

IEEE Region 8 newsletter

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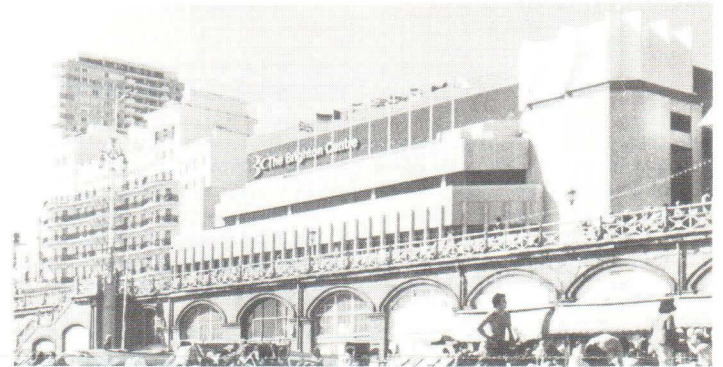
26th SEPTEMBER '83 - EUROCON '84 - 28th SEPTEMBER '83 BRIGHTON CONFERENCE CENTRE, BRIGHTON, ENGLAND

The Brighton Conference Centre (see picture) is the setting for the 6th European Conference on Electrotechnics - EUROCON '84. Brighton is on the south coast of England and only 1 hour from London and 40km from Gatwick Airport (there is a direct rail link from the Airport to Brighton). There is also easy access from the car ferry ports of Portsmouth, Newhaven, Southampton and Dover.

The conference theme is "Computers in Communication and Control" and will be held from September 26th to 28th 1984. The Call for Papers was circulated some time ago and the deadline for Receipt of Abstracts is 2nd December 1983. The main aim of the Conference is to demonstrate the impact of computer-based technology, including the use of microprocessors, on the disciplines of communication and control. Attention will therefore be focussed on contributions which cross disciplinary boundaries.

Members in the communications field will be interested to see that this conference follows immediately on the heels of IBC '84 which will also be held in Brighton (see 'Meetings in Region 8' for deadline and full details).

Immediately following EUROCON '84 will be the main Region 8 Celebrations of the IEEE Centennial in London. It is hoped that the conjunction of these two conferences and the Centennial Celebrations will attract a large number of members in view of the financial benefit of having only one travel fare covering such a packed week of interest.



If members are thinking of bringing their families to Brighton for the week, not only is Brighton an easy journey from London but it is a lovely place to spend a few days. Brighton has been a fashionable holiday resort for many years. There are plenty of things to do and see, a large shopping centre, the famous antique shops and, of course, the sea. For further information and registration forms for EUROCON '84 contact: The Manager, Conference Services, The Institution of Electrical Engineers, Savoy Place, London WC2R 0BL, United Kingdom.

7th DECEMBER '83 - AFRICON '83 - 9th DECEMBER '83 THE KENYATTA CONFERENCE CENTRE, NAIROBI, KENYA

The response to the Call for Papers for AFRICON '83 has been excellent. About half of the papers come from African authors and the others from all over the world. The importance of the conference, which will take its place alongside EUROCON and MELECON as a regular event in the Region 8 Calendar, cannot be stressed too highly. The huge explosion of technical development within Africa has relevance to business, industry and research throughout the world.

It is still not too late to register. The fees are (for registration after 1st November): IEEE members - \$50; non-members - \$60 with reduced rates for students and life members. For Registration Forms and copies of the Programme contact: Mrs. R. Mischler, IBM Research Laboratory, Saumerstrasse 4, CH8803 Rueschlikon, Switzerland. Telephone: +41 1 724 2727. Telex: 53 626.

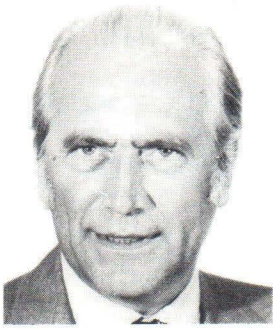
During Africon '83 there will be a special meeting for all those interested in continuing education. The place and time will be announced at Africon but it will probably be held in the evening of 7th December.

The purpose of the meeting will be to discuss the needs of continuing education in the area and an overview of material available from IEEE headquarters will be given. It will also discuss the possibility of holding tutorials in Africa sponsored by Region 8 and given by members of Region 8 as well as members from other Regions. Members interested in this who are willing to give tutorial lectures should submit an outline to the CE Office IEEE Region 8, c/o Prof. Dr. Karl Gosser, Fern-Universitaet, Baulemente der Elektrotechnik, POB 940, D-5800 Hagen 1, West Germany.

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REPORT FROM THE REGIONAL DIRECTOR



Karsten E. Drangeid
Director Region 8 1983-84

Next year is the Centennial year of the IEEE. For this event we are preparing a poster exhibition, showing the development of electrical and electronic engineering over the past 100 years. We are looking for suitable material in the form of photographs showing significant events in the last 100 years' history of the development of electrical and electronic engineering. As we will do this on a world-wide basis, we welcome material from your countries. This can be photographs of equipment or people, with a short description of the material. If you have suitable material of this kind, I would be grateful if you could make it available to me.

IEEE membership grew to 225136 members in June. This means a 6.39% growth over that at the end of 1982. Our Region grew even more percentage-wise - from 11266 at the end of 1982 to 12385 in June 1983 which means a growth of 9.9%. We would like the IEEE to go into the Centennial year with more than a quarter of a million members. This can only be achieved with some additional recruiting activities. I hope many of our members will make an effort to help us attain this goal.

