

IEEE Region 8 newsletter



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
INCORPORATED

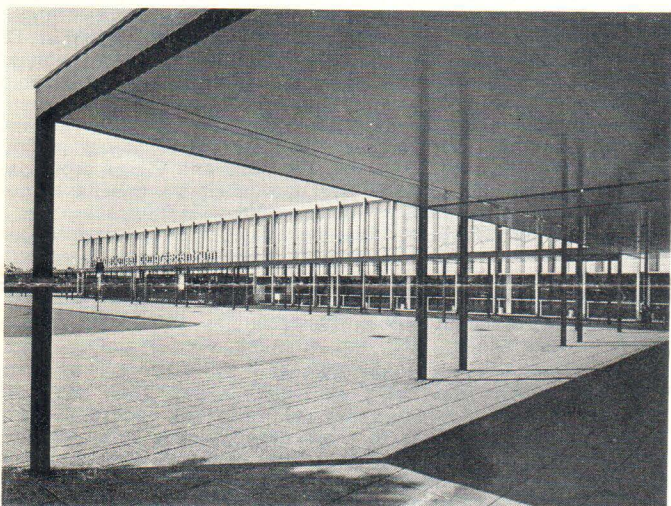
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No. 23 October 1973

EUROCON 74

EUROPEAN CONFERENCE ON ELECTROTECHNICS
AMSTERDAM, THE NETHERLANDS, APRIL 22-26 1974



International Congress Centre, Amsterdam

Eurocon 74, successor to the successful IEEE Conference held in Lausanne, Switzerland in 1971, will take place in Amsterdam from April 22-26 1974 under the general title of 'The Engineer in Society'.

Broad scope

The programme will consist of invited and contributed papers, lectures and panel discussions covering a wide area in electrical and electronic engineering grouped into the following six Sections—Controlling the future; Instrumentation electronics; Communications for the 1980's; The computer in society; Biomedical engineering, and Education.

Relief on deadline for abstracts

A large number of papers have already been received but due to the late distribution of the announcement and call for papers in some countries, the deadline for receipt of abstracts will not be rigidly observed for a few more weeks so that intending authors of important papers still have time to present their latest work and have it discussed.

Published quarterly — next issue January
Deadlines—

News to Editor	- - - - -	December 15
Advertisements to Sweetman and Fordham	- - - - -	December 15
Delivery inserts to County Secretarial Services	- - - - -	January 1

Further information

For further information contact the conference office at the following address

Eurocon 74, c/o KIVI, 23 Princesgracht, The Hague, Netherlands. Telex 33641, Telephone 070-64 6800, Telegram address KONINGSTING—THE HAGUE.

Analysis and Computation of Electric and Magnetic Field Problems

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K. J. BINNS and P. J. LAWRENSON

Provides in a single volume, a comprehensive treatment of both analytical and numerical methods for deriving two-dimensional solutions for stationary and quasi-stationary electric and magnetic fields.

364 pages £5.80 October 1973

Measurements in High-Voltage Test Circuits

G. W. BOWDLER

Describes the problems encountered and the methods employed in measurements of voltage and current in HV power systems and also in items of equipment used in such systems.

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Thyristor Control of AC Motors

J. M. D. MURPHY

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PERGAMON

INSTITUTE NEWS

Membership

A membership survey was conducted during the month of June. A sample population of 20% of our membership received a questionnaire. The three main topics surveyed were a follow-up to the US salary and fringe benefits survey, an evaluation of technical services, and membership interest in an IEEE Educational Certification programme. The results will be published in "Spectrum" before the end of the year.

As a result of the fine work of the Membership and Transfers Committee and the Member Services staff of the Institute, the predicted 4-6% drop in membership for 1973 has been averted, as shown in the following table:—

Category	1973-1972		
	1972	1973	% Change
Total Institute Members at 1 June	157,040	158,013	+ 0.61%
Total Student Members at 1 June	14,916	16,886	+ 13%
Group Memberships at 1 June	139,352	137,522	- 1.3 %
Dues Arrears at 1 June	15,352	15,620	+ 1%
New Elections at 11 June	6,173	7,213	+ 16%

The increase in membership of some 900 is made up from the Regions with some showing a loss. Region 8 had the highest gain with an increase of 480 members.

The goal of 170,000 members by the end of the year is well within range of accomplishment. Each Divisional and Regional Director has been asked to bolster this programme by seeking your enthusiastic support, your guidance and influence in attaining the objectives. (See Region 8 News)

Region News in "Spectrum"

Since the report in the last Newsletter of the introduction of a special coloured page in "Spectrum" to give news of Regions, several issues have carried these sheets, but the news given on the one for Region 8 has consisted of items selected in New York from information on the files there. If this very up-to-date circulation of news is to be of maximum benefit, then Sections will need to make special arrangements to provide the necessary news, by passing it via Bill Devenish.

