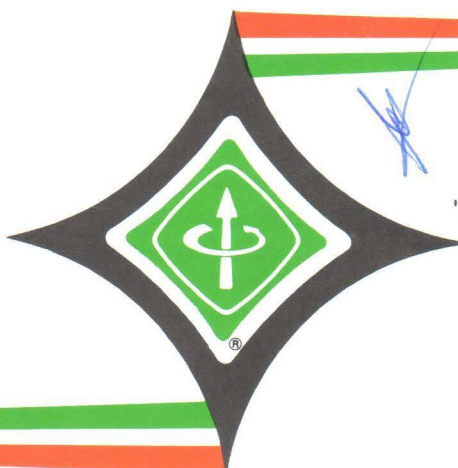


IEEE

Region 8 News

No 107 - August 1994

Europe, Middle-east and Africa



Editor

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From the Regional Director

Publications you no longer need. We have conducted a survey of libraries in east Europe in order that we may advise those willing to assist, where their IEEE publications are most needed.

If you wish to donate your surplus IEEE publications please complete the reply form on page 9 and send it to me; you will receive the address of a library to which your journals should be sent. If you wish Region 8 to pay the cost of freight, I can arrange this if you advise me the amount.

Should your organisation be in a position to supply a number of publications regularly, why not consider a more permanent arrangement with an east European library?

President-elect: Only a small minority of Region 8 members voted in last year's election. Please use this year's ballot to exercise your choice for the 1995 President-elect from the three excellent candidates:

Charles Alexander, Vice President for Professional Activities;

Don Bolle, Vice President for Technical Activities

Wally Read, Vice-president for Standards

Assistance for east Europe members. It is pleasing to report good progress in Region 8 on a number of new developments. The voluntary contributions fund to help needy Sections in our Region, reached almost \$5,000 in its first year; an equal sum will be provided by the Region 8 Treasury. We intend to continue asking for contributions from members when they renew their membership later this year. Some of the funds have already been committed to the sending of books and journals to Albania, to provide travel funds for the Ukraine Section, to assist in the setting up of a joint IEE/IEEE office in Budapest, and to launch the east Europe library project under which microfiche versions of selected IEEE Technical Society publications will be donated to libraries in about 10 Sections.

Electronic Mail. I have asked all Section Chairmen to establish e-mail connections by the end of 1994. The potential benefits to Region 8 members are so great that I would like to encourage everyone to get connected, perhaps through your local university

C.W. Turner - Director Region 8

IEEE BRUSSELS OFFICE - OPERATIONAL PLAN - (As seen from the U.S.A)

OFFICE OPERATIONS	CURRENT PROCESS	LONG TERM GOAL	INTERIM STEPS TO GET THERE
ORDER PROCESSING OF IEEE PUBLICATIONS	Brussels office stocks; inventory; processes orders/invoices customers; responds to customer order inquiries	Brussels office will: 1. Process product orders onto IEEE Oracle System 2. Respond to all order inquiries fast, via on-line queries 3. System-generated billing and correspondence 4. System-generated reports	Brussels office to continue to process orders locally and supply information to IEEE in Piscataway US.
DISTRIBUTION OF SAME	Brussels office ships product direct to customer	1. Remove inventory from Brussels Office 2. Ship Customer Orders from	Brussels office to continue to stock inventory and ship to customers until on-line access to Oracle is provided
NEW MEMBER APPLICATION PROCESSING	Brussels office forwards to IEEE in US for processing	Allow Brussels office to process new member applications on-line and transfer dues payments to US account as volume grows	Provide membership information/applications to prospective members; accept new apps; deposit dues in local account; forward apps to US till on-line
MEMBER RENEWALS	Forward direct to IEEE in US for processing		Continue to forward to IEEE US
MEMBERSHIP DEVELOPMENT	IEEE Staff to Attend Regional meetings	Will proactively support Region 8 membership, local events and conferences, office promoted as the regional point of contact	IEEE US to equip Brussels office with mbr/mktg information for distribution; promote office for IEEE conferences, currency conversions, orders etc. Continue to forward to IEEE US

The Poulsen Arc

Electrical Engineering Milestone Unveiled at Lyngby Radio

By Knud-V. Weisberg

During the recent Region 8 committee meeting in Hilleroed, north of Copenhagen an IEEE Electrical Engineering Milestone Plaque was unveiled in the hall of Lyngby Radio Station, a centre for overseas and local maritime services; its text reads:

"Valdemar Poulsen, a Danish engineer, in 1902 invented an arc converter as a generator of continuous-wave radio signals. Starting in 1904 Poulsen used the arc for experimental radio transmissions from Lyngby to various receiving sites in Denmark and Great Britain. Poulsen arc transmitters were used internationally until they were superseded by vacuum-tube equipment"

Poulsen also invented the telegraphone, a magnetic wire recorder for recording telephone messages; the precursor of the modern telephone answering machine. Poulsen took out patents which made Dudell's "singing arc" an effective high-frequency continuous wave generator: he caused the arc to burn in a hydrogen atmosphere and applied a magnetic field to blow the arc away from the gap. The available detectors were ineffective for his continuous waves, and he therefore devised an asynchronous mechanical detector to produce an audible signal.



Region 8 Director Professor Charles Turner, unveiling the Valdemar Poulsen memorial wall at Lyngby Radio

With the major problems now out of the way Poulsen arc transmitters were marketed by several companies until 1925. In 1914 Poulsen's laboratory at Lyngby was put at the disposal of the Danish State Telegraph Authority.

