

IEEE Region 8 newsletter



NEXT ISSUE – MAY

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THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
INCORPORATED

Editor: Dr. G. H. Byford, "Sandstones", Crooksbury Road,
Runfold, Farnham, Surrey, England. Phone: International +44 2518 2625

National 02518 2625

Regional Director: Basil W. Osborne
British Cable Services Ltd., 187 Coombe Lane West
Kingston-upon-Thames, Surrey, England KT2 7DJ

No. 73 FEBRUARY 1986

EUROCON 86

*Advanced Technologies and Processes
in Communication & Power Systems*

EVOLUTION

*Technology and Electronic Components
Architectures and Machines for
Information Processing*

Ten Tutorials

Seventy Papers

Posters

Invited Lectures

Information from:

Conference Secretariat, 11, rue Hamelin, F-75783, Paris CEDEX 16, France

Telephone: 33(1) 45 03 14 27. Telex: 611045 F SYCEL

VITAL STATISTICS

The following information was extracted from the "Annual Report of the Secretary" published in February 1985; it would be reasonable to assume that the figures should be increased by 5% for 1986. They show the number of Society members in each of the Region's geographical divisions and may be of use to those planning meetings or publicity.

REGION 8 SECTION	Total Society Members	Total Affiliates	ASSP 1	BT 2	AP 3	CAS 4	NPS 5	VT 6	R 7	CE 8	IM 9	AES 10	IT 12	IE 13	EM 14	ED 15	COMP 16
Austria	276	25	13	3	5	23	3	2	8	4	10	6	9	6	7	7	50
Benelux	2344	99	163	21	68*	163	45	17	32	49	66	47	82	42	48	119	501
Denmark	685	21	47	10	29	50	8	7	15	14	26	13	19	13	22	22	120
East Africa	166	3	3	3	6	9	0	2	1	9	1	0	3	6	12	1	25
Egypt	491	2	23	4	18	28	5	1	4	11	10	9	8	15	13	12	91*
Finland	603	20	48	6	20	36	9	3	8	16	11	6	12	9	23	10	153
France	1923	64	127*	21	51	98	39	16	47	30	57	79	72	37	34	74	280*
Germany (West)	2388	300	149	21	70	170	17	27	48	35	63	58	76	39	38	116	530
Greece	673	14	39	7	12	36	4	3	12	9	12	17	22	35	22	7	138
Iran	345	4	13	9	13	28	2	2	3	17	16	10	7	21	4	9	50
Israel	1095	87	73	5	36*	43	9	5	25	19	22	45*	56	26	26*	36*	236*
Middle & South Italy	1079	28	52	11	52*	66	12	10	22	17	31	44	48	28	21	43	154
Nigeria	296	3	3	8	6	13	2	0	5	10	13	3	3	14	22	5	32
North Italy	1509	67	71	16	40	85	19	19	31	26	50	20	44	43	28	46	343
Norway	537	34	31	2	15	26	3	3	21	5	17	13	17	11	12	13	108
Poland	78	3	2	0	1	5	0	0	1	0	2	3	1	3	2	4	10
Portugal	286	10	24	1	5	17	3	1	2	1	10	5	6	14	9	7	62
Saudi Arabia	874	17	18	14	16	23	9	9	9	21	27	13	10	19	65	8	154
South Africa	349	14	19	1	14	17	0	3	2	5	15	11	9	15	18	6	59
Spain	2004	29	105*	27	63	105	22	18	40	33	74	46*	53	80	46	48	335*
Sweden	1504	47	91	10	45*	85	20	37	36	19	57	44	56	20	21	50	263
Switzerland	1923	70	89*	17	39*	120*	16	23	33	34	63	30	65	51	53	82*	395*
UK & Rep. Ireland	3227	230	190	41	99	199*	26	38	52	51	64	74	56	61	67	128	729*
Yugoslavia	458	11	22	7	8	27	6	2	15	8	21	7	14	19	7	17	74
Members outside Sections	1398	32	60	14	44	61	9	9	15	30	45	20	22	44	66	27	311
TOTALS	26511	1234	1475	279	775	1533	288	257	487	473	783	623	770	671	677	897	5203

