Schem

Within the next 25 years we may expect to live to 100; computer designed artificial limbs will achieve a simulation of normal function at any age. These are but two of the expert opinions expressed at the workshop on "The Benefits of Technology for Humanity" held on March 14–16th 1988 in Jerusalem.

The opening lectures, by Professor Ruina and Mr. Weiss emphasised one of the basic dilemmas of our society – how to use technological progress in the service of human needs, including the fulfilment of a meaning in the individual's life, whilst at the same time striving not to increase inequality. In the plenary session Dr. Darringer from IBM considered the future of Electronics and Computers, Dr. Horowitz from MITRE discussed the System Concept in Information systems and Dr. Sasson of UNESCO from Paris summarised the prospects in Biotechnology. The participants then formed two groups: "Health and Medicine" and "Work and Human Relations".

The Medical Group discussed those potential advances in which technology could play an important part: a reduction in birth defects, the solution to human infertility problems, the possibility of rejuvenating brain cells and thereby deferring the onset of senility. Other topics included the use of new materials in prosthetics and several possible routes towards a reduction in the incidence of heart disease.

The Work and Human Relations Group took a rather more pessimistic view of technology's contribution. Productive capacity has been increased but technology has not provided the means of satisfying society's expectations for a "better life". Working from home may well be economically efficient but there is the risk that it will lead to a lessening of human contact and a consequent increase in psychological difficulties. Experience has shown that in spite of the availability of electronic communications, business travel has not diminished.

Views from the Social Sciences members suggested that a wider interdisciplinary approach may be necessary in order to understand human behaviour, and so prevent possible loss of motivation and identity which could so easily come about when an individual perceives himself as no more than a robot in an industrial system. Technology threatens to overload the individual with "information" and this is exactly what it was intended to avoid.

During the final plenary session the general feeling was that technology could be of greater benefit to society if ways were found to modify slightly its ethics, and make changes in its educational system. There was the unanimous view that there is a need for more interdisciplinary research and that workshops of this nature should continue to be a feature of the IEEE programme.

(See also Social Implications of Technology. Ed.).



Intensive Summer Course
on
CMOS VLSI Design

ANALOG & DIGITAL

LAUSANNE, SWITZERLAND
August 29 - September 16, 1988

organized by

**Electronics Laboratory of the
Swiss Federal Institute of Technology, Lausanne (EPFL)**

3 one-week modules are proposed to the participants with the possibility of choosing any combination of the 3 modules.

PART I INTRODUCTION TO CMOS INTEGRATED CIRCUIT DESIGN
(1st week: August 29 - September 2)

PART II ADVANCED VLSI DESIGN AND ARCHITECTURE
(2nd week: September 5 - September 9)

PART III ADVANCED ANALOG DESIGN
(3rd week: September 12 - September 16)

In addition to the lectures, an intensive **hands-on training** will be provided to the participants in a modern **Computer Aided Instruction laboratory**. The training support includes 36 color-graphic stations with advanced CAD tools for analog and digital circuit design, simulation and verification. In order to provide efficient hands-on training on the computer facilities, the number of participants will be limited.

*Deadline for registration : **June 15th***

INSTRUCTORS

M.J.DECLERCQ, M.R.G.DEGRAUWE, M.I.ELMASRY, K.ESHRAGHIAN, L.A.GLASSER,
B.HOCHET, F.KRUMMENACHER, P.MARCHAL, C.PIGUET, F.RAHALI, W.M.C.SANSEN,
G.C.TEMES, E.A.VITTOZ

MAILING ADDRESS

Dr V. VALENCIC, EPFL-LEG, EL-ECUBLENS, CH-1015 LAUSANNE, SWITZERLAND
phone: + 41-21-47'39'72 telex: 454'062 EPFVD CH fax: + 41-21-47'46'60

ADVANCED VLSI PROCESSING

August 22—26, 1988. Davos, Switzerland

- 836 Semiconductor Materials & Devices: Si Technology
- 802 Compound Semiconductor Mtrls: GaAs & Related Compounds
- 853 GaAs MMIC's: Microwave Monolithic Integrated Circuits

November 7—11, 1988.

