



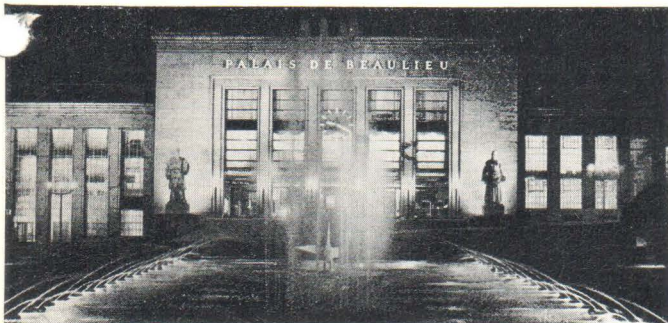
Editor: W. H. Devenish, The Electrical Research Association,
Cleeve Road, Leatherhead, Surrey, England.
(Telephone Leatherhead 4151 : Telex 264045)

Regional Director : Professor P. G. A. Jespers,
Louvain University, Electronics Labs., 94 Kar. Mercierlaan, 3030 Heverlee, Belgium.

No. 15 June 1971

EUROCON 71

Lausanne, Switzerland 18-22 October, 1971



New Institute Award at Eurocon 71

The new Award, generously donated by N.V. Philips Gloeilamp-fabrieken, of Eindhoven, Holland, will be presented for the first time in Lausanne next October at Eurocon 71.

The Award, which takes the form of a gold medal, for outstanding achievement in research and development, will be called the Frederik Philips Award, in honour of the Company's Chairman, and the first presentation will be made to Mr. Philips himself.

Further details of the presentation will be included in the final Eurocon 71 programme.

Programme

The programme for EUROCON 71 is now almost completed. Some 200 papers, from 20 countries, have been accepted in the six main areas of the Convention—information processing in large systems, long-distance communication, solid-state circuits, distribution of electrical power, bio-medical engineering, and electronic timekeeping.

The organisers are most grateful to the leading European Societies and Institutions which are supporting EUROCON 71. They also thank the Ecole Polytechnique Federale de Lausanne for the facilities it is providing for the secretariat, and the companies which have provided generous financial support.

An Advance Programme is enclosed with this Newsletter, and indicates the strength of the programme in each specialist subject, and the number of different countries from which papers are coming. The response has exceeded the expectations of the Technical Programme Committee.

There are 12 general survey papers for the non-specialist. Ten of these papers will be given at different times throughout EUROCON 71, so forming a conference-within-a-conference for those seeking background to fields outside their own specialisation.

There is an attractive students' programme, including about 20 tutorial lectures. Students may register for the nominal fee of two dollars, and arrangements are being made to accommodate them in the homes of Swiss students and in other inexpensive accommodation. Further information is available from the EUROCON 71 Secretary (address below).

A number of specialist papers are concerned with computer applications and control. There are also a number of papers on education—the education and training of the new kind of engineer needed in bio-medical engineering is considered in papers from authors in Germany, the Netherlands, Switzerland,

UK and USA. The scope of papers on general education includes the use of long-distance communication in European education, new requirements for telecommunication education, and the role of education in bridging the gaps in Western society.

The programme includes several panel discussions and workshops; the subjects include the role of professional engineering societies in national and international standardisation, and new techniques in cardio-vascular diagnosis and monitoring. As a further feature of the programme, the first, second and third competitors in the 1971 Region 8 Student Paper Contest have been invited to present their papers.

Social events include a ladies' programme; visits to places of interest to tourists; and evening visits for dinner at a typical Lausanne restaurant. There are also technical visits to Swiss companies and other organisations.

If there is sufficient demand, Swissair, official carriers for EUROCON 71, will arrange reduced fares on specified flights from centres in Region 8 to Geneva, the nearest international airport to Lausanne, in connection with the Convention. Those interested should contact their nearest Swissair office.

The scene is set for our first Region 8 Convention; its success depends on your participation. The organisers also hope that every member receiving the Newsletter will pass on information about EUROCON 71 to his colleagues.

Further information, copies of the Advance Programme, posters and registration forms are available from the EUROCON 71 Secretary, 24 Chemin de Bellerive, CH-1007, Lausanne, Switzerland.