Several IEEE members have contacted me lately to ask for financial support for them to participate in the AFRICON '83 conference. Unfortunately

we are not able to help due to the limited budget we have. AFRICON '83 is, however, very important for us as it is the first IEEE conference in Africa and we see it as a tremendous opportunity to exchange information, to establish contacts and make friends with other IEEE members and so increase the membership within our Region. I was therefore very pleased when one of our sections spontaneously offered to give us some small financial help so that members could participate in the conference. I take this opportunity to thank this section for their offer and at the same time to express my hope that other Sections will follow this good example. Meanwhile we will also try other ways to get financial support including, for example, from business and industry as we believe AFRICON '83 will be the first of a whole series of future AFRICONS and for this we need a successful start.

During my first year as director of Region 8 I have received many letters. Most of them with complaints about minor matters. These are, of course, very important as they lead to the improvement of the services to our members. In addition to these letters of complaint I would like to receive letters of a more constructive and creative nature so that we can do more for our members by introducing new services and new directions. We have many possibilities and opportunities in the IEEE and we should take full advantage of these. In the future I look forward to a great number of inputs expressing your suggestions and wishes.

KARSTEN E. DRANGEID
Rueschlikon, Switzerland

THE ELECTRON TUBE - 100th ANNIVERSARY

The discovery of the thermionic emission by T. A. Edison in the year 1883 was a major milestone in the development of modern electronics. Although little notice was at first taken of this discovery, it was nevertheless the essential prerequisite for the development of the electron tube. Today, 100 years later, the electron tube is undisputedly one of the electronic components without which advanced communications engineering, modern high-energy physics and medical technology, as we know them, would be unthinkable.

At this year's NTG Conference "Electron Tubes", which was held from 18 through 20 May in Garmisch-Partenkirchen in co-operation with the Federal-German section of the IEEE, there were reports from specialists and scientists from Europe, the USA and China on current electron-tube developments and technology.

Discussion focussed primarily on microwave tubes, where there is uninterrupted further development. This constantly receives fresh impetus from the growing demand for communications, from military needs and from the intensive research that is going on in the field of nuclear-fusion reactors.

The objectives are higher frequencies, maximum levels of power and larger bandwidths.

An example is the klystron development for the storage ring LEP of CERN, with which RF power of 1.1 MW was achieved at 352 MHz. Further development down to frequencies of less than 200 MHz is considered possible, even though the sizeable dimensions (length of more than 4 metres) are a considerable handicap. With all conventional power tubes developments continue to focus on improving efficiency and useful life. Progress no longer represents milestones of achievement, however, but are rather the result of laborious and detailed effort.

The gyatron is the subject of development work world-wide aimed at

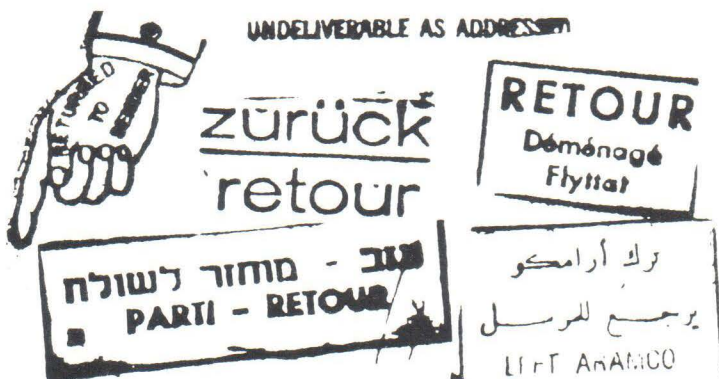
achieving very high RF power at extremely high frequencies. Its main application is seen today as being in plasma physics. For heating hydrogen plasmas in nuclear fusion one would like to produce very high continuous-wave and pulsed power at frequencies up to 300 GHz. Military applications in radar are also contemplated with high-power gyro travelling-wave tubes.

In the case of optoelectronic tubes work is going on to improve the resolution both with picture and pickup tubes. In a tube for computerized type-setting, for instance, a spot size of 12 μm is called for. And this goal has been reached by improving the electron optics and the fluorescent screen. There were also reports of interesting progress in image amplifiers. In the area of intensifier tubes for night-viewing devices GaAs photocathodes have emerged as clearly superior to the old S25 cathodes. An X-ray-image amplifier for diagnostic purposes was described with which it is now possible to X-ray lungs in the necessary format of 40 cm x 40 cm and with a level of quality that practically equals direct exposures.

In the lectures on X-ray tubes there were reports of work on rotating-anode tubes that is aimed at improving quality and performance. The transition from glass technology to metal bulbs with ceramic insulators has enabled a 20% increase in specific power handling without any accompanying increase in dimensions. There was also a report on a rotating-anode tube with 16 grid-driven electron sources for use in tomography. And finally there was talk of cathodes. All important as they still are for the life and reliability of a tube, efforts are being made in the area of cathodes to increase the emission-current density and, at the same time, useful life by means of special dispenser cathodes.

Proceedings: NTG-Fachbericht No. 85 (VDE-Verlag GmbH, Bismarckstrasse 33, D-1000 Berlin 12).

IS THIS YOUR MAILING?



Every week the IEEE mails thousands of items across the world. Many of these are sent via the office responsible for the production of this newsletter, County Secretarial Services, England. Every month about 2% of all mailings are returned rubber stamped like the ones shown. There are two main reasons for this. 1. The address given by members is not correct according to their own postal service. 2. Members move house and fail to contact the IEEE until many months later.

