

IEEE Region 8 News

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Editor

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HULLO MR. PRESIDENT

Do come in, make yourself comfortable

"Welcome to one of the warmest seats in the Institute, I trust that the temperature is to your liking. I would like to take advantage of this occasion to seek advice on the subject of "talking" to the members, in particular to the members of this Region; the process is I believe called "communication". In any organisation, those at the administrative centre are accustomed to the use of a convenient shorthand language of their own. I am sure that the members of your Committees and Boards all demonstrate an enviable competence in these linguistic gymnastics and that they experience no problems in arriving at a mutual understanding, with a total absence of ambiguity: to this process I would attach the label "First Level of Understanding", FLU to those in the know.

There is of course a "Second Level of Understanding" SLU; which exists between your central Committees and those groups responsible for the organisation of Regions, Societies, Sections and so forth. At this point there arises a small problem: the SLUs being only semi-literate in the IEEE linguistic sense, sometimes experience difficulty in unravelling the messages from heaven, and not wishing the "loose face" in the presence of their seniors in these matters, pretend an understanding to which they are not entitled and perhaps formulate a confident reply which a FLU will accept with some non- noncommittal phrase in public and mystification in private.

Naturally there is a third category - "Lack of Understanding" LU; which includes some 99% of the members. The problem upon which I would value your Committee's advice is how should one establish a FLU-SLU understanding and much more important how does one arrive at a FLU-LU or FLU-SLU-LU procedure for communication between the angels and the sinners. The latter, if they were by some misfortune to meet a pair in the street, could not distinguish a TABOpCommed RAB from a PACEd USAB; are they fierce or friendly and can they be tempted with buns or peanuts.

I should emphasise that my difficulty is neither with the form of spelling introduced by Mr. Webster following his understandable dislike of the English after the American War of Independence, nor with the use of long

words, if they can be found in a reasonable English dictionary. The conversational grammatical proclivities which may infect the written word of your committees are not my concern, but there does remain a minefield of difficulties which seem to lie in the path of an effective understanding between the few who govern and the many who pay. Let us consider a topical example - from page 5 of the October "Institute" - by the Ad Hoc Committee on Volunteer Restructuring (I assume that we are not proposing a course of genetic engineering to *restructure the volunteers*); it has the laudable aim of informing members about a reorganised Institute and encouraging them to discuss the matter and return their comments to the President. I make the assumption that both your Committees and the members have a suitable dictionary to aid their understanding^{1,2}.

In its opening paragraphs the article states that it will explain the Board's proposal (*suggestion, intention*¹; *plan of action*²) and then continues with a statement concerning the Board's concept (*an idea, an abstraction*¹; *a general notion, a vague idea*²). Might it not be more logical to start with the vague idea and proceed to the plan of action; in many places it is not clear whether the authors are dealing with the idea or with some proposal for putting the idea into practice. Is your Board being asked to approve the concept or the proposal? The absence of the word "transnational" and its replacement by "international" is much to be commended; the former does not appear in either Ref 1 or 2 whilst the latter is universally understood. The McCarthy days, when the word might have been remotely confused with "internationale" are, one hopes, a thing of the past.

"Entity" (*something that exists independently*¹; *a thing's existence as opposed to its qualities*²; - a difficult concept? Ed.) appears repeatedly in the text; together with "activities", both being used as if sprinkled on the page by a pepper-pot. We manage, in Region 8, with just an ordinary Regional Committee, we find no need for a Region 8 Activities Committee. The almost subconscious and repetitious addition of words to otherwise well understood expressions, increases complexity, but decreases understanding.

For whom is the article is intended, those who: might be a part of the new geographical groups, are within USA, or are outside USA? Perhaps they should be, but ordinary members are not concerned with Boards and Committees, or how their do their work; the question they will ask is "how will it affect me? Or "what future facilities will be provided that I do not now enjoy?" The authors offer negligible help. Might not your Committee consider a reduction in the number of words, an increase in "whitespace", a more appealing title and some relief from the solid mass of printing, that Committee surely does not wish "to bore-the-pants off" its readers - do I have the correct verb?

Lest your Boards and Committees should imagine that I am conducting a kind of feud against the written word from the IEEE alone, let me hasten to assure you that it is not so. In Region 8 similar problems exist; problems which have occupied much UK political time and changed the way in which English is taught in English schools. H.R.H. Prince Charles, never backwards in these matters, has in one context described modern English as a "Desolate wasteland of banality and cliches"

Your Committees will I am sure be aware that recent political events are likely to result in a redrawing, or perhaps a restoration, of the map of Europe; a region which could then dwarf both the 1992 EEC and the United States. Such a New Europe would not be enlarged simply by the addition of a population lacking in history, culture or scientific endeavour, but by many who would be seeking to make up for lost scientific time, keen to join the technical community to which they have recently been denied access. The rewards for collecting these people under the umbrella of the IEEE are considerable and the price possibly high - but if your Committees cannot convince them they will not join us."

1. *The American Heritage Dictionary of the English Language*. Dell Publishing Co. Inc., 1 Dag Hammarskjöld Plaza, New York
2. *The Oxford Dictionary*. Oxford University Press, Ely House, London W.1.

The Editor

CONTINUING EDUCATION

By Peter Wiesner - IEEE Education Dept. New Jersey U.S.A.

Who wants yesterday's newspaper? Who wants yesterday's engineer? Well, that depends.

For starters, we worship newness. "The cutting edge of technology" is good, "Obsolescence" is bad. We all want to be up-to-date, doing things bigger and better, or smaller and better; professionally we are perpetually playing catch-up, reading up and studying up, to ensure that we are as competent as our university degrees say we are. Employers pay money for what engineers *can* do; knowing what to do and how to do it is obviously important and this is where education, not always schooling, plays an important role.