- 867 Sputtering and Its Application in Microelectronics
- 863 Plasma Etching and Deposition
- 861 Semiconductor Silicon
- 866 Advanced Microelectronic Packaging
- 877 Silicides for VLSI Applications

February 6—10, 1989. Davos, Switzerland

- 994 Ion Implantation
- 971 VLSI Testing
- 972 BiCMOS Technology
- 939 Laser Processing
- 973 Epitaxial Film Growth

May 9—12, 1989. The Netherlands

- 905 Lithography & Wafer Topography in IC Processing
- 917 MOS Devices for Advanced VLSI
- 918 CMOS Process Integration and Engineering
- 935 Plasma Etching for VLSI

ADVANCES IN CAD FOR VLSI

March, 1989. Switzerland

- 960 Process and Device Modeling and Simulation
- 979 Circuit Modeling and Simulation
- 978 Physical Design: Placement, Routing and Compaction
- 977 Silicon Compilers for VLSI Applications

INFORMATION STORAGE TECHNOLOGY

August 29 — September 2, 1988. Davos, Switzerland

- 808 Magnetic, Optical and Magneto-Optic Storage of Data
- 837 Error Correcting Codes with Appl. in Digital Recording Channels

CIRCUIT DESIGN AND SIGNAL PROCESSING

August 29 — September 2, 1988. Maastricht, The Netherlands

- 807 Analog MOS and GaAs Integrated Circuits
- 882 Digital Signal Processors
- 806 Linear Microwave Circuits: Design I
- 820 Non-Linear Microwave Circuits: Design II

ADAPTIVE SIGNAL PROCESSING AND CONTROL

September 12—16, 1988. Maastricht, The Netherlands

- 809 Adaptive Signal Processing

September 19—23, 1988. Stockholm, Sweden

- 842 adaptive Neural Networks & Adaptive Filters

October 24—28, 1988. Maastricht, The Netherlands

- 828 Fast Algorithms for Adaptive Signal Processing
- 822 Adaptive Control

April 1989. The Netherlands

- 941 Neural Computing and Pattern Recognition

SIGNAL PROCESSING AND COMMUNICATION

May 16—19, 1988. Maastricht, The Netherlands

- 899 Digital Image Processing

June 6—10, 1988. Maastricht, The Netherlands

- 812 Modern Microwave Techniques
- 825 Antennas, Radomes and Measurements
- 843 Communication Satellites
- 865 Secure Communication Systems
- 819 Surface Acoustic Wave Devices and Signal Processing

August 22—26, 1988. Davos, Switzerland

- 803 Light Wave Communication Technology

October 10—13, 1988. Switzerland

- 810 Digital Processing of Deterministic and Stochastic Signals
- 857 Modern Design

October 24—28, 1988. Maastricht, The Netherlands

- 811 Modern Time and Spectral Analysis
- 874 Applied Digital Signal Processing

April 10—14, 1989. The Netherlands

- 923 Satellite Communications and Broadcasting
- 949 Data Transmission: Theory and Practice
- 958 Modern Digital Modulation Techniques

Find out What's Happening and What's about to Happen

Continuing Education is vital for keeping up with technological evolution — in the academic world, in industry and in research. CEI-Europe/Elsevier is dedicated to technology transfer between academe and industry. We are providing professional education in engineering and applied sciences.

Our Courses meet educational needs of three main target groups, through Basic Science Updating, Spearhead Technology and Interdisciplinary Programs.

The programs are selected, developed and evaluated to ensure superior quality.

Our instructors are selected internationally renowned in their particular field, who have besides demonstrated the ability to clearly present their knowledge to a professional audience.

Our courses are held all over Europe at locations conducive to the learning situation. Socializing activities are arranged for after class hours where ad hoc discussions are the rule rather than the exception. CEI-Europe/Elsevier courses are both beneficial and enjoyable.

Addresses and Contact Persons:

CEI-Europe/Elsevier, Dr. Birgit Jacobson
P.O. Box 910, S-612 01 Finspong, Sweden
Ph: +46 (122) 17570. Fax: +46 (122) 14347. Tx: 64471.

CEI-Europe/Elsevier, Gerda Wolzak
P.O. Box 2400, 1000 CK Amsterdam, The Netherlands
Ph: +31 (20) 5862 600. Fax: +31 (20) 5862 726. Tx: 10704.