*There was a young lady called Bright
Who travelled much faster than light
She set out one day
In a relative way
And returned the preceding night.*

Membership Development Workshop

By Professor Dr. W.E. Proebster

This workshop was held at the European Operations Centre, Brussels on 23rd-24th April; there were sixteen attendees, representing several spheres of Regional interest. The main conclusions in order of importance, were as follows:

- Both new membership applications and renewals should be handled by the Brussels Centre; this should include a follow-up to ensure that members' needs are met promptly and competently. In order to put this into effect, the Brussels Centre should have an on-line connection to the central IEEE data base.
- Membership Development Material, including membership leaflets, posters and promotional packs for conference stands, should be held at Brussels in quantities sufficient to satisfy the requirements of volunteers from Sections and Chapters.
- An IEEE 'bulletin board' should be established and maintained at the Brussels centre: it should be accessible by both e-mail and fax. Amongst its contents should be: prices of IEEE literature, conference, workshop and meetings announcements; transactions and standards; information on Student activities.
- Faster delivery of IEEE periodicals is of special importance in view of recent difficulties; it is to be hoped that the services of the Brussels Centre will relieve this problem. The Brussels Centre should be responsible for the quality of the IEEE membership data base for Region 8. Experience has shown that the data base carries some inaccurate or obsolete data; which underlines once more the importance and urgency of an on-line connection to the IEEE US computer system.

In addition there was considerable discussion on some other matters about which the Region has concerns and reservations:

- The procedure for dealing with eastern currencies
- The availability of Regional procedures which could influence and strengthen the Admissions & Advancement committee decisions
- We should move towards equal pricing of IEEE publications, whether delivered from Brussels or USA
- We should seek support, through Brussels, for a better understanding by the IEEE, of Region 8 cultural problems. The difficulties created by the more than fifty different Regional cultures are seldom appreciated outside the Region.
- The word 'European' should be deleted from the office title, it being too restrictive; it has to be made clear that the Brussels centre should serve all the Region.
- Annual membership renewals should be spread over the year; this would even the office workload and enable the office to provide an improved service to members.

In his closing remarks the Director-elect, Professor Peer Martin Larsen, commented favourably on the usefulness of the meeting and congratulated Professor Proebster and Mr. Keever for the excellent arrangements.

Conference Organized in Cooperation
with IEEE MTT/AP and VDE/ITG

Messehalle Sindelfingen • 30th May – 1st June 1995

Call for Papers

Abstracts to the following topics can be submitted until 1.10.1994:

1. Microwave Measurement Techniques
2. Communication, Mobile Communication, Satellite Communication
3. Microwave Sensors (Radar, Radiometry)
4. Traffic Applications
5. Medical and Biological Applications
6. EMC
7. mm-Wave Techniques, Sub-mm-Wave Techniques
8. Antennas, Phased Arrays
9. Microwave Circuits
10. Microwave Semiconductors, MMICs
11. Passive Microwave Components
12. CAD, Linear/Non-Linear Modelling
13. Field Theory (Waveguides, Discontinuities)
14. New Materials (HTC, Chiral Materials etc.)
15. Quasioptics
16. Interactions Microwave - Optics
17. Optical Communication
18. Optical Sensors
19. Optical Measurement Techniques
20. Other Topics

For further information please contact the organizer:



Wilhelm-Suhr-Str. 14 · D-31558 Hagenburg
Tel. +49/50 33/70 57 · Fax +49/50 33/79 44

Personal Communications

The Communications Society has launched a new publication "Personal Communications", the magazine for Nomadic Communications and Computing. The publication covers technical and policy issues relating to personalised, location-independent communication in all media and combinations of media, and at all protocol layers.

According to the Editor-in-chief, Hamid Ahmadi, "Personal Communications" will keep readers in touch with the technologies for keeping in touch, technologies which have improved the feasibility of the work-at-home and remote office concept. In addition, businesses are demanding faster and easier access to information and individuals are, with increasing frequency, looking to these technologies to manage their personal finances.

This new publication is intended for those who are working with communications, computer systems and networking technologies and covers both wired and wireless communications, including computing, mobile and portable systems and personal services. Contact: IEEE Brussels Office, 13 Avenue de l'Aquilon, B-1200 Brussels, Belgium. Tel: +32 2 770 2198. Fax: +32 2 770 8505

Supercomputing

IEEE Catalogue no. UH0182-6. A glossary for the ignorant, of terms which should be useful as an opening shot on any important social occasion - who could be without their "hypercube architecture" in a "systolic array?"

From: The Brussels Office, Brussels, Europe.

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12 - 14 September 1994

presented by

Professor A H Aghvami
Director of Research

Department of Electronic & Electrical Engineering

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ICT 95

International Conference
on
Telecommunications

Bridging East & West Through Communications

Bali Indonesia

3rd to 5th April 1995 —Tutorials 6th & 7th

Final Call For Papers

You are invited to submit original papers addressing topics in the broad area of telecommunications for presentation at the conference and for publication in the conference proceedings. Those wishing to offer a contribution should submit three copies of the full manuscript or extended abstract.

Deadlines

Full manuscript or extended abstract
due: 1st Oct. 1994

Notification of acceptance:
15th Nov. 1994

Camera ready manuscript
due: 15th Jan. 1995

Submit Papers to:
Ms. Heather Clayton

Tel +44 (0)71 873 2281
Fax +44 (0)71 836 4781

Dept. of Electronic &
Electrical Engineering
King's College London, Strand,
London, WC2R 2LS, UK
E-Mail: udee783@uk.ac.kcl.cc.bay

being based on the meter and volumes of water under various conditions. But in spite of the obvious convenience of boiling and freezing water, it became clear that something "*more scientific*" was needed if temperature too were to be included in the "Metric" system! *Absolute* zero was defined as the point at which molecular motion ceased (-273.15 degrees Celsius). Change followed change and in 1990 an international committee devised a corrected Celcius scale, on which water boiled at 99.97 degrees.

