



REPORT OF THE REGIONAL DIRECTOR

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No. 46

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS INCORPORATED

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MAY 1979

Regional Director: D. C. J. Poortvliet

TNO Research Unit, Westeinde Hospital, EEG Dept., Lijnbaan 32, 2512 VA The Hague, The Netherlands.



D. C. J. Poortvliet Director Region 8 1979-80

As a new Regional Director I was invited to attend the "New Directors Orientation Sessions" at Headquarters of IEEE in New York on January 11 and 12, 1979. The first day IEEE staff members explained clearly the various aspects of the IEEE organization, such as the budget, Spectrum, technical publications etc. The second day a visit to IEEE service center in Piscataway was organized after which informal meetings with staff members were possible. I considered these meetings important and encouraging. The first meeting of the ad hoc committee

on transnational affairs took place on the evening of January 11. The main item discussed was the question whether the IEEE

was really aiming to be transnational and if so, what do the non-US members expect. I stated that the members of the outside regions needed transnational information and the IEEE should get a good insight in the co-operation with the National Societies existing in the outside regions. At the meeting of the Executive Committee on January 13, which I attended as an observer, it was decided that meetings with non-US organizations were necessary. As a result of this discussion a meeting between the IEEE Executive Committee and the EUREL Executive Committee was proposed to take place in London in June 1979

The past Regional Director pointed out that he was disappointed that the directors of R7 and R9 were not appointed as members of this ad hoc committee. This is the reason that Paul Carrol, VP of Regional Activities, appointed a RAB International Committee. The members are Douglas M. Hinton (International Relations) and the directors of Regions 7 through 10. The next series of meetings took place in Atlanta, Georgia. On February 14 I attended the meeting of the Long Range Planning Committee. A 1979 task force on Geographical Units was appointed consisting of J. E. Shepherd (R1) as Chairman, J. Zaborszky and the R8 Director. One of the questions was whether the sectionwise subdivision of the non-US regions is still adequate. Also the relationship between these Sections and the non-US National Societies should be inventorized. The development of the transnational aspects of the IEEE was considered to be an important LRPC action. A reorganization of the Board of Directors, replacing the Senior Past President by the President-Elect, is still a point of discussion. Senior Past Director Saunders reported on this matter.

On February 16 the Regional Activities Board met. Besides the reports of various RAB committees the problems of gathering news from the Regions to be published in Spectrum was discussed. As a result of these discussions it was proposed that each Region should appoint an officer or a task force responsible for the regional news in Spectrum.

After the RAB meeting the newly appointed RAB International Committee met. The following items were briefly discussed.

Guidelines for Co-operation with National Societies

DEADLINES	PUBLISHED QUARTERLY	FEB	MAY	AUG	NOV
	News to Editor	Jan 7	April 7	July 7	Oct 7
	Advertisements to County Secretarial Services	Jan 15	April 15	July 15	Oct 15
	Delivery inserts to County Secretarial Services	Jan 22	April 22	July 22	Oct 22

- Japan Institute of Electrical Engineers Agreement
- _ **Region 8 Resolution on Transnational Matters**
- **IEEE Continuing Education Courses**
- Concept of Equivalency of Member Grades
- **Dues Collection by Sections**

It was decided that most of these items needed further study and feedback to the Regional Committees.

On February 17 I was invited to attend the IEEE Executive Committee Meeting. The plans for the June ExCom meeting were discussed. Possible discussion items with the EUREL Executive Committee are:

- IEEE policies relative to National Societies Problems common to US and non-US engineers
- **Registration of Engineers**
- EUROCON

As a result of these discussions the General Manager Erik Herz was asked to visit London in March to prepare the June meeting. I joined Mr. Herz on March 27 when he had a meeting at IEE Headquarters in London. The next day we travelled to Frankfurt to visit VDE. At both places we had very open discussions about the role of IEEE and the co-operation with the National Societies and from this place I want to thank both IEE and VDE for their hospitality. The last meeting in Atlanta I attended was the meeting of the IEEE Board of Directors. As this was the first 1979 meeting many nominees were appointed to various IEEE boards and committees. As usual not many nominees from the non-US Regions were appointed. Maybe it is too early yet to take action, because the transnational spirit should get time to develop.

During an Executive Session the Board of Directors nominated B. H. Schneider as the Board candidate for the office of 1980 IEEE President and C. L. Hogan for the office of 1980 IEEE Executive Vice President.