Find out more about our courses

Fill in the coupon and send it to one of the addresses above.



CEI-EUROPE/ELSEVIER More Information Form

YES, please send me more information on courses number:

.....
.....
.....
.....

Name:

Company:

Address:

.....

Telephone:

IEEE Region 8 Newsletter, May 1988

MAY 1988

- May 23-25. International Conference on Rural Telecommunications.** London, UK
Organiser: IEE
Co-operating: Institute of Mathematics and its Applications
Contact: IEE Conference Department
Deadline: 3 November 1987 (Full typescript)
- May 23-25. Topical Meeting on Optical Bistability (OBIV).** Aussois, France
Organiser: IEEE LEO
Sponsors: NSF, OSA
Contact: N. Peyghambarian, University of Arizona, Optical Science Center, Tucson, AZ 85721, USA
- May 29-31. 18th International Symposium on Multiple Valued Logic - ISMVL-88.** Palma de Mallorca, Spain
Organiser: IEEE Computer Society
Contact: Mr. Enric Trillas, Consejo Superior de Investigaciones Cientificas, Serrano 17, 28008-Madrid, Spain
- May 30-June 3. Eighth International Workshop on Expert Systems and their applications.** Avignon, France
Contact: Jean-Claude Rault, EC2, 269-287 rue de la Garenne 92000 Nanterre, France

JUNE 1988

- June 7-9. 1988 IEEE International Symposium on Circuits and Systems.** Helsinki, Finland
Organiser: IEEE CAS
Co-operating: IEEE Finland Section
Contact: Dr. Markku Renfors, Tampere University of Technology, PO Box 527, SF-33101 Tampere, Finland
Deadline: 1 October 1987 (Summary)
- June 7-8. Third International Conference on Installation Engineering - Designing and Maintaining Successful Systems.** London, UK
Organiser: IEE
Contact: IEE Conference Department
Deadline: 10 February 1988 (Full typescript)
- June 8-10. Eighth Conference on Analysis and Optimization of Systems.** Antibes, France
Organiser: INRIA
Contact: INRIA, Service des Relations Ext., Bur. des Colloques, Domaine Voluceau-Rocquencourt, BP 105-78153, Le Chesnay, Cedex, France
- June 9-10. 10th International Conference on Magnetically Levitated Systems (MAGLEV).** Hamburg, FRG
Organiser: VDE/ETG
Co-operating: IEEE VT, IEEE Germany Section
Contact: Prof. Dr. Ing. H. Weh, Inst. für Elektrische Maschinen, Postfach 3329, D-3300, Braunschweig, FRG
Deadline: 7 March 1988 (Final Paper)
- June 13-17. EUROCON '88 - Eighth European Conference on Electrotechnics.** Stockholm, Sweden
Organiser: SER, IEEE Sweden Section
Sponsors: IEEE Region 8, EUREL
Contact: EUROCON '88 c/o Stockholm Convention Bureau, P.O. Box 6911 S-102 39, Stockholm, Sweden
Deadline: 1 August 1987 (Abstracts)
- June 13-14. 3rd International Workshop on the Bellman Continuum.** Sophia-Antipolis, France
Contact: Prof. A. Blaquié, Univ. de Paris 7, Lab. d'Aut. Théorique, Tour 14-24, 2 Place Jussieu, 75251, Paris, Cedex 05, France
- June 21-23. International Conference on Private Switching Systems and Networks.** London, UK
Organiser: IEE
Contact: IEE Conference Department
Deadline: 12 February 1988 (Full typescript)
- June 24. COMSIG '88 - South African Conference on Communications and Signal Processing.** Pretoria, South Africa
Organiser: IEEE South Africa Section
Co-operating: IEEE Region 8, NEERI
Contact: W. T. Penzhorn, CSIR P.O. Box 395, Pretoria 0001, Republic of South Africa
- June 27-30. Fifth International Conference on Dielectric Materials, Measurements and Applications.** University of Kent at Canterbury, UK
Organiser: IEE
Co-operating: IEEE UKRI Section, Inst. of Physics, IERE, Dielectric Soc.
Contact: IEE Conference Department
Deadline: 15 January 1988 (Full Typescript)