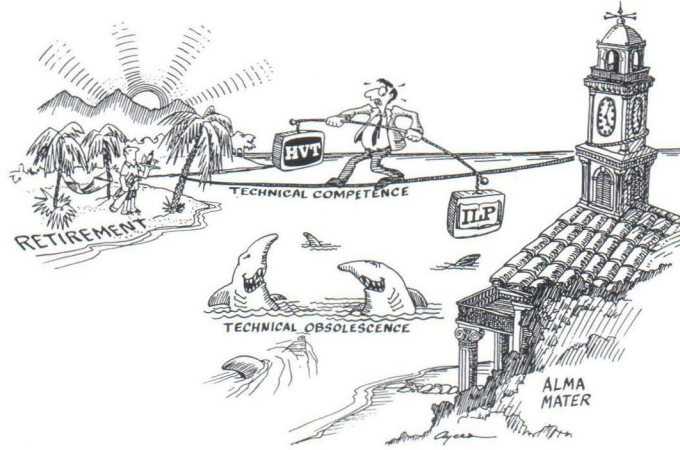
The problem for practicing engineers is that the more successful they are the more they need to keep up and the less time they have for formal education. Our solar system has granted us a fixed number of hours and days - as a result we can only do so much against time before we lapse into obsolescence, but there are things we can achieve. The IEEE Education Board provides us with opportunities for professional self-renewal which do not require attendance at courses designed for young students.

Seasoned engineers, busy with job and family responsibilities, simply do not have the kind of schedules that are attuned to campus belfry chimes.

is to foster the idea of continuing education more as a corporate investment than as an employee benefit. At the very minimum, employers and company libraries

development French and Spanish programmes. There is also a multi-language distinguished lecture series produced in association with the MTT Society.

There are also course-support materials, such as the **Independent Learning Programmes**, designed for working engineers who do not have the time to attend college in order to bring their skills up to date. These and all other educational programmes are scrutinised by both engineering educators and practicing engineers; in this way the unity of theory and practice is achieved. In a recent opinion poll some 56% of IEEE members stressed the importance of **Continuing Education** for professional advancement; we need to bring home to our profession the idea that life-long education is here to stay.



(HVT=Home Video Tutorials ILP=Independent Learning Programme - Ed.)

IEEE home-study courses are designed for mature individuals who have the motivation and self-discipline to tackle difficult materials on their own.

Continuing education is often regarded as the employee's rather than the employer's responsibility, and as a consequence the cost of continuing education is borne by the individual. A major challenge

should be encouraged to purchase continuing educational materials for their employees.

IEEE home study materials include **Home Video Tutorials**, which bring into your living room, up-to-date presentations by experts from many countries. In an effort to encourage **International Tutorials** we are cooperating with the MTT Society, in the

For additional information about IEEE Independent Learning products and services contact: Mr. Peter Wiesner, IEEE Educational Activities, 445 Hoes Lane, PO Box 1331, Piscataway, NJ-0855-1331, U.S.A. The Region 8 Representative for Continuing Education is: Professor A.S.Vander Vorst, University Catholique de Louvain, Batiment Maxwell, B-1348 Louvain-la-Neuve, Belgium.

CompEuro '90

By Dr. Jacob Baal-Schem - Israel

The IEEE International Conference on Computer Systems and Software Engineering - CompEuro '90 - will be held at the Tel-Aviv Hilton in Israel on 8-10th May 1990. The main theme of the Conference is "Systems Engineering aspects of Complex Computerised Systems". Seventy papers, selected from the one hundred and eighty received, will be presented at 26 sessions during the first two days of the Conference, together with two Poster Sessions. The third day will be devoted to three Tutorials by eminent speakers from Europe and North America.

The opening session will include a lecture by Professor Michael Rabin of the Hebrew University of Jerusalem and Harvard University USA on "How to use Parallelism if you must". This will be followed by a plenary session dealing directly with the main subjects of the Conference: VLSI Technology - its outlook and Impact on Systems for the year

2000 by D. Frohman (Israel); System Engineering Issues by H.G.Sol (The Netherlands); and the Complexities of Computer Based Systems by M. Jackson (UK)

Among the papers to be presented during the technical sessions will be reports on experience with development architecture from the UK, Spain and the USA, and case studies from Israel, Sweden, West Germany, the Netherlands and others. Knowledge based systems will be presented by lecturers from UK, Taiwan and Israel. The subject of Rapid Prototyping will be discussed in two sessions, with an introduction by R. Budde of W. Germany and other presentations by lecturers from the Netherlands, Greece, Italy, W. Germany and Spain. Engineering and Software Engineering tools will be the subject of two sessions by speakers from Brazil, Italy, Israel and France. Software Validation and Verification will be introduced by lecturers from Italy, USSR and the UK.

The programme includes two Panel Discussions: the first deals with Object Oriented Systems Development and the second with basic issues underlying the theme of the Conference. On the third day three Tutorials will be presented:

- Software Project Management for Embedded Systems - M.S. Deutsch, USA
- Prototyping: Tools, Techniques and Concepts - M.S. Budde and H. Zullighoven, W. Germany
- Practical Visual Techniques in reactive System Design - R.J.A. Buhr, Canada.

CompEuro '90 has been designed to offer its participants and their accompanying persons many interesting social events and visits to a variety of historical, cultural and religious sites in Israel.

For full details please contact: CompEuro '90 Secretariat, PO Box 50432, Tel-Aviv 61500, Israel. Tel: 972-3-664825; Fax: 972-3-660952

Why an EMC Symposium

By Dr. Hugo Rüchardt

More than one hundred years ago a new natural resource called the Electromagnetic spectrum was discovered and made available for utilization; it is characterised by interrelated space, time and frequency. In the earliest stage of radio the only limitations on its utilisation were imposed by the natural electromagnetic environment and the development of science and technology for the design and construction of equipment. The few working devices then available could be separated in time, frequency or space; the problems of interference and spectrum sharing were practically non-existent.

It was not anticipated then that the rapid development of devices using high frequency energy would lead to a situation in which problems of sharing the limited resources of the spectrum by many services (with the resultant electromagnetic environmental pollution and interference problems) would become the key to the development of radio communication.