Supporting Societies (as at May 1971)

Belgium	
Societa Royale Belge des Electriciens	SRBE
Denmark	
Dansk Ingeniorforening	DIF
Ingenior Sammenslutningen	I-S
France	
Societe Francaise des Electriciens	SFE
Societe Francaise des Electroniciens et des Radioelectriciens	SFER
Association Francaise pour le Cybernetique Economique et Technique	AFCET
FR Germany	
Verband Deutscher Elektrotechniker	VDE
Great Britain	
The Institution of Electrical Engineers	IEE
The Institution of Electronic and Radio Engineers	IERE
The Institution of Electrical and Electronics Technician Engineers	IEETE
Italy	
Associazione Elettrotecnica ed Elettronica Italiana	AEI
Norway	
Den Norske Ingeniorforening	NIF
Norsk Elektroteknisk Forening	NEF

Sweden			
Svenska Elektrolingenjörers Riksförbund	SER	Association Suisse pour l'Automatique	ASSPA
Tekniska Samfundet i Göteborg, Fackavdelningen för Elektroteknik		(Schweizerische Gesellschaft für Automatik)	(SGA)
Switzerland		Association Suisse pour la Technique Biomedicale	
Association Suisse des Electriciens	ASE	(Schweizerische Arbeitsgemeinschaft für Biomedizinische Technik)	
(Schweizerischer Elektrotechnischer Verein)	(SEV)	Association Suisse pour les Techniques Spatiales	
Association Suisse des Ingenieurs et Architectes	ASIA	(Schweizerische Vereinigung für Weltraumtechnik)	
(Schweizerischen Ingenieur und Architektenverein)	(SIA)	Groupement de l'Electronique Vaudoise	GEV

INSTITUTE NEWS

Divisional Organisation and the Nomination and Election of Divisional Directors

On 1 January, in addition to the three Societies (Computer, Control Systems, and Power Engineering), G-MMS and G-SSC merged to become the IEEE Systems, Man and Cybernetics Group. The composition of the six TAB Divisions is as follows:

Division 1: Audio and Electroacoustic Group, Circuit Theory Group, Control Systems Society, Information Theory Group; **Division 2:** Electrical Insulation Group, Industrial Electronics and Control Instrumentation Group, Industry and General Applications Group, Instrumentation and Measurement Group, Nuclear Science Group, Power Engineering Society, Vehicular Technology Group; **Division 3:** Aerospace and Electronic Systems Group, Broadcasting Group, Broadcasting and TV Receivers Group, Communication Technology Group, Electromagnetic Compatibility Group; **Division 4:** Antennas and Propagation Group, Electron Devices Group, Magnetics Group; Microwave Theory and Techniques Group, Parts Materials and Packaging Group, Sonics and Ultrasonics Group; **Division 5:** Computer Society; **Division 6:** Education Group, Engineering in Medicine and Biology Group, Engineering Management Group, Engineering Writing and Speech Group, Geoscience Electronics Group, Reliability Group, Systems, Man and Cybernetics Group.

In 1971, Divisions 1 and 5 are each to nominate and elect a Division Director for a 1972-73 term. Bylaw 310.2 provides that the Group Chairmen and Society Presidents in the Divisions were to submit nominations by 30 April. The IEEE Nominations and Appointments Committee then selected a slate, with not less than two candidates for each position. The members of the Groups and Societies then have an opportunity to submit nominations by petition, with a 15 August deadline, reference Article XII, Section 3 of the IEEE Constitution. Ballots will be mailed from IEEE Headquarters on or about 1 September.

Membership of the Institute

The attention of all Regions, Sections, Chapters and the Student

Branches is drawn to the need for continued emphasis to be given to the established programmes for enlisting new members and retaining present members.

Past Director, Jean Lebel, is a member of this year's Membership and Transfer Committee and will do all he can to provide any help and guidance sought from him.

Three Distaff Fellows

When Elizabeth Laverick (SM 1955-F 1971) was elected Fellow by the November Board of Directors, she joined two others on the distaff side who also hold Fellow IEEE distinction—Grace M. Hopper (S 1952-M 1954-F 1962) and Jenny E. Rosenthal (SM 1957-F 1966). IEEE now has at least 638 women members, about 45% of whom are Students.