Gone also are all but one of the other metric standards which were based on material objects. The metre, traditionally supposed to be represented by a pair of scratches on a platinum bar held in a vault in France, has been repeatedly redefined, most recently in 1983. In place of water and geography we then had a new metre - the distance that light travels in one 299,792,458th of a second. This too was short lived, to be replaced by multiples of specified wavelengths of laser light. Yet another change resulted in the second itself acquiring a new definition. Using a new clock, based on a hydrogen maser and the microwave-excited vibrations of caesium atoms, the second is defined as the time that passes during 9,192,631,770 of these atomic vibrations. Doubtless before the ink is dry on this definition, there will be yet another, which of course will be even more precise than the last.

It remains only for some hard-working scientist to discover a *fundamental* measure for the elderly kilogram. *Ed.*

Metric Standards

The Metre is not what it was

The modern metre is not what it once used to be; a couple of centuries ago even the European natives could grasp the metric measurement system - it was based on the distance between one of the Earth's poles and some simple properties of ordinary water. The metric system that emerged from the French Revolution was simple, self consistent, comprehensible and decimally tidy. However the insatiable demands of science for ever more precise measurements quickly removed the simple, understandable metre, leaving in its place definitions based on the daunting language of quantum mechanics.

The metric system, as originally formulated, was supposed to be based on the absolute dimensions of terrestrial distance and the immutable properties of water. A new measurement, which would replace the English foot and its approximate French equivalent, the *pied de roi*, was suggested in 1670 by Gabriel Mouton, a French Vicar who introduced a unit of length called the metre; it was equal to one 10-millionth of the distance from one of the Earth's poles to the equator. During the French revolution that distance was calculated from measurements made on the meridian between Dunkirk and Barcelona.

Even in 1799, when France officially adopted the metre, French experts had devised a fallback unit to be used in case the official platinum metre should be lost or destroyed.

Following the invention of the metre, efforts were made to measure length in terms of the oscillation of a very precise pendulum; it was not a complete success, but was the forerunner of modern distance measurement as a function of precise time. A complete metric system was then devised,

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21 - 23 November 1994

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Dr F Marvasti

Editor for Modulation and Signal Design
IEEE Transactions on Communications

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NEWS FROM THE SECTIONS

France

By Mme Frédérique Vallée

Conferences:: In association with other Societies, the France Section of Region 8 is participating in the following conferences : -

Applications of Non-ceramic Outdoor Insulation for Transmission and Distribution Networks, Paris, Palais des Congrès, France, [June 7-8 1994]. (inf. : Mme Vannier, SEE, 48 rue de la Procession, 75724 Paris Cedex 15, phone : (33) 1 44 49 60 17, fax : (33) 1 44 49 60 49).

IPMU, 5th International Conference on Information Processing and Management of Uncertainty in Knowledge-based Systems, Paris, France, [July 4-8, 1994]. Inf. : Mme Bernadette Bouchon-Meunier, LAFORIA, Université Paris VI, Boîte 169, 4 place Jussieu, 75252 Paris Cedex 05, phone : (33) 1 44 27 70 03, fax : (33) 1 44 27 70 00, e-mail. : bouchon@laforia.ibp.fr.

CEFC '94, 6th biennial Conference on Electromagnetic Field Computation, Aix-les-Bains, France [July 5-7, 1994]. Inf. : CEFC'94 Secretariat, Yves Maréchal and Gilbert Reyne, LEG, ENSIEG, B. P. 46, 38402 Saint Martin d'Hères Cedex, phone : (33) 76 82 64 03, fax : (33) 76 82 63 00, e-mail. : cefc@ensieg.fr.

OCEANS '94 (OSATES) Ocean Space Advanced Technology European Show, Brest, France [September 13-16, 1994]. Inf. : Mlle Bonami, SEE, 48 rue de la Procession, 75724, Paris Cedex 15, phone : (33) 1 44 49 60 60, fax : (33) 1 44 49 60 44/49.

ICEM '94, International Conference on Electrical Machines, Gif-sur-Yvette, France, [September 5-8, 1994]. Inf. : M. Lucien Deschamps, secrétariat général de la SEE, 48 rue de la Procession, 75724 Paris Cedex 15, phone : (33) 1 44 49 60 60, fax : (33) 1 44 49 60 44/49.

- **ISATA 27th International Dedicated Conference on Supercomputer Applications for the Transportation Industries**, Aachen, Germany, [October 31, November 4, 1994]. Inf. : Dr J. Soliman, ISATA Secretariat, 42 Lloyd Park Avenue, Croydon, CRO 5SB, England, phone : (44) 081 681 3069, fax : (44) 081 686 1490).

ULTRASONICS Symposium, Cannes, France [Hôtel Martinez, november 1-4, 1994]. Inf. : M. Gérard Quentin, Université Paris VII, 2 place Jussieu, 75251 Paris Cedex 05, France, phone : (33) 1 43 29 51 22, fax : (33) 1 43 54 28 78.

JINA 94, 8th International Conference on Antennas, Nice, France, [november 8-10, 1994]. Inf. : Secrétariat JINA 94, CNET-PAB, Centre de La Turbie, 06320 La Turbie - France, fax : (33) 93 41 02 29, télex: :470159F.

The French Section has granted its sponsorship to the following symposium : - **INTERWORKING '94, Second International Symposium on Interworking**, Sophia-Antipolis, France, [may 4-6, 1994]. Inf. : Dr M. Besson, ASCOM, 2229, route des Crêtes, 06560 Valbonne, phone : (33) 92 94 22 04.

