# 





THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

Editor: Mr W.H.Devenish, The Electrical Research Association Ltd., Cleeve Road, Leatherhead, Surrey, England KT22 7SA. Tel. Leatherhead 74151

Telex 264045

Regional Director: Prof. F. Louis Stumpers

No. 32

OCTOBER 1975

## **USE YOUR VOTE**

Members will by now have received the ballot forms for the election of the President and Vice-President of the Institute for 1976.

It is important that all members in Region 8 cast their vote and before doing so that they carefully consider the statements made by the two Presidential candidates and the record of their IEEE activities. (Which for convenience are reproduced below.)

Your vote must be received in New York by NOON ON NOVEMBER 3, 1975. Make sure that you sign the pink envelope and that it is sent by airmail with the correct postage. If understamped it will travel by surface mail and arrive too late to count.



JOSEPH K. DILLARD Manager, Advanced Systems Technology Westinghouse Electric Corporation East Pittsburgh, Pennsylvania

(Nominated for President 1976 by the Board of Directors.)

The main strength of the IEEE has been and continues to be its technical excellence. I would not do anything to change this, and I will measure all decisions by their effect on preserving and enhancing this basic strength.

Nevertheless, we must move more rapidly in meeting the professional needs of engineers. One of my main objectives will be the unifying of the engineering professional societies to permit professional activities to be handled by a single umbrella organization. This does not need to change the IEEE as we presently know it in the technical area. But it could give the engineer the clout he deserves on the economic and political scene.

I am opposed to IEEE engaging in collective bargaining, or taking adversary positions between employer and employee. I do favor actions that will make engineering a true profession. This means we must move in the direction of admissions quotas, compulsory state registration, internship, and direct control over the accreditation of engineering schools. In short, we need to emulate the medical and legal professions.

#### IEEE Activities

(M'50-SM'53-F'62) OFFICES: Board of Directors, 1970-75; Executive Vice President, 1975; Vice President-Technical Activities, 1972-73; Treasurer, 1974; Division II Director, 1970-71. COMMITTEES: Audit, 1974; Executive, 1972-75; Finance, 1972-75, Chairman, 1974; Finance Advisory, Chairman, 1974; Founders Medal, 1971-72; Industrial Power Rectifiers, 1952-61, Secretary, 1953-55, Vice Chairman, 1955-57, Chairman, 1957-59; Industry Division, 1957-59; Life Member Fund, 1974; Nominations and Appointments, 1971; Prize Awards, 1956-57; Standards, Liaison Representative, 1964-66; Systems Engineering, 1955-56; Technical Activities Board, 1970-73, Chairman, 1972-73; TAB Operating Committee, 1970-73, Chairman, 1972-73; Transmission and Distribution, 1953-68, Vice Chairman, 1964-66, Chairman, 1966-68; 1972 Chairman of Sub-committee of Board of Directors responsible



IRWIN FEERST Massapequa Park, New York

(Nominated for President 1976 by Petition.)

Changes are imperative to make IEEE responsive to the needs of the American Working EE. To this end, I speak before IEEE Sections and write and publish the newsletter of the Committee of Concerned EEs. Scan the table and ask: Do these recommendations seem reasonable? Desirable? Feasible? Can you imagine the present hierarchy implementing them with the required urgency?

Item	Comments	Date Proposed	IEEE Action	
Legal Defense Fund to assist EEs fired because of age discrimina- tion.	American Chemical Society (ACS) does this.	2/75	Nothing	
Verify accuracy of past predictions of engineering "shortages."	IEEE cannot be- come the mar- keting arm of engineering educators.	7/73	Nothing	
File an amicus curiae brief in the case of the engineers fired by BART.	A professional's highest loyalty is to public safety.	8/74	Done	
A Spectrum-pub- lished list of employers who treat EEs unpro- fessionally.	Amer. Ass'n. of Univ. Professors and ACS do this.	6/71	Nothing	

for framing the IEEE Constitutional Amendments to include professional activities. REGIONS: District 2, Prize Papers Committee, Chairman, 1955-56. SECTIONS: Pittsburgh, Program Committee, 1952-56, Director, 1956-58, 1964-66. GROUPS/SOCIETIES: Power Engineering: Council, 1966-68; Power Apparatus and Systems, Guest Editor, June 1966 Special Issue; Transactions Editorial Committee, 1966-68. CONFERENCES: Special Technical Conference on EHV Transmission, National Executive Chairman, 1965, Special Technical Conference on Underground Distribution, Advisor, 1967-68. REPRESENTATIVE: International Electrotechnical Commission, Executive Committee, 1972-75.