- June 28-30. International Wroclaw Symposium on Electromagnetic Compatibility.** Wroclaw, Poland
Organiser: IEEE EMC
Sponsor: PAS
Contact: W. Moron, EMC Symposium, Box 2141, 51-645 Wroclaw 12, Poland

JULY 1988

- July 4-7. BEAMS '88 - 7th International Conference on High-Power Particle Beams.** Karlsruhe, FRG
Organiser: Kernforschungszentrum Karlsruhe
Co-operating: IEEE Germany Section
Contact: Prof. Dr. G. Kessler, BEAMS '88, Kernforschungszenrum Karlsruhe P.O. Box 3640, D-7500 Karlsruhe 1, FRG
- July 11-15. Second IEE/BCS Conference "Software Engineering 88".** University of Liverpool, UK
Organiser: IEE
Co-operating: British Computer Society, IEEE UKRI Section, ACM Europe Cha
Contact: IEE Conference Department
Deadline: 30 October 1987 (Draft)
- July 13-15. Third International Conference on Power Electronics and Variable-speed Drives.** London, UK
Organiser: IEE
Contact: IEE Conference Department
Deadline: 30 October 1987 (Synopsis)

AUGUST 1988

- August 29-September 1. EUROMICRO '88 - Fourteenth Symposium on Microprocessing and Microprogramming.** Zurich, Switzerland
Organiser: EUROMICRO
Contact: EUROMICRO Att: Mrs. Chiquita Snippe-Marlis, P.O. Box 545, 7500 AM Enschede, The Netherlands
- August 30-September 2. International Commission for Optics Topical Meeting on Optical Computing.** Toulon, France
Organiser: IEEE C
Sponsors: ANRT, DGaO, IP, OSA, SPIE
Contact: Prof. S. Lowenthal, Institut d'Optique, Bat. 503, Univ. Paris XI B.P. 43 91406 Cedex, France

SEPTEMBER 1988

- September 5-8. Symposium on Power Systems - Modelling and Control Applications.** Brussels, Belgium
Organiser: IBRA-BIRA (Belgian Federation of Automatic Control)
Sponsor: IFAC
Co-operating: SRBE-KBVE
Contact: IFAC Symposium 88, IBRA-BIRA Fed., rue Ravensteinstraat 3, 1000 Brussels, Belgium
Deadline: 1 November 1987 (Full papers)
- September 5-8. EUSIPCO 88 - Fourth European Signal Processing Conference.** Grenoble, France
Organiser: EURASIP
Contact: N. Martin, CE-HAG-ENSIEG, BP 46, 38402 St. Martin d'Heres Cedex, France
- September 11-15. 14th European Conference on Optical Communication - ECOC '88.** Brighton, UK
Organiser: IEE
Sponsors: BCS, IOP, IERE, URSI
Co-operating: IEEE Region 8, EUREL
Contact: IEE Conference Department
Deadline: 8 April 1988 (Paper)
- September 13-16. IEEE Geoscience and Remote sensing Symposium (IGARRS '88).** Edinburgh, Scotland
Organiser: IEEE Geoscience and Remote Sensing Society
Sponsors: ESA, IEE, ONR
Contact: Dr. J. A. T. Young, Dept. of Geography, University of Edinburgh, Drummond Street, Edinburgh EH8 9XP, Scotland, UK
- September 20-22. 2nd International Conference on Electrical Drives - ICED '88.** Poiana Brasov, Romania
Organisers: IEEE CS, IEEE IE
Sponsor: IEEEJ
Contact: Dr. Razvan Magureanu, Academy of the Socialist Romanian Ag. 125 Calea Victoriei, 71102 Bucharest, Romania

- September 21-23. ESSCIRC '88.** Manchester, UK
Co-operating: IEEE Region 8
Contact: Prof. J. Mayor, Dept. of EE, Univ. of Edinburgh, The King's Buildings, Edinburgh, EH9 3JL, UK
- September 23-27. IBC 88 - International Broadcasting Convention.** Brighton, England
Organiser: IEE
Sponsors: IABM, IEE, IEEE, IERE, RTS, SMPTE
Contact: IEE Conference Department
- September 26-30. International Conference and Exhibition Computational Intelligence.** Milano, Italy
Organiser: IEEE C
Sponsor: ACM
Contact: Prog. G. Valle, Univ. degli Studi di Milano, Dep. Sc. Informazione, Via Moretto da Brescia 9, 20133 Milano, Italy