The present IEEE Executive Vice President Leo Young decided to run as a petition candidate for the office of 1980 IEEE President and as usual Irwin Feerst did the same. So we have three candidates for the 1980 President. Two Resolutions of Appreciation were unanimously approved by the Board.

The outgoing General Manager Dr. R. M. Emberson was elected Director Emeritus of the Institute and Miss Emily L Sirjane (many members refer to her as THE IEEE) was given the title of Life Fellow Emeritus. Although I took many pictures during the BOD dinner, during which Emily Sirjane and Dick Emberson were honored, it is impossible to print any of them in this Newsletter because the editor of Spectrum did not send me back the pictures up to now. Another important discussion was about the Campaign Plan for 1980 IEEE President. The BOD decided to cover the campaign expenses up to \$10.000. Finally some remarks to the members of this Region. You have been reported about the transnational activities of IEEE. Activities taken in this direction are only justified if you as a member in this Region think it is worthwhile. So if you have any suggestions please inform me as soon as possible.

The Presidential elections this year are more difficult than usual. I shall try to get statements of all candidates to be printed in this Newsletter, so you can all vote on basis of your own judgement.

DICK C. J. POORTVLIET The Hague April 5, 1979

Correction

In my report in the Newsletter of February 1979, I listed the Members of Region 8 who had been elected to Fellows as of January 1, 1979. Unfortunately, two names are missing from the list. They are Professors Niels H. Knudsen and Karl J. Åström (both from Sweden). I would like to apologise to my countrymen and congratulate them on the election.

EUROCON '80, STUTTGART, GERMANY March 24–28 1980



Prof. Dr. Wolfgang A. Kaiser Chairman of Technical Program EUROCON 80

Professor W. E. Proebster, Chairman of the EUROCON '80 Steering Committee, reports that progress on the arrangements for EUROCON '80 are well advanced. This progress is due largely to the efforts of the team of experts which he and Professor W. Kaiser, Chairman of the Technical Program Committee, have brought together. This team, of more than 50 prominent electrical and electronics engineers from eleven countries, makes up the two committees already mentioned and the four Sub-Committees on the theme subjects of the Conference: the Technology of Microelectronics; Microelectronics in Telecommunication's and Data Processing; Electronics in Electrical Power Systems and Control; Electronics and Microelectronics in Other Fields.

In addition to those serving on the various Committees, a number of corresponding members have been appointed to assist in obtaining papers; three in U.S.A., and one each in Israel, Japan, and Yugoslavia. The appointment of corresponding members in Hungary and Poland is also planned.

The Technical Program Committee expect to receive offers of 150 to 200 papers, from which approximately 40 short specialist papers and 40 longer review papers will be selected. This program will enable EUROCON '80 to be a Conference of interest to specialists and also to those who require a general background to any of the Conference theme subjects. Already 50 papers have been offered, by authors from Austria, Belgium, Czechoslovakia, Denmark, France, Germany, Israel, The Netherlands, Poland, Sweden, Switzerland, Turkey, U.K., and U.S.A. Thus ten months before EUROCON '80 it is already certain that the program will have a truly international coverage.

Interested authors still have time to submit papers; 500-word summaries must reach Professor Kaiser, University of Stuttgart, Breitscheidstrasse 2, D–7000 Stuttgart 1, Germany, not later than July 31. The complete text of accepted papers will be required by December 31.

EUROCON '80 will be an important Conference for students, who will be charged only a nominal Conference fee. Many of the presented papers will be of interest to them, and in addition a student program is being planned under the direction of General V. Bertrand and Professor A. S. Vander Vorst, Chairman of the Region 8 Student Activities Committee. Present proposals are to arrange sessions especially for students, including tutorials. The final of the Region 8 Student Paper Contest will be held on the last afternoon of the Conference. Invitations to some of the winners of Student Paper Contests in other Regions, to attend EUROCON '80, are under consideration.

Interest in the Exhibition associated with EUROCON '80 has been expressed by a number of leading companies in Europe. A space of 800 square metres is available close to the University of Stuttgart where EUROCON '80 will be held. If you require more information on the Exhibition, please write to Professor Proebster, IBM Deutschland GmbH, Postfach 80 08 80, D–7000 Stuttgart 80, Germany.