A definition of the mid sixties reflected the scope of what came to be known as Electro-

Magnetic Compatibility: "EMC is the ability of signals and interference to coexist without loss of the wanted information". But this was only the beginning of what is now a much broader concept, which embraces not only radio-communication but also other devices using EM phenomena, including the biological effects of EM energy. The contemporary definition of EMC has become: the ability of a device using EM phenomena to function satisfactorily in a given EM environment without introducing intolerable disturbance to that environment or the biosphere.

Semiconductor systems, and in particular those based on SLI and VLSI circuits are much more susceptible to EM pulses from atmospheric discharges than were the earlier electrical systems. Digital systems are less susceptible to radiated interference, but much more susceptible to interference by transients occurring during power supply switching. Electromagnetic waves are subject only to the laws of physics, they completely ignore administrative barriers, the desired as well as the disturbances crossing such

obstacles without "permission" or "licence". This is one of the strongest reasons for international scientific and technical cooperation; it is also the reason why international EMC symposia are held to stimulate progress and personal contacts.

The need for such Symposia on a national scale has long been recognised in many countries, e.g. England, Federal Republic of Germany, France Japan the USSR and especially USA, where more than 30 EMC symposia have been held. However it was Europe that instituted truly international EMC symposia, a successful initiative which appeared almost simultaneously in Poland and Switzerland. The organisers in both countries have coordinated their efforts in order to establish the yearly international EMC symposium.

The 10th International Wroclaw Symposium on Electromagnetic Compatibility will be held in Warsaw, Poland from 26-29th June 1990. Contact EMC Symposium, Box 2141, 51-645 Wroclaw 12, Poland.

North Italy

By Professor Vito A. Monaco

Cari Soci,

approssimandosi la fine del mio mandato (Maggio 1990) alla Presidenza della Sezione ho provveduto, in accordo con lo *Executive Committee*, a designare un *Nominating Committee* composto dai *Past Chairman* G. Catenacci, E. Gatti, A. Lepsky, F. Saccomanno e M. Sforzini, che all'unanimità ha proposto le seguenti candidature:

Chairman: Ing. P. Gazzana-Priaroggia (Cons. Pirelli.)

Vice Chairman: Ing. Basilio Catania (Cons. CSELT)

Secretary/Treasurer: Ing. Guiseppe Luoni (Pirelli)

A termini di regolamento, se non perverranno altre candidature mediante *petition* di almeno 12 soci effettivi entro un mese dalla data della presente, le elezioni si svolgeranno in occasione della assemblea annuale dei Soci che verrà convocata nel marzo 1990.

Colgo l'occasione per inviare in allegato un breve rendiconto dell'attività svolta nel corso del 1989 ed un elenco delle più importanti manifestazioni in programma, oltre a varie altre notizie utili per una più completa informazione sulla Sezione. Gli Atti del Convegno "Formazione Universitaria nell'Europa Integrata", tenuto con un certo successo nel giugno scorso,

sono in corso di stampa e verranno inviati gratuitamente a tutti coloro che ne faranno richiesta. Con l'occasione desidero ringraziare tutti i Componenti dello *Standing Committee*, i *Counselor* delle *Student Branch* e i Coordinatori delle *Chapter* per l'impegno profuso a favore della Sezione

Per concludere voglio ricordare l'invito rivolto dal *Board of Directors* ad ogni Socio di procurare nel corso del 1990 un nuovo Socio. Con molti cordiali saluti e sinceri auguri per un buon 1990.

Bologna, 9 gennaio 1990

Vito A. Monaco

Attività svolta nel 1989:

- Conferenze su argomenti vari, in collaborazione con Istituti e Dipartimenti universitari
- Partecipazione di 15 Soci studenti al Melecon '89 (Lisbona), con spese di viaggio in gran parte a carico delle Sezioni Centro-Sud e Nord Italia.
- Convegno "Formazione Universitaria nell'Europa Integrata" (Bologna, 23-24 giugno 1989), in collaborazione con la Sezione Centro-Sud Italia.
- Convegno "Il Robot nell'Automazione della Produzione Elettronica" (Milano, 28-29 settembre 1989) in collaborazione con la Sezione Centro-Sud Italia e con il Gruppo specialistico CCTE-Microelettronica della AEI.
- Convegno "Tecnologie di Interconnessione e Packaging nell'Elettronica"

(Firenze), 9-10 ottobre 1989, in collaborazione con la Sezione Centro-Sud Italia e con il Gruppo specialistico CCTE-Microelettronica della AEI.

- Assegnazione dei premi IEEE agli studenti meritevoli.

Attività in programma:

- Assemblea dei Soci (Bologna, marzo 1990)
- Convegno "Gallium Arsenide Application Symposium" (Roma, 19-20 aprile 1990), in collaborazione con la Sezione Centro-Sud Italia e con il Gruppo specialistico CCTE-Microelettronica della AEI
- Conferenza "IEEE CompEuro '91" (Bologna, 13-16 maggio 1991), in collaborazione con la IEEE Computer

Society, con la IEEE Region Eight, e con il Gruppo specialistico CCTE=Microelettronica della AEI

Chapter: si sono formate o sono in corso di formazione le seguenti C:

- Joint - Microwave Theory and Techniques, Antennas and Propagation, Circuits and Systems, Electron Devices (Coordinatore: C. Naldi)
- Instrumentation and Measurements (Coordinatore: A. Brandolini)
- Power Engineering (Coordinatore: P. Gazzana Priaroggia)
- Joint - Power Electronics, Industrial Electronics (Coordinatore: P. Maranesi)
- Computer (Coordinatore: R. Negrini)

Student Branch: si sono formate o sono in corso di formazione le seguenti S.B.:

- Bologna (Counselor: M. Rudan)
- Genova (Counselor: C. Braccini)
- Milano (Counselor: R. Negrini)
- Padova (Counselor: C. Monti)
- Pavia (Counselor: S. Massucco)
- Torino (Counselor: F. Gregoretti)
- Trieste (Counselor: G. Ramponi)

Section Chairman: Professor Vito Antonio Monaco, Dipartimento di Elettronica, Informatica e Sistemistica, Viale Risorgimento 2, 40136 Bologna.