IEEE Convention

'Transnational' fairly described the exhibits. Of 425 exhibitors, almost 100 (23%) were from overseas, led by the British (31 exhibitors), followed by France (new this year), Japan, Canada, Australia, Denmark, West Germany and Korea. The 'New York Times' observed, 'The Aussies—sheer cheerfulness—were shaking hands and passing out kangaroo lapel pins as though the whole Coliseum belonged to them.'

Transnational, unfortunately, did not describe this year's papers programme any better than last year's. The Executive Committee has requested the Conference Board to improve international participation in the technical programme at the 1972 Convention.

Granger Appointed to US State Department Bureau

Many members in Region 8 will remember John Granger through his visits to Europe during his year as IEEE President and, more recently, when he came over to lecture. It has now been announced that he has been appointed Deputy Director of the Department of State's Bureau of International Scientific and Technological Affairs.

MEETINGS IN REGION 8

International Medium Voltage Earthing Practice

An international Conference on Medium Voltage Earthing Practice is to be held at the Institution of Electrical Engineers from 21-23 March 1972. The aim of the Conference is to review the differing practices throughout the world of earthing for safety and protection in domestic, commercial and industrial premises and for medium voltage distribution systems.

Organised by the Power Division of the IEE, the Conference is being held in association with the Association of Supervisory and Executive Engineers, the British Standards Institution, the IEEE UK and RI Section, and the Mine and Quarries Inspectorate (Department of Trade and Industry).

The Organising Committee invite offers of contributions not

exceeding 3,000 words, for consideration for inclusion in the Conference programme. Those intending to offer a contribution should make contact immediately with the Manager, IEEF Conference Department, Savoy Place, London WC2R 0E, England.

International Symposium on Electrical Network Theory

Plans are well advanced for the International Symposium on Electrical Network Theory to be held in London from 6-10 September 1971. This is the official annual international meeting of the IEEE Circuit Theory Group. Information and registration forms can be obtained from Mr. A. C. Davies, NET 71, Department of Electrical and Electronic Engineering, The City University, St. John Street, London EC1V 4PB, England.

NEWS OF THE SECTIONS

IRAN SECTION

The Editor puts this item out of its alphabetical order because it is the first news we have had from the new Section in Iran, and also because of the long delay which has occurred in its publication.

As was scheduled, on 15 July 1970 a group of IEEE members participated in the reading of the ballots for election of the Section Officers. The result is—Chairman: A. Tchamran; Vice-Chairman: S. Berbekar; Secretary: R. Hashemian; Treasurer: M. Zadeh.

The elected officers would like to thank all IEEE members who returned their ballots and took part in observing the voting procedure. It had been hoped to schedule this year's technical meetings with the beginning of the current academic year, but since it was first necessary to register the Section with the Iranian authorities, the official operation of the Section has been postponed. They are, however, seeking the assistance of members to fill the following needs: 1. Programme Committee

(meetings and papers), 2. Membership and Transfers Committee, 3. Student Activities Committee.

The Chairman would appreciate suggestions from members in Iran regarding ways in which they could assist with the operation of the Section.

A more recent report refers to the following Seminars: (1) 6 March 1971, 'The Function of the Local, Remote Control and Communication System in the NIGC Gas Pipeline', by S. Berbekar, National Iranian Gas Company; (2) 13 March 1971, 'Magnetic Domains and their Observations', by S. Vojdani, EE Department, AMUT; (3) 3 April 1971, 'Analysis of Uncertain Dynamical Systems', by R. Ashraf, EE Department, AMUT; (4) 10 April 1971, 'Room Acoustics', by A. Liaghati, Telephone Company of Iran; (5) 17 April 1971, 'Bio-medical Engineering and the Application of Control Theory in Modelling Biological and Physiological Systems', by A. Jabbari, EE Department, AMUT; as well as to the visit of Mr. G. Meltzer, Israel Section Chairman on 30 March, 1971.