Over 100 EUROCON '80 registration enquiries had been received by the end of April. If you are interested in receiving more information, please write to the Conference Office, VDE, Lautenschlagerstrasse 21, D–7000 Stuttgart, Germany.

LATE NEWS

The 3rd meeting of the Programme Committee was held in Stuttgart on April 18. A few changes were made in the composition of the various Sub-Committees and the IEEE student contest has been arranged to be on the Friday afternoon. The following papers have been received: Sub-Committee 1 – 26 papers; Sub-Committee 2 – 20 papers; Sub-Committee 3 – 20 papers; Sub-Committee 4 – 19 papers (of which 11 are on medical electronics). It was decided to prefer general and review papers for the morning sessions and specialist technical papers for the afternoon. The Monday afternoon plenary assembly will probably be opened by a lecture from a member of the German Government followed by two other lectures on social and economic impact and two or three technical papers of high quality. The panel discussion on the social impact of microelectronics will be chaired by Dr. Baur (Siemens) and that on technological forecasting for microelectronics by Dr. van Vessen.



Meeting of Technical Program Committee (TPC) EUROCON 80 From left to right: Dr. G. H. Byford; Dr. J. C. van Vessem; Prof. Dr. F. L. H. M. Stumpers (Vice Chairman); Mr. L. Pouzin; Prof. Dr. W. A. Kaiser (Chairman of TPC); Prof. Dr. W. E. Proebster (Chairman Eurocon 80); Dr. H. Scholl.

COMPOSITION OF THE SUB-COMMITTEES

The program committee feels very honoured to be able to work with the following distinguished group of scientists, and hopes that they will stimulate many members of IEEE and EUREL to send in an abstract before the July 31st deadline.

1. Technology of Microelectronics

chairman: dr. van Vessem (Philips, the Netherlands); dr. Rüchardt (Siemens) and dr. Weinerth (Philips, Hamburg) from the Fed. Rep. of Germany; dr. Estève (CNRS, Toulouse) and M. Zanetto (Thomson), France; dr. Holt (Plessey), U.K.; prof. Davidse (Delft Univ.), the Netherlands; prof. Demoulin and prof. de Man (Louvain Univ.), Belgium; prof. Eier (T.H. Vienna), Austria; prof. Melchior (ETH Zürich), Switzerland; ing. Gilardini (Selenia, Roma) and dr. Messori (Olivetti) from Italy.

2. Microelectronics in telecommunications and data processing

chairman: M. Pouzin (IRIA), France; prof. Gallenkampf (FTZ) and dr. Pfeiffer (AEG- Telefunken), from Germany; M. Camus (France); mr. Cheeseman (G.P.O. Research) U.K.; dr. Zegers (Philips, the Netherlands); prof Zetterberg (Royal Inst. Tech. Stockholm), Sweden; dr. Ebenberger (ITT, Vienna), Austria; dr. K. Neilson (Philips, Copenhagen), Danmark; prof. Picon (IBM and Univ. Madrid), Spain; dr. Mey (Hasler), Switzerland; prof. Falzone (SIT Siemens, Roma) from Italy.

3. Electronics in electrical power systems and control

chairman: prof. Zwicky (ETH, Zürich), Switzerland; prof. Leonhardt (Univ. Braunschweig), prof. Boehringer (Stuttgart Univ.) and dr. Ernst (Siemens) from Germany; m. Clade (EDF, Clamart), France; prof. Bird (Univ. of Bristol), U.K.; prof. Törek (Univ. Stockholm), Sweden; prof. Zach (Univ. Vienna), Austria; dr. Weisshaar, Switzerland; Ing. Ferrari (Enel, Milano) from Italy.

4. Electronics and Microelectronics in other fields

joint chairmen: dr. Byford (Royal Aircraft Establishment, U.K.) for medical electronics and dr. Scholl (Bosch, Germany) for automotive and industrial applications; dr. Zeidler and dr. Hamanns (SEL), from Germany; prof. Chevallier (CNRS, Compiègne), France; prof. Magnusson (Chalmers Univ. Gothenburg), Sweden; mr. Holst (Bang and Olufsen), Danmark; prof. Delgado (Univ. Madrid), Spain; dr. Forrer (Neuchatel), Switzerland; prof. Marissa Maranzaha (Polytecnico Milano) and prof. Donato (Pisa Univ.) from Italy.