Section Chairman Elect: Ing. Paolo Gazzana-Priaroggia, Pirelli Cavi, Piazzale Cadorna 5, 20123 Milano (C.P.n.10098-20110 Milano)

CompEuro '91

By Professor Vito A. Monaco and A.R. Meo

Papers are invited for the International Conference on Advanced Computer Technology, Reliable Systems and Applications - CompEuro '91 - to be held in Bologna, Italy from 13-16th May 1991. The theme of the Conference is the interaction between Computer Technology and Computer Architecture

- Fault Tolerant Architectures, Parallel Architectures, Non-Von Neuman Systems, RISC and CISC Processors
- Systolic Systems, Arrays, Neural Networks, Embedded Systems, Ultra Reliable Systems, Image and Signal Processing
- Metropolitan Area Networks, Broadband ISDN, Network Intelligence, Network Management, Customer Control, Reliability and Security.
- Rapid Prototyping of Systems and Software, Robust Software Development, Development Environments, CASE Tools, Artificial Intelligence Techniques, Reliable User Environments.
- Mapping Algorithms into Hardware, Reliability and Fault Tolerance Evaluation, System-Level Modelling.
- CAD Tools and Environments, High-level Synthesis, Design for Testability, Fault Modelling, Artificial Intelligence and VLSI Design.
- ASICs, High-speed Technologies, VLSI Production, Memories, Advance Packaging, EM Interference, Peripherals

Prospective Authors should send a 2000-word extended abstract, supplemented by up to two pages of figures (to arrive not later than 15th July 1990) to CompEuro '91 - Prof. Roberto Negrini, Dipartimento di Elettronica del Politecnico, Via Ponzio 34/5, 20133 Milano, Italy. Tel.: +(2) 2399-3627; Fax: +(2) 2399-3587; Tlx: 333-467POLIMI-I. The Conference Language is English.

CompEuro '91 will include Tutorials, a Technical Exhibition of components, equipments, demonstrations, and technical literature, a Panel Discussion on Computer Education, a Student Paper Contest, and a Social Programme. This will be the fifth in the series of annual CompEuro International Conferences, which were initiated by the Computer Society and Region Eight. Joining them as Sponsor will be the Gruppo specialistico Circuiti, Componenti e Tecnologie Elettroniche (CCTE) of the Associazione Elettrotecnica Italiana (AEI). Alitalia will be the official carrier.

Further information can be obtained from:
Prof. Vito A. Monaco, Dipartimento di Elettronica, Informatica e Sistemistica,
Università di Bologna, Viale Risorgimento 2, 40136 Bologna Italy. Tel: +(51)
644 3030; Fax: +(51) 644 3073; Tls: 520-620 INGB0-1

Mr. Don L. Suppers

It is with great sadness that we have learned of the death of Don Suppers, who for many years was Staff Director of Field Services. We offer our sympathy and condolences to his wife Doris and to his family.

First European Test conference

By Mr. Colin Maunder

Much excellent research and development has been done on Test Technology in Europe. An example is the invention of the BILBO - now a key building block in the design of self-testing circuits - in the Federal Republic of Germany. More recently, the work of the Joint Test Action Group in promoting design-for-testability standards, which began in the Netherlands, has led to the draft IEEE P1149.1 standard on boundary-scan and attracted considerable interest world wide.

Much of this work has, of course, been presented internationally at events including the European Design-for-Testability Workshops and the International Test Conference (ITC), held annually in the USA. However, until 1989 there was no international conference in Europe to act as a focus for workers in Test Technology.

Boundary-scan

The session on boundary-scan opened with a tutorial paper which presented an outline test programme for a board populated with components that conform to the draft IEEE P1149.1; the paper showed the sequence of operations which might constitute a test of the board and indicated the types of fault addressed by each step and how fault diagnosis could be achieved. A later paper presented an alternative approach based on self-test and self-diagnosis. The other papers in the session looked at the design of an hierarchical design-for-test architecture for IC designs which was compatible with the draft IEEE standard and at the problem of ensuring that power connections between an IC and a board are defect-free.

CAE-ATE Interfaces

The CAE-ATE Interfaces session outlined the requirements and applications for a test specification language. The practical value of such a language in linking design and test generation tools with automatic test equipment has been demonstrated through the use of the Neutral Code Format (NCF) developed by Elektronikcentralen in Denmark. Other authors described a similar approach developed within SGS Thompson. The final paper described the inclusion of waveform hierarchy in the SEF database.

Defect Modelling

In the session on defect modelling, software tools for extracting defect behaviour from a circuit layout were described. There was discussion concerning the location of the areas of an IC which would be most at risk from photolithographic spot defects. There was a review of CMOS failure mechanisms which had been detected and studied; it was shown that a variety of techniques is required for all main fault classes to be detected, and that Idd current monitoring was essential in many cases.

One controversial issue during the conference was the usefulness (or otherwise) of randomly generated stimuli as a precursor to the deterministic generation of tests for digital circuits. Results were presented from a series of experiments which showed that this approach could be inefficient. Another paper developed criteria for identifying an optimum switching point between randomly and deterministically generated tests.

Other session addressed Test Generation, Built-in Self-test, the Testability of Regular Structures and several practical issues.

Proceedings

Selected papers from the Conference will be published in IEEE Design and Test of Computers Magazine in February 1990. Copies of the Proceedings of ETC '89 are obtainable from the IEEE Computer Society Press.