REMEMBER - IF YOU MOVE, WRITE IMMEDIATELY TO:
IEEE SERVICE CENTRE,
445 HOES LANE,
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NJ 08854, USA.

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Subscription Information:

Volume 1, 2 issues, approximately 100 pages each, will appear in 1983.
Volume 2, 4 issues, approximately 100 pages each, will appear in 1984.

North America:

Annual subscription rate: 1983: US \$ 52.00; 1984: US \$ 104.00, including carriage charges. Subscriptions are entered with prepayment only. Orders should be sent to:
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France Section (Chairman: Mr. L. J. Libois)

France Section has been quite alive during these last months: membership development (increase of 8% in one year), chapter activities, conference organization have been going on at a good rate. However, we would like to emphasize an event, which very well illustrates the policy of our Section. The development of student activities, and of student branches, is in fact one of the priorities of France Section.

And it is why France Section has organized, for the first time this year, a meeting called "Young Student-Engineers Day". This meeting was co-sponsored by SEE (French Electrical and Electronics Engineers Society) and took place in Grenoble on June 8.

The goal of this meeting, which must be now an annual event, is to permit IEEE or SEE students to present their "realizations" to a large audience of engineers, from research centres or industrial firms. These realizations can have been done during Student Branch activities, Student Club activities or during scholar projects. But they must be more than a paper study. Discussions, among attendants, follow the presentation of the realizations. These meetings should permit closer contacts between students and practising engineers.

The 1983 Grenoble meeting was successful, with an attendance, for the first meeting, of 75 participants and six presentations of realizations. The proceedings of this meeting were to be edited and available from France Section in October.

The works presented during this meeting are the following:

- Realization and industrial implantation of two modular hydraulic robots (MM JACQUES, BASTONI, CLERC, NOUVELOT, from ECAM - Lyons)
- A software for traffic lights management and scheduling (MM MEIZEL, LOUSTALOT, ALLEGRE, from IDN - Lille)
- Parallel algorithms for finite elements method (M PION, from ENSIEG - Grenoble)
- An "EPROM programming" interface card for APPLE II (M LEVAN, from ENSIEG - Grenoble)
- Automated command of a "radio-amateur" station (MM DEBBASH, SCHILKNECHT, from ENST - Bretagne)
- A computer aided teaching system: "SAVANT" (MM DESSALLES, PADIOU, BESSE, from ENST - Paris).

The success of such meetings among students and engineers should permit good development of France section. At least, we hope so.

Poland Section (Chairman: Prof. Dr. Wieslaw Seruga)

The two-year agreement was signed by IEEE President Mr. Robert E. Larsen and SEP President Mr. Jacek Szpotanski this year. The following persons were elected to the sixth Poland Section Executive Committee for the period 1983-85: Chairman-Prof. Wieslaw Seruga; Vice-Chairman-Prof. Andrzej Filipkowski; Secretary/Treasurer: Doc. Zbigniew Czyz.

Furthermore, two former Chairmen, Prof. Adam Smoliński and Prof. Andrzej Sowiński, as well as Doc. Jan Nasilowski and Dr. Ryszard Jachowicz, have agreed to work on the Executive Committee.

Division of work: Publications and Publicity: Prof. Andrzej Filipkowski; Professional and Educational Activity: Doc. Jan Nasilowski; Membership and Transfer: Dr. Ryszard Jachowicz; Nominations: Prof. A. Smoliński and Prof. A. Sowiński.

Between July 1982 and July 1983, eleven lectures were organized (four of them were delivered by invited guests) and a symposium. The lecturers were:

- Kenneth Openshaw Sharpless (City University, London)
"Circuit representation of magnetic field problems"
- Joseph van Bueren (City University, London)
"The dynamic characteristic of linear induction motor"
- Gerald D. Cain (Polytechnic of Central London)
"Signal processing activities at the Polytechnic Central London"
- Adam Smoliński (Polytechnic, Warszawa)
"Progress in photofibre engineering - unipolarized, unimodular photofibres, their application in telecommunication and metrology"
- Jan Przyłuski (Polytechnic, Warszawa)
"Electric energy accumulation"
- Andrzej Pawlaczyk (Electrotechnical Institute, Warszawa)
"Organization of scientific and research works in Institute of Converter Engineering, and of Electric Drives in RWTH - Aachen"
- Zbigniew Ciok (Polytechnic, Warszawa)
"Expected directions of development of electro-energetics"
- Volkmar Kose (Physikalisch Technische Bundesanstalt Braunschweig)
"Recent progress based on cryoelectronics"
- Boleslaw Winarski (Electrotechnical Institute, Warszawa)
"Actual situation and directions of development of power electronics"
- Adam Kujawski
"Inversion of light wave front in non-linear effects"

NEWS OF THE SECTIONS continued

- Ryszard Struzak and Wladyslaw Moron (Institute of Communication, Warszawa)
"Progress in electromagnetic compatibility"
 - impressions after the V EMC Symposium in Zürich, March 1983.
The title of the symposium was: "Photofibres and applications".
- On the occasion of the Centenary of IEEE there will be organized a

general meeting of the Members of the Poland Section of IEEE. In 1984 the title pages of all the publications prepared by the Poland Section of IEEE will mark this event.
There are now 52 Members of the Poland Section of IEEE. The new Executive Committee intends to increase the number of Members, Fellows and Lecturers.