NEWS IN FRENCH

Conférences de l'A.R.E. : Dans le cadre des accords passés entre l'A.R.E. (Conférences du soir des Anciens de la Radio et de l'Electronique) et la Section française de l'I.E.E.E., nous annonçons les conférences suivantes : - "**Le Général Ferrié**", par son biographe,

le Professeur Amoudry, 18 mai 1994. - "**Les très grands télescopes**", par le Docteur J. Enard, chef du Département Ingénierie à l'European Southern Observatory (Munich), 22 juin 1994. - "**La fusion nucléaire**", par Robert Aymar, Directeur des Sciences de la Matière au CEA, 5 octobre 1994. Ces conférences auront lieu à 17h, dans la salle n° 11 de la FIEE, située au quatrième étage du 11 rue Galilée, PARIS 16ème - Métro Boissière ou Iéna. L'entrée est gratuite, des rafraichissements sont servis pour clôturer agréablement la séance. Pour tout renseignement ou confirmation, s'adresser à Mme Birckel, 193, rue du Faubourg Saint-Martin, 75010 Paris, tél. : (1) 46 07 40 77.

Les mardis parallèles de l'IEEE : Le groupe de travail intitulé "**Parallélisme et systèmes distribués**" fonctionne les mardis après-midi, une fois par mois, au CNAM de Paris. (inf. J.F. Myoupo - Université Paris Sud - CNRS URA 410, LRI, bat. 490, 91405 Orsay, tél. : 69 41 66 34, ou C. Cérin, Université de Picardie Jules Verne, UFR de Mathématique & Informatique, LAMIFA, 33, rue St Leu, 80039 Amiens, tél. : 69 41 70 82, e-mail. : cerin@lri.fr).

Israel

By Professor Ady Seidman

Fellow Awards The Israel Section congratulates the following members who were elected to the Fellow grade, as from January 1 1994: Uri Shaked for "Contributions to the theory of singular optimal estimation and to linear control theory"; Shlomo Shamai for "Contributions to Shannon theory as applied to the evaluation of the reliability of communication channels; Mati Wax for "Contributions to sensor array signal processing and model selection"; and Ehud Weinstein for "Contributions to the application of statistical methods to signal processing and time delay estimation".

New Chapters Two Chapters have recently been established: Vehicular Technology, Chairman Dr. Reuven Meidan; and Information Theory, Chairman Dr. Meir Feder. The formation of two other chapters is being considered: Prof. Anthony Weiss is organizing the Signal Processing Chapter and Marcel Friedman the Reliability Chapter.

The 18th Convention of IEEE - Israel. A call for papers was issued for the 18th Convention to be held in Tel-Aviv from March 7th to 9th, 1995. The papers, to be published in Proceedings, will be in English. For an advance programme and registration, please mail your address to:

IEEE, Department of Electrical Engineering, Faculty of Engineering, Tel-Aviv University, 69978 Ramat-Aviv, Israel.

Elections for the Israel Section Management and for some Chapters were held in May, 1994.

Section Chairman: Prof. Ady Seidman Tel-Aviv University, Faculty of Engineering, IL-69978 Ramat-Aviv, Israel Tel.: 00972-3-6408138, FAX: 00972-3-6423508; e-mail: seidman@eng.tau.ac.il

**Now would be the time for all good men
to come to the aid of Regional Activities
- Pay your dues early.**

South Africa

By Professor Petrie Meyer

This year the Engineering Faculty of Stellenbosch University celebrates its 50th anniversary. South Africa Section's contribution to the festivities will be "Symposium '94", a two day event in which all chapters will take part, including the newly formed Control chapter.

The Programme

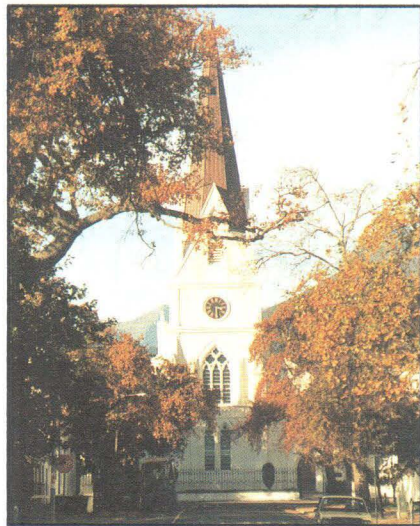
3rd October 1944. The eighth South African Symposium on Antennas and Propagation, and Microwave Theory and Techniques. Prof. D.B.Davidson, Tel: +27 21 808 4458. Fax: 4981. E-mail: davidson@firga.sun.ac.za

3rd October 1944. First South African Symposium on Small Computer Systems. Mr. H.J.Gouws. Tel:+27 21 808 4334. Fax 4981. E-mail: hjgouws@firga.sun.ac.za.

4th October 1944. The Seventh South African Symposium on Communications and Signal Processing. Mr. J.G.Lourens. Tel: +27 21 808 4012. Fax: 4981. E-mail: lourens@firga.sun.ac.za

4th October. The first South African Symposium on Small Satellites and Control. Prof. A. Schoonwinkel. Tel: +2721 808 4926. E-mail: schoonwi@firga.sun.ac.za.

Stellenbosch is one of the most delightful towns in South Africa - it is



The oldest church in Stellenbosch

also one of the oldest, situated between mountains in the heart of the wine-growing area, some 40km from Cape Town. Members from anywhere in the Region will be most welcome; if you can make it to these celebratory meetings you may rest assured that your time will not have been wasted. There is ample accommodation and transport facilities are excellent.

Increased use is being made of both the e-mail network and the computer diskettes from

"Regional Activities". Another of our more interesting developments is the introduction of graduate symposia, where "masters" students have the opportunity to present their work to fellow students and to discuss joint interests; the students opinion is that these symposia are interesting and informative and provide a first class introduction to the sometimes traumatic business of putting ones views to a critical audience; they should continue.