REGION 8 SECTION	MTT 17	EMB 18	COM 19	SU 20	CHMT 21	OE 22	CS 23	ED 25	PC 26	EMC 27	SMC 28	GBS 29	SIT 30	PE 31	IE 32	MAG 33	IA 34	QEA 36
Austria	10	7	20	8	3	1	14	3	6	3	5	1*	3	16	6	5	4	5
Benelux	60*	86	190	32	34	17	112	31	19	19	68	19*	27	53	14	32	41	27
Denmark	27	29	55	10	14	14	26	8	11	11	17	8*	6	13	6	5	8	11
East Africa	4	3	17	0	1	1	9	2	4	1	2	0	1	27	1	3	9	0
Egypt	21	10	38	2	1	5	38	10	4	5	8	3	4	47	15	5	16	7
Finland	27	15	42	6	13	7	35	5	5	4	24	8	6	11	7	3	10	5
France	80	37	146*	38	48	17	94	25	14	32	47	22*	20	84*	26	47	41	43
Germany (West)	106*	46	198	30	27	18	92	20	20	19	59	28*	27	87	19	41	37	57
Greece	17	9	66	0	1	6	51	9	2	2	19	11*	9	48*	0	9	29	10
Iran	12	16	22	4	4	5	18	5	2	3	8	3	1	18	0	3	12	5
Israel	47*	25	112*	12	13	3	50	9	20	13	27	9	11	13*	7	17	21	24
Middle & South Italy	60*	34	92	17	17	12	53	14	9	16	30	17*	5	27	8	13	24	20
Nigeria	2	2	27	2	3	3	16	7	7	0	4	0	10	48	4	0	20	2
North Italy	42	47	123	18	31	11	75	11	13	17	36	12*	14	64	18	22	50	24
Norway	14	10	53	11	10	19	31	3	3	4	18	10*	4	23	7	4	9	7
Poland	3	0	5	1	3	0	7	1	0	3	1	0	1	10	2	1	4	2
Portugal	7	9	23	2	2	3	14	7	5	0	5	3*	4	16	1	1	15	2
Saudi Arabia	16	20	68	7	4	13	31	17	23	7	4	5	19	158	11	3	51	2
South Africa	15	4	31	2	0	2	18	11	2	3	6	4	6	25	0	3	21	2
Spain	77	83	123*	18	24	10	98	73	25	27	81	18*	27	79	20	28	78	20
Sweden	58*	52	106	17	25	16	61	21	17	30	38	19*	15	72	22	19	32	30
Switzerland	58*	44	188*	30	56	12	58	19	24	42	28	15*	42*	87	16	22	34	38
UK & Rep. Ireland	142	48	302	35	34	40	139*	30*	44*	19	52	30*	37	191	24	38	93	54
Yugoslavia	18	8	32	5	10	2	31	10	2	7	14	2	3	25	3	8	20	4
Members outside Sections	47	31	105	10	13	21	68	23	10	9	16	14	14	156	11	13	52	8
TOTALS	970	675	2184	317	391	258	1239	374	291	296	617	261	316	1398	248	345	731	409

Key to abbreviations

ASSP	Acoustics, Speech and Signal Processing	COM	Communications
AP	Antennas and Propagation	SU	Sound & Ultrasonics
BT	Broadcasting Technology	CHMT	Components, Hybrids & Manufacturing Technology
CAS	Circuits and Systems	OE	Ocean Engineering
NPS	Nuclear and Plasma Sciences	CS	Control Systems
VT	Vehicular Technology	ED	Education
R	Reliability	PC	Professional Communications
CE	Consumer Electronics	EMC	Electromagnetic Compatibility
IM	Instrumentation & Measurement	SMC	Systems, Man & Cybernetics
AES	Aerospace & Electronic Systems	GRS	Geoscience & Remote Sensing
IT	Information Theory	SIT	Social Implications of Technology
IE	Industrial Electronics	PE	Power Engineering
EM	Engineering Management	IE	Industrial Electronics
ED	Education	MAG	Magnetics
COMP	Computers	IA	Industry Applications
MTT	Microwave Theory & Techniques	QEA	Quantum Electronics & Applications
EMB	Engineering in Medicine & Biology		

Regional Conferences

VLSI and computers

CompEuro 87

You may still submit papers for this Conference; submission dates are considerably later than those announced in the last Newsletter. The new dates are: a summary (not more than 100 words) should be received not later than 1 July 1986, notification of acceptance will be sent by 1 October 1986 and your complete paper must be received by 1 February 1987. Both summaries and papers must be in English and should be sent to Prof. W. E. Proebster, c/o IBM, PO Box 80 08 80, D-7000 Stuttgart 80, Federal Republic of Germany.