Student programme

prof. van der Vorst (SAC Chairman, IEEE Region 8) and General Bertrand (SEE.Eurel) are responsible for the student programme and prof. Laloux (Louvain U.) will act as secretary.

Corresponding members

dr. R. Lucky (Bell Tel.), dr. Pugh and mr. Verhofstadt (USA); prof. Inose (Japan); dr. Raviv (Israel); prof. Gruden (Yugoslavia); prof. A. Ambroziak (Warsaw, Poland).

INSTITUTE NEWS

Call for Suggestions on International Activities

As one of his first acts as 1979 President, Dr. Jerry J. Suran established a new ad hoc committee on international activities, and appointed Executive Vice President Dr. Leo Young as its chairman. The committee is to report to the Board on how to strengthen IEEE's international role, and improve services to IEEE's non-US members. Members of the committee (besides Leo Young) are Directors Jack Barkle (Division VII), S. Y. King (Hong Kong, Region 10), Dick Poortvliet (The Netherlands, Region 8), and Peter Rusche (Region 4). There are two other non-US directors, Ted Glass (Winnipeg, Manitoba, Canada, Region 7) and Carlos Rivera-Abrams (San Juan, Puerto Rico, Region 9).

The committee has already met twice. Dick Poortvliet stressed the importance of international contacts available through IEEE. S. Y. King explained the role IEEE plays in different countries in the Far East. Leo Young suggested an 'International Corner' in the IEEE monthly *The Institute*. It would contain topical news from all over the world. Articles are also solicited for *The Institute* and for IEEE Spectrum on the following topics: Major socio-technical issues in different countries or regions of



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Your presence at FORUM 79 will help to foster the understanding of current problems and make of this event the worthy summit meeting long awaited by the telecommunication world. **Eva, Switzerland ember 1979 ber 1970 ber 1970**

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Part I: 19-21 September 1979 Part II: 23-26 September 1979

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the world; The status of the engineer, and how it is changing; Relations between IEEE and national societies; Professional and economic issues like pensions, registration, unions, etc.; Legislation in the news that affects engineers; National policies and practices that affect engineers or engineering; National education systems, degrees, practices; and so on.

If you have any suggestions that would help the committee, please pass them on to Executive Vice President Dr. Leo Young, c/o IEEE, 345 East 47th Street, New York, N.Y. 10017, USA.

Centennial Planning Begins

The year 1984 marks the one-hundredth anniversary of the founding of the American Institute of Electrical Engineers (AIEE). The IEEE, formed by a merger of the AIEE and the Institute of Radio Engineers, will celebrate its centennial during the year beginning January 1, 1984.

Two committees have been appointed to plan for this major event. The first, primarily an honorary group, is the Centennial Committee, to be chaired each year through to 1984 by the incumbent IEEE President. Its other members are: John Bardeen, Patrick E. Haggerty, William R. Hewlett, William C. Norris, Robert N. Noyce, Simon Ramo, John W. Simpson, and Charles H. Townes.

The working group for Centennial planning is called the Centennial Task Force. With John D. Ryder as the Chairman, the Task Force has the following membership: Nathan Cohn, Robert F. Cotellessa, Lawrence P. Grayson, Donald T. Michael, William W. Middleton and M. E. Van Valkenburg. The Task Force will soon begin actively considering possible centennial activities. Suggestions should be directed to Reed Crone, Staff Secretary of the Centennial Task Force, IEEE Headquarters.

Membership

The October 1978 membership figures, released by the Membership Development Committee, show that the overall IEEE membership of 183,394 has surpassed last year's final total of 183,103. October's membership increase (6828) is 3.9 per cent more than the membership increase for the same month last year.

The total membership of all seven Divisions swelled by 6.9 per cent (11,923 new members) compared with October 1977 figures. Division V led the way with a 25.3 per cent jump (7,245 new members). No Division, and only one Region (Region 9), experienced a decrease in membership.

The total increase in membership is only 3 per cent short of the suggested 1978 goal of 7000 new members. Regions 3, 5, 6, 8 and 10 have already achieved their suggested 1978 goals. Region 8 has increased from 6,863 in 1974 to 8,232 in 1978.

Senior Members Wanted

The Management Development Committee work group on' Senior Member elevations is finalising the materials and promotional support for local efforts at encouraging qualified Members to seek Senior Member grade. With guidance from the Admission and Advancement Committee, the forms are being reorganized for easier completion by the applicant and better review by the A & A Committee.