ETC '90 will be held on 17-19th April 1990 in West Germany. Further details may be obtained from: Mr. Colin Maunder, British Telecom Research Labs, Martlesham Heath, Ipswich, IP5 7RE, England. Tel: +44 473 642706. Fax: +44 473 642157

France

By Dr. F. Vallée

Chapters

The French Section is happy to announce the establishment of a new Chapter - Electromagnetic Compatibility - its organiser is Mr. Mayer. The following are the active Chapters in France:

- ASSP (Acoustics, Speech and Signal Processing) - President Mr. Bellanger
- PE (Power Engineering) - President Mr. Cladé
- COM (Communications Society) - President Mr. Lombard
- C (Computer) - President Mr. Croisier
- MTT (Microwave Theory & Techniques) - President Mr. Fouad-Hanna

Conferences

- 12th International Conference on Software Engineering (Nice 26-30th July 1990).
- Power from Space 91 (Paris 11-12th April 1991). Contact: SEE, 48 rue de la Procession,

Contact: IEEE Computer Society, 1730 Massachusetts Avenue, N.W., Washington DC, 20036-1903. Tel: 19(1) 202 371 0101

- Information Processing and the Management of Uncertainty (Paris 2nd-6th July 1990). Contact: Secrétariat de la Confé IPM U-ENSTA, 32 bd Victor 75015 Paris, France
- 19th International Conference on Conduction and Breakdown in Dielectric Liquids (Grenoble 10-14th September 1990). Contact: 10ICDL c/o CNRS-LEMD, 166x, 38042 Grenoble Cedex, France. Tel: (33) 76 88 10 71; Fax: (33) 76 88 11 61

75015 Paris, France

- Conference on Parallel Computing in Engineering and Engineering Education (Paris 8-12th October 1990). Contact: Dr. Patricia Samwell, City University School of Engineering, Northampton Square, London EC1V 0HB, England. Tel: (44) 1 253 4399 Extn 3863; Fax: (44) 1 490 0719
- CompEuro '91, Advanced Computer Technology, Reliable Systems and Applications (Bologna 6-10th May 1991). Contact: Professor Vito A. Monaco, Dipartimento di Elettronica, Informatica e Sistemistica, Facoltà di Ingegneria, Via Risorgimento 2, 40136 Bologna, Italy

Other French News

La Section française de l'I.E.E.E. parraine: SMTique, CONNECTique, ASIC 90

Quatrième journées européennes du montage des composants en surface et de la connectique, troisième journées du circuit intégré à application spécifique (Paris 27-28 mars 90) - (rens. auprès de ESI publications, SMTique/CONNECTique ASIC, Secrétariat général, 7 rue Laromignière, 75005 Paris, France. Tél: 33 (1) 46 34 21 60; Fax: 33 (1) 45 87 29 99)

Dans le cadre des activités du chapitre MTT, la Section française organise la conférence: Les outils de conception de circuits microondes

(Poigy-la-Forêt, 23-24 novembre) - (rens. auprès de Odile Picon, CNET, PAB/STS/HYP, 38-40 rue du Général Leclerc, 92131 Issy-les-Moulineaux. Tel: 45 29 65 77; Fax: 45 29 46 51)

Dans le cadre des accords passés entre l'A.R.E. et la Section française l'I.E.E.E., nous annonçons les conférences suivantes:

- L'évolution des montres à quartz (par Jean Jouannic - 20 décembre 1989)
- L'épistémologie et les problèmes qu'elle soulève (par Bruno Jarrosson - 16 janvier 1990)

- L'évolution des caméras de télévision de 1932 à nos jours (par Michel Favreau - 13 février 1990)

- Des architectures Von Neumann aux architectures neuroniques - Evolution des architectures des "ordinateurs" (par Dominique Potier - 13 mars 1990)

- Ces dernières conférences auront lieu à 17h, FIEE, 11 rue Hamelin, Paris.

Section Chairman: Mr. Jacques Cladé, Directeur Adjoint à EDF, 2 rue Louis-Murat, 75384 Paris, Cedex 08, France. Tel: +33 1 40 42 67 23; Fax: +33 1 40 42 55 44.

For Students

By Mikko Katajamaki

Hi all you students in Region 8! Welcome to a new decade. It seems that the end of the last decade has been quite busy, at least in Eastern Europe. I hope that we shall have many new IEEE Student Branches from that area.

In different parts of the Region this year will again be full of events for students. First there is the Student Paper Contest; which country, where and when are unclear to me, but some time in the sprint anyway. Secondly, the Student Branch in Eindhoven is going to have its 10-year celebration from 5-13th April, including an international student meeting, a symposium and visits to some companies (Philips and Bavaria-brewery, maybe?). I'm sure that the Eindhoven branch people will be glad to have as their guests, as many students as possible. If you are interested in taking part in their festivities please write to:

Erik Daniels
University of Technology Eindhoven
Den Dolech 2 EH 1.28
5612 AZ Eindhoven
The Netherlands

or you can try to e-mail: rcstieesb@heith5.BINET

Advisory Committee will have its meeting; student representation is expected from all regions, that is from Region 8 as well. How many participants Region 8 is going to have and how to finance their trip is so far an unsolved problem, but I'll be working on it.

Student Branches from several parts of Region 8 are visiting each other with increasing frequency. For example, at the end of September the Student Branch of Twente, Enschede, and the Netherlands are visiting the Branch in Oulu, Finland, and at the beginning of October there will be a reciprocal visit from Finland to the Netherlands.

If your Branch has contacts with some other Branch within Region 8, you could start planning a programme of mutual visits. If your branch has no such contacts, it about time to start making some.

Remember to join the Region 8 Student Branch e-mail system by sending a message to the Postmaster, Petri Solanti, at pso@tut.fi and say who you are and give your e-mail address, if you are not already included in the list.

In October this year there will be the "Sections Congress" in Toronto, Canada. At the same time and in the same place, the IEEE Student

Mikko Katajamaki, Region 8 RSR, Dept of Electrical Engineering, Computer Laboratory, University of Oulu, SF-95070, Finland. e-mail: mjk@steks.oulu.fi



Intensive Summer Course
on

CMOS VLSI Design '90

ANALOG & DIGITAL

LAUSANNE, SWITZERLAND
August 27 - September 14, 1990

organized by

**Electronics Laboratory of the
Swiss Federal Institute of Technology, Lausanne (EPFL)**

3 one-week modules are proposed to the participants with the possibility of choosing any combination of the 3 modules. However, if PART II is chosen, it is strongly recommended to follow PART I as well. In addition to the lectures, a **hands-on training** will be provided to the participants in a modern **Computer Aided Instruction** laboratory.