The Conference will be held in the Congress Centre, Hamburg, Federal Republic of Germany on the 11 to 15 May 1987.



The principal topics will be:

Impact of VLSI on Computers

Computer architecture, Design and Construction.
Terminals and Personal Computers.
Sensing and Control Applications.

Influence of Computers on VLSI

Computer Aided Design: Design Languages, Modelling and Testing.
Hardware and Software Tools for Design, Manufacturing and Testing.
Device Modelling and Simulation.

Microelectronics and VLSI

Logic and Memory Technology.
Packaging.
Microprocessors and Wafer-scale Integration.
Production and Market Trends.

Computer Systems

Intelligent Workstations.

Networks and Local Area Networks.

Special Computers: Graphics, Database, Robotics.

Supercomputers, Array and Pipeline Processors.

The Conference Programme will Include

Tutorials planned to provide experts with an introduction to fields adjacent to those in which they are working. Other tutorials will provide background for those who may not be familiar with any of the areas covered by the Conference. There will be four parallel tutorial sessions, they will include:

VLSI Technology – Memory circuits and packaging.

Computer Aided Design – logic, simulation, layout and testing.

Intelligent Workstations.

Supercomputers – architecture and design.

A Technical Exhibition is planned to complement the Tutorial Programme and the Conference papers. Enquiries to Professor Proebster.

CompEuro is the first of a new series of major, annual, international computer conferences at which computer experts can meet regularly to present their latest results and to discuss trends, a need not met by any existing European conference. The series is sponsored by Region 8 and the IEEE Computer Society. Additional information may be obtained from Professor Proebster, whose address is in the first paragraph of this notice.

Electrical power systems in fast developing countries

This Symposium will be held in the King Saud University, Riyadh, Saudi Arabia, on 21-24 March 1987. The hosts on this occasion will be the King Saud University; sponsors are the University and Region 8 IEEE. The following topics are suggested but others will also be welcome:

Planning

Operation

Analysis

Protection

Computer Applications

High Voltage

Alternative Energy Sources

Papers are now invited; three copies of the summary should be sent to:

Dr. Abdulaziz A.El-Sulaiman

Electrical Engineering Dept.,

King Saud University,

PO Box 800,

Riyadh 11421,

SAUDI ARABIA.

Telex 201019/2 KSU SJ.

from whom additional information may be obtained. Summaries should arrive not later than 15th May 1986. The authors of accepted papers will be notified by September 1986; complete papers must be received not later than 31st December 1986.

PERSON

Dr. Herre Rinia – Obituary

Prof. Dr. F. Louis H. M. Stumpers

Dr. Rinia was born in Friesland in the Netherlands in 1905; he studied at Delft and was awarded an electrotechnical degree in 1928, in which year he joined the staff of the Philips Research Laboratories at Eindhoven. There were then only 45 graduate scientists in the laboratories; later, when he became Director in 1946 there were 150, and when he retired in 1966, 400 – he died in May 1985.

One of his earliest projects was the construction of an electronic dog, which barked and found its way around obstacles, but radio receivers quickly became his principal interest. As an amateur astronomer he constructed a 30cm glass mirror telescope and experimented with chrome-iron glass joints; Dr. Rinia's enthusiasm led to the foundation of an astronomical observatory in Eindhoven.

In 1935 his interests led him into television, one of his early inventions being a new kind of Nipkow disc, which, when allied to a Schmidt camera was used for projection television. He continued his interest in astronomy and supervised the construction of the Dwingeloo observatory, introducing new ideas for the movement of very large parabolic reflectors.

