

IEEE Region 8 newsletter



Handwritten signature and initials: FC-PP

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
INCORPORATED

Editor: W.H. Devenish, The Electrical Research Association, Cleeve Road,
Leatherhead, Surrey, England. Tel. Leatherhead 74151 ~ Telex 264045

Regional Director: Mr. C. Reginald Russell

No. 20 January 1973



C. Reginald Russell
Director Region 8
Secretary/Treasurer
Region 8, 1967-72

NEW DIRECTOR OF REGION 8

As a result of the election last Autumn Mr. C. Reginald Russell has become Director of Region 8 for the two year period 1973-74. On his invitation Mr. Robert C. Winton has agreed to serve as Regional Secretary/Treasurer.

Message from the Regional Director

At the beginning of my term as Regional Director, I send to all of you my greetings for 1973. I look forward to continuing the work of my predecessors in improving existing services and providing new ones for the benefit of members throughout the Region.

C. Reginald Russell



Robert C. Winton
Secretary/Treasurer
Region 8
Secretary UKRI Section
1965-72

NEW FELLOWS

IEEE Members Elevated to Fellow Grade

The following members, listed under their respective Sections, have been elevated to the grade of Fellow as of 1 January 1973. The presentation of their certificates has been assigned to the officers of the individual Sections, acting as representatives of the Board of Directors.

BENELUX

John A. Greefkes: For contributions to communication systems and circuitry.

Cornelis A. Muller: For contributions to the knowledge of the structure of galaxies.

ISRAEL

Shmuel Shtrikman: For contributions to basic and applied magnetism, in particular, the theory of new magnetization processes and its impact on the development of new permanent magnets.

Jacob Ziv: For contributions in the fields of information theory and engineering education, and for leadership in

establishing engineering research and development in Israel.

NORTH ITALY

Ciro Della-Giovanna: For leadership in the development of telecommunications systems in Italy.

Emilio C. Gatti: For contributions to research in nuclear instrumentation, and in the statistical limits of time and amplitude measurements.

SWITZERLAND

Karsten E. Drangeid: For contributions to the development of semi-conductor devices.

UNITED KINGDOM AND REPUBLIC OF IRELAND

John Brown: For achievements in research and teaching of electrical and electronic engineering, especially in the fields of microwaves and electronic devices.

Erich S. Friedlander: For services in the field of transmission, and for the design and development of magnetically saturating control and stabilizing devices.

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INSTITUTE NEWS

Student Items

A quarterly students' Newsletter has been authorised, and news items for inclusion are being sought. Take this opportunity to get news of your Branch included in the first few issues by sending the necessary information to Bob Asdal at Headquarters in New York.

It is several years since Region 8 was successful in the Vincent Bendix Award. It is now rather late to be thinking about the current Award, but why not watch the position for activity ready for the next?

IEEE Services

A lecture of 13 pages and 23 slides is available to Regions and Sections with additional text and slides tailored to the individual Region. For details of how to borrow a set, write to the Office of the Regional Director, 14 Warwick Road, London W5 3XJ, England.

1973 Membership Directory

Publication of this Directory has been authorised to replace the 1970 issue which now has only limited usefulness in view of the accumulated changes since then. This new publication will carry a statement concerning its use, which corresponds to the restriction on the use of mailing lists, and has been amended to read:

"IEEE membership mailing lists, whether obtained through IEEE Headquarters or through any IEEE organisational unit, may be used only in connection with normal IEEE-sponsored activities, and may be used only for such purposes as are permitted under the New York Not-for-Profit Corporation Law. Any requests to Headquarters for a mailing list shall state the purpose for which the listing is to be used. A request for an exception to the above rule may be submitted to the IEEE General Manager."

Members and Sections

A breakdown of IEEE membership and Sections as at 31 August 1972 was:

	<i>Members</i>	<i>Sections</i>
United States	140,339	164
Canada	7,838	17
Region 8	5,725	16
Region 9	2,257	11
Region 10	3,958	6

This analysis was made following the formation of a new Section in Region 10, with a membership of 432. It is interesting that in USA it appears necessary to have at least twice as many members in an area before a Section is formed than in the rest of the world.