History Committee

The History Committee has started a pilot project to tape-record interviews with living pioneers in the electrical/electronics field. The idea is to record remembrances about important contributions to our field of interest before this source material is no longer available. Distribution of the tapes, once recorded, has not been determined. The use of volunteers for most of the work has kept the costs at a minimal level. The project is being supported by the Life Member Fund.

Delphi Study of Artificial Intelligence

A grant from the National Science Foundation of \$3,000 was awarded to the IEEE for a "Delphi Study to Forecast the Implications of Artificial Intelligence Research for Society". The project will be conducted by the San Francisco Chapter of the Systems, Man and Cybernetics Society, as part of the IEEE's Technology Forecasting and Assessment Programme. Sixty participants, derived primarily from the International Joint Council on Artificial Intelligence, will try to develop an operational understanding of the limitations of machine intelligence and forecast its impact on society. A questionnaire that will be mailed to each participant will include items on possible uses of various machines as well as their effect on functions currently performed by human labour.

Technology Forecasting and Assessment

The TF & A Project was established for the purpose of making a systematic determination of the future of those technologies which lie within the areas of our members' interest. The task involves preparing forecasts of those technologies and the assessment of their impacts on the economy, the environment and on society generally. The Project will fulfil a number of objectives—it will provide IEEE members with information for career planning, opportunities for using their skills which they should anticipate, and the training needs which are implied; it will develop a conceptual framework for reviewing activities of IEEE entities and for indicating appropriate areas for new IEEE programmes; it will establish for the IEEE a role in the development and evaluation of public policies which may affect, or be affected by, trends in electrotechnology.

The most important objective, perhaps, is that of opening the way for IEEE's members to participate effectively in shaping some of the policies which affect their profession. To achieve this, we will seek to involve the total membership in the full cycle of forecast preparation and assessment of technology impact.

The Project is organised, and all phases of the work will be done, along Group/Society lines. The three principal phases of the Project are (a) preparation of a "tree", (b) Forecasts, and

(c) assessment of impacts. The purpose of the "tree" is to provide a systematic—and hopefully exhaustive—structuring of the various G/S total spans of interest into manageable sub-units for forecasting. Extensive detailing will provide some assurance that we are not overlooking significant sub-technologies.

The second phase is the preparation of detailed forecasts for each technology branch of the "tree". Organisationally we will be assigning these branches, through the G/S Ad Coms, to individual committees to make the forecasts. Finally, in the third phase, IEEE members will have an opportunity to develop, with the joint participation of professionals from the soft sciences, their assessment of the potential impact of electrotechnology on society, the economy, and the environment. To assume that our members will be able to participate fully in each phase, the TF & A Project will conduct day-and-a-half training workshops in the techniques of forecasting and assessment. These workshops, to be given wherever and whenever there is sufficient interest, will provide attendees with the necessary tools for analysing the future technology and potential impacts in their own areas of specialisation.

Predominantly the TF & A Project will rely on our Groups and Societies to bring members into the Project. To assist them in this task the TF & A Project office is seeking to establish a number (hopefully two dozen or more) of Associate TF & A Committees in various geographical areas. The purpose of these Committees is to provide an opportunity for local groups, whose members' areas of interest might well cut across several Groups and Societies, to get together on problems of methodology in technology forecasting. In addition, these informal groups will ordinarily recruit members for participation in TF & A Training Workshops. Any IEEE unit may, of course, sponsor a Training Workshop by getting 20 interested participants together.

The TF & A Project is designed both to use and to enhance the capabilities of IEEE members, but it depends on our getting information to members through the many and varied organisational units of the Institute, and upon their being able to get back to us. The former is a function of the IEEE infrastructure's enthusiasm for TF & A. For the latter, the appointment of Dr. W. Morsch as TF & A Project Manager means there will be a focus and continuity to the Project which was heretofore difficult to maintain. Dr. Morsch is based in IEEE's Washington office, 2029 K Street NW, Washington DC 20006, 202/785-0017.

W. R. G. Baker Prize Paper Award

This Award, consisting of a certificate and \$1,000, has now been extended to include papers written for the "Proceedings", instead of being limited to material appearing in any "IEEE Transactions". The new rule will apply to the 1975 and subsequent Awards. The final date for application for the 1974 Award was 15 September.