He was elected a member of the Royal Netherlands' Academy of Arts and Sciences in 1947 and was a regular visitor at its monthly meetings until shortly before his death. In 1951 he became a Senior Member of the IRE, and in 1954 a Fellow; he was Vice President of the IRE, Chairman of the Benelux Section and from 1963-1965 Director of Region 8 – its first Director. In 1970 he received an Honorary Doctorate from Delft University and the IEEE award in International Communication; he was a Knight of the Order of the Netherlands Lion and an Officer in the Order of Orange Nassau. Those who remember him well, will miss his ready wit, his inventiveness and his enjoyment of a spirited discussion.



Robert C. Winton

Haraden Pratt Award

Founded in 1971, the award is given in recognition of an individual's exceptional services to the Institute; this is the first occasion on which it has been conferred on a member from a Region outside the United States.

Bob Winton is a native of London, England and obtained his B.Sc.(Eng) from the City and Guilds Engineering College of the University of London. He made his career with Mullard Ltd., the electronic component manufacturing and marketing division of the Philips group; he was a Senior Executive Engineer with particular interests in education and training. He served as Chairman of the Institution of Electrical and Electronics (Incorporated) Engineers from 1970 to 1971 and on various committees of the Institution of Electrical Engineers, of which he is a member of long standing. He served as Chairman of the Electrical and Electronics Manufacturers Training and Education Board and on committees of the Engineering Industry Training board, the Confederation of British Industry, and the Council for National Academic Awards.

He served for five years as a Major in the Royal Electrical and Mechanical Engineers, in charge of radar and radio repair and maintenance workshops in the UK, Sicily, Egypt and Italy. He is at present European Consultant to the Los Angeles-based company "State of the Art".

In 1963, at the invitation of the UKRI founder Robert Williams, Mr. Winton joined the IEEE and became the Section Assistant Secretary; since then he has served as Section Secretary (1965-72), Chairman (1976-77), Secretary/Treasurer Region 8 (1973-74 and 1978-80), Spectrum Editorial Board (1979-82) and Region 8



ALITIES

Secretary from 1980. He is the author of a number of papers on education and training and is co-author of the book "An Elementary Guide to Reliability", now in its third edition. He has for some 50 years been keenly interested in the sport of fencing, serving on its Executive Committee and other committees of the UK Governing Body, the Amateur Fencing Association, of which he is a vice President; in 1985 he was awarded the Association's Gold Medal.

He is married, with a family of three. His wife Heather is an enthusiastic gardener, reader and potter, and Secretary of the local amateur theatre group. Peter has two children and is Production Co-ordinator with Desoutter Brothers, Andrew is Assistant Management Consultant with Coopers and Lybrand, and Carol is a Production Assistant with the British Broadcasting Corporation.

To the members of the Region 8 Committee Bob is that essential ingredient without which the Committee would not function; the Committee's authority on IEEE Law and Custom, its adviser on Diplomacy and its model of patience, with twenty-four nations at times intent on creating a latterday Tower of Babel. The Meeting Minutes reflect all these qualities and also an ability to create written order out of verbal chaos. He is everyone's friend and the award could not reflect a greater merit.

Mr. Charles A. Eldon

The Prechtl Plaque

When Professor Doctor Gottfried Biegelmeier was presented with the Power Life Award of PES in Vancouver at the Summer Power Meeting, he, the Professor that is, as is the custom of visiting monarchs, presented the Prechtl Plaque to Mr. Robert F. Lawrence, Director of Division VII, as a gift to the Institute from the Technical University of Vienna. At the Board of Directors meeting on 24 November 1985, he, Mr. Lawrence now, on behalf of the Professor Doctor, committed the said Plaque to the care of Charles A. Eldon; it is this ceremony that you see in the picture.



Eric R. Laithwaite

Nicola Tesla Field Award

By Dr. B. J. Cory

The award is made in recognition of outstanding achievements in the field of electrical and electronics engineering; in this case for Professor Laithwaite's contributions to the development and understanding of electric machines and especially of the linear induction motor.