New IEEE Societies

Final approvals have been voted to establish two additional IEEE Societies—Circuits and Systems 4-CAS; Nuclear and Plasma Societies 5-NPS. Please note that the latter will publish two Transactions—Nuclear Science-4NS; Plasma Science-4PS. The IEEE affiliate fee was raised to \$18 last year, in anticipation of an increase of the IEEE dues.

1971 index to IEEE Periodicals

The 1971 annual indexes of all IEEE journals have been combined and are now available in a convenient, alphabetically-arranged single-volume format. Computer-photocomposed from the same data base that provided the individual year-end indexes, the 1971 Index collates the indexing of over 200 issues and contains over 25,000 entries. All necessary information is quickly accessible through the comprehensive **author index** and detailed **subject index**. Each entry in the 1971 Index contains a microfiche code, which enables readers of microfiche editions to locate quickly the specific fiche number, row number and position within the row of an item's starting frame. The 1971 Index can be ordered from IEEE Headquarters in New York at \$7.50 for members.

PUBLICATIONS AND COURSES

Minicomputers: Hardware, Software and Applications, edited by James D. Schoeffler of Case Western Reserve University, and Ronald H. Temple of General Electric, has now been published. This volume is the seventh in the IEEE Press Selected Reprint Series. This uniquely useful volume brings together information previously scattered widely throughout the literature. The 47 reprinted papers, plus material specially written by the editors, are divided into eight parts that cover hardware, software, input/output devices, and five categories of applications. This 376-page book, sponsored by the IEEE Computer Society, is priced at \$6.50 for the Member Edition (paperbound). A cloth-bound edition is available at \$9.70 to members.

Semi-conductor Memories, edited by D. A. Hodges, of the University of California, and **Power Semiconductor Applications**, Volumes I and II, edited by J. D. Harnden, Jr., and F. B. Golden, of General Electric, are now published. The engineer or student concerned with the application of semiconductor memories in computers or other systems will find a wealth of information in **Semiconductor Memories**. The 31 reprinted articles—drawn from trade magazines, engineering journals and manufacturers' literature—give the reader an appreciation of the characteristics, limitations and trends affecting these memories. This 296-page book, sponsored by the IEEE Computer Society, is priced at \$6 for the Member Edition (paperbound). A cloth-bound edition is available at \$8.95 to members.

Power Semiconductor Applications, Volume I: General Considerations will be a valuable source book and textbook to engineers working in industry, in power, in transportation—anywhere that electric power is used and controlled for myriad purposes. The 67 reprinted papers in this 568-page book emphasise the **applications** of high-power semiconductors rather than the devices themselves. The three parts into which it is divided treat the many aspects of equipment design considerations, inverters and power conditioning for motors. The Member Edition (paperbound) is priced at \$7.50, and the cloth-bound edition at \$11.20 to members.

Power Semiconductor Applications, Volume II: Equipment and Systems also has an application rather than a device emphasis. It complements and supplements the more general treatment of Volume I by giving numerous examples of applications categorised by function and by industry. Depending on the needs of the reader, it may be used alone or in conjunction with Volume I. This 344-page book, which contains 40 reprinted papers, is available in a Member Edition (paperbound) for \$6, and in a cloth-bound edition for \$8.95 to members. Volumes I and II may be purchased as a set at a significant saving. The paperbound set is priced at \$12 for members, and the cloth-bound set is \$18.40 to members.

British Individual Study Courses now Available Through IEEE

In a move designed to strengthen a growing educational bond between the IEEE and its counterpart in Great Britain, the IEE, agreement has been reached to offer specially developed individual study courses of the IEE to the electrical/electronics engineering community in the US by the IEEE. At first four courses will be available: "Field Effect Transistors", by R. King, MA, of Imperial College of Science and Technology; "Pulse Code Modulation", by Prof. K. W. Cattermole, BSc, of the University of Essex; "Digital Instrumentation", by A. R. Owens, MSc, and D. Everett, BSc, of the University College of North Wales, and "Modern Control Theory", by J. M. Layton, BSc, BA, of the University of Birmingham. In April 1973 a fifth course will be available on "Colour Television", by C. R. G. Reed, MA, of the Research Department of the British Broadcasting Corporation.