DENMARK SECTION

'Polarization and Radar Antennas' was the title of the meeting on 3 May, where Dr. J. Arnbak, Danish Defence Research Board, reported on progress in modern radar technique. The analytical description of the transmission of microwaves from mathematically defined slots is the basic concept of the work described. The use of these results in construction of new navigation equipment based on the radar principles was finally mentioned.

On 18 May the excursion to the Technical University of Lund, Sweden, included visits at the Department of Automatic Control, Industrial Electronics and Electrical Measurement. The 48 participants in the excursion were welcomed by Professor Stigmark, the Student Counselor at Lund. In the three Departments staff members told about research projects on satellite communication (weather forecasts), frequency standards, process computer applications and bio-medical transducers and measurements.

In the Autumn several meetings are planned, and the first will be 'A Computer-Aided PERT Game', by J. A. Richter-Nielsen, Electrical Power Engineering Department of the Technical University of Denmark.

The Copenhagen Student Branch was formed on 1 March. The Student Counselor is still Mr. E. Nilsson, Laboratory of Electromagnetic Field Theory, at the Technical University of Denmark.

GERMANY (WEST) SECTION

An international Symposium on High Voltage Technology is to be held at the Technical University, Munich, from 9-14 March 1972. It is a conference of the Verband Deutscher Elektrotechniker (VDE), with the co-operation of the IEEE Power Engineering Society.

The scientific programme comprises the following subjects: Electric field in high voltage devices; Generation of high voltages; Measurement of high voltages above 1 MV; Measurement of electrical field strength in high voltage devices; Potential-free measurement of physical quantities under high voltages; Physics of long sparkgaps in air; Spark breakdown in insulating gases under high voltages; Breakdown in solid liquid and mixed insulating materials under high voltages; Underground transmission of high power; and Application of high voltages outside the realm of electric power transmission.

Prospective authors are invited to send preliminary title and a brief abstract of their intended paper not later than 2 August 1971 to—International Symposium High Voltage Technology, c/o Hochspannungsinstitut TU Munchen, 8 Munchen 2, Arcisstrasse 21, Germany. They will receive typing instructions and model papers. Contributions may be in German or English. If they are in German, an additional summary in English, having a maximum length of one page, is required.

The final programme, including application forms for Symposium participants, can be obtained after 15 November 1971, from—International Symposium High Voltage Technology, c/o VDE-

Bezirksverein Sudbayern, 8 Munchen 19, Arnulfstrasse 205, Germany.

MIDDLE AND SOUTH ITALY SECTION

Although a small number of technical meetings was held during 1970, it is necessary to note that this Section was in a re-organisation period during last year. In fact, many meetings of the Executive Committee (elected in May 1970) have been held for reorganising the Section, and writing and approving the Section Bylaws, which have recently been submitted for approval by the Region 8 Director.

The 1971 programme includes many technical meetings as follows: 8 February 1971, 'Radio Communications at Frequencies over 10 GHz', by Prof. B. Peroni; 19 April 1971, 'Tellegen's Theorem, Korchhoff Operators and Transpose Networks', by Prof. R. Spence; May 1971, 'Problems of Communications on Laser Beam', by Prof. B. Daino (Fondazione Ugo Bordoni, Rome); to be held in June 1971, 'Walsh Functions and their Applications', by P. Mandarini (Istituto di Elettronica, University of Rome).

The 1970 activities also included the participation of the Past-Chairman, Professor G. Barzilai, to the Region 8 meeting at Gothenburg, Sweden, in April 1970, and the participation of the Vice-Chairman, Prof. V. Cimagalli, to the last Regional meeting in Geneva, Switzerland.

Student Activities

The IEEE Student Section of the University of Rome reports the following main activities during 1970-71: regular meetings of the Executive Committee; regular elections; one annual meeting of members; ten visits to factories, plants, etc. (10-15 attendance for each visit); printing of one issue of the University of Rome IEEE Student Section Newsletter.

UNITED KINGDOM AND REPUBLIC OF IRELAND SECTION

The Section welcomed the presence of Professor Paul Jespers to its Executive Committee and Annual General Meeting on 3 May. He presented the Martin N. Liebmann Award to Sir Martin Ryle, and a Past-Chairman's Certificate to Professor J. Mortlock.