Also being developed are reasons for the individual to elevate in grade, ideas to promote elevation and consideration of additional unique Senior Member programmes and activities. Rosters of Members who appear eligible for Senior Member grade can be requested from Membership Development, N.Y.

Membership Brochure

A new version of the Membership Brochure has been produced, very largely by Bob Winton, in which the information is much more appropriate to the needs of Region 8. Supplies should be available from the Chairman, Region 8 Development Committee, C. J. M. van der Wulp, TNO Research Unit, Westeinde Hospital, EEG Dept, Lijnbaan 32, 2512 VA The Hague, The Netherlands, or through the Officers of each Section in the Region.

IEEE Conference Recorder

TAB Conference Activities has announced a new publication designed to meet the specific technical interests of members who purchase conference proceedings. The IEEE Conference Recorder lists all new conference records from recent IEEE-sponsored or co-sponsored meetings. In preparing the newsletter, Conference Activities relied upon the computer-maintained Technical Interest Profile each member completes when joining IEEE. Concise summaries of topical conference records and price listings are included as well as a convenient order form. For further information or to obtain a copy, contact Conference Activities at HQ.

IEEE Nominees for Top Offices in 1980

Burkhard H. Schneider, assistant vice president of planning and research of The Detroit (Michigan) Edison Company, and Dr. C. Lester Hogan, vice chairman of the board of Fairchild Camera and Instrument Corporation of Mountain View, California, have been nominated for the 1980 posts of president and executive vice president of IEEE. The nominations were made by the Board of Directors at a recent meeting in Atlanta. Elections will take place in the Fall of 1979.



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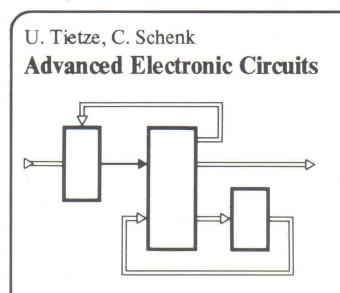
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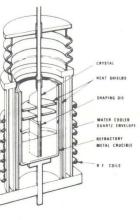
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Heteroepitaxial Semiconductors for Electronic Devices

Editors: G.W. Cullen C.C. Wang



A Schematic Presentation of an Edge-Defined Film-Fed Growth (EFG) Apparatus.

R.H. Kingston Detection of Optical and Infrared Radiation

1978. 39 figures, 2 tables. VIII, 140 pages (Springer Series in Optical Sciences, Volume 10) Cloth DM 43,-; US \$ 23.70 ISBN 3-540-08617-X

This book presents a unified treatment of detectors and the detection process and is the first such comprehensive text in the past decade.

It covers the fundamentals of optical and infrared detection including the properties of the radiation, the ideal photodetector, coherent or heterodyne detection, noise processes in vacuum photodiodes, photomultipliers, photoconductors, semiconductor photodiodes, and avalanche photodiodes. With the assistance of E. Schmid 1978. 570 figures. VIII, 510 pages Cloth DM 78,-; US \$ 42.90 ISBN 3-540-08750-8

Already in its fourth edition and translated into several languages, this bestseller on electronic circuit design is now available in English. The book deals with the most important applications of analog and digital circuits, from the operational amplifier to the microprocessor. Individual topics are treated thoroughly and often in more detail than even the specialized literature.

Contents: Linear and non-linear operational circuitry.— Controlled sources and impedance converters.— Active filters.— Broadband amplifiers.— Power amplifiers.— Power supplies.— Analog switches and comparators.— Signal generators.— Combinatorial logic circuitry.— Sequential logic circuitry.— Microprocessors.— Digital filters.— Data transmission and display.— D/A and A/D converters.— Measuring circuits.— Electronic controllers.— Appendix: Definitions and nomenclature.

1978. 239 figures, 28 tables. XIII, 299 pages Cloth DM 158,-; US \$ 86.90 ISBN 3-540-90285-6

Heteroepitaxial Semiconductors for Electronic Devices will be an invaluable source of information for graduate students and professionals involved in the preparation, characterization, and utilization of electronically active materials in industry.