PART I INTRODUCTION TO CMOS INTEGRATED CIRCUIT DESIGN
(1st week: August 27 - August 31)

PART II ADVANCED VLSI DESIGN AND ARCHITECTURE
(2nd week: September 3 - September 7)

PART III ADVANCED ANALOG DESIGN
(3rd week: September 10 - September 14)

*Deadline for registration : **June 15th***

Registration fees in Swiss Francs: 1 week; 2'500.-, 2 weeks; 3'500.-, 3 weeks; 4'500.-

INSTRUCTORS

M.ANNARATONE, R.CASTELLO, P.DEBEFVE, M.J.DECLERCQ, M.R.G.DEGRAUWE, C.ENZ, K.ESHRAGHIAN, W.FICHTNER, B.GILBERT, H.HARINGER, B.HOCHET, S.M.KANG, F.KRUMMENACHER, J.LUTZ, D.MLYNEK, A.O SSEIRAN, C.PIGUET, F.RAHALI, A.SANGIOVANNI-VINCENTELLI, W.M.C.SANSEN, G.C.TEMES, C.TRULLEMANS, E.A.VITTOZ

Course directors: MICHEL DECLERCQ, DANIEL MLYNEK, ERIC VITTOZ

Course manager and mailing address:

VLADO VALENCIC EPFL-LEG, EL-ECUBLENS, CH-1015 LAUSANNE, SWITZERLAND
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LAUSANNE - SWITZERLAND

July 2-6, 1990

"Basic Concepts of Oversampling Quantization and Σ - Δ Modulation"

JAMES CANDY - BELL LABS , U.S.A.

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"Basic Building Blocks and High Speed CMOS Data Converters"

PAUL GRAY - UC BERKELEY , U.S.A.

"Quantization Noise in Σ - Δ Data Converters"

ROBERT GRAY - STANFORD UNIVERSITY, U.S.A.

"Low-Power CMOS A/D Converters - Basic Building Blocks"

FRANCOIS KRUMMENACHER - EPFL, SWITZERLAND

"Accuracy Limitations of MOS Data Converters"

JAMES McCREARY - MICRO LINEAR , U.S.A.

"High-Speed Bipolar Data Converters, High-Accuracy Conversion Techniques"

RUDY van de PLASSCHE - PHILIPS RESEARCH LABS., NL

"An Overview of A/D and D/A Techniques"

GABOR TEMES - UC LOS ANGELES , U.S.A.

"Low-Power CMOS A/D Converters - Integrated SC A/D Converters"

VLADO VALENCIC - EPFL , SWITZERLAND

Course coordinator : Gabor C.Temes , Course fee : 2'500.- Swiss Francs

*Deadline for registration : **May 31, 1990***

BiCMOS Technology & Circuit Design

October 8-11, 1990

Introduction

BiCMOS technology

BiCMOS device-level design, optimization

Modelization, simulation, scaling

Dedicated CAD tools

BiCMOS digital design

Regular structures

(memory, PLA)

BiCMOS analog circuit design

BiCMOS smart power circuits

BiCMOS prediffused arrays

Applications (design exemples)

Course coordinators :

Antonio Alvarez (CYPRESS Semiconductors), Michel Declercq (EPFL-LEG)

*Course fee: 2'000.- Swiss Francs, Deadline for registration : **July 31, 1990***

For further information, please contact:

Dr.V.Valencic, EPFL-LEG, EL-ECUBLENS, 1015 LAUSANNE, SWITZERLAND

Tel: +41-21-693'39'72(or 75), Fax: +41-21-693'36'40 (or 46'60)

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Germany

By Prof. Dr.-Ing. E. Handschin

The **Executive Committee** met on 13-14th November 1989 in Frankfurt. The Chairman, Prof. Dr. A. Schwab, welcomed the two new members, Dr. Boos and Prof. Dr. Hartnagel. Prof. Dr. Handschin was confirmed as Publications Officer.

The Germany Section has 2,188 members (30.10.89), 458 of whom are students; special attention is being given to universities and technical colleges to increase the number of student members. The Rhur University and Dortmund University jointly have formed a Rhur Student Branch. The application has been submitted but as yet no reply has been received from IEEE Headquarters.

The Section is supporting leading technical conferences in Germany. These include the 12th DAGM Symposium on **Pattern Recognition** (Sept. 24-26 1990) in Oberkochen-Aalen. The IFIP meeting **Approved Software Products** (Sept. 15-19 1990) in Munich. **Eurosensors IV** (Oct. 1-4 1990) in Karlsruhe. A possible participation in the **European Microwave Conference** (1991) Stuttgart has been approved by the Executive Committee. Finally the German

Section will participate in the international workshop **Cellular Neural Networks and its Applications** (Dec. 17-19 1990) in Budapest.

The German Computer Chapter, headed by Mr. Baber, reported on first contacts with regional groups of the Gesellschaft für Informatik in Darmstadt-Frankfurt and Mannheim-Heidelberg

At the Section Congress "Making Connections", which will take place in Toronto (Oct. 5-7 1990) the Chairman Prof. Dr. Schwab will participate. The next Executive Committee meeting will take place on 26-27th November 1990 in Munich.

MTT/AP Chapter

By Prof. Dr.-Ing. H.L. Hartnagel

The MTT/AP Chapter has plans to hold five workshops in 1990 and to participate in the **Antennen** conference (20-23 March 1990) in Wiesbaden. Three of the Workshops will be:

- **Mikrowellen-Baugruppen und -Komponenten** (8-9 Feb. 1990) at Schloß Reisenburg

(near Ulm, FRG). Please contact: Prof. Dr.-Ing. W. Menzel, Univ. Ulm, Abt. Mikrowellentechnik, Liststr. 3, D-7900 Ulm. Tel: (FRG-731) 4014-130; Fax: (FRG-731) 4014-117.