OCTOBER 1988

- October 3-5. Microelectronics for Information Technology.** Berlin, FRG
Organiser: VDE/ITG
Co-operating: IEEE Germany Section
Contact: Prof. Dr. Ing. K. Goser, Universität Dortmund, Emil-Figge-Str. 68, 4600 Dortmund 50, FRG
Deadline: 30 June 1988 (Final Paper)
- October 17-19. Fourth International Conference on Satellite Systems for Mobile Communications and Navigation.** London, UK
Organiser: IEE
Sponsors: INMARSAT
Co-operating: IEEE MTT, IEEE VT, IERE, RAS, RIN, RINA
Contact: IEE Conference Department
Deadline: 26 October 1987 (Synopsis)
- October 30-November 3. ICC '88 - Ninth International Conference on Computer Communications.** Tel-Aviv, Israel
Organiser: ICC
Contact: Secretariat ICC '88, PO Box 50006, Tel-Aviv 61500, Israel

NOVEMBER 1988

- November 7-8. International Conference on Refurbishment of Power Station Electrical Plant.** London, UK
Organiser: IEE
Co-operating: Institute of Mechanical Engineers
Contact: IEE Conference Department
Deadline: 27 May 1988 (Full typescript)
- November 8-10. JINA '88 - International Symposium on Antennas.** Nice, France
Organiser: CNET-PAB, Univ. de Nice
Co-operating: SEE, IEEE France Section
Contact: Secretariat JINA '88 CNET-PAB Centre de la Turbie 06320 Cap d'Ail, France
Deadline: 30 April 1988 (Summary)
- November 22-24. Fourth International Conference on Electrical Safety in Hazardous Areas.** London, UK
Organiser: IEE
Sponsors: BASEFA, BSI, GAMBICA, IP, Inst. of Physics, ICE, IMC, IME, IMEMME
Co-operating: British Gas, AODC, EIC, EEMUA, IADC, IEC
Contact: IEE Conference Department
Deadline: 10 June 1988 (Full typescript)
- November 28-30. International Conference on Overhead Line Design and Construction: Theory and Practice (Up to 150 kv).** London, UK
Organiser: IEE
Contact: IEE Conference Department
Deadline: 6 November 1987 (Synopsis)

DECEMBER 1988

- December 6-9. EuroComm 88 - International Exhibition and Congress on Business, Public and Home Communications.** Amsterdam, The Netherlands
Organiser: RAI
Contact: EuroComm 88, RAI Gebouw bv, Europaplein 1078 GZ Amsterdam, The Netherlands

FEBRUARY 1989

- February 7-9. Second International Conference on Road Traffic Monitoring.** London, UK
Organiser: IEE
Co-operating: IEEE VT, ICE, County Surveyors' Soc., IHT, IERE
Contact: IEE Conference Department
Deadline: 13 May 1988 (Synopsis)

February 22-24. Conference on Communication in Distributed Systems. Stuttgart, FRG
Organiser: VDE/ITG
Sponsor: GI
Co-operating: IEEE Germany Section
Contact: Prof. Dr. Ing. P. J. Kuhn, Institute of Communication Switching, Univ. of Stuttgart, Seidenstrasse 36, D-7000 Stuttgart 1, FRG
Deadline: 1 June 1988 (Paper)

MARCH 1989

March 7-9. 8th International Zurich Symposium & Technical Exhibition on Electromagnetic Compatibility. Zurich, Switzerland
Organiser: ETH
Sponsors: Swiss PTT, Swiss Electrotechnical Association
Co-operating: IEEE, URSI
Contact: EMC Symposium & Exhibition, ETH Zentrum-IKT, 8092 Zurich, Switzerland
Deadline: 15 March 1988 (Abstract)