Section Chairman: Professor Duncan C. Baker, University of Pretoria Dept of Electrical Engineering, Pretoria 0002, South Africa. Tel: +27 12420 2775. Fax: +27 1243 3254. E-mail: duncan.baker@ee.up.ac.za

United Kingdom & Republic of Ireland

By Mr. Terry H. Oxley

European Chapter Workshop: *CAE, Modelling and Measurement Verification* at the Wembley Conference Centre London on 24th October 1994, in conjunction with Microwaves '94. Cooperatively sponsored by the MTT Society and the national IEE. The technical programme, structured with a mixture of formal and poster sessions,

will contain parallel presentations on the broad themes of passive circuit analysis and modelling, and device and circuit models in systems C.A.D.. Keynote papers will be presented by Linda Katehi, University of Michigan and Steve Tucker, HP-EEsof; these will focus on silicon circuit modelling at mm-wave frequencies and the latest developments in rf and microwave simulation. Contact:

TPC Chairman - Professor J.A.C. Stewart, Department of Electrical and Electronic Engineering, The Queen's University of Belfast, Ashby Building, Stranmillis Road, Belfast BT9 5AH. Tel: +44 232 245133. Fax: +44 232 667023

Workshop: EMO '94 High Performance Electron Devices for Microwave and Optoelectronic Applications at King's College, Strand London on 14th November 1994. Cooperatively sponsored by the ED & MTT Societies and the national IEE. The technical programme will provide an opportunity for discussing the increasingly demanding requirements for advances in semiconductor materials, device processing and circuit design. Contact:

Dr. Ali A Rezazadeh, Dept of Electronic and Electrical Engineering, King's College, Strand, London WC2R 2LSJ. Tel +44 71 873 2879. Fax: +44 71 836 4781. E-mail: A.Rezazadeh@UK.AC.KcL.CC.OAK (Janet Network)

Chapter Chairman: Mr. Terry H. Oxley, "Tremont", Back Lane, Halam, Southwell, Newark Notts NG22 8AG England. Tel: +44 636-815510. Fax +44 636 815865.

Germany

By Professor Dr E. Handschin

The executive committee of the section met on May 17th in Frankfurt, under the chairmanship of Professor Dr. A. Schwab. The section now has 3,260 members, including 600 students. The secretarial support provided by Dr. Schanz, manager of the ITG at VDE headquarters in Frankfurt, is much appreciated. Close cooperation between VDE and IEEE is an important consideration for both engineering associations. The president and secretary of the Institute visited VDE in the spring of 1994 to discuss the cooperation agreement. In order to improve relations between both organisations a joint working group has been suggested. In agreement with the treasurer Prof. Dr. Wiesbeck, the chairman has suggested that financial support should be given to student branches and chapters, so as to make their programmes more attractive and complete.

Chapters: In addition to the existing five chapters within the German section, the foundation of the following two chapters is in progress:

Information Theory
Electromagnetic Compatibility

Since the chairman of the joint Swiss-German chapter "Engineering in Medicine & Biology" will not be available in future, a new chairman will be appointed to take over until the autumn of 1994.

Students: The student branch activities have been successfully organised by Prof. Hahn; he suggests that it would be advantageous to have a more intensive information and programme exchange between student branches

Intelligent Robots and Systems. This important international conference will be held in Munich from 12-16th September 1994. The theme of the conference, which is being held in Europe for the first time is *Advanced Robotics and the Real World*. During the conference more than 300 contributions will be presented by leading international researchers from academia and industry. They will illustrate the latest advances in robot intelligence and dexterity, by experiment or by applications from the real world. The conference

general chairman is Prof. Dr. Volker Graefe, Bundeswehrhochschule in Munich, For further information please contact the following address: "IROS" '94 Secretariat, Universität der Bundeswehrhochschule München, D-85577 Neubiberg, Germany Fax: +49 89 6004 3074

The German section is supporting the second European Congress on **Intelligent Techniques and Soft Computing - EUFIT '94**, which takes place from 20th-23rd September 1994 in Aachen, Germany. The general conference chairman is Prof. Dr. H.J. Zimmermann, Technical University Aachen. Conference topics to be covered include basic concepts and mathematical aspects, methodologies such as artificial intelligence, expert systems, decision support systems, computer vision and applications in engineering, process control, quality control, production, medicine and finance. There will be an international software, hardware and book exhibition. In addition to the conference programme there will be several tutorials offered as an introduction for newcomers to the areas discussed during the conference. The address for further information and all correspondence is: EUFIT '94, Promenade 9, D-52076 Aachen, Germany. Tel: +49 2408 6969. Fax: 49 2408 94582

The Computer Society and the Industrial Electronics Society are cosponsoring a conference entitled **1994 IEEE International Workshop on Advanced Teleservices and High-speed Communication Architectures**. It will be held from 26-28th in Heidelberg, Germany. For further information please contact: The IEEE Computer Society, Conference Services, 1730 Massachusetts Ave. NW, Washington DC 20036-1992. Tel: +2021 371 1013 or Fax+202 728 0884

The German section and VDE (Verband Deutscher Elektrotechniker) jointly announce the first call for papers for the **Fourth International Symposium on Spread Spectrum Techniques and Applications (ISSSTA '96)**, which will be held from 22nd-25th September 1996 in Mainz, Germany. Prospective authors are cordially invited to submit papers in particular, but not exclusively, on the following topics: theory, system design, communications, navigation, ranging, channel sounding, devices and circuits. The technical programme committee chairman is Prof. Dr. P.W. Baier, University of Kaiserslautern, Germany. For further information please contact the congress organiser Mr. R. Rompel, VDE, Stresemannallee 15, D-60596 Frankfurt, Germany. Tel: +49 69 6308 381. Fax: +49 69 9631 5213.

Intelligent Systems Engineering Following the highly successful international conference held in Edinburgh during August 1992, the second ISE conference will be held at the Technical University of Hamburg-Harburg in Germany from 5-8th September 1994. The aim of the conference is to provide a forum for reporting significant results on the theory and application of Artificial Intelligence techniques to engineering problems; the German section is associated with this conference.