The courses aim to provide an engineer who qualified between five and 20 years ago with opportunities to bring himself up-to-date in post-graduate specialist subjects in electrical, electronic and control engineering. The courses run continuously, and a student, having registered, may start at any time after the initial commencement date for that course. Each student will be associated with an individual tutor, who will advise and comment on his progress. Each course consists of about 15 lessons and takes roughly six months to complete. The fee for each course to IEEE members will be \$75. Registration forms and additional information on each of the courses are available from the IEEE Educational Services Department (Mrs. E. White) at Headquarters in New York.

IEEE Transactions on Plasma Science

A new quarterly periodical, the "IEEE Transactions on Plasma Science", will appear early in 1973. The Transactions will be concerned with plasma science and engineering, including but not limited to: magnetofluid dynamics and thermionics; plasma dynamics; gaseous electronics and arc technology; controlled thermonuclear fusion; electron, ion and plasma sources; space plasmas; high current relativistic electron beams; laser-plasma interactions; diagnostics; plasma chemistry; and colloidal and solid-state plasmas. Regular papers, shorter notes and letters are invited. Please send enquiries or manuscripts to the Editor: Dr. J. E. Drummond, The Boeing Company, Aerospace Group, MS 88-23, PO Box 3999, Seattle, Washington 98124, USA. IEEE members will find that the combined bill for 1973 dues and fees will offer three options for membership in the reorganised and expanded Nuclear and Plasma Science Group (mentioned earlier)—(a) the new "IEEE Transactions on Plasma Science", or (b) the "IEEE Transactions on Nuclear Science", now in its 19th year, or (c) Both Transactions, at a special combination fee.

REGION 8 NEWS

Eurocon '74

This Conference is scheduled to be held in April 1974 in Amsterdam and will follow the lines of the previous Eurocon '71 (held in Lausanne). The Conference is being organised in conjunction with the Confederation of European Engineering Societies, and we welcome their support in this new type of broad-base conference.

Student Contest

It was decided at the recent Student Activities Committee meeting in Brussels to postpone the Student Paper Contest from 1973 to April 1974 so that it coincides with Eurocon '74 to be held in Amsterdam. More details of this will be provided in the Newsletter in due course.

Airmailing of Spectrum

Regretfully, the experiment to bulk-mail Spectrum will end shortly due to lack of funds. Further proposals for quicker distribution of publications will however be made to the Institute and news of this will be given in the Newsletter. Meanwhile, members' comments on this will be appreciated. It must be realised that air-mailing will involve extra charges.

IEEE Educational Offerings, Seminar-Short Course Materials

The IEEE has in the past organised a series of seminar and short course publications that have been presented exclusively to US members. These courses are now available for sale to Region 8 members, from Office of the Regional Director, 14 Warwick Road, London W5 3XJ, England, at the price of \$10 each. The following short courses are available: Course No. 68-E-1: "Computer Programming for Electrical Engineers"; No. 68-E-2: "Problem-Solving for Electrical Engineers using Time-Shared Computers"; No. 69-E-1: "Fundamentals of Integrated Circuits"; No. 70-E-1: "Monolithic Integrated Circuits"; No. 70-E-4: "Using Quantum Electronics Today"; No. 72-SC-1: "Frequency Synthesis—Techniques and Applications"; No. 72-SC-2: "Computer-Aided Network Analysis and Design"; No. 72-SC-4: "Introduction to Modern Control Logic"; No. 72-SC-5: "Integrated Circuits: A Conceptual Approach". **Career Guidance Material:** "A Career Model for Engineering", "Decisions about Careers—A Guide for those who counsel high school students" (\$1).

Cassette Lectures and Colloquia

In addition to the slide-tape lectures listed in earlier Newsletters, the following cassettes are available from Office of the Regional Director, 14 Warwick Road, London, W5 3XJ, England: **CASSETTES:** 71-CC-05: Upcoming Decade of Automotive Engineering Management Interface; 71-CC-08: Programming Languages for the Layman; **CASSETTE COLLOQUIA** (price for sale to members): IPL-69: Workshop on Computer Languages for Process Control; ATC-70: The Future of Air Traffic Control (\$7); 70-CC-02: Managements Principles for Engineers (\$6); 70-CC-03: Integrated Circuits for Consumers Applications (\$7); 70-CC-04: Principles for Programming Process Computers (\$6); **IEEE SOUNDING:** 70-ES-01: Systems Engineering: Art, Science and Politics (\$7); 70-ES-02: Electronics in Commercial Aviation (\$7); 71-S-06: Solid State Industry—a Technical and Economic Forecast; 71-S-08: Automotive Electronics.