APRIL 1989

April 11-13. MELECON '89 - Mediterranean Electrotechnical Conference. Lisbon, Portugal
Organisers: IEEE Region 8, IEEE Portugal Section
Sponsors: Orden dos Engenheiros, CEATUL
Contact: Prof. de Medeira Silva, Instituto Superior Tecnico, Av. Rovisco Pais, 1096 Lisboa Codex, Portugal
Deadline: 15 June 1988 (Summaries)

April 11-13. Fourth International Conference on Development in Power System Protection. University of Edinburgh, UK
Organiser: IEE
Co-operating: IEEE UKRI Section
Contact: IEE Conference Department
Deadline: 11 December 1987 (Synopsis)

April 25-29. International Conference on Acoustics, Speech and Signal Processing. Glasgow, Scotland, UK
Organiser: IEEE ASSP
Contact: Prof. T. S. Durrani, Univ of Strathclyde, Dept of EE, Royal College Bldg, 204 George St, Glasgow G1 1XW, Scotland, UK

MAY 1989

May 8-12. CIRED - International Conference on Electricity Distribution. Brighton, UK
Organiser: IEE
Co-operating: National and Liaison Committees
Contact: IEE Conference Department

May 8-12. CompEuro 89 - VLSI and Computer Peripherals. Hamburg, FRG
Organiser: IEEE Region 8
Sponsors: IEEE CS, VDE, GI
Contact: Prof. W. E. Proebster, c/o IBM P.O.B. 80 08 80, D-7000 Stuttgart 80, FRG

SEPTEMBER 1989

September 3-7. 15th European Conference on Optical Communication - ECOC '89. Goteborg, Sweden
Organiser: Chalmers University of Technology, Goteborg

Sponsors: EUREL, Ericsson, Swedish Telecom
Co-operating: SER, IEEE Region 8, SNRV, IEEE/LEO, URSI, IECEJ, IEEE, OSA
Contact: P. A. Andrekson, c/o Dept. of Electrical Measurements, Chalmers Univ. of Technology, S-412 96 Goteborg, Sweden
Deadline: 8 March 1989 (Paper)

OCTOBER 1989

October 3-5. International Carnahan Conference on Security Technology. Zurich, Switzerland
Organisers: ETH Zurich and Georgia Tech.
Co-operating: AES, IEEE Reg. 8, Switzerland Sec., EURALARM, EPS, IEEE, ASIS
Contact: Pieter de Bruyne, ETH-Zentrum-IKT, CH-8092, Zurich, Switzerland
Deadline: 1 December 1988 (Abstract [400 words])

APRIL 1990

April 17-20. INTERMAG '90. Brighton, England
Organiser: IEEE MAG
Contact: Courtesy Associates Inc., 655 15th Street, N.W. Suite 300, Washington D.C. 20005, USA

MAY 1990

May 7-9. CompEuro 90 - International Computer Conference. Tel-Aviv, Israel
Organiser: IEEE Israel Section
Sponsors: IEEE Computer Society, IEEE Region 8
Co-operating: IPA
Contact: Conference Secretariat, c/o ORTRA, P.O. Box 50432, Tel-Aviv, 61500, Israel

REFERENCE INFORMATION

Mailing Addresses

IEEE Region 8 Conference Coordinator - Dr. J. Baal-Schem, P.O.B. 1205, Holon 58112, Israel.
IEEE Conference Department, Savoy Place, London, England, WC2R 0BL. Telephone National 01-240 1871 (Ext. 222). International +44 1 240 1871. Telex: 2611176.
IEEE Conference Activities, 345 East 47th Street, New York, NY 10017, USA
IERE Conference Secretariat, 99 Gower Street, London WC1E 6AZ. Telephone National 01-388 3071. International +44 1 388 3071. Telegrams: Instrand London
England WC1E 6AZ.