Contents: G.W. Cullen, C.C. Wang, Introduction.-G.W. Cullen, The Preparation and Properties of Heteroepitaxial Silicon.- C.C. Wang, Heteroepitaxial Growth and Characterization of Compound Semiconductors.-M.T. Duffy, The Preparation and Properties of III-V and II-VI Compounds for Surface Acoustic Wave and Integrated Optic Devices.- P.J. Zanzucchi, Characterization of Heteroepitaxial Thin Film Semiconductors On Insulating Substrates.- W.E. Ham, The Electrical Characterization of Heteroepitaxial Semiconducting Films.- S. Berkman, V.S. Ban, N. Goldsmith, An Analysis of the Gas Flow Dynamics in a Horizontal CVD Reactor.- J. Blanc, Misfit, Strain and Dislocations in Epitaxial Structures: Si/Si, Ge/Si, Si/A12O3.

Optical and Infrared Detectors

Editor: R.J. Keyes

1977. 115 figures, 13 tables. XI, 305 pages (Topics in Applied Physics, Volume 19) Cloth DM 86,-; US \$ 47.30 ISBN 3-540-08209-3

Contents: R.J. Keyes: Introduction. – P.W. Kruse: The Photon Detection Process. – E.H. Putley: Thermal Detectors. – G.D. Long: Photovoltaic and Photoconductive Infrared Detectors. – H.R. Zwicker: Photoemissive Detectors. – A.F. Milton: Change Transfer Devices for Infrared Imaging. – M.C. Teich: Nonlinear Heterodyne Detection.

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Hemel Hempstead, Hertfordshire, HP2 4RG, England.



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NEWS OF THE SECTIONS

BENELUX SECTION

During 1978 the Benelux Section held technical meetings on the following topics: Data Communication Networks, Education in Electronics, Electronic Circuit Elements, Electronics for Broadcast Studios, Radar Systems, and finally, Viewdata and Teletext. In the average, each meeting attracted about a hundred participants, with the viewdata meeting as an exception; nearly two hundred persons attended.

In the spring of 1978 the committee of the Benelux Section was newly elected for a two year term: Dr. Eduard J. Maanders (Univ. of Eindhoven) is Chairman, Prof. Roger J. van Overstraeten (Univ. of Leuven) Vice-Chairman, Ir. Godefridus J. Arink, Secretary/Treasurer and Prof. J. G. van Bladel, Dr. T. A. Claasen, Ing. J. A. Greefkes, Prof. A. A. Laloux, Ir. W. Lulofs, Ir. J. T. Neessen, Dr. A. G. Roederer, Dr. W. Sansen, Prof. A. S. Vander Vorst (Past Chairman). Ir. G. J. Vos was nominated Treasurer effective per January 1, 1979.

The joint Antennas and Propagation/Microwave Theory and Techniques Chapter of the Section has continued its programme with five meetings, which were well attended. Groups of members have suggested the establishment of two additional chapters, i.e. for Communications and for Engineering in Medicine and Biology.

The section co-sponsored the successful 4th European Solid State Circuits Conference, which was held in Amsterdam from 18 till 21 September 1978.

On October 31, the active membership of the Section was 890, including 197 student members, an increase of 22 members over the number a year earlier on the same date.

ISRAEL SECTION

The Israel Section, with its 380 active members (including 50 students), is preparing for the 11th Convention of Electrical and Electronic Engineers in Israel, to be held at the Tel Aviv Hilton from October 23–25, 1979 (and not in October 1978 as erroneously published in the November 1978 issue of the Newsletter).

This Convention, organized every second year by the IEEE local section, is a National event, and the Steering Committee, chaired by IEEE section chairman J. Baal-Schem, includes representatives from Universities, National Engineering Associations and leading Electronic Industries in the country. It is expected that more than 1,500 participants will attend the Convention.

The Technical Program Committee, chaired by Prof. Bar-Lev of the

Technion, has already received over 80 abstracts to be presented at the technical sessions of the Convention.

Special attention is given to the participation of students at the Convention. Student paper contests will be held at each of the student branches and the winners of these contests will be invited to present their papers at a special "Student Session" of the Convention. Faculties of Electrical Engineering at the Technion and Universities have agreed to release fourth grade students from studies on the "Student Day" of the Convention.

NORTH ITALY SECTION

The Fourth European Conference on Optical Communication was held in Genoa, Italy, on September 12–15, 1978. About six hundred people attended this very successful conference, which gave scientists and engineers an opportunity to discuss the rapid progress in this field in order to stimulate future developments and applications.