- **Measurement Techniques for Microwave Device Characterisation and Modelling** (23 Apr. 1990) in Stuttgart, FRG. Please contact: Prof. Dr.-Ing. G. Kompa, Universität der Gesamthochschule Kassel, Wilhelmshöher Alle 73, D-3500 Kassel. Tel: (FRG-561) 804-6364; Fax: (FRG-561) 804-6327.
- **Integrated Microwave and Millimeter Wave Circuits** (Oct. 1990) University of Duisburg, FRG. Please Contact: Prof. Dr.-Ing. I. Wolff or Prof. Dr.-Ing. A. Beyer, Universität Duisburg, Bismarkstr. 69, D-4100 Duisburg 1. Tel: (FRG-203) 379-3213 or 3218; Fax: (FRG-203) 379-3333.

Section Chairman: Prof. Dr.-Ing. Adolf Schwab, University of Karlsruhe, 7500 Karlsruhe 1, West Germany.

MTT/AP Chapter Chairman: Prof. Dr.-Ing. H.L. Hartnagel, Institut für Hochfrequenztechnik, Technische Hochschule Darmstadt, Merckstr. 25, D-6100 Darmstadt, West Germany.



Region 8 News Extends a Warm Welcome to Professor Dr. Kurt Richter Director Elect 1990 Director 1991-1992



South Africa

By Professor P.W. van der Walt

In 1989 the Section membership increased by about 10% and there was a healthy growth in our technical activities. The Computer Chapter held two well-attended workshops; Pieter Bakkes and his team deserve special mention for revving up the chapter to high speed operation within one year!

The ASSP/COM Chapter held the highly successful IEEE COMSIG 89 conference. Prof. Wynand and his team, and especially David Weber, merit everyone's congratulations. Certainly the published Proceedings is a document which must be the envy of many a veteran conference organiser. Also on the list is the INFOSEC conference and a meeting in October 1990.

The AP/MTT Chapter held three meetings in Pretoria and a well-at-

tended meeting in Cape Town, which was organised by Petrie Meyer. AP/MTT also had a small finger in the pie of the Natal seminar on Microwave Sources, organised by Erwin Schumann of Natal University. Vacuum tubes are alive and well!

The Section wishes to thank its many sponsors:

• **Grinel** and the **Institute for Electronics (IE)** of the University of Stellenbosch for COMSIG. ECS sponsored the COMSIG folder. The IE also provided free secretarial services and paid for numerous fax transmissions. **LGI** and **IE** paid our mailing costs. **Rennies Travel** provided valuable assistance.

• A Thank-You to **Datafusion**, who have offered to sponsor a Best-Paper award at **Comsig-'90**. A free ticket to attend ICASSP in the USA should make it worth while to spend a few extra hours preparing that prize-winning COMSIG paper

A South African Energy Chapter will be formed. Prof. John Enslin and Daan van Wyk have mobilised the necessary support to fill in the petition form. We have still to attend to a few administrative formalities to legalise the chapter, but that should be plain sailing.

We are happy to announce that the 1990 AP/MTT symposium, to

be held in the Cape towards the end of August, will be a joint venture between the IEEE and the SAIEE with UCT's Prof. Barry Downing at the steering wheel.

A particularly exciting development is that Region 8 has asked the South Africa Section to host the next AFRICON International Conference. We see this as a golden opportunity to bring engineers from all over Africa (and Europe!) together to discuss the unique technical problems of the African environment. The SAIEE has accepted an invitation to join the party.

Section Chairman: Prof. P.W. van der Walt, Department of Electrical and Electronic Engineering, University of Stellenbosch, 7700, South Africa.

SWITZERLAND: MTT + AP

By Professor F. Gardiol

The Chapter organised a full-day symposium at the Physical Chemistry Laboratory of the Zürich Federal Institute of Technology on 27th October 1989 on:

Microwaves in Spectroscopy and Frequency Standards

This symposium provided a very interesting opportunity for members of the Chapter to become acquainted with some particularly important applications of microwaves that are seldom heard of in microwave engineering circles.

Dr. Arthur Schwinger presented the basic principles of electron spin resonance spectroscopy, a powerful technique for analysing paramagnetic matter in the solid, liquid and gaseous states. This technique uses microwaves to flip over electron spins placed in a static magnetic field. It is extensively applied in physics, chemistry, biology, medicine, environmental and material sciences. The two regimes of continuous and pulsed irradiation were presented and illustrated by an actual experiment of electron spin echo.

Professor Alfred Bauder then outlined the microwave spectroscopy of rotating molecules. Short microwave pulses, from 20ns to 5 microseconds duration, polarise the molecules. At the end of the exciting pulse, the polarised molecules radiate signals at their characteristic frequencies, which are amplified, down converted and Fourier transformed. Since the detected signals are very weak, particular precautions are required to avoid noise. Two spectrometers were designed, using a waveguide Stark cavity and a Fabry Perot resonator.

Professor Giovanni Busca, director of the Neuchâtel Observatory, presented and compared the three most accurate frequency standards presently in use, based on the transitions in hydrogen, rubidium and cesium. The typical bandwidths of these transitions are of the order of a few Hertz, at microwave frequencies, which poses some particularly interesting stability problems for microwave engineers.

The event was organised in a masterly fashion by Dr. Jörg Forrer, Secretary of the Chapter. The Chapter also elected its new Committee for the period 1990-91 as follows:

Chairman: Prof. A.C. Bauder, ETH Zürich

Vice Chairman: Dr. L. Prost, Federal Metrology Office, Wabern

Secretary: Mr. W.W. Vollenweider, Ascom-Radiocom, Solothurn

I wish to thank them very much for accepting this important responsibility and have no doubt that the future of the Chapter is in good hands.

Chapter Chairman: Professor Alfred C. Bauder, Laboratory for Physical Chemistry, Swiss Federal Institute of Technology, Universitätstrasse 22, CH-8092 Zürich, Switzerland Tel: +41 256 4341; Bitnet bauder@czheth5a.

Student Job and Information Exchange

By Thomas Riedel

At the Region 8 membership development meeting in Vienna, the participants expressed the wish to have an information system in connection with studying and working abroad in the Region.

The Zürich Student Branch is creating such a system, it is called **IEEE Region 8 Student Job and Exchange Information System (SJXS)**. It will be a data base into which student branches can enter all the information they have about their country, and from which everyone can recover the information in which he is interested, preferable by EMail. To install a prototype we now need information! Student branches, please send me all the information you have about studying and working for short periods (e.g. traineeship) in your country! Furthermore if you have suggestions about the data base, or even experience, write that as well. The goal is to be able to start the information system not later than May 1990.