Outstanding Speakers

The following information should be added to that given in previous Newsletters:

E. A. Edelsack, Department of the Navy, Office of Naval Research, Branch Office, London, Keysign House, 429 Oxford Street, London W1R 2EU, England. Lectures: "Superconductivity in the US—A Technology Coming of Age", "Superconducting Electronics Research in the US; Past, Present and Future". The particular emphasis of the talks would depend on the audience background and interests. Lecturer actually in London.

Prof. M. H. Nichols, a specialist in the field of telemetry, has given recently in the USA a course of lectures on "Theory and Application of Telemetry Receiving Station Test Procedures". Prof. Nichols is willing to give this course in Europe, in April 1973, provided that it raises a sufficient interest. Full particulars have already been sent to your Section.

Region 8 G-EMB

At the first meeting of the G-EMB Council, particular attention was given to those problems peculiar to a Region having many languages, differing professional procedures, and a wide variety of literature and organisations allied to medicine or biology. As a part of its policy of promoting the interchange of ideas and experience, the Council will circulate the following as soon as possible: (1) A Region 8 G-EMB membership list; (2) A list of appropriate journals; (3) A list of recommended English/other language dictionaries.

The IEE (UK) and the EEG Society (UK) are to arrange a Conference in Oxford, England, from 28-31 August 1973 on "Electrical Signals from the Brain". The IEEE is a co-sponsoring body.

Negotiations are proceeding for the organisation of a meeting in Holland, in association with the Dutch Society of Biophysics and the IEE (UK). The subject will be "Statistical Descriptions of Electrophysiological Activity", and the date will be Autumn 1973.

The Council will, for an experimental period, assist authors in the preparation of English language papers.

The Council is also most anxious to foster co-operative relations with other societies, and the Secretary would welcome suggestions and comments of any kind in any language. Further information for speakers at either of the two meetings may be obtained from the Secretary, Dr. G. H. Byford, RAF Institute of Aviation Medicine, Farnborough, Hants, England.

1973 IEEE International Symposium on Information Theory

The Symposium is sponsored by the Information Theory Group of the IEEE and will be held from 25-29 June 1973 in Ashkelon, Israel. Research papers on all aspects of information theory are invited from all countries for presentation at the Symposium. In addition to papers in the classical areas of coding theory and systems, statistical detection and estimation theory, communication system analysis and design, statistical data processing and pattern recognition, contributions are especially solicited on newer applications of the basic concepts in biomedical engineering, environmental and urban systems studies, communication nets, the computer-communication interface, and new data-processing devices and techniques.

There will be two types of contributed papers: "long" papers, to be presented in 30 minutes, and "short" papers, to be presented in 15 minutes, and in order to encourage presentation of recent results, there will be special sessions of five-minute presentations, selected on the basis of abstracts only. These may be submitted at any time before the beginning of the meeting.

Symposium Co-Chairmen are: Dr. A. Wyner, Room 2C-357, Bell Laboratories, Murray Hill, New Jersey 07974, USA, and Dr. J. Ziv, Faculty of Electrical Engineering, Technion-Israel Institute of Technology, Haifa, Israel.

1973 Conference on Video and Data Recording

This Conference will be held from 10-12 July 1973 at the University of Birmingham, Birmingham, England. It is sponsored by the Institution of Electronic and Radio Engineers, and organised by the IEE, the Royal Television Society, the IEEE, the Society of Motion Picture and Television Engineers.

After 15 years of video recording there are many new techniques coming into use, such as magnetic bubble stores, while video recording using digital techniques is now a possibility. The aim will be to provide a forum for recent advancements in the following and related fields: Theory of Recording Processes; Magnetic Recording Media, Techniques and Hardware; Coding and Modulation; New Application Areas; New Recording Techniques and Media.

Further information from the Secretary, Organising Committee for the Joint Conference on Video and Data Recording, Institution of Electronic and Radio Engineers, 8 Bedford Square, London WC1B 3RG.