IEEE Society Acronyms:

ASSP	- Acoustics, Speech, and Signal Processing	IA	- Industry Applications
AES	- Aerospace and Electronic Systems	IE	- Industrial Electronics
AP	- Antennas and Propagation	IT	- Information Theory
BT	- Broadcast Technology	IM	- Instrumentation and Measurement
CAS	- Circuits and Systems	LEO	- Lasers and Electro-Optics
CE	- Consumer Electronics	MAG	- Magnetism
COM	- Communications	MTT	- Microwave Theory and Techniques
CHMT	- Components, Hybrids, and Manufacturing Technology	NPS	- Nuclear and Plasma Sciences
C	- Computer	OE	- Oceanic Engineering
CS	- Control Systems	PC	- Professional Communications
DEI	- Dielectrics and Electrical Insulation	PES	- Power Engineering
E	- Education	R	- Reliability
EMC	- Electromagnetic Compatibility	RA	- Robotics and Automation Council
ED	- Electronic Devices	SIT	- Social Implications of Technology
EM	- Engineering Management	SMC	- Systems, Man, and Cybernetics
EMB	- Engineering in Medicine and Biology	SSC	- Solid State Circuits Council
GRS	- Geoscience and Remote Sensing	UFFC	- Ultrasonics, Ferroelectrics and Frequency Control
		VT	- Vehicular Technology

EUREL Acronyms:

A	- Austria
OVE	- Österreichischer Verband für Elektrotechnik
B	- Belgium
SRBE	- Société Royale Belge des Electriciens
AIM	- Association des Ingenieurs Electriciens sortis de l'Institut Electrotechnique Montefiore
CH	- Switzerland
SEV/ASE	- Schweizerischer Elektrotechnischer Verein/Association Suisse des Electriciens
D	- Germany
VDE	- Verband Deutscher Elektrotechniker
DK	- Denmark
IS	- Ingenior-Sammenslutningen I-VD
DIF's-E-Gr	- Elektroingeniorgruppen (in Dansk Ingeniorforening)
E	- Spain
AEE	- Asociación Electrotécnica Española
F	- France
SEE	- Société des Electriciens, des Electroniciens et des Radioelectriciens

GB	- Gt. Britain
IEE	- Institution of Electrical Engineers
IERE	- Institution of Electronic and Radio Engineers
I	- Italy
AEI	- Associazione Elettrotecnica ed Elettronica Italiana
N	- Norway
NEF	- Norsk Elektroteknisk Forening
NL	- Netherlands
KIVI	- Koninklijk Instituut van Ingenieurs, Afd. Elektrotechniek
NERG	- Nederlands Elektronica-en Radiogenootschap
P	- Portugal
-	- Conselho Directivo Nacional/Ordem dos Engenheiros - Department Electrical Engineers
S	- Sweden
SER	- Svenska Elektroingenjörers Riksförening
SF	- Finland
-	- Aatteellisten sähköinsinöörijärjestöjen neuvottelukunta

International Conference on VLSI and Computer Peripherals

There is still time to submit a paper for the international Conference on VLSI and Computer Peripherals - Advanced Technologies - CompEuro '89 - to be held on 8-12th May 1989 in Hamburg, Federal Republic of Germany. Abstracts, 500-1,000 words, are due by 15th August and camera ready copy of accepted papers by 1st February 1989; these should be sent to Professor W. E. Proebster, IBM Laboratory, P.O. Box 1380, D-7030 Boeblingen, Federal Republic of Germany. IEEE members in Region 8 who have papers accepted and who receive a recommendation from their Section Chairman, or from another member of their Section Committee, may be able to obtain reimbursement of part of their expenses if they would not otherwise be able to attend. The complete CompEuro '89 programme is as follows:

Computer Communications - Smart solutions for communication with peripherals:

- Advanced bus systems for direct attachment of peripherals to workstations and host systems.
- Advances in industrial LANs for plant flow automation, extended office systems.
- Integrated networks, e.g. the capability of ISDN and of other integrated networks to support peripherals.
- Heterogeneous communication systems, supporting a mix of peripherals from one or more manufacturers.

External memories:

- Storage systems and devices based on semiconductor, magnetic, optical and other technologies.
- Hierarchies and system architectures for external memories and storage.
- Intelligent interfaces to peripheral memories.

VLSI Technologies and Trends:

- Selection of technology.
- Standard versus custom design.
- Advanced tool designs.
- Design for noisy environment.
- Low temperature technology.
- Packaging.
- Advanced testing concepts.