American National Electrical Safety Code

This Code has now been published as a single-volume edition. This is the first time in 25 years that the entire Code has been published in one volume. The book was published as an American National Standard by the IEEE. Copies may be ordered from the Standards Office at \$4.

Land Transportation Re-Aligns

In a move to re-structure its sub-committees to better serve its members, the Land Transportation Committee of the Industry Applications Society has decided to become active in the following areas of interest, as revealed from a mail survey of members:—transit, railroad, advanced systems, non-guideway vehicles, standards and foreign practices, programmes, papers' review and publicity.

With increasing interest in electric drives for vehicles, and especially for off-highway types, a new Non-Guideway Vehicles Sub-Committee will be concerned with recreation vehicles, mining and agricultural equipment and similar vehicles operating over land. This new Sub-Committee will be applications orientated.

New officers of the Land Transportation Committee, who were active in the re-structuring activity and will hold office for the coming year include—Chairman: R. M. Smith, Manager, Electric Locomotive Design and Development, General Electric Co., USA; Vice-Chairman: D. Aboudara, Marketing Manager, Rail Transit, Rohr Industries Inc.; Secretary: T. P. Woll, Test Director, DOT Test Train Program, Federal Railroad Administration.

IEEE Award in International Communication

Frank de Jager and Johannes Greefkes were presented with the IEEE Award by International Communication, which consists of a plaque, a certificate and \$1,000. The presentation was made during the IEEE International Conference on Communications in Seattle on 12 June.

Mr. Greefkes began his electronics career at N.V.Vos & Zn, Amsterdam in 1933. Five years later he joined Philips Telecommunications Industries. In 1946 he became Senior Engineer at Philips Research Laboratories. That was the same year that Mr. de Jager, having received his electrical engineering degree, also joined the same firm. In 1958 the two men received the Verder Award for improvements in the transmission of speech at a low signal-to-noise ratio. The IEEE International Communications Award is being presented to them "for their contributions to communication systems research, in particular for their inventions in the delta-modulation area". Mr. de Jager was appointed Senior Engineer in 1964. Mr. Greefkes, who retired from Philips in 1972, is currently a faculty member in the Telecommunications Department of the Eindhoven University

of Technology. Both are members of the IEEE, Mr. de Jager as a Senior Member, and Mr. Greefkes as a Fellow. Mr. de Jager is also Vice-President of the Netherlands Society of Radio and Electronic Engineers.

Watts in a Name?

University of Alabama Professor H. Mott writes "As we study the (1970 IEEE) Directory names, it becomes clear that the profession is in good condition. There are 15 Brights and 1 Brilliant, as compared with 4 Dulls. Win (1) and Winner (5) outnumber Loser (1) and Unwin (1). It is interesting to note that the Directory lists 35 Wises, 7 Wisemans and 3 Wisdoms, but only 9 Lucks and 2 Luckys. Perhaps this shows that, contrary to present belief, wisdom is a more useful survival trait than luck!"

REGION 8 NEWS

IEEE Membership

Benefit of IEEE Membership

Engineers need a continuing self-improvement programme to protect their investment in education and to keep up with the continuous advancement in the field. All the programmes of the IEEE (a trans-national society working in co-operation with the national engineering societies) are designed to aid members with day-to-day operating problems and to contribute to their long-term professional development and advancement. A few of the benefits that the over 160,000 members of the IEEE have are—

—*Publications:* The IEEE member has access, at greatly reduced rates, to one of the world's most comprehensive publication operations in the electrical and electronics field.

—*Meetings:* The IEEE member may, at reduced rates, attend and participate in a large number and variety of meetings—general and specialised—on local, regional, national and international levels.

—*Educational Services:* The IEEE member has the opportunity to use a wide range of educational services to avoid technical obsolescence.

—*Personal Contribution:* The IEEE member may contribute time and talent in many areas of the Institute's activities. Such participation not only gives personal satisfaction of accomplishment, but also, as a dividend, provides training and experience in leadership.

—*Personal Recognition:* the IEEE member is identified on a world-wide basis with others who have chosen the same profession; his name appears in the IEEE Membership Directory, and he is eligible for IEEE Awards.

—*Group Insurance:* The IEEE member may participate in the IEEE Insurance Programme.

Membership and Transfer

A continuing effort to recruit new members, to maintain the membership, and to promote transfers in grade is a vital part of the Institute's activity. The greater the participation by engineers and scientists in furthering the objectives of the IEEE, the broader the technical exchange. The greater the membership of the IEEE, the better the IEEE may serve you and the electrical and electronics profession. This is the reason the IEEE is always concerned with extending its membership even though it is already the largest technical gathering in the world. You are requested to help in this matter by taking an active part in one or more of the following activities:—

—*New Members:* You are benefiting from the services offered by the IEEE. Many of your colleagues would also benefit greatly by IEEE membership, so bring the IEEE and its advantages to their attention and urge them to become members (from October there are no dues for 1973, whilst membership privileges start immediately). The goal for Region 8 should be that each member would bring another electrical or electronics engineer or scientist into the IEEE.