Third European Solid State Device Research Conference

The Third European Conference on Solid State Device Research will be held in Munich from 18-21 September 1973. Sessions are planned with submitted papers on the following topics: New solid state phenomena and devices; Novel device technologies; Improved device design, concerning switching, memory, imaging, optoelectronic, acoustoelectric devices and transducers and high power devices. Included are material problems, surface and interface phenomena, device modelling, computer aided design; excluded are applications and circuitry problems. Papers to be presented at the Conference will be selected by the Program Committee on the basis of 400-word summaries to be submitted before **14 May 1973**, to the Conference Chairman, Dr. H. Weiss, Siemens AG, Research Laboratories, 8000 Munchen 80, Balanstrasse 73, Germany. The Conference language is English. Invited papers will be published in Conference Proceedings. Further information can be obtained from Dr. F. Coers, German Section IEEE, 6 Frankfurt/Main 70, Stresemann Allee 21, VDE-Haus, Germany, or Dr. K. H. Riewe, DPG, 645 Hanau, Heraeusstrasse 9, Germany.

1971 Symposium on Electrical Network Theory

A few copies are still available of the Digest of Technical Papers (IEEE Catalogue No. 71C 53-CT) of the IEEE International Symposium on Electrical Network Theory, which was held at The City University, London, in September 1971. They may be ordered from Dr. A. C. Davies, NET 71, Department of Electrical and Electronic Engineering, The City University, St. John Street, London EC1V 4PB, England. The cost per copy is £1.65 for IEEE members resident in Region 8 and £3.30 for non-members.

NEWS OF THE SECTIONS

DENMARK SECTION

Visiting Professor J. L. Massey (IEEE Fellow) from the University of Notre Dame, presented on 31 May the paper "Coding for Everyday Channels", when he gave a simple and unified treatment to the large number of error-correction schemes for fading channels.

On 6 September the meeting was focused on light-emitting diodes, and Dr. O. Leistiko Jr., Laboratory for Semiconductor Devices, DTH, presented a paper surveying electroluminescence in solids with particular emphasis on the fabrication of LED.

A paper concerning bio-acoustics was presented on 19 October by O. J. Pedersen, MSc, the Acoustic Laboratory, DTH. For designing communication equipment a better knowledge of the nature of speech and its understanding is required. A survey of the latest research results was given.

Approximation of frequency-analysis by optimising was the content of a lecture given on 22 November by H. Gaunholt, MSc, Institute of Teletechnique, DTH. The use of error-functions and the Fletcher-Powell algorithm was illustrated with computer print-outs.

The Annual Meeting of the Section took place on 12 December and will be mentioned in the next Newsletter.

GERMANY (WEST) SECTION

The newly elected officers for 1973-75 are:

Chairman: Prof. W. Kleen, München; Vice-Chairman: Prof. K. Fränz, Ulm; Secretary: Dr. F. Coërs, Frankfurt; Treasurer: Dr. H. Rüdhardt, München; First Assessor: Dr. H. J. Schmitt, Hamburg; Second Assessor: Dr. Veith, München.

ISRAEL SECTION

The Eighth Convention of Electrical and Electronics Engineers in Israel, organised by the Israel Section of the IEEE, will be held in Tel-Aviv from 30 April-3 May 1973. This bi-annual Convention is the central professional event of electrical and electronics engineers in Israel and is accompanied by an exhibition, demonstrating latest achievements in the field of electrical and electronic equipment in Israel and abroad. The General Chairman is Dr. I. Ben Artzi (formerly Dr. S. Landesman), and the Program Chairman is Prof. I. Cederbaum, Technion Israel Institute of Technology. About 1,500 engineers and 100 exhibitors are expected to participate.

Electrical and electronics engineers are invited to submit original papers to the Convention and a 400-word summary of the paper, in triplicate, should be sent to the Technical Committee, Eighth Convention of Electrical and Electronic Engineers, POB 29234, Tel-Aviv, Israel, as soon as possible. All accepted papers will be included in the Convention Proceedings, which will be published before the Conference. For further information kindly apply to the Technical Committee.