The Committee has filled vacancies arising from the death of Mr. C. G. Mayer by electing Mr. C. T. W. Sutton Chairman of the Section, and Professor F. M. Bruce a Vice-Chairman. The following were elected to the Committee for 1971/2 by ballot: Mr. R. W. Addie, Mr. C. C. Barnes, Dr. R. C. Cuffe, Professor J. R. Mortlock, Professor G. W. Rawcliffe, Mr. H. Schwarz, and Professor R. C. G. Williams.

The £300 scholarship, financed by the Section and administered jointly with the Institution of Electrical Engineers and the Institution of Electronic and Radio Engineers, has been awarded to Mr. F. A. Huntley of Southampton University. He will spend three weeks visiting semi-conductor manufacturers in America to investigate the trends of future research.

STUDENT ACTIVITY NEWS

On 16 April 1971 the Fifth Region 8 Student Paper Contest took place in Paris. The winner of the first prize was Mr. F. J. Furrer, Federal Institute of Technology, Zurich, Switzerland, with the paper 'Coupled Transmission Lines with Nonlinear Terminations'. The second prize-winner was Mr. E. Loute (with co-author Mr. Decretion), University of Louvain, Heverlee, Bel-

gium, with the paper 'Optimisation d'Isolateurs a Resonance', and the third prize-winner was Mr. P. E. M. Poulakka, Technical University of Helsinki, Otaniemi, Finland, with the paper 'A Novel Design Method for Three-Port Circulators'.

On 16 April the Ninth Region 8 Student Activities meeting was also held in Paris with participants from Benelux, Denmark,



Participants in the Region 8 Student Contest with students from the Ecole Supérieure d'Ingenieurs d'Electrotechnique et d'Electronique at the reception held at the Chambre de Commerce et d'Industrie de Paris.

Egypt, Finland, France, Greece, Italy, Switzerland, Sweden and UKRI. The 'Student Day' on 16 April ended with an interesting visit to Ecole Supérieure d'Ingenieurs d'Electrotechnique et d'Electronique, where the meeting took place.

A new Student Branch has been started at the University of Ein-Shams, Egypt, with Professor Saad-El-Din, Head of the Electrical Engineering Department at the Faculty of Engineering, University of Ein-Shams, as Counselor.

EDUCATIONAL ACTIVITIES IN REGION 8



Professor A. S. Vander Vorst,
Region 8 Representative,
Educational Activities
Board



Frank J. Furrer,
First Prize winner,
1971 Student Paper
contest

The responsibilities of the Educational Activities Board in New York are as follows: (1) Formulation of the Institute policy on educational matters for the Board; (2) Participation in inter-society educational affairs; (3) Educational programmes of broad interest for the membership; (4) Educational programmes for non-members.

This broad scope usually determines such items on the Agenda of this Board as—pre-college guidance, accreditation of electrical engineering curricula, and continuing education programmes. Some of these problems are presently relevant to the US Region of the IEEE. Continuing education, however, is relevant to the whole of the electrical engineering community and the needs of Region 8 in particular should be evaluated.

Efforts have been made in the past to promote educational activities within Region 8. EUROCON 71 is certainly a significant contribution to this programme. It seems, however, that a major effort must be made to help, first, to bring the available services to the members, and, second, to generate new material appropriate to the needs of Region 8 (here also EUROCON 71 might be an excellent opportunity).

There is presently an important amount of educational material available from the IEEE—slide-tape lectures, seminars and short course publications, cassette colloquia and IEEE sounding. On the other hand, there is certainly a considerable amount of material circulating in narrow spheres within Region 8, offered by national societies, international organisations, companies and universities. The electrical engineering community in Region 8 could benefit from all those efforts if information could be made available. It could benefit much more if at least some of these efforts were correlated.

Professor P. Jaspers, Regional Director, asked Professor A. Vander Vorst to represent the Region at the Educational Activities Board in New York and to help to promote educational activities in the Region. This will involve the appointment of Section officers to be in charge of the educational activities; the assessment of Regional and Sectional needs in terms of continuing education; the evaluation of educational material coming from IEEE and other sources; the generation of educational material to be made available within the IEEE; and the promotion of continuing education services.