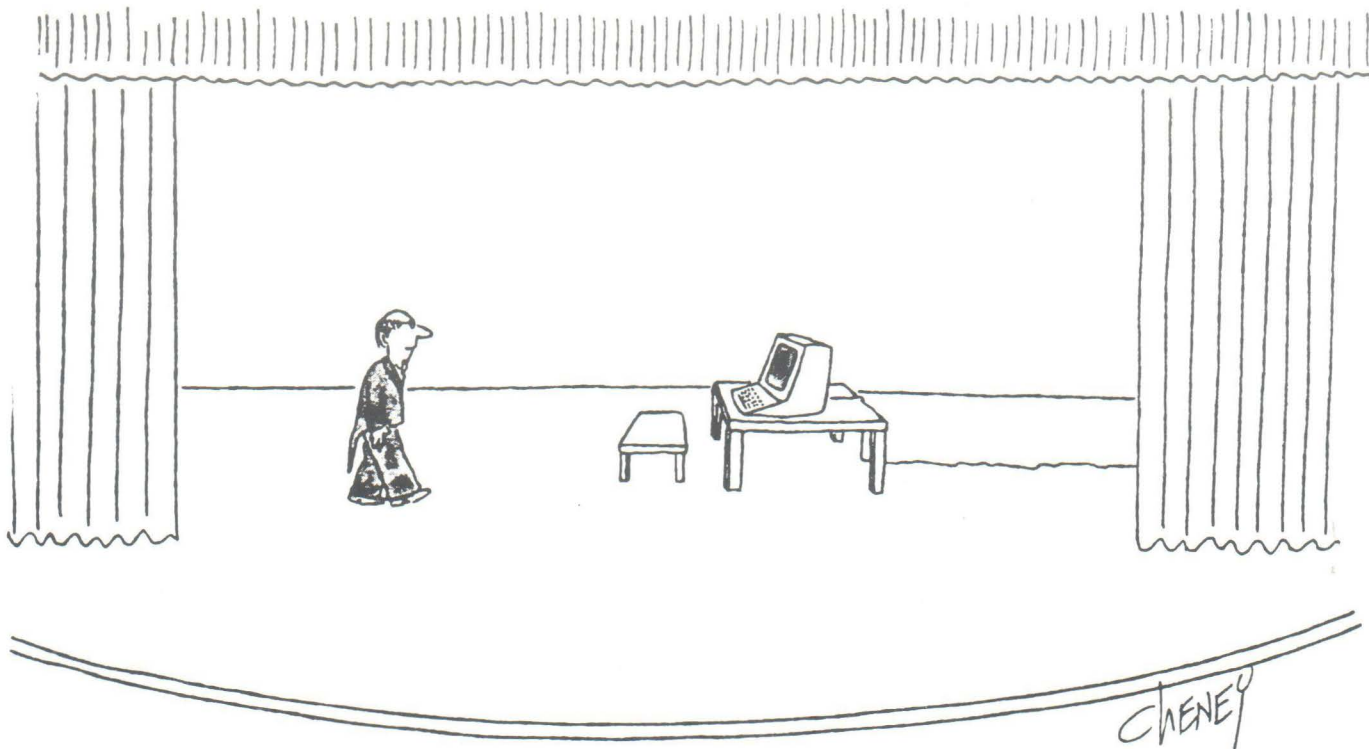
Eric Robert Laithwaite was born in Atherton, Lancashire, England – he was a farmer's son. In 1941 he joined the Royal Air Force as an Instrument Repairer but by 1943 had obtained a Commission in the Technical Branch as an Electrical Officer and was sent to the Royal Aircraft Establishment at Farnborough as a "boffin in uniform". There he worked on automatic pilots, fitting a GEC pilot designed for the Grumman Avenger into a British twin-engined Mosquito.

On leaving the RAF in 1946 he entered Manchester University and was awarded his Bachelor of Science Degree in 1949, and as a result of his work on the Ferranti Mk I computer, obtained a Master's Degree in 1950; he was Secretary to the 1951 Inaugural Conference of this machine, the world's first commercially-built Universal computer.

He returned to his work with electric motors and in 1957 was awarded a Doctor of Philosophy and in 1964 a Doctor of Science; he was then appointed Professor of Heavy Electrical Engineering at Imperial College. In 1966 the Royal Society awarded him the S. G. Brown Award & Medal for his inventions on the Linear Induction Motor. His election as a Fellow of the IEE and of the IEEE came in 1964.