A new IEEE Joint Chapter has been formed. It is for three Groups: (1) G-3: Antennas and Propagation, (2) G-15: Electron Devices, (3) G-17: Microwave Theory and Techniques. The first Chairman of the Chapter is Mr. A. Madjar, PO Box 1, Kiryat Motzkin, Israel. The main purpose of the Chapter is to organise and conduct professional activity in the three above-mentioned fields of interest. Electrical engineers of other fields of interest are encouraged to form another Chapter following our example and Mr. Madjar is willing to help anyone who wishes to act in this direction. The success of the new Chapter depends primarily on the co-operation and involvement of all the engineers sharing our three fields of interest and anyone who has any constructive suggestion or wishes to express his opinion is encouraged to write to the Chairman.

SPAIN SECTION

It is our sad duty to report the premature and sudden death of our Chairman, the founder of the Spanish Section, Prof. Rogelio Segovia, on 5 September. His death has had great impact not

only on the Spanish Section of the IEEE, but on his many pupils, and on official and private institutions, where he was well-known for his outstanding scientific and human qualities. His death is a great loss to the electrical engineering community.

SWITZERLAND SECTION

The Switzerland Section has submitted a petition, which has been approved by the Director of Region 8, requesting approval to establish a Joint Chapter consisting of G-1: Audio and Electroacoustics; G-19: Communications; S-16: Computers. The petition has been checked and found to contain the required number of signatures of active Section members enrolled in the respective Groups and Societies. As of 31 August 1972 the membership in the Section was:

	Students	Other Grades	Total
G-1	11	33	44
G-19	15	68	83
S-16	14	63	77
	40	164	204

UNITED KINGDOM AND REPUBLIC OF IRELAND SECTION

Annual General Meeting

The Section AGM will be held in the IEE Building, London, at 6 p.m., on 19 March 1973. To provide an opportunity for members to meet, the Executive Committee invite all those attending to stay on to a buffet supper after the meeting.

Further details enclosed.

Outstanding Speakers Lectures

Arrangements for lectures within the Section by speakers from other Sections are now in the hands of Lieutenant Colonel L. F. Ball, MSc, CEng, 128 Mildred Avenue, West Watford, Herts. WD1 7DX. Those interested in giving or receiving talks are asked to get in touch with him.

Section Student Adviser

Prof. C. W. Turner, University of London King's College, Strand, London WC2R 2LS, is now Section Student Adviser in succession to Prof. Ellison.

IEEE Travelling Scholarship

An IEEE travelling scholarship of £300 is offered for visit(s) to foreign electrical or electronic research or manufacturing establishments by a postgraduate student. The purpose is to promote an exchange of research and technological ideas and to foster a closer relationship between young engineers in different countries. Candidates were requested to submit a programme for their visit(s) by 31 December 1972, and the award will be made to the candidate whose programme is judged most likely to promote the objects of the scholarship. The scholarship is financed by the UK&RI Section, which is acting in collaboration with the IEE and the Institution of Electronic and Radio Engineers. Entrants must be Student or Graduate Members of one of these three Institutions.

Election of Officers

The officers of the Section taking over from 1 January are Chairman, Mr. G. G. Gouriet; Vice-Chairmen, Mr. C. C. Barnes and Mr. R. H. Davies; Treasurer, Dr. R. L. Smith-Rose.

Honour for new Chairman

All members offer their congratulations to Mr. G. G. Gouriet on the award of the CBE (Commander of the British Empire) which was included in the New Year Honours List. Mr. Gouriet is Chief Engineer Research and Development of the British Broadcasting Corporation and as this issue goes to press is appearing on BBC television presenting the annual series of Christmas lectures at the Royal Institution in London under the title of "Ripples in the Ether".

MESSAGE FROM THE EDITOR

The Regional Director has requested that a section of the Newsletter be devoted to "Letters to the Editor" and this is to invite short letters about future developments in the Region to be sent to me. While every effort will be made to publish all letters received members will I am sure appreciate that in view of space limitations this may not always be possible.

W. H. Devenish

CONFERENCE INSERTS MAILED WITH THE NEWSLETTER

This service is available for all professional meetings contributing to the learned society programme of the IEEE. The charge helps towards the cost of publishing the Newsletter and for an insert such as is sent with this issue is approximately \$165 for a circulation of 6,000 and lower in proportion for one Section.

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