—*Membership Grade:* All IEEE members should have the appropriate membership grade. A member who has held the grade of "Associate" for about ten years may be eligible for transfer to the grade of "Member", and thus, among other things, be eligible to vote and hold office in the IEEE, in

addition to the recognition of competence which the higher grade gives him. A member who has held the grade of "Member" for about seven years may be eligible to transfer to "Senior Member", and thus be eligible for nomination to the grade of "Fellow", in addition to the badge of distinction which the grade of "Senior Member" confers. If you do not have the appropriate grade, please take the necessary steps to get this rectified.

—*Fellow Nomination:* Every year the IEEE honours about 125 of its Senior Members by elevating them to the grade of Fellow. If you know of someone whom you believe should be recognised in this way, please take the necessary steps to have him nominated.

—*Members in Arrears:* 722 of the members in Region 8 had not, by the end of June 1973, paid their dues for 1973 and have thus been taken off the active membership list. I urge you to check with your colleagues and if they have not sent their dues please find out why, and request that they rectify the situation immediately so that they may once again receive IEEE publications and also that other membership services may be restored.

—*Resigned Members:* 92 members in Region 8 have resigned during the first six months of 1973. If you know of anyone who has resigned, please find out why and send the information to your Section Chairman. Also request that he apply for re-instatement as a member.

Regional and Sectional Activities

Many of the IEEE services depend upon the activities of the Regional and Sectional officers and Committees. The IEEE is always looking for suggestions for improvements in membership services, and for people who are willing to take an active part in IEEE work. If you have any suggestions or are willing to work, please write to your Section Chairman or to me. Included in this Region 8 Newsletter is an addressed postcard for your convenience. Please use a few minutes to fill it in and return to me. Thank you very much for your co-operation. Andreas Rannestad, IEEE Region 8 Member, Membership and Transfers Committee.

Meeting of Region 8 Committee

The Committee has received an invitation to meet in Germany on 26 and 27 October. This will be the first time the Committee has met in that country.

Outstanding Speakers

The only speaker visiting Europe whose name has been notified to the Editor since the last issue is Prof. W. Janischewskij, Electrical Engineering Department, University of Toronto, Toronto 5, Canada. The titles of his lectures are "Studies of Transmission Line Corona" and "Transport of Energy from the Canadian Arctic". No abstracts are available. He will be visiting Prague and London and will be available in Prague from 12-17 November. His languages are Polish and English. Contact Mme. D. Kohoutova, Head of Research Section, Power Research Institute, Partyzanska FA, Prague 7, Czechoslovakia. Invitations should be sent directly to the speaker, with copies to the Director of Region 8, Mr. C. R. Russell, 14 Warwick Road, Ealing, London W5, UK.

MEETINGS IN REGION 8

1974 International Optical Computing Conference

Papers are desired for this Conference, sponsored by the IEEE Computer Society, It will be held in Zurich, Switzerland, from 9-11 April 1974. Areas of interest are holographic imaging, coded aperture techniques, speckle techniques and holographic interferometry, and optical computing systems. A 200-word informal summary of all prospective papers and a biographical sketch of the author(s) must be submitted to Dr. D. Casasent,

Technical Program Chairman, Carnegie-Mellon University, Department of Electrical Engineering, Pittsburgh, Pa. 15213, USA. Authors will be notified of acceptance of their paper by 15 December 1973. A 1,000-2,000-word technical digest summary of all accepted papers is due before 1 February 1974 in camera-ready form for inclusion in the Conference Digest. Contact: Harry Hayman, PO Box 639, Silver Spring, Maryland 20901, USA, telephone: 301-439-7007.

Second International Symposium on Biotelemetry

Three years after the successful first meeting, a new interdisciplinary Symposium will take place in Davos, Switzerland, from 20-24 May 1974 and make possible an exchange of information between scientists from the fields of medicine, biology and engineering. The Organisation Committee (Chairman: P. A. Neukomm, Labor für Biomechanik/Turnen und Sport ETHZ, Plattenstrasse 26, CH-8032 Zurich) announces a call for papers on new developments and new applications of biotelemetry equipment (deadline: 15 December 1973). Programmes with registration forms are available there.