Whenever possible use EMail: ieeesjxs@nimbus.ethz.ch

For paper mail use: IEEE Region 8 Student Job and Exchange Information Service (SJXS), Thomas Riedel, Institut für Automatik, ETH-Zentrum/room ETL K13, CH-8092 Zürich, Switzerland.

COMMUNICATION RESEARCH

at

King's College - University of London

The Communications Research Group at King's College is expanding rapidly and has strong research activities in the following areas:

- **Digital Communications:** Satellite and Terrestrial Systems; Mobile and Indoor Wireless Communications; Digital Modulation and Coding; Networks and ISDN
- **Microwave Techniques:** MMIC Components and Systems; Wideband Hybrid Components
- **Electromagnetic Modelling:** Field Pattern Computation Techniques; Microwave Patch Antenna Arrays

We are interested in applications from prospective PhD students and other research workers, including research assistants; visiting workers from industry and visiting lecturers from universities.

For additional information contact:

Dr. A.H. Aghvami,

Communications Research Group

Dept. of Electrical & Electronic Engineering

King's College, Strand, London, WC2R 2LS

Telephone: 01-873-2592. Fax: 01-836-4781

Sweden

By Dr. Anders Derneryd

Section Officers

At the Annual Meeting held in Gothenburg on 9th January this year, a new member was elected to the re-elected Section Board; its members are now as follows:

Chairman: Piotr Starski, CTH; Vice-chairman(1): Folke Bolinder, CTH; Vice-chairman(2): Sven-Olof Öhrvik, LTH; Secretary: Anders Derneryd, ERE; Treasurer: Lennart Lundgren, CTH; Membership Development: Jan Thorin, CTH

Chapters

The VT/COM Chapter has also held elections to its board, whose members now are: Chairman: Henry Scheffe, IME; Secretary: Thomas Mattsson, LTH. We wish them every success in the Chapter activities for 1990

A petition for forming an EMC (Electromagnetic Compatibility) Chapter is being prepared by Peter Landgren, Bofors. Please contact him on 0586 81428 to indicate your support.

The MIT/AP Chapter is planning technical meetings within the following areas during the spring: Printed Circuit Antennas, Digital Microwaves and Optical Microwaves. Please contact Chairman Thomas Lewin, ERE on 031 671091 or Secretary Stefan Johansson, CTH on 031 721728 for further information.

Section Chairman: Dr. J. Piotr Starski, Chalmers University of Technology, Division of Network Theory, S-412 Gothenburg, Sweden. E-mail: piotr@nt.chalmers.se (UUCP)

BENELUX

By Ir. J. Noordanus

General Meeting

The General Meeting of the Benelux Section took place on 7th December 1989 at the Philips Research Laboratories, Eindhoven. A general survey was given by the immediate past Chairman Professor P.M. Dewilde. The total membership is now 2007, of which 638 are students

The Section played its part in the organisation of ECOC 90 and will be assisting with the organisation of ISSLS91 in Amsterdam and CompEuro '92 in the Hague (Chairman Mr.

G.J. Arink) In May 1990 the Section is acting as host to the Region 8 Committee in Brussels; the IEEE Board of Directors and its EXCOM will meet at the same time and place - a good opportunity for it to be informed about the European Community in 1992.

A standing committee on Educational Matters is being created in order to formulate our position regarding the education of electrical engineers

The lively activity of the many student

branches was described by Prof. Van Dommelen, the newly elected Chairman. There are branches in Delft, Eindhoven, Twente, Leuven, Liège and Louvain-la-Neuve. A new Student Branch has been formed in Gent; contacts between all these branches are being stimulated. In the Student Paper Contest, UCL and KUL obtained 2nd and 3rd places.

The programme co-ordinator, Prof J.B. Peak, reported on the technical meetings held in 1989 - they were as follows:

- Massive Calculation
- Very Large Scale Integration
- Computer Architecture - Real-time Graphics
- Development and Applications of Semiconductors Lasers

- Digital Video
- Digital Recording of Sound
- Netherlands Experiments with the Olympus Satellite
- Electronic Instrumentation for Radio-astronomical Research

Happily there is very good co-ordination and co-operation with the Netherlands Technical Societies. Apart from the Royal Society of Engineers (KIVI) and the Netherlands Electronics and Radio Society (NERG), the AES (Audio Engineering Society) and the Benelux Section of the IEEE are participating in the programme of technical meetings.

The newly elected Benelux Council is as follows:

Chairman: Prof. D. Van Dommelen, Katholieke Universiteit, Leuven

Vice-chairman: Prof. J.R.H. Peek, Philips Research Labs, Eindhoven

Past Chairman: Prof. P.M. Dewilde, Technische Universiteit, Delft

Secretary: Prof. J. Vanderwalde, Katholieke Universiteit, Luven

Second Secretary: Ir. J. Noordanus, AT&T NSI, Hilversum/RIC, Brussels

Treasurer/Continuing Education: Dr. E.J. Maanders, Eindhoven

Programme Co-ordinator: Dr. W. Van Gils, Philips Research Labs, Eindhoven

Student Activities: Prof. A. Laloux, Université Catholique de Louvain

Fellows & Awards: Prof. P. Eykhoff, Technische Universiteit, Eindhoven

Member: Prof. J. Destiné, Université de Liège. Ir. D.H. Rabacy, Bell Telephone Mfg Co., Antwerpen

Technical Meeting

Under the chairmanship of Prof. Peek, on the same day as the General Meeting, a technical meeting of Digital Video took place; Philips were the hosts for this too. Some 250 people attended this interesting and important programme. After

a welcome by Drs. M. Carasso, Director Philips Research, who gave a short introduction to this technical field, the following papers were presented:

- Digital Video, a survey. Prof. Biemond, TU Delft.
- Source Coding of TV and HDTV Signals, Dr. Breeuwer, Philips Research