IEEE AWARDS



E. Folke Bolinder, Chairman,
Awards and Fellows, Region 8

In my continuing series on IEEE awards there follows a list of the various Field Awards and the qualifications needed to obtain them. These particular awards can be given to individuals outside the Institute and members who wish to nominate colleagues should contact their Section Chairman who will be able to lend them the IEEE Awards Guide (a little yellow brochure) which explains the nominating procedure and lists the Institute Awards in full.

IEEE Field Awards (Annual Awards)

Cledo Brunetti Award

For outstanding contribution in the field of miniaturization in the electronic arts.

Control Systems Science and Engineering Award

For meritorious achievement in the field of control systems science and engineering, to an individual.

Harry Diamond Memorial Award

For outstanding technical contributions in the field of government service in any country as evidenced by publication in professional society journals.

William M. Habirshaw Award

For outstanding contribution in the field of transmission and distribution of electric power, to an individual or group.

IEEE Award in International Communication in honour of Hernand and Sosthènes Behn

For outstanding contribution in the field of international communication.

Morris E. Leeds Award

For outstanding contribution in the field of electrical measurement, to an individual or group. Special consideration given to value of contribution made before candidates reached 36th birthday.

Morris N. Liebmann Memorial Award

For important contribution to emerging technologies recognized within recent years.

Jack A. Morton Award

For outstanding contributions in the field of solid-state devices to an individual or group.

Frederik Philips Award

For outstanding accomplishments in the management of research and development resulting in effective innovation in the electrical and electronics industry.

Emanuel R. Piore Award

For outstanding achievement in the field of information processing, in relation with computer science.

David Sarnoff Award

For outstanding contribution in the field of electronics.

Charles Proteus Steinmetz Award

For major contributions to the development of standards in the field of electrical and electronics engineering, to an individual.

Nikola Tesla Award

For outstanding contributions in the field of generation and utilization of electric power.

Vladimir K. Zworykin Prize Award

For the most important technical contribution to electronic television.

E. FOLKE BOLINDER
Chairman, Awards and Fellows, Region 8.

ELECTION RESULTS



Donald D. King

IEEE PRESIDENT ELECT

The new President Elect will be Donald D. King. He will take up Office in 1984 and is expected to become President in 1985. He said in his election address to Region 8 "... the Atlantic is no barrier to co-operation and friendship".



Basil W. Osborne

VICE-CHAIRMAN, REGION 8

The new Vice-Chairman of Region 8 will be Basil W. Osborne. He takes up Office on 1st January 1984. In his election address he said "... engineering boundaries are those of knowledge, rather than those of geography or politics".

THE ELECTION RESULTS IN FULL ARE AS FOLLOWS:

PRESIDENT ELECT:

Hans C. Cherney	12,375
Jerrier Haddad	9,317
Donald D. King	17,906

EXECUTIVE VICE-PRESIDENT:

Henry L. Bachman	18,864
George P. Rodrigue	17,906

VICE-CHAIRMAN, REGION 8:

Basil W. Osborne	836
Emmanuel N. Protonotarios	759

The Constitutional Amendment was defeated with 28,339 votes against.

MEETINGS IN REGION 8

2nd International Conference on The Impact of High Speed and VLSI Technology on Communication Systems

This conference is to be held 30 November–1 December 1983 at the Institution of Electrical Engineers, Savoy Place, London WC2R 0BL, United Kingdom.

It is organised by the Electronics Division of the IEE in association with the Institute of Electrical and Electronics Engineers (United Kingdom and Republic of Ireland Section), the Institute of Physics and the Institution of Electronic and Radio Engineers.

Six sessions will be held with the following titles and be followed by a closing address on 'The Way Ahead.'

1. Optical Fibre Systems
2. Design Aids
3. Line Systems
4. Signal Processing 1
5. Signal Processing 2
6. Switching

Further information from: Conference Services, The Institution of Electrical Engineers, Savoy Place, London WC2R 0BL, United Kingdom. Telephone: 01-240 1871 (Ext. 222); Telex: 261 176 IEE LDN G.

Software Process Workshop

This workshop will be held February 6–8 1984 at the Runnymede Hotel, Egham, Surrey, UK.

The purpose of the workshop is to examine the software process as a whole. Topics for discussion will include:

- requirements to be met by the complete software engineering process
- alternative views of the complete process
- implications for both software developers and software users
- requirements and opportunities for process support
- transition to a broadly based approach.

Contributions which challenge the basic thesis – that the current approach is too fragmented and a new top-down approach is required – will also be welcome.

Sponsorship is from ACM, BCS, IEE and IEEE Computer Society.

The workshop will be limited to 40–50 people, and all participants are expected to play an active role. The programme will consist of a mixture of informal presentations and discussions. Applicants may submit either

- (a) a short summary of a proposed presentation
- or (b) a one-page position statement indicating reason for interest in the workshop and possible contribution to general discussion.

Presentation summaries should ideally be 2–4 pages in length but longer summaries are acceptable. The organisation of the workshop will be flexible in order to permit detailed treatment of pertinent topics, and authors should therefore indicate both a 'minimum' and an 'ideal' time allocation for their presentations.

Applications should have been submitted by October 31 1983 to the Organization Secretary. Successful applicants will be notified by the end of the year.

The programme will begin with an informal get-together on Sunday night. The workshop will begin Monday 9.30 a.m. for the convenience of those wishing to arrive then and will close after lunch on Wednesday.