He and his wife Sheila have four children: Martin, a mechanical engineer; Helen, who teaches mathematics and has one son; Louise is a student nurse; and Dennis is at Manchester University reading Materials Science. More recently Professor Laithwaite has again turned his attention to the gyroscope and he is currently adding to the extensive list of technical books of which he is author, a title on Engineering and Biology.





Drawing by Cheney; (c) 1983 The New Yorker Magazine, Inc.

Continuing Education

By Prof. Dr. K. Goser

The Continuing Education office of Region 8 now has available the Proceedings of the Centennial Education Forum "Midcourse Corrections in Engineering Education". The forum prompted both speakers and audience to answer the question:

How should traditional engineering education be modified to make engineering graduates more responsive to the needs of industry and government?

Attention was drawn to the importance of continuous attention to the lifelong learning which is vital to the engineering professions. Are the needs in these areas being met? What form should university education take? When does engineering education begin and what should it include.

The main topics of the book, which has some 100 pages, are:

National interest and engineering education: Can we meet the challenge?

The engineer and national policy

Options in engineering education

Education for our second century

If you wish to purchase the book, you may order it from the CE office for the special price of 10 or 30 DM including postage. The offer applies only to Region 8, please send a cheque and your address to:

Prof. Dr. K. Goser,
Continuing Education Office IEEE
Region 8
Bauelemente der Electrotechnik
Universitat Dortmund
PO Box 50 05 00
D-4600 Dortmund 50
Federal Republic of Germany.

International Measurement Confederation

The International Measurement Confederation has formed a new Technical Committee devoted to the Measurement of Electrical Quantities. Its sphere of activity will include both power and hf measurements but will exclude microwaves. Among the topics with which it will concern itself are the following, although others will be added to the list as the need arises:

Measurement of electrical signals, analysis of distortion and interference, nonstationary signals, statistical distribution of instantaneous values.

Measurement of impedances and transfer functions, static and dynamic behaviour of electrical, electronic and magnetic elements, driving signals of special form or spectrum for measurements on devices and systems.

Transducers and Converters of electrical quantities.

Measurement of electrical, electronic and magnetic components in production.

Identification of power supply systems and their elements.

Instrumentation related to the topics of the Technical Committee's activities.

The 1st Symposium will be held in Como, Italy in 1986; a 2nd Symposium is planned for 1987 in Poland. Information from Professor Dr. J. Weiler, Institute of Automatic Control and Industrial Electronics, ETH-Zentrum, CH-8092 Zurich, Switzerland.

You might wish to know

The IEEE is campaigning vigorously against the US Government's policy of controlling the transfer of unclassified technical information. The IEEE policy is not to implement any restrictions, which are described as "counterproductive" in a letter to the US Defence Secretary Caspar Weinberger and signed by the IEEE President and by the Presidents of eleven other US engineering and scientific societies. One result of IEEE policy is that IEEE entities may not sponsor meetings which involve the control of unclassified information.

Mr. D. Morphet, UK delegate at the International Atomic Energy Agency conference, yesterday announced that the British Nuclear Fuels uranium enrichment plant at Capenhurst, Cheshire, is to be submitted to international safeguards. The method for inspecting and maintaining installations using the relatively new gas centrifuge system, such as at Capenhurst, was agreed in 1982 after two-and-a-half years' work by a six member commission. (The "Guardian" p3, 26:9:85).

"You might wish to know" (November Newsletter) included a short announcement concerning the IEEE Videoconferences. In a letter from Dr. Robert G. Kahrman, Manager of Satellite and Seminars Continuing Education, he advises us that "we stand ready to send the signals on to Europe: our I lam New York City broadcast starting time would fit well with the European Continent"(!). He continues: "Because the programmes are five hours long, it would be easy to transmit to a European site where the programme would be reconnected to a satellite over Europe. It could then be brought down in many places." Those interested are requested to write or telex to Dr. Robert G. Kahrman, Manager Satellite and Seminars Continuing Education, IEEE, 445 Hoes Lane, Piscataway, N.J. 08854-4150, USA, Telex 833233.

The Editor owes an apology to the UKRI Section for a misprint which appeared in the November Newsletter, under the title "You might wish to know". It was not the Egypt Section which received the Regional Activities Board's Growth Award, but the UKRI Section.