"One EE—one vote."

Six U.S. Regional Directors represent 148 200 (dues = \$35); four foreign ones 24 200 (dues = \$30). 11/73 Nothing

IEEE Activities

(S'48-A'51-M'57-SM'57) Member, Professional Activities Committee, Lond Island Section.

# **MEMBERSHIP DEVELOPMENT IN REGION 8**

Are you becoming obsolete? How long will it take for an engineer or scientist to become outdated if he or she does not keep up with the latest technical advances? Would you believe five years? That is right, five years at the present rate of technological progress. IEEE offers several ways to combat this problem, among them are publications, technical meetings and educational aids. Through membership in IEEE and in any of its 31 technical Groups or Societies, you get the best of all these methods, especially tailored to your particular field.

The greater the participation by engineers and scientists in furthering the objectives of the IEEE, the broader the exchange among these having these mutual interests. The larger the membership in IEEE Region 8, the better we may serve your special interests. This is the season IEEE is always concerned with extending and retaining its membership even though we are already the largest technical professional engineering society in the world.

By reading this you are most likely an IEEE member, but there are a large number of electrical and electronics engineers in Region 8 who are not members, and who would greatly benefit from membership. The IEEE membership in Region 8 has gradually increased during the years as shown in the table below, which also includes the figures for Students, Elections to Membership, Members in Dues Arrears and Members Resigned for end 1974 and end of July 1975. The Region 8 Membership target for 1975 has been set at 8,600, and that for each section is given in the last column. Two Sections, Finland and Yugoslavia have already reached their targets. How is your Section doing, will it be able to achieve success before the end of the year? In order to help, I have instituted mailing of IEEE information to non-IEEE members participating in IEEE sponsored conferences in

Region 8 and several Sections will be instituting membership drives and also contacting those in dues arrears or who have resigned. However, it will not be possible to reach our target without the help of all IEEE members in Region 8. I therefore request that all of you help in one or more of the following ways:

- If you are a member of the Section Programme Committee, arrange for an IEEE information table at each meeting, and request that the Section Membership Development Committee follow up with any non-IEEE members attending.
- If you are a member of a Conference Programme Committee, arrange for an IEEE information table close to the registration desk, and send a list of names and addresses of participants to me.
- If you are an IEEE member in a country without a Section/Group or Society Chapter/Student Branch, discuss this with your colleagues and request information for forming such a Section/ Chapter/Student Branch.
- 4, Offer your services to the Membership Development Committee.
- Bring the benefits of IEEE membership to the attention of your colleagues and urge them to join. It should be the aim of each IEEE member in Region 8 to introduce a new member in 1975.

If I can help you in any way, please do not hesitate to contact me. Thank you for your co-operation.

Dr. Andreas Rannestad, Region 8 Member, IEEE Membership Development Committee.

Address: 110 Zavelstraat, B-1980 Sterrebeek, Belgium. Telephone: Private (02) 731.86.96. Office (02) 241.00.40. Ext. 2253.

SECTION	TOTAL MEMBERSHIP			STUDENTS		NEW ELECTIONS		DUES ARREARS		RESIGNATIONS		Membership	
SECTION	1972	1973	1974	1975	1974	1975	1974	1975	1974	1975	1974	1975	Target 1975
BENELUX	630	755	750	740	190	191	81	110	87	125	12	13	938
DENMARK	230	205	198	197	23	24	23	9	21	8	7	2	248
EGYPT	134	177	196	124	102	48	87	12	67	93	0	0	245
FINLAND	96	96	95	125	20	45	7	38	6	13	2	0	119
FRANCE	617	677	729	688	113	109	126	110	90	147	11	7	912
GERMANY (FR)	357	386	417	439	9	7	32	25	13	13	7	1	517
GREECE	96	92	127	130	22	7	28	10	6	11	0	1	159
IRAN	99	120	151	151	15	14	23	17	15	32	0	2	189
ISRAEL	282	312	347	348	43	54	57	33	34	35	0	2	434
M.& S. ITALY	242	221	208	208	33	44	24	22	28	21	6	0	260
N. ITALY	452	535	588	568	177	184	143	78	85	89	14	14	735
NORWAY	95	94	96	98	1	1	6	0	5	4	2	1	120
POLAND	9	29	35	40	1	0	4	2	0	0	0	0	44
SPAIN	192	219	253	286	45	67	48	38	24	32	0	1	317
SWEDEN	404	423	426	404	120	93	37	22	32	38	3	2	533
SWITZERLAND	546	557	566	594	50	81	50	56	12	27	2	5	709
UKRI	1093	1084	1153	1144	82	112	123	100	66	79	21	15	1450
YUGOSLAVIA	30	47	42	56	5	6	2	16	6	1	0	0	53
OTHERS	350	419	486	499	40	57	76	95	55	77	0	5	618
REGION 8	5954	6448	6863	6839	1091	1144	977	793	652	845	89	66	8600