The workshop will be held at the Runnymede Hotel which is easily reached from London and Heathrow Airport. Participants may choose to stay at the hotel or to make their own arrangements.

Costs are as follows:

Workshop participation plus full board for three nights	£175.00
Workshop participation plus full board for two nights	£135.00
Workshop participation only (including lunches, coffee, etc.)	£55.00

Additional accommodation can be arranged.

Further information from the Organization Secretary: Rosemary Gasson, Imperial Software Technology Ltd, 60 Albert Court, Prince Consort Road, London SW7 2BH, UK. Telephone: (01) 581-8155. Telex: 928476 ISTECH.

1984 International Joint Alpine Symposium

The 1984 International Alpine Symposium, a joint forum of practising physicians and medical computer graphics researchers in clinical Computer Tomography (CT) and Nuclear Magnetic Resonance (NMR) imaging will convene February 11–17 1984 in Igls, a small town overlooking Innsbruck, Austria. This symposium will include clinical sessions and presentations on current medical image display research and medical image communications.

The Alpine Symposium will provide an inter-disciplinary forum to inter-mingle medical imaging clinicians with medical computer graphics scientists, engineers, and physicists from universities, medical centres, industry and government. The intention is to exchange realities of clinical digital imaging with the innovations and potential of computer graphics research in this growing display technology. Invited and contributed papers, tutorials and panels will emphasize clinical innovations and medical display applications in the following areas:

Clinical Sessions

- C.1 – Diagnostic Techniques for Neuro CT/NMR
- C.2 – CT/NMR Evaluation of the Spine
- C.3 – CT/NMR Specimen Correlations
- C.4 – Pre and Post Operative CT Correlations
- C.5 – Diagnostic Techniques in Spinal Surgery
- C.6 – Paediatric CT/NMR Neuro Diagnostics
- C.7 – High-Resolution Cervical Spine CT

Engineering Sessions

- E.1 – Medical Computer Graphics Systems and Techniques
- E.2 – Image Restoration, Enhancement, Filtering
- E.3 – Image Analysis
- E.4 – Medical Structure Modelling, Prosthesis Planning and Manufacturing
- E.5 – Surgical Planning/Control
- E.6 – Image Archiving and Communications

The symposium is co-sponsored by: Foundation for Advanced Medical Display Technology, IEEE Computer Society – Technical Committee on Computational Medicine.

2nd Conference on Sensors – Technology and Application

Organized by VDI/VDE-Gesellschaft Mess- und Regelungstechnik in co-operation with NTG-Fachausschuesse 2 and 3, and co-sponsored by the German Section of the IEEE, this conference will be held March 19–21 1984 in Bad Nauheim, Federal Republic of Germany.

Prospective contributors were invited to submit papers, dealing with the use of new technologies and with new techniques of sensors. Preference was to be given to contributions which report progress in technique with practical implementation in the design, development or use of instrumentation.

The following non-exclusive list of topics indicates the scope and the structure of the conference.

Sensors

Advanced Sensor Technology

- Materials, Sensor production

Sensors and new measurement techniques for

- Mechanical Quantities, Temperature, Composition of Fluids, Concentration of Components, Humidity, pH-Value and Particles.

Signal Processing, Adaptors

Sensors and Systems Aspects.

Abstracts should have been sent, before 5 August 1983, to: Prof. Dr-Ing. K. Bethe, Institut fuer Grundlagen der Elektrotechnik und Elektrische Messtechnik der Technischen Universität Braunschweig, Postfach 3329, D-3300 Braunschweig.

Lectures of 15 minutes will be in English or German.

International Symposium on the Performance of Computer-Communication Systems

Papers have been submitted for the symposium in Zurich, Switzerland, 21–23 March 1984 on the following topics:

Modelling, Analysing and Measuring Performance of: Protocols; Local area networks; Wide area networks; Integrated networks; Satellite networks; Telephone networks; New telecommunication services; Distributed systems and data bases. Congestion and Flow Control. Routing. Reliability. Optimization/Configuration.

More information can be had from: Werner Bux and Harry Rudin, IBM Zurich Research Laboratory, Saumerstrasse 4, CH-8803 Rueschlikon, Switzerland.

Artificial Intelligence HANDS-ON INTRODUCTION COURSE

Battelle Institute, Geneva

16-20 January 1984

5 days intensive course, with 4 hours on computer/day, on: AI introduction, LISP, PROLOG, Rule based expert systems, Deductive retrieval, Associative memory, Natural language, Image based expert systems.

Contact: L. Pau,

AI course, Battelle,
7 route de Drize,
CH 1227 Carouge
(41) (22) 43/98/31

MEETINGS IN REGION 8 continued

Architecture and Operating of Computer Systems

The conference is being held bi-annually sponsored by Gesellschaft für Informatik (GI) and Nachrichtentechnische Gesellschaft (NTG) within VDE in co-operation with the German Section of IEEE. It will be held at the University of Karlsruhe, 26-28 March 1984. It represents the most essential forum in the area of computer systems in the Federal Republic of Germany. The conference offers the opportunity to present the latest results from design and development, from measurement and evaluation of architectural and algorithmic aspects on all functional levels of hardware as well as software. The usually great number of participants guarantees expert discussion with impacts on your own further work. The conference languages are German and English.

The main theme is "Computers in extreme situations." Examples of special topics are:

- high throughput
- fast reaction
- availability
- reliability
- protection and security
- ease of operation
- adaptability
- computational accuracy
- compactness
- speed
- degree of parallelization
- degree of verification
- degree of networking
- geographic distribution
- degree of vertical migration
- degree of specialization
- structural specialities
- technology

Papers should have been submitted before 1 September 1983.