I/O-I/O Systems and Devices for the Human Interface:

- Displays, e.g. CRT, LCD, ELD, PDP.
- Printers, e.g. inkjet-, thermal-, laser-.
- Keyboards, digitisers, scanners, mouse devices.
- Speech I/O.
- Human factors, e.g. noise and glare reduction, paper handling, software-assist functions.

Sensors and Controls:

- Smart sensors and actuators, data acquisition systems applied in robotics, process control, medical, environmental, alarm and security systems.

CompEuro '89 is sponsored by the IEEE Computer Society, IEEE Region 8, Gesellschaft fuer Informatik and the Verband Deutscher Elektrotechniker. The following also are co-operating: IEEE-Com-Ed, Eurel, Euromicro, E.P.S., GME, VDE(ITG), S.I., S.I.D.

HAMBURG
8-12 May 1989
**VLSI and
COMPUTER
PERIPHERALS**

**Advanced
Technologies
and Trends**



**COMP
EURO 89**



VLSI and External Memories
VLSI and I/O: Displays, Printers, etc.
VLSI and Sensors and Controls
VLSI and Computer Communication
VLSI for Peripherals

Call for Papers

Letter of Intent with Name and Title: As soon as possible.
500-1000 Word Abstract: 15 August 1988

To: CompEuro '89, Prof. Dr. W. E. Proebster, IBM Laboratory,
PO Box 1380, D-7030 Boeblingen, West Germany.

Further details on page 7 of this Region 8 News.



1988 International Conference on

SUPERCOMPUTING

SAINT-MALO, FRANCE 4-8 JULY, 1988

Information:

Jocelyne Erhel - IRISA
Campus Universitaire de Beaulieu
35042 Rennes Cedex - FRANCE
Telex: 950473 Fax: 99 38 38 32



PROCEEDINGS

africon '87



Abidjan, Cote d'Ivoire

30 Nov. - 2 Dec. 1987

**TAKE A LOOK AT AFRICA
ITS POTENTIAL AND ITS PROBLEMS**

This unique conference was different from other conferences: it set out to consider the problems that could arise in devising an African infrastructure upon which the future development of Africa's Technological and Educational programme could be based. The participants were drawn not only from the countries of Africa, but also taking part were leading members of a number of prominent industrial nations; their discussions and suggested solutions are all reported fully in the Proceedings. By reading the 40 contributions in 160 pages Proceedings, you could be very well informed on the special situation which exists in Africa with regard to its Future Development.

IEEE Catalogue Number 87THO217-0

ISBN 0-87942-708-6 (paper)

The proceedings are available from either:

IEEE Region 8
c/o Dr. Hugo Ruechardt,
Siemens AG,
Balanstrasse 73,
D-8000 Munchen 80,
West Germany

IEEE Service Centre,
445 Hoes Lane,
P.O. Box 1331,
Piscataway,
NJ 0885-1331,
U.S.A.

The Price is \$20 US for IEEE Members or \$40 US for non-members.
IEEE members ordering their copies through Munich may pay in DeutschMarks.

It costs only

£90

to write to
20,000 Electrical Engineers

REGION 8 NEWS DEADLINE & ADVERTISING RATES

Edition	February	May	August	November
News to Editor	January 1	April 1	July 1	October 1
Advertisements to Editor	January 1	April 1	July 1	October 1
Inserts to Printers	January 15	April 15	July 15	October 15

Printers: Seven Corners Press, Woodbridge Meadows, Guildford, Surrey, England, GU1 1BL.

Payment in Sterling banker's draft to IEEE-R8N.
PO Box 30, Farnham, Surrey, England GU10 1QQ.

A4 Full Page Colour	£1200	Charge includes Layout OR from Artwork supplied by the Client
Half	650	
Quarter	400	
A4 Full Page Black & White	£1000	
Half	600	
Quarter	350	

Special Colour or Black and White Artwork can be supplied:
(Costs on receipt of copy) Further details from the Editor.

BACK PAGE MINI BOXES

6 x 4cm - £60/box

9 x 4cm - £90/box

Blue, Green or Red Border + one coloured line of text per box.

INSERTS distributed to 18,000 members - Less than 10gm £1,200
20gm 1,700
30gm 2,200

Payment to IEEE-R8N.
PO Box 30, Farnham, Surrey, England, GU10 1QQ.