The organising committee is co-chaired by Prof. Dr. J. Lunze of the Technical University of Hamburg-Harburg. For further information please contact Miss J. Chopping, IEE Conference Services, Savoy Place, London WC2R 0BL, UK.

*Section Chairman: Prof. Dr. Ing. Adolf J. Schwab, Kaiserstrasse 12,
7500 Karlsruhe 1, Germany. Tel: +49 721 608 2520.
Fax: +49 721 69 5224*

Have you read page 1?

Greece

By Prof. G.I. Stassinopoulos

Elections were held and the current committee members were reelected, (G. Stassinopoulos, G. Kontaxis, Ph. Konstantinou for president, vice-president and secretary/treasurer respectively).

We have had a series of exciting lectures on telecoms, with key presenters Dr. Nickolas Zervos, Bell Labs, on **High Bitrates for the Local Loop** (video on demand applications) and Prof. Constantine Kourkoubetis of the University of Crete on **Cell Loss Estimation for ATM Networks**. Forthcoming visitor and invited speaker is Prof. Y. BarNess from the New Jersey Institute of Technology, his topic will be: **Interference Cancellation in Multiuser Communication Systems** (7th April, 1995).

Members in the north of our section covering Thessaly, Macedonia and Thrace are busy organizing the **1995 IEEE Workshop on Nonlinear Signal and Image Processing**, in Halkidiki, Greece, June 20th-22nd, 1995. Submission of an extended abstract is due before 1st November 1994. Members in the north of our section, covering Thessaly, Macedonia and Thrace are busy organizing the 1995 IEEE Workshop on **Nonlinear Signal and Image Processing**; to be held in Halkidiki, Greece, 1995; interested members should contact:

Prof. Ioannis Pitas, Department of Electrical & Computer Engineering, Aristotle University of Thessaloniki, P.O. Box 463, 540 06 Thessaloniki, Greece, tel: +30-31-996304, fax: +30-31-274868, E-mail: pitas@vergina.eng.auth.gr

*Section Chairman: Professor George G. Stassinopoulos, Nat Tech .
University of Athens, Division of Computer Science, Heroon
Polytechniou 9, 15773 Zografu, Athens Greece. Tel: +30 1 779 3988.
Fax: +30 1 775 7501.*

Norway

By Mr. Fritz Bekkadal

Membership Development. The Norway section is growing very satisfactorily, the total number of members having increased steadily. During the past two years that increase has been 33% and the total is now approaching 500. Even more encouraging is the increase in the number of student members; 240% in the same two year period.

Chapters. The section has now established its second chapter, a joint Signal Processing, Communication, and Information Theory chapter, with Mr. Fritz Bekkadal as Interim Chairman

We are now planning a third joint chapter: Antennas and Propagation and Microwave Theory.

Student Branch. The section is now on the point of establishing its first student branch, at the Norwegian Institute of Technology, University of Trondheim. The petition was forwarded in March/April and we now await an acknowledgement.

Conferences and Symposia. The section has cosponsored two symposia in Norway this year:

- ISIT '94 - International Symposium on Information Theory; held in Trondheim on 17th June - 1st July.
- The First Joint NORSIG-IEEE Nordic Signal Processing, held in Ålesund on 2nd-4th June. (NORSIG is the Norwegian Association for Signal Processing)

*Section Chairman: Mr. Fritz Bekkadal, SINTEF-DELAB, N-7034
Trondheim Norway. Tel: +47 759 4312
Fax: +477 59 10 99*

France Signal Processing Chapter

By Professor F. Castanie

In addition to an exhibition of products, Digital Signal Processing '94 will include a cycle of high quality conferences, led by specialists in the subject. The conferences will take place in the Palais des Congrès and will be on a different topic each day:

Algorithms and Architectures for DSP; Digital Communication; Multimedia (sound and image coding).

This is a complete exhibition of hardware, software, solutions and services offered to signal processing applications designers. Round Table discussions and an Exhibitors Forum

Information from: Joëlle Zanchi - Tel : +33 4728 4656.

Fax: +33 4728 4699

Finland

By Aarno Lehtola and Jari Jokiniemi

Artificial Intelligence Research - August 29th 31st. The Section, the Computer chapter, the Finnish Artificial Intelligence Society (FAIS main organiser), Åbo Akademi, University of Turku, and the School of Economics and Business Administration, are jointly organising a conference on Artificial Intelligence Research in Finland, STeP '94. It will be held at the Turku Technology Centre (Lemminkäisenkatu 14-18 Entrance A) Turku, Finland

STeP '94 will be a forum for all research areas on artificial intelligence, including both basic and applied research. Future AI applications in business and industry are special themes of the conference. Topics include neural network theory, neural networks in medical applications, pattern recognition, fuzzy control, object-orientated programming, approximate reasoning and AI in business. There is also a tutorial on AI applications. STeP '94 will be organised in the form of tutorials, symposia, workshops, software presentation and exhibition. Contact: Sinikka Säteri, Turku School of Economics and Business Administration, PO Box 1109, FIN-20521 Turku, Finland Tel: +358 21 63 83 513 Fax: +358 21 63 83 511 E-mail: ssateri@abo.fi.

Convention on Radio Science - Sodankylä - 27-28th October.