IEEE members in Russia have never had any contact with Region 8, of which their country is a part, and there are no signs yet that the situation will change now that Mr. Reagan and Mr. Gorbachev have agreed to increase scientific contacts and exchanges. Before the political summit, IEEE President Charles A. Eldon attended the 40th meeting of the Popov Society and explained that if relations were to be renewed, the IEEE would expect information to flow in both directions, not only from the US to Russia as it had in the past. The Russian reaction is awaited.

The November newsletter described the arrangement with a UK company "London Information" to give IEEE members 10% discount on personal orders for IEEE books, publications and documents; but a number of members have sent orders for publication "subscriptions". London Information point out that they do not handle members' subscription orders because, as London Information they are not IEEE members, and must therefore pay the higher non-member rates.

Readers may remember that in the November Newsletter, the evidence employed by Mr. Michael S. Elphick to discredit the IEEE was shown to have dubious statistical validity. Since then Mr. Charles A. Eldon has written to Mr. Elphick a reasoned reply to his charges, a reply which carries with it all that Presidential Authority has to offer. But Mr. Elphick was not to be suppressed; he published the Presidential Epistle in his journal, and added his own comments on "statistical significance". Sadly, those comments served only to reinforce the suggestion that his statistical journalism has no place in truth, logic, or science.

The pioneering use by the Japanese of windpower to help cut shipping costs has encouraged more attention and money to be devoted in general to the use of wind as an energy source. This

article reviews current windpower projects being undertaken in the UK.

(Engineering p488-491 September 1985)

Following upon the discovery of DNA molecules, there is an increasing body of research which suggests that many of our more serious medical problems arise from genetic defects; if that were so then cures may be provided by what has become known as "genetic engineering".

At a recent meeting of the Santa Clara Valley Engineering in Medicine & Biology Society, Professor Channing R. Robertson dealt delivered a lecture on "Bioprocessing on a Large Scale". Whilst molecular biologists edit, rearrange and create the "software" used by living organisms to direct chemical biosynthesis, engineers are striving to meet the "hardware" needs which will lead to the introduction of future large-scale production facilities; they in turn will demand a new engineering approach to what have hitherto been solely biological processes. The use of recombinant micro-organisms and cells presents to the engineer a novel set of constraints and design problems.

("Grid", the Newsmagazine of IEEE Bay Area USA - November 85.)

River boat doctor

DR. ING.

Notice on a Region 8 River Boat

"Anyone feeling ill or feverish should see the Chief Engineer".

Conference briefs

Computer Society in Ireland

It has been suggested that Meetings of the Computer Society could be held in the Republic of Ireland. Would any member of the Society resident in the Republic and interested in organising meetings of the Society in Dublin, please contact Dr. J. Christie, Department of Electronic Engineering, University College, Upper Merrion Street, Dublin 2, Ireland.

Optoelectronics in Austria

The Third International Symposium on Optical and Optoelectronic Applied Sciences and Engineering will be held on 14-24 April 1986 at Innsbruck, Austria. Information from IEEE Computer Society office in Brussels - see the announcement in this Newsletter "Computer Society's Office in Region 8".

Solid state in Holland

The twelfth European Solid-state Conference will be held in Delft, Holland, from 16 to 18 September 1986. Details may be obtained from Mr. A. W. van Herwaarden, Electrical Engineering Dept., Delft University of Technology, PO Box 5013, 2600GA Delft, The Netherlands.

Engineering in medicine and biology - USA

The 8th Annual Conference will be held in Fort Worth, Texas from 7 to 10 November 1986. Abstracts should be received before 1 April 1986. Further information from: Dr. Swamy Laxminarayan, Laboratory Computer Centre, MSB-A539, New Jersey Medical School, 100 Bergen Street, Newark, New Jersey 07103, USA. Telephone 201-456-6007/6789.

New year message from the Director

At the start of my second year as your Regional Director, I am writing to wish you all a very successful 1986.

The expansion of Region 8 depends on your activities, and with a little more effort we could become the fastest growing Region in the IEEE. Please obtain and distribute membership application leaflets as widely as possible (your Section committee members have a supply) and try yourself to recruit at least one new member during 1986.

To help in this, the IEEE has reached a decision to abolish the \$15 entrance fee, which no longer has to be paid. This is a most useful development, which should help our growth.