## **INSTITUTE NEWS**

#### Electro, a New IEEE Convention

A new IEEE Convention and product exposition will debut May 11-13, 1976 in Boston, following the merger this year of IEEE INTERCON and the North-east Electronics Research and Engineering Meeting (NEREM). Already at work is Technical Program Chairman Ralph Anderson of General Radio, Cambridge, Ma. The ELECTRO Board plans to meet the latter part of June. A Call for Sessions will be issued late Summer. A heavy programme of activities is being planned for attendees, capitalizing on the Bicentennial and the 100th anniversary of the telephone. Appointed on-the-scene Eastern ELECTRO Operations Manager is Ernest Witschi, 31 Channing St, Newton, Ma. 02158.

#### IEEE Membership Directory 1975

This over 800-page Directory lists all IEEE members alphabetically, except students, with membership grade, business affiliation where available, and address. Also, IEEE Officers and Directors, 1963-75; IEEE Award Winners, 1909-1975; Fellows of the IEEE with year and citation, plus a new Fellow Biography Section. Member price \$12.00, nonmember price \$35.00. Publication date: Fall 1975. Order from IEEE Service Centre, 445 Hoes Lane, Piscataway, N.J. 08854. (Payment must accompany order. Please make cheque payable to IEEE).

**Publishing Opportunity**—all types of student-authored papers wanted!

Arrangements have been made by the Student Activities Committee with a number of IEEE's 31 Groups and Societies to publish in their

Newsletters student-authored papers (or condensed versions thereof) which were presented in an IEEE Student Paper Contest at a Branch, Section, Area, or Regional level. Here is how it works:

- Send a reproducible copy of your paper to: IEEE, Manager, Student Services, 345 East 47th Street, New York, New York 10017.
- On a separate sheet accompanying your paper, list your name, address, IEEE membership number, highest degree earned, school you are attending, and graduation date. Include a statement of the Contests in which the paper was entered and how it fared. (This information will be considered proprietary and will not be forwarded or published). Also, provide a biography and photograph of yourself.
- When received, papers will be classified to determine their areas or areas of applicability and will be forwarded to the appropriate Group or Society, which has expressed interest in receiving student papers, for publication consideration. Final decisions regarding publication will be made by the IEEE Group or Society.
- Papers will be acknowledged when received and authors will be notified to which Group or Society the paper is sent.

Here is a great opportunity to have your paper disseminated and discussed in the technical forum to which it applies and to receive the acclaim of a published author. Don't wait . . . . submit your paper today!

## **REGION 8 NEWS**

#### International Communication Award

Leslie Herbert Bedford was honoured at the International Conference on Communications held in San Francisco, California. He was presented with the IEEE Field Award in International Communication in honour of Hernand and Sosthenes Behn, an Institute Award which recognizes outstanding achievement in the field of international communication.

The presentation was made to Mr. Bedford "For outstanding pioneering and development work in the fields of telecommunications and radar."

Just prior to World War II, Mr. Bedford was head of the department at A. C. Cossor Ltd., engaged in the development of radar receiver projects (gun-laying) during which time he produced an elevation finding device known as the "Bedford attachment." He later became

Director of Research at Cossors, all activities being Government sponsored and mostly concerned with radar.

In 1948 Mr. Bedford became Director of Engineering at the British Aircraft Corporation (GW) Ltd., where he initiated the ground to air missile system known as Thunderbird and held engineering responsibility for all projects. Under an inter-company agreement, Mr. Bedford worked with the design team at Hughes Aircraft during the competitive states of Intelsat IV, concentrating on the communications aspects. He retired in 1968.

Mr. Bedford was made an Officer of the Order of the British Empire (OBE) in 1942 and a Commander of the Order (CBE) in 1956. He is a Fellow of the Institution of Electrical Engineers (London), the Institution of Electronic and Radio Engineers, the City and Guilds of London Institute and the Royal Aeronautical Society.

## **MEETINGS IN REGION 8**

#### International Symposium on Information Theory

The Symposium will be held at the Ronneby Brunn, Ronneby, Sweden, June 21-24, 1976.