At the Geophysical Observatory. The main topic for this year's meeting is ionospheric and plasma research; additional topics include: remote sensing, radio astronomy, Finnish satellite and rocket research, and measuring techniques. Contact: Tauno Turunen, Director Sodankylä Observatory, Tel: +358 693 619 813. Fax: +358 693 619 875. E-mail: ari.tauno.turunen@csc.fi

SP/CAS Chapter News. The VI Finnish symposium on Industrial and Engineering Mathematics was held in May '94 at Tampere University of Technology; particular emphasis this year being placed on signal processing, the Chapter played a substantial part in arranging and co-sponsoring the symposium; it was also host to the IEEE Distinguished Lecturer Professor Maurice Bellanger, who discussed "Signal AC Matrix, Predictive and Adaptive Filtering". Other speakers were Professors Antonio Fasano, Jussi Rahola and IEEE Fellow Yrjö Neuvo

We are constructing an up-to-date database for the E-mail addresses of members in the Signal Processing Society and the Circuits & Systems Society in Finland. Will all members of CS and SP please send your postal address via E-mail to 'saari@cs.tut.fi'

Chapter Chairman: Moncef Gabbouj (moncef@cs.tut.fi). Chapter Secretary: Kari Saarinen (sasari@ca.tut.fi)

Section Chairman: Mr. Arno Lehtola, Nottakunnantie 3B9, SF-02230 Espoo, Finland. Tel: +3580 456 6032. Fax: +3580 456 6027.

For Students

By Mr. Roman Mittendorfer

E-mail: Once again I should like to invite all Student Branches to join the IEEE e-mail network. Using e-mail will improve communications among IEEE volunteers, Student Branches, Branch Chapter and Sections, and the members of the Institute staff. All connected branches will receive deadline reminders, useful information and messages from IEGEE headquarters. To sign up your Branch, please send an e-mail message to startup@ieee.org; it should contain the following information:

1. your name and e-mail address
2. Your daytime phone and/or fax numbers
3. The name of the branch / branch chapter you represent
4. The name of the Branch chair and Counsellor who has appointed you as e-mail liaison

To receive the current directory of IEEE Student Branches registered with alias addresses listed at "ieee.org", send an e-mail message to: directory.sb@ieee.org. Using this information, your Branch can connect and communicate with other Student Branches worldwide!

Region 8 Student Representative (RSR). Roman Mittendorfer, Muenzgrabenstr. 244/214, A-8010 Graz, Austria. Tel: +43 316 873 7274. Fax: +43 316 873 7266. E-mail: r.mittendorfer@ieee.org or -mittendorfer@ft'ug.dnet.tu.graz.ac.at

North Italy

By Dr. Alessandro Gandelli

At the Section executive committee meeting, 7th April, the calendar of Conferences and meetings were discussed. Among the most significant events sponsored by the Section and Chapters it is opportune to remember the lecture given by Prof. John G. Kassaklan, Director, MIT Laboratory for Electromagnetic and Electronic Systems; his subject was "'Power Electronics - what is it? - where is it? - where is it going?'" The venue was the F.A.S.T Auditorium in Milan and the date 16th May 1994. PELS & IELS Joint Chapter, and the Section, cooperated in the organisation.

The same Chapters organised the second "AC Motor Drives Technology" course in Vicenza. Prof. Ramu Krishnan, Virginia Polytechnic Institute USA, presented the main lecture.

The IM Chapter, sponsored by the North Italy Section, has organised two very important meetings: the International Workshop on "Mathematical Methods in Electrical and Electronic Measurements - July 1994, and the "Third Volta Colloquium on Partial Discharge Measurements - 31st August - 2nd September 1994.

The second of these conferences will be held at the palatial meeting facility in Villa Olmo, one of the residences of the former Dukes of Milan. The first event was devoted to improving the exchange of ideas between mathematicians and electrical and electronics engineers working on measurements. The second meeting continues a successful venture started in 1980; it is devoted to the theory and application of Partial Discharge Measurements. This year the main topic is "Fault Detection and Interference Rejection". Further information may be obtained from the General chairman Prof. Arnaldo Brandolini, Dept. of Electrical Engineering, Piazza L. da Vinci 32, 20133 Milano Italy. Tel: +39 2 2399 3798. Fax: +39 2 2363 561. E-mail: arnaldo@quadralt.etec.polimi.it.

The MTT Society and its N. Italian chapter cosponsored the "European Gallium Arsenide and Related III-V compounds Applications Symposium, held in Torino 28-30th April.



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E-mail: hans-joerg.pfleiderer@e-technik.uni-ulm.de

Region 8 News

The circulation of Region 8 News varies between 25,000 and 30,000 for each of its four issues; this excludes more than 3,000 affiliates who, not being "members" within the meaning of IEEE law, do not receive it. Although it may not appear to be so, it is not necessary to be a Section chairman, a Regional Director, or other high dignitary, in order to write for "The News"; its pages are open to all grades in all countries. Writing correct English is not a prerequisite and help will be given to any prospective author - but please send your copy to the editor well before the official deadline. The production process goes like this:

i) The author sends his article "the copy" to the editor, who makes what changes he considers necessary to fit it into the space available, modifies the English and decides on the layout. This material is entered into a Desktop Publishing programme, which produces a draft of the assembled page. After several proofs the final camera-ready copy appears. Photocopies of all these pages are made and pasted together into the form of a rudimentary Region 8 News, which includes instructions to the printer written in a curious kind of shorthand: this rough booklet is called a "paste-up". Everything is there in its correct position, with copies of all photographs, illustrations and advertisements correctly inserted. Typefaces, size of characters and colours are then marked on the paste-up and all colours indicated. This is the printer's bible for your job - make a mistake in this part and you will not earn thanks from anyone. The paste-up and a set of camera-ready A4 sheets go to the printer. That is what the editor does.

ii) At the printers the camera-ready copy is photographed and the films assembled on a "light box"; for an 8 page R8 News there would be 8 A4 films on one A1 sheet, from which four further A1 films are made, one for each of the primary, or process colours; mixing the process colours can produce almost any colour shade. These 4 colour films are now transferred to metal plates, which will be used for the printing process itself. You may be excused for thinking that this is a highly "computerised" high-tech process - not so, it is done by one

highly skilled operator, an artist in his own right, whose working medium is coloured films and his brush a scalpel - sometimes used with great care to rectify the editor's mistakes. The machines used for printing R8 News are very large; they are made by the Heidelberg company in Germany, and are masterpieces of precision engineering; using electrics, hydraulics, pneumatics, optics, and of course the ever present computer. To buy one you would need to write a cheque for some \$2,500,000; to repay their cost, they work 24 hours a day, seven days a week. One, installed in August 93 was printing the May 94 R8 News and had not stopped for maintenance or breakdown during that period. The finished A1 colour-printed sheets are then folded and cut to A4, the wire bindings are inserted and the whole counted and packed for delivery. That is what the printers do.