April 21 in Paris sees the opening of the EUROCON '86 conference on "Advanced technologies and processes in communication and power systems". Please bring this conference to the attention of those dealing with communication and power systems in your country. Information on the conference is contained elsewhere in this issue.

At about the time that this reaches you, the IEEE will be holding a 2-day Annual Meeting at San Jose in California. This meeting, the first of its kind, is on the theme "The impact of cultural values on engineering excellence". It will mark the first presentations of two new IEEE Awards, the IEEE Engineering Leadership Recognition and the IEEE Corporate Innovation Recognition.

Our congratulations go to Prof. Arnaldo M. Angelini, the recipient of the 1986 Simon Ramo Medal; to Prof. Eric R. Laithwaite, the recipient of the 1986 Nikola Tesla Award; and to Mr. Robert C. Winton, the recipient of the 1986 Haraden Pratt Award.

B.W.O.

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Delivery inserts to County Secretarial Services	Jan 22	April 22	July 22	Oct 22

Meetings in Poland

International Symposium on Electromagnetic Fields in Electrical Engineering. The discussion was lively and demonstrated the importance of electromagnetic field calculations in the design of very large power systems. It was decided that the Symposium should be organised every two or three years, the next one is to be held in Pavia, Italy. The Conference Proceedings have been printed – Professor W. Seruga, ul. Czackiego 3/5, 00-043 Warszawa, Poland.

A New Approach to the Calculation of Heat in Current-carrying Copper Conductors. – Dr. Jan Nasilowski. The heat exchange coefficients are variables which differential equations for temperature increase cannot satisfy. The author deduced from Newton's heat dissipation law a new coefficient, "current coefficient of heating M" which is constant for most practical requirements; knowing M, the steady state temperature rise may readily be calculated (if it is below +200 degrees C); moreover it enables the differential equation for the current heating process to be modified. The results have been reported in "Physics Letters, vol 100A, No. 8, 1984".

A New Method for Describing the Skin-effect – Dr. Jan Nasilowski. Skin-effect theory predicts that hf current density is greater in the outer layer of a conductor than at its centre: but there are two problems. 1. How much of the current does flow in the skin-layer when the circuit current takes a value $i = I_{sin} t = 0$? and 2. For the sine wave current at an instant $di/dt = 0$, a constant current dc condition is fulfilled and the current density should be uniform over the cross section of the wire. Existing theory does not take this into account. The author considers that the ac current density distribution in a wire is an instantaneous process, governed by di/dt for the circuit.

Application of Infrared Spectroscopy to Sealed Paper-oil Insulation Systems – H. Latour-Slowikowska. Studies have enabled a more precise determination of those reactions which play the main role in the thermal ageing process of insulation paper. The time course of temperature as a function of age depends on whether it takes place in amorphous cellulose regions or in quasi-ordered regions. Experimental results illustrate the very important role played by the morphologic structure of cellulose, the mass of paper in relation to that of oil, and acid impurities in the oil.

Meetings on Energy Methods in Magnetic Field Calculations – Dr. A. Krawczyk; and **The Present State of Design Methods for dc Traction Machines** – Dr. Jozef Zamojski, have also been held.

Computer Society's office in Region 8

By Mr. R. C. Winton, Region 8 Secretary

In a modern office in a southern suburb of Brussels Mrs. Nell Nachtergal has become the first full-time member of the IEEE staff to be situated in Region 8. She is Manager of the European Office which the Computer Society (CS) opened last November to improve the services which the Society provides for its members in our Region.

The basic purpose of the Office is to speed up communication between CS members and CS headquarters, and to enable members to obtain CS publications more quickly. In particular the Office will provide information on CS conferences, publications, membership services and future activities; hold a stock of some CS publications; provide on request a catalogue of CS publications; deal with specific CS problems. If your publication or book is not in stock, the request will be passed to the CS in the USA for execution. All orders must be prepaid. Orders will be accepted from non-IEEE members, but they will of course be charged non-IEEE prices.

The Office address is IEEE Computer Society, Avenue de la Tanche 2, B-1160 Brussels, Belgium; Telephone +32 2660 1143; Telex 25387 AVV B.

Please note that the Office is concerned only with Computer Society business; referring other matters to it will only cause delay.