Areas to be covered include: Coding Theory; Communications Systems; Computational Complexity; Computer Communications; Detection and Estimation; Pattern Recognition; Stochastic Processes; Shannon Theory. Papers are invited in these and related fields. As in the past there will be two kinds of contributed papers: the "long" papers of thirty minutes duration and the "short" papers of 15 minutes duration. The "long" papers will be accepted on the basis of the complete manuscript. The "short" papers will be accepted on the basis of a 500 word summary. Both the complete manuscripts and the summaries should be submitted together with an abstract suitable for inclusion in the Symposium programme. Manuscripts submitted for consideration as "long" papers that cannot be accommodated in the programme in this category also will be considered in the "short" paper category unless the author instructs otherwise. Authors should indicate the area of their paper for ease in processing.

Deadline for Papers: The deadline for the submission of all manuscripts, summaries and abstracts is November 5, 1975. Acceptances and rejections will be made by February 1, 1976. Every effort will be made to give early decisions on papers submitted early. All manuscripts should be sent to: Jack Salz, Bell Laboratories, Room 1G-509, Holmdel, New Jersey 07733, U.S.A.

General enquiries may be sent to: Lars H. Zetterberg, Royal Institute of Technology, Electrical Engineering Department, Stockholm 70, Sweden.

### International Conference on Gas Discharges

Organized by the Science, Education and Management Division of the Institution of Electrical Engineers in association with the Institute of

Electrical and Electronics Engineers (United Kingdom and Republic of Ireland Section), the Institute of Physics, the Institution of Electronic and Radio Engineers and the Welding Institute. The Conference will be held at University College of Swansea, 7-9 September, 1976, and will emphasize the engineering applications of gas discharges and relevant fundamental processes.

Applications and fundamentals in any field will be considered **except** discharge chemistry, MHD generation and fusion. It is intended to arrange a number of review lectures on various topics. Those intending to offer contributions should submit 25 copies of a synopsis (approximately 250 words) to the Conference Department on or before 1 January, 1976.

The Organizing Committee recommend that where authors from the same organization intend to make submissions, they should cooperate and send joint offers, as the number of contributions which can be included in the programme is limited. The Committee also request that authors indicate to which subject area their material is appropriate; this will assist in the grouping of sessions.

The authors whose synopses are selected for development into full contributions for further consideration will be required to provide a typescript of not more than 3,200 words of text, or correspondingly less if illustrations are included, by 1 April, 1976. Shorter contributions will also be welcome for consideration.

Registration forms and further programme details will be made available a few months before the event and will be sent to all who apply to: IEE Conference Department, Savoy Place, London, WC2R 0BL.

#### International Broadcasting Convention

Sponsored by Electronic Engineering Association; Institution of Electrical Engineers; Institute of Electrical and Electronics Engineers; Institution of Electronic and Radio Engineers; Royal Television

Society: Society of Motion Picture and Television Engineers. The Convention will be held in London, 20-24 September, 1976.

The Convention Publication will contain the contributions presented at the technical sessions and will be distributed to delegates in advance, as it facilitates discussion at the sessions. For this reason, those wishing to offer a contribution should submit a synopsis of 250 words on or before 3 November, 1975. The Technical Programme Committee will make a selection from the submissions for the technical sessions and the authors will be invited to submit for assessment a full typescript of not more than 3,200 words (or less if illustrations are included) by early March 1976. Shorter contributions will be equally welcome.

The interest in new information services and display using television receivers and systems will be featured in a number of papers. Additionally, papers are invited on topics broadly outlined as follows: automation in broadcasting; electronic journalism; engineering, training and management; future maintenance philosophy; operational experience of satellite broadcasting and distribution systems; propagation and service planning; receivers and domestic replay; recording, storage and replay; signal sources; sound systems, stereophonic and quadraphonic; technical aspects of international programme exchange; transmitters, transposers and aerials.

At the sessions, authors will personally present their material and will be encouraged to illustrate their presentations with demonstrations, by using relevant audio and visual colour media, such as films, videotapes, slides etc.

The exhibition associated with IBC ranks as one of the most important in the world.

Further information and booking forms from: The Secretariat, International Broadcasting Convention, IEE, Savoy Place, London,

#### International Conference on Software Engineering for Telecommunication Switching Systems

Region 8 has now joined with the Electronics Division of the Institution of Electrical Engineers and the Institution of Electronic and Radio Engineers and the Osterreichischer Verband für Elektrotechnik (OVE) in organizing this Conference in Salzburg, Austria, 18-21 February,

The aim of the Conference is to promote discussion and allow for the exchange of experience and ideas on design, implementation, operation and training relating to software engineering for telecommunication switching systems.