The papers will be published in the conference proceedings, a volume of the "Informatik-Fachberichte" (Springer Verlag), to be available at the beginning of the conference.

Further information from: Prof. Dr. H. Wettstein, Institut für Informatik III, Universität Karlsruhe, Zirkel 2, D-7500 Karlsruhe 1. Tel. (0721) 608 3834.

Communications 1984

Communications 84 will aim to provide a forum for engineers involved in the many aspects of communication, either as designers or users, of equipment and systems, to discuss advances which have occurred, or which are foreseen. In 1984 the conference embraces six main themes within the domain of telecommunications and business systems.

Papers are invited which deal with the main topics given below and will form the sessions of the conference.

- Regulatory aspects of new telecommunication systems activities
- Integrated office systems
- Satellite business systems
- Private mobile radio systems (including cellular)
- Wide-band systems (cable and radio)
- Voice recognition and synthesis systems.

It is anticipated that system oriented papers will cover:

- User and operating interests
- Strategy
- Systems and equipment
- Engineering and technology
- Components

The Organizing Committee welcomed offers of contributions by 12 September 1983 for consideration for inclusion in the programme on any of the above topics.

The conference will be held at the Birmingham Metropole Hotel, National Exhibition Centre, Birmingham, UK, 16-18 May 1984.

Details of the Communications 84 Exhibition can be obtained from: Industrial and Trade Fairs Ltd, Radcliffe House, Blenheim Court, Solihull, West Midlands, B91 2BG, UK. Telephone: 021-705 6707; Telex: 337073.

Other information from: Conference Services, IEE, Savoy Place, London WC2R 0BL, UK.

4th Jerusalem Conference on Information Technology (JCIT)

The advance programme announcement for the 4th Jerusalem Conference on Information Technology (JCIT) is now available. JCIT-4 is sponsored by the Information Processing Association of Israel and the IEEE Computer Society, in co-operation with the Association for Computing Machinery, and will be held from May 21-25, 1984. Like its three predecessors in 1971, 1974, and 1978, JCIT will cover a broad range of topics on computer technology and applications and in this forum will also explore the economics and management of the information industry. The emphasis will be on software engineering and manufacturing.

JCIT-4 will be held at the same time as the Economic Conference and the Israel Technology Trade Fair (ISRATECH). JCIT-4 will also be held in conjunction with the 19th National Conference of the Information Processing Association of Israel.

The goals of JCIT-4 are similar to those of the earlier conferences: to explore the next decade in information technology, to bring experts in the computer field together, to give Israeli computer specialists an opportunity to meet and learn from outside experts, and to stimulate

commercial and scientific interchanges between Israel and other countries.

For a copy of the advance announcement and registration information call or write: JCIT-4, P.O. Box 639, Silver Spring, MD 20901, USA. Phone: (301) 589-8142. TWX: 71028250437 IEEECOMPSON.

7th International Wroclaw Symposium on Electromagnetic Compatibility (EMC-84)

This symposium enjoys the co-operation of many international organizations including IEEE Region 8. It will be held in Wroclaw 26-28 June 1984.

Prospective authors were invited to submit original, unpublished papers concerning research, technological and operational aspects of EMC. Suggested topics included, but were not limited to, the following:

- Systems EMC: emissions, susceptibility and coupling of systems and sub-systems;
- Equipment EMC: emissions and susceptibility of electronic equipment and components;
- Spectrum utilization: utilization of EM spectrum by, and frequency allocation of, signals designed to convey intelligence;
- Bioeffects of EM radiation: thermal and non-thermal effects, safety levels, irradiation standards;
- Radiation hazards: undesirable EM interactions with fuel, explosives etc.
- EM noise sources: studies of the origin and characteristics of EM emissions natural and man-made, individual and composite but not designed to convey intelligence;
- Measurement technology and spectrum monitoring: instrumentation and methods of measurement;
- Antennas and propagation: off-frequency/off-beam antenna behaviour, related propagation;
- EMC standards: standards of good EMC engineering practice and general philosophy in standardization;
- Lightning and EMP: EMC considerations of lightning and nuclear EM pulses;
- EMC aspects of new concepts: Walsh functions, spread spectrum modulation, secure communications etc.;
- Computer aided EMC analysis and design: Math models, programs, numerical technique.

The language for presentation of papers is English or Russian.

Further information from: Mr. W. Moron, EMC Symposium, Box 2141, 51-645 Wroclaw 12, Poland. Telex 0712118 ilw pl.

Conference on Precision Electromagnetic Measurements, CPEM 84

The 1984 CPEM - the world's leading international biennial conference for electromagnetic metrology and related fundamental constants - will be held on 20-24 August 1984, at Delft University of Technology, The Netherlands. The IEEE Benelux Section is one of the sponsors.

Papers are requested for CPEM 84 which describe original work, not published or previously presented, covering the design, performance or application of electromagnetic measurements, techniques, instruments or systems.

In co-operation with the relevant commission of the International Union of Pure and Applied Physics (IUPAP), the Conference Committee has decided that topics on fundamental constants related to electromagnetic measurements will also be part of CPEM 84.

All papers concerned with EM measurements and related fundamental constants will be considered. Papers in the following fields are regarded as particularly appropriate for this conference.