3) The two tonnes of printed R8 News are transported to the "Mailers", whose job it is to collect together Region 8 News, the advertisers' inserts and put everything into its right envelope in accordance with a matrix schedule prepared by the editor whilst the printing is in progress. The mailers use a mixture of machine and manual processes. 28,000 Region 8 News with 50/60,000 inserts are posted to members within three days of their delivery to the mailers. That is what the mailers do.

In drawing up the mailing schedules it has to be remembered that individual advertisers may require their inserts sent to members in any of the Regions 38 Sections and/or only to those members who belong to specified Societies. Whilst producing the insert schedules the editor has also to calculate, and pay for, the total cost of postage: the British Post Office gives credit to no one and postal charges have to be paid before a single R8 News is delivered. Within each country there are up to eight postal divisions; sorting the mail into those divisions is the responsibility of the mailers

There are of course others involved: Freight agents for inserts from outside UK, Customs agents, a transport company (and the government VAT office).

Each copy of R8 News costs the Region about 38 cents

The Editor



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From Antalya to Bari Melecon '94 - '96

By Dr. J. Baal-Schem

Melecon '94 was held in Antalya, it was organised by the Turkey Section, the Middle East Technical University, Bilkent University and the Chamber of Electrical Engineers of Turkey; all took a very active part in this most successful Mediterranean event

The technical programme potentially included over three hundred and forty papers, in several parallel sessions, to be presented either orally or as posters.; but unfortunately, an airline pilots' strike prevented some of the authors from attending and only 80-% of the papers were read and 50% of the posters displayed. There were sessions on Communications, Networks, Antennas, Electrical Machines and Power Systems - in most of these sessions the audience exceeded one hundred. Plenary lectures provided an opportunity for members to hear eminent speakers dealing with subjects of general electrical engineering interest.

Those registrants who succeeded in arriving at the conference hotel, more than one hundred and fifty were students, enjoyed an excellent climate and the graceful welcome which awaited them; the social programme could not have been better, with ample opportunities for strolling through the picturesque old city and its environs.



The Trulli - Traditional houses - Apulia

The theme of Melecon '96 will be: Industrial Applications in Power Systems, Computer Science and Telecommunications; it will of course maintain the high standards for which Melecon '94 will long be remembered. It is equally important that the atmosphere and surroundings should facilitate discussion and the interchange of ideas between colleagues having a common interest; this has long been an important feature of Melecon conferences; one which will continue into Melecon '96 and beyond

As an inducement to attend the '96 Melecon in Bari - May 13-16th - Professor Pugliese, general chairman of the conference, showed a video of the city of Bari and Professor De Sario of the Politecnico di Bari, showed an equally impressive film of the Apulia region. Bari is on the coast of Apulia and has much to offer the tourist, whether he is in search of past civilisations, gastronomic delights or just wishes to lie in the sun. Melecon '96 expects to attract the same international enthusiasm as was evident at this year's Melecon. Travel presents no problems since there are excellent connections with all the major European airports.

Professor Tuncay Birand is the general chairman, and Professor Onder Yuksel is chairman of the programme committee; they head an enthusiastic and experienced team which will ensure the success of Melecon '96. For whatever reason you visit Apulia you will not be disappointed.

Free Exhibition Space for Newly Industrialised Countries

By Professor André Vander Vorst

Every fourth year the International Telecommunications Union organises a comprehensive exhibition; probably the world's largest. The next will be in Geneva from 2nd to 11th of October 1995; it will include a pilot scheme to enable selected small companies from Newly Industrialised Countries, which have until now not been able to take a substantial part in the exhibition, to have exhibition space without charge and a free booth.

It has recently been shown that technological advancement, allied to the liberalisation of markets, has done much to encourage the development of domestic telecommunications by small companies. It is amongst these entrepreneurial R&D and manufacturing companies, that the most promising Newly Industrialised Countries (N.I.C.) candidates are to be found; they represent an innovative, competent and fast growing segment of the domestic industry and are ideally situated to initiate mutually profitable cooperation and joint ventures with foreign partners. They fill a market need but pose no threat to multinational or large domestic suppliers. Due to their ability

to react rapidly to market and technical changes and their close contact with consumers, they are able to make a profitable contribution to international technical cooperation. They are however, small and fragmented, have insufficient financial resources and lack experience in the techniques of publicity.

It is precisely to overcome these difficulties that the I.T.U. has initiated the N.I.C. pilot scheme. Companies who believe that they fall within the scope of this scheme and would like to take part, should contact Mrs. Lili Rison for more detailed information:

Mrs. Lili Rison
Project Manager, Telecom 95
Place des Nations
CH-1211 Geneva 20, Switzerland
Tel: +41 22 730 5244. Fax: +41 22 730 6444
Telex: +421000 UIT CH. Internet: telecominf@itu.ch

IEEE publications and conferences are helping to publicise progress in developing countries, including their related industrialisation efforts; it is from small companies in the Newly Industrialised Countries that the IEEE could find potential new members. The N.I.C. scheme fits well into the the Institute's increased interest in world-wide affairs.

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Region 8 Conference Record

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Tel: 071 344 5477/5478. Fax: +44 71 497 3633

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