The second national meeting on Applied Electromagnetic Fields was held in Pavia on October 2–4 1978. It was co-sponsored by the North Italy Section (Prof. Rumi was appointed representative to the Conference). In total, 55 papers were presented; they were grouped under the following headings: Antennas; Electromagnetism and Environment; Solutions of Problems of Electromagnetism; Optical Fibres, Integrated Optics and Holographic Techniques; Biological Effects, Diagnostic Applications and Hazards of Electromagnetic Waves; Components, Instrumentation and Measurement Techniques; Propagation of Electromagnetic Waves. The Proceedings of the meeting, published by the Facoltà di Ingegneria of the University of Pavia, give a full account of all the papers that were presented.

Section Chairman C. Egidi published the paper "Galileo Ferraris, the Discoverer of the Rotating Magnetic Field" which presents some little known facts about the early developments in electrical science. The paper is included in the July 1978 issue of the magazine Alta Frequenza. Please address requests for a copy of a reprint to: Instituto Elettrotecnico Nazionale Galileo Ferraris, Corso Massimo D'Azeglio 42, 10125 Turin, Italy.

SWITZERLAND SECTION

The Switzerland Section Executive Committee elected in Autumn 1978 for the term 1979/81 was presented to the members attending a meeting in Neuchâtel on 2 February 1979. The officers of the Section are: Chairman: Dr. M. P. Forrer, Neuchâtel; Vice-Chairman: Prof. Dr. G. S.

LOGIC ANALYSER D MAGNETIC GYRATION D CONSTRUCTING A H.F. SYNTHESIZER D ANTENNA AIMING CALCULATIONS D WORLD OF AMATEUR RADIO D ELECTRONIC ORGAN TONE SYSTEM D COMPUTER BUSES HIGH PERFORMANCE PRE-AMPLIFIER DESIGN D COMMUNICATION IN TUNNELS BUILDING A LOW COST MATHEMATICAL COMPUTER D **Great Value Great Value Great Value That's Wireless World — and above are listed just some of the**

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Moschytz, Zurich; Junior Past Chairman: Dr. H. Mey, Bern; Secretary/ Treasurer: Dr. P. Kartaschoff, Bern; Members-at-Large: Dr. F. Eggimann, Männedorf, Prof. Dr. M. Jufer, Lausanne, Dr. G. de Montmollin, Cortaillod, Mr. H. F. Wyss, Bevaix.

UNITED KINGDOM AND REPUBLIC OF IRELAND SECTION At the Annual General Meeting held on 22 March, 1979, Bill Devenish handed over as Secretary to Dr. G. H. Byford, RAF Institute of Aviation

Medicine, Farnborough, Hants. GU14 6SZ. After the AGM a most interesting talk was given by Mr. W. B. Morley, Head of Prestel Marketing (UK), on the three partners and three parts that constitute Prestel, its operation and social implications.

The Section has several flourishing Chapters and members who are interested should write for further information and details of activities. **Professional Communications**

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STUDENT ACTIVITIES

The 11th Student Paper Contest was held on Friday, 27 April, 1979 at the Zürich Federal Institute of Technology, the jury - international as usual - consisting of Dr. Bagdasarjanz, Brown-Bovery, Switzerland; Prof. Bolinder, Chalmers Institute of Technology, Sweden; Dr. Eggimann, Cerberus Ltd., Switzerland; Prof. Stumpers, Philips, Netherlands.

There were 4 entries, all of which were rated by the jury to be of high level, with a high quality of presentation. The final order was judged to be:

1. W. Blaser and P. Heinzmann,

"New cryptographic device with high security using public key distribution'

Zürich Federal Institute of Technology, Switzerland.

2. M. Nazarathy.

'Optical spatial spectrum analysis using a simplified approach", Technion - Israel Institute of technology.

- 3. S. Abbeloos and M. de Grève,
 - 'Etude et réalisation d'un modem à microprocesseur à 2400 bits/sec"

Université Catholique de Louvain, Belgium.

The prizes were presented by Dr. J. J. Suran, President of the IEEE, and consisted of two from the Life Member Fund, \$200 for the most outstanding paper and \$100 for the runner-up, together with an extra \$250 from Region 8 Student Funds to enable the winner to organise a visit to the United States. Additionally, on this occasion, the President presented each of the contestants with a timer with the hint that it might avoid their over-running their time on future occasions.

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