The programme will be limited to a maximum of thirty papers so that adequate discussion can result. Emphasis will be on achievements of technical interest and advanced ideas rather than on reports of a routine nature. In addition to the formal sessions there will be opportunities for informal group discussion.

The programme has sessions titled: System specification; Automatic programme generation; Software management; Software production; Programming languages; Programme proving; Systems design; Practical aspects; Testing and evaluation I and II.

# **NEWS OF THE SECTIONS**

#### Germany Section

On June 10, 1975 Professor Dr-Ing. h.c. Wilhelm Runge, fellow and life member of the IEEE celebrated his 80th birthday. During his last activities Professor Runge was director of the Research Laboratories of AEG-Telefunken, West Germany. He is one of the pioneers in communications especially in radar development in Germany during his activities in his company, which began around 50 years ago.

#### North Italy Section

The following list shows the names and addresses of the newly elected officers and of the Committee Chairmen of the North Italy Section.

Prof. Ing. Giuseppe Biorci Direttore dell'Istituto di Elettrotecnica dell'Università,

Viale Cambiaso, 6-16145 Genova.

Vice-Chairman:

Prof. Ing. Ezio Volta

Direttore del Laboratorio di Automazione,

Navale del CNR.

Viale Cambiaso, 6-16145 Genova.

Secretary-Treasurer:

Prof. Ing. Paola Antognetti Istituto di Elettrotecnica dell'Università, Viale Cambiaso, 6-16145 Genova.

Prof. Ing. Gianfranco Cariolaro

Membership Committee:

Istituto di Elettrotecnica, Via Gradenigo, 6/a-Padova

Student **Activity Committee:**  Prof. Ing. Leonardo Calandrino Istituto di Elettronica, Viale Risorgimento, 2-Bologna.

Seminar and Publications Committee:

Prof. Ing. Luciano Stanchi CCR-EURATOM-Ispra (Varese).

**Publicity Committee:** 

Prof. Ing. Vito Svelto Istituto di Elettronica dell'Università,

Pavia.

Development and

Award Committee:

Prof. Ing. Arrigo Frisiani Istituto di Elettrotecnica, Viale Cambiaso, 6-16145 Genova.

#### Poland Section

The following list shows the names and addresses of the Officers of the Section:

Chairman:

Prof. Adam K. Smolinski Polna 54 M. 48, 00644 Warszawa.

Vice-Chairman:

Prof. Andrzej H. Wojnar Sady Zoliborskie 17 M. 24,

01772 Warszawa.

Secretary-Treasurer:

Dr. Zbigniew H. Czyz Bialowieska 19 M. 35, 04063 Warszawa.

#### United Kingdom and Republic of Ireland Section

At the Annual General Meeting at the beginning of the year, it was agreed that meetings should be organized at intervals throughout the year, with perhaps some being held outside London. The first meeting was held at very short notice at King's College, London, when Professor T. E. Everhart spoke on trends in electrical engineering education in the U.S.A.

The second meeting will be held on Tuesday 18th November, 1975 at 6p.m. at Imperial College, Exhibition Road, South Kensington (Department of Electrical Engineering), when Dr. J. D. Wright, Strategic Planning Officer, Research Dept. CEGB will open a discussion on "Can novel energy sources fill the energy gap?". Tea will be available from 5.30 p.m. and the meeting will close at about 7.30 p.m., after which a cash bar will be open.

PL	BLISHED QUARTERLY	JAN.	APRIL	JULY	OCTOBER		
S	News to Editor	Dec. 7	Mar. 7	June 7	Sept. 7		
LINE	Advertisements to Sweatman & Fordham	Dec. 15	Mar. 15	June 15	Sept. 15		
DEAD	Delivery inserts to County Secretarial Services	Dec 15	Mar 15	June 15	Sept 15		

## ADVERTISING RATES

\$250 per ½ page. \$450 per full page. \$125 per 1/4 page. Special Section for Appointments/Professional Services/Publications - \$75 per 1/8 page to include setting. Inserts supplied by advertiser — charges based on page rate.

CONFERENCE INSERT CHARGES. Service available for professional meetings contributing to the IEEE learned society programme. For full Region 8 coverage copies required 7,500. Size A5 max or folded to A5 (148mm x 210mm). Weight <21g(%oz.) \$550. Weight < 50g (1%oz.) \$650. Lower charges for part region or section coverage. Additional charge if collation required.

Enquiries to County Secretarial Services, P.O. Box 7, Guildford, Surrey, England GU2 5HH. Telephone Guildford (0483) 77777.

Cable address Cosec Guildford. Delivery address for inserts 8 The Flower Walk, Guildford, Surrey GU2 5HH.