- EM-based fundamental constants and standards
- direct current and low frequency
- time and frequency
- antennas and fields
- microwaves and millimeter waves
- (micro) computer-aided measurements
- infra-red, visible and ultra-violet radiation
- electro-optics, fibre optics
- lasers
- cryo-electronics
- technical calibration services

Further information from: Mrs. I. J. Smits, Department of Electrical Engineering, Delft University of Technology, P.O. Box 5031, 2600 GA Delft, The Netherlands.

5th International Symposium on Network Theory

The 5th International Symposium on Network Theory will be held at Sarajevo, Yugoslavia, on September 4-7 1984. It is organized by the Yugoslav Society for Electronics and Automation (ETAN) in co-operation with the IEEE Circuits & Systems Society. Offers of papers should be submitted by January 31 1984, and further information may be obtained from: Yugoslav Society for Electronics and Automation (ETAN), Programme Committee, Network Theory Symposium ISYNT '84, P.O. Box 356, 11001 Beograd, Yugoslavia.

MEETINGS IN REGION 8 continued

Dielectric Materials, Measurements and Applications

IEE International Conferences on Dielectric Materials, Measurements and Applications have been held approximately every five years since 1955 to review progress in the subject. The conference has established a world-wide reputation for dealing with essentially fundamental considerations, applied to practical situations. Large numbers of registrants from overseas have provided a truly international flavour to the discussion periods.

The conference in 1984 is to be held 10–13 September at the University of Lancaster, UK, and is planned to interest those concerned with dielectrics and insulators and their applications in power engineering, electronic systems, electronic devices and integrated circuits. The programme will therefore cover the field widely in terms of materials, frequencies and scientific and operational characteristics.

The Organizing Committee invited offers of contributions for consideration for the programme on the following topics and others closely related to them:

- Permittivity, Loss, Conduction and Breakdown in Solids and Liquids under Specific Conditions
- Short-Term and Long-Term Ageing Effects including Residual Life Prediction
- Studies of Treeing, Effects of Partial Discharges and Electrochemical Processes, especially in relation to Morphology and Structure in Dielectrics
- Performance of Dielectrics under Extreme Conditions of Temperature, Humidity and Chemical and Mechanical Constraints
- Assessments of New Resin Systems including those intended for Outdoor Insulation
- Tracking and Erosion of Materials and Components
- Flammability and Toxicity of Dielectrics and their Degradation Products
- Quality Control for Insulation Systems including Non-Destructive Testing
- New Dielectric Tests, Measurement Methods and Instrumentation

Those wishing to offer a contribution were asked to submit a synopsis before 10 October 1983.

The conference is organized by the Science, Education and Technology Division of the Institution of Electrical Engineers in association with the Institute of Electrical and Electronics Engineers Inc. (United Kingdom and Republic of Ireland Section), Institute of Physics, Institution of Electronic and Radio Engineers and the Plastics and Rubber Institute.

The Conference programme, with a registration and university accommodation booking form, will be published a few months before the event. This, and further information, from: Conference Services, IEE, Savoy Place, London WC2R 0BL, UK.

IBC 84

The tenth International Broadcasting Convention (of which the IEEE is a co-sponsor) will be held at the Brighton Metropole Conference and Exhibition Centre on 21/25 September 1984. The technical programme has been broadened, with particular emphasis on cable and satellite distribution and on higher definition television systems.

The growth of IBC, both in size and in participation, has continued with each of the Conventions. In 1982 the attendance of delegates, exhibitors and world press representations totalled more than 7000, from 60 countries.

Papers are invited (800 word synopsis **at the latest** by 4 Jan 84) on topics broadly outlined as follows:

1. Studio and Outside Broadcast facilities.
2. Sound systems and radio broadcasting.
3. Lightweight programme origination equipment.
4. Television cameras, electronic graphics, visual effects and other studio equipment including recording.
5. Equipment interfaces and integrated control systems.
6. Propagation and service planning.
7. Transmitters, transposers and antennas.
8. Satellite broadcasting equipment and systems.
9. Satellite and terrestrial links.
10. Cable and optical fibre systems.
11. Cable and broadcast services and complementary information systems.
12. Receivers – the home terminal.
13. Measurement technology.
14. Broadcast services to the mobile user.

For paper submissions, registration forms or exhibition information contact: IBC Secretariat, IEE, Savoy Place, London, WC2R 0BL, England.

Journées d'électronique et de Microtechnique Conference on 'Advances in Microprocessor Peripherals'

Proposals are invited from authors of original tutorial or specialized papers for this conference to be held in Lausanne, Switzerland October 9–11 1984. A full text (or very detailed summary, in the case of specialized papers) should be submitted before March 15th 1984 to the address given below.

The main topics of discussion are:

- Man/Machine interaction
- Smart Sensors: Special A/D Techniques, processing, conditioning etc.
- Smart Actuators: Positioning mechanisms, robots, interfacing.
- System implementation and design: communication, tools methodology etc.
- Technologies of peripherals: disks, printers, displays etc.

Official languages are French and English with simultaneous translation.

The Conference is organized by the Swiss Federal Institute of Technology, Lausanne with the support of the IEEE and EUREL.

Further information and address for submission of papers: Scientific Committee, Secrétariat des Journées d'électronique et de microtechnique, Département d'Electricité – EPFL, 16, Chemin de Bellerive, CH-1007 Lausanne, Switzerland.

MEETING OUTSIDE REGION 8

TENCON '84 Singapore

Sponsored by IEEE Singapore Section, IEEE Region 10, with co-sponsors: IEEE Consumer Electronics Society, IEEE Industrial Electronics Society, IEEE Control Systems Society, IEEE Communications Society, Department of EE, National University of Singapore, School of EEE, Nanyang Technological Institute, Singapore.

TENCON is a series of international conferences sponsored by the IEEE to promote the development and application of electronics in the countries of the Western Pacific, the Indian Ocean and Oceania. The first in the series TENCON '82 was held in Hong Kong in December 1982 with VLSI and Microcomputers as the theme. The theme for TENCON '84 is Consumer and Industrial Electronics and Applications. The conference provides an inter-disciplinary forum for information exchange in the development and application of electronics in a region which is growing in economic importance.

The intent of this conference, 17–19 April 1984, is to provide a forum for both invited and contributed papers on Consumer and Industrial Electronics and Applications and related topics ranging from basic research to hardware manufacture and systems development and applications. In addition to invited and contributed papers, TENCON '84 will include a plenary session and panel discussions with distinguished speakers. Selected short courses for review and professional advance-

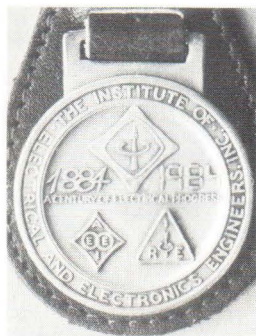
ment, supplementing the regular technical sessions will also be held. The topics for consideration in the conference are divided into six broad areas and representative examples of topics to be included are shown below.

- (i) Microelectronics, IC Technology, VLSI systems and applications, memories.
- (ii) Computers, personal computers, computer peripherals – disk drives, automation, automatic reservation system, applications of mini- and micro-computers, CAD/CAM, local area networks.
- (iii) Appliance electronics, automotive electronics, electronics/educational toys, TV games.
- (iv) Image processing, TV signal processing, teletext, video text, video discs, information storage system, digital TV, cable TV, satellite receivers.
- (v) Home control, industrial control and instrumentation, energy management, environment security control, robotics.
- (vi) Medical electronics, optical fibre/laser scanners, ultra-sonic scanners, tomography.

Further information from: Dr. J. Phang, TENCON '84 Conference Secretary, Electrical Engineering Department, National University of Singapore, Kent Ridge, Singapore 0511.



IEEE CENTENNIAL



Detail of the key fob which is an exact replica of the Centennial medal

The February issue of this Newsletter will be a special edition to celebrate the first 100 years of the IEEE. It will carry details of the major events to be held to mark the Centennial and it is hoped that members will participate whenever and wherever they can. The influence of electronic and electrical development can be seen everywhere, not only in the latest microprocessor designed for hi-tech industry but even in our homes where it is difficult these days to wash a pair of socks without the aid of a microchip.

The Centennial is not simply an opportunity for self-congratulation but a chance to review the past and analyse its successes and failures. It will also be a time for looking forward. Scientific advances can work for both good and evil so it is to be hoped that the year ahead will give all members a chance to pause, reflect on the past and plan for the future. Throughout the year this Newsletter will be carrying articles relevant to the Centennial and contributions from members reporting or publicising special celebrations should be sent to the Editor: Mr. W. H. Devenish, ERA Technology Ltd, Cleeve Road, Leatherhead, Surrey, England KT22 7SA.

During the Centennial year special medals will be presented to a limited number of Engineers throughout the Regions in recognition of outstanding contributions to the world of Electrical and Electronic Engineering. Exact replicas of the medals are available in the form of key fobs (see picture). Other souvenirs available include: digital desk clocks; paperweights incorporating thermometers; portfolios; mugs; ties, scarves and a special Centennial Calendar for 1984. All items bear one of the Centennial logos and are designed to be practical as well as decorative. If you want more information about these souvenirs contact: The Centennial Task Force, IEEE Service Centre, 445 Hoes Lane, Piscataway, NJ 08854, USA.

ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE
SWISS FEDERAL INSTITUTE OF TECHNOLOGY - LAUSANNE

JOURNEES D' ELECTRONIQUE ET DE MICROTECHNIQUE

October 9-11, 1984

LAUSANNE/SWITZERLAND

International conference on

ADVANCES IN MICROPROCESSOR PERIPHERALS

CALL FOR PAPERS

The aim of the joint "Journées d'électronique et de microtechnique 84" is to review the state of the art in peripherals which both benefit from and valorize microprocessors.

Topics of interest include :

- Technologies of peripherals : disks, printers, displays, etc.
- Smart sensors : special A/D techniques, processing, conditioning, etc.
- Smart actuators : positioning mechanisms, robots, interfacing, etc.
- Man/machine interaction : input devices, ergonomics, etc.
- System implementation and design : communication, tools, methodology, etc.

Authors of original tutorial or specialized papers on these subjects are invited to submit a proposal based on a full text (for tutorials) or a very detailed summary (for specialized papers) before March 15, 1984 to :

Scientific Committee
Secrétariat des Journées d'électronique et de microtechnique
Département d'Electricité - EPFL
16, Chemin de Bellerive
CH-1007 Lausanne (Switzerland)

The papers should be prepared for oral presentation, in French or in English (simultaneous translation) of a duration of 40 minutes for a tutorial paper and 25 minutes for a specialized paper.

Intention for preparing a tutorial paper should be announced as soon as possible. More information is available at the above address.

- Official languages : English and French (simultaneous translation)

organized with the support of IEEE and EUREL

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