Along with the classical problems of biotelemetry, that range from the transmission of biomechanic, cardiovascular, respiratory and neurophysiological parameters to problems of miniaturisation (implantable transmitters, integrated circuits for biotelemetry, etc.), special focus will be given to a number of new questions such as pre-processing and reduction of telemetric data; storage telemetry (e.g. digital recording of biomedical data on free ranging animals or ambulant patents); clinical telemetry (e.g., medical monitoring of patients with small alarm transmitters); clinical emergency telemetry (e.g., transmission of E.C.G. from ambulances, etc.).

Together with the International Society on Biotelemetry, the two Swiss Federal Institutes of Technology (Lausanne and

Zurich) are the main organising bodies behind the meeting. As precision mechanics is a field which has received traditional emphasis in these two Universities, special attention will be given to the complicated problems of transducers and measuring heads for biomedical signals.

The organisers hope that this meeting may serve a dual purpose: first, to bring to the knowledge of doctors and biologists the state of the art of biotelemetry and especially to inform them of new technical possibilities, trends and developments. Secondly, to help engineers gain an exact idea of the problems involved in biomedical measurements and give them the incentive as well as concrete suggestions to develop new methods of biomedical signal acquisition.

Abstracts of approximately 500 words are required before 15 December 1973. Information may be obtained from P. A. Neukomm, ETHZ Turnen Sport/Biomechanik, Plattenstr. 26, CH-8032 Zurich, Switzerland.

European Microwave Conference

The Fourth European Microwave Conference is to be held in Montreux, Switzerland, during the week 10-14 September 1974. It will be devoted to recent developments, significant theoretical and applied contributions in the fields of microwaves. Information may be obtained from the Conference Chairman: Prof. F. Gardiol, Ecole Polytechnique Fédérale, chemin de Bellerive 16, CH-1007 LAUSANNE, Switzerland.

NEWS OF THE SECTIONS

Note for Contributing Editors or Section Secretaries

Although the summer months are traditionally lacking in news, the absence of any at all suggests that all Sections should review their arrangements for providing information for publication. In the past Sections have found it helpful to read of activity

in other Sections as it has provided them with ideas for similar activity. Consequently the Editor would be happy to receive news of any completed activity for inclusion when space permits.

The next issue of the Newsletter will be in January, and all news must reach the Editor before 15 December 1973.

STUDENT ACTIVITY NEWS

Contributors are asked to read the News of the Sections.

Promotional Mailing

Autumn promotional mailing has been sent to Branch Counsellors in two parts. Included is a new Student Branch Manual which should be especially helpful to new officers and counsellors. Look through it and familiarise yourself with the sections on meeting programmes, service projects, fund-raising suggestions, recruitment hints, and the outline of the IEEE student organisation. The manuals have been sent to Student Activities Chairmen as well.

Supplies and promotional material have also been included in the mailing. Counsellors should discuss and distribute the contents among their student officers and Membership Committee people. If more supplies are needed, give Bob Asdal at Headquarters the request.

Student Branch Annual Reports

Student Branch Annual Reports and Financial Statements will be on a calendar year and due 1 February of the following year. The Student Branch rebate (\$1 per member as of 31 December) will be contingent upon receiving this report on time. Check the new Student Branch Manual for a sample copy of the Annual Report forms. Initial start-up and transient problems, such as records of the preceding Student Executive, should become a natural transfer mechanism between incoming and outgoing officers—before they leave school.

New Student Members

New student members expect a prompt response and they will be acknowledged by the Institute's Membership Department.

It has been noted that many Branches collect a number of applications and transmit them as a unit to Headquarters. Some Branches are holding on to these applications for almost a month, however. Batched applications should be sent to Headquarters weekly to avoid any additional delays.

Student Newsletter

The Student Newsletter, Volume II, begins in October. The Editor would appreciate receiving significant news items and articles, including black and white photographs. While it is too late to make the first issues, you should make note of the future deadlines: 1 December for the February issue, and 1 February for the April issue. Material should be sent to Bob Asdal at Headquarters.

Bendix Awards

These Awards, which total \$2,500, help to support specific projects of Student Branches, and seven Branches have benefited in 1973. Proposals for the 1973 Bendix Awards must be postmarked no later than 31 December 1973. Details are available from Bob Asdal at Headquarters.

Individual Meeting Reports

Individual meeting reports (on yellow sheets) are no longer required by Headquarters. You should, however, record the names of speakers and films used at meetings. A list of contacts for industrial tours should also be maintained. This information is useful to other Branches and will be requested in a new Annual Report. Eventually a speaker's tours, and film directory will be published from material contained in the Annual Reports.

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