Educational activities in electrical engineering are obviously the main purpose of the IEEE and of the national societies. This requires of course a permanent effort and a quite regular action. The following steps have been taken:

1. The Appointment of Section Officers in Charge of Educational Activities

These officers will get in contact as soon as possible with Professor Vander Vorst. Their first objectives will be (a) the evaluation of the technical interests of the Section membership. Because of the quite heterogeneous spectrum of Region 8, this can only be done at the Section level, taking into account the educational programmes offered by the national societies, the geographical distribution of the membership, the size of the Section, etc. (b) The elaboration of a programme to answer some of the needs. Inter-Sectional and Regional co-operation will certainly be required. (c) The evaluation of the services which could be offered by the Section to the other Sections within the Region; for instance, by generating slide-tape lectures or producing films in a field very well developed in the country.

2. The Distribution of Material

A central office has been established in Brussels, Belgium, to distribute slide-tape lectures, cassettes, soundings and other material whenever available within Region 8. An agreement is being set up between Headquarters and Region 8 to cover all the practical aspects. This office will be the centre of a two-way system—(a) distribute (loan and/or sale) educational material already available from Headquarters and/or Region 8; (b) collect educational material available within Region 8 (from IEEE units or from other organisations, whenever possible) or generated within Region 8.

The address of this office is—Mrs. P. Stievenart, Avenue A. Huymans 206, 1050—Brussels, Belgium. All those who are aware of existing material, such as films, slide sets, slide-tape lectures, etc., could help by giving the pertinent information to their Section Educational Activities Officer and to Professor A. Vander Vorst, Laboratoire d'Hyperfréquences UCL, Kardinaal Mercierlaan 94, 3030—Heverlee, Belgium.

3. The Exchange of Lecturers

This is probably one of the most useful services to offer. It is, however, very difficult to organise and it will probably take a long time before operating efficiently. A first step has been taken by establishing a link between Headquarters and the central office in Brussels to collect information in New York about members of Regions 1 to 6 travelling to Region 8, transmit this information to Brussels and disseminate it through the Sections. On the other hand, members of Region 8 travelling to Regions 1 to 6 should let the central office in Brussels know and they will send the information to Headquarters. Furthermore, this office will also help members of Region 8 travelling within the Region to get in contact with other Sections.

It could also be possible to select Regional speakers, as several professional groups have done in the past. Before starting such an operation, however, it will be necessary to have a clearer picture of the technical interests of the Region 8 membership.

The only purpose of all this is to better serve the membership. It will work only if it gives some answer to the needs of our Region and if the membership makes use of these facilities. The Region 8 EAB representative is open to any suggestion and is ready to help the Section officers to promote educational programmes.

4. Slide Tape Lectures

Twenty four slide tape lectures on different subjects are available for loan to Sections and Branches. Handling charge: \$2.50 to Student Branches, \$10 to all others; or may be purchased outright at prices ranging from \$20.00 to \$72.50 per lecture. Details on application to Professor Vander Vorst (address above).

EXTRA PAPERS INSERTED WITH THE NEWSLETTER

Several recent issues have contained calls for papers or announcements of IEEE conferences, which have been included for a small insert charge. So far the extra weight of such insertions has not required additional postage to be paid, but on 1 July a new international agreement on postage charges comes into force and after this date additional postage may be incurred. Should this be the case the extra cost will have to be passed on to the organisations responsible for the insertion. The total cost will still be very much less than a separate mailing involving enveloping, labelling, handling, and its own basic postage charge.

This insertion service is available to the whole of Region 8 or to selected Sections, countries or areas as required, but is of course limited to IEEE sponsorship. Inserts and insertion instructions should be sent to County Secretarial Services, 8 The Flower Walk, Guildford, Surrey, England (Telephone GUILDFORD (0483) 77777; Overseas Telegraph Address COSEC GUILDFORDSY) and must be received by the first day of the month of issue (March, June, September, and December). Notices for insertion to selected Sections can be duplicated from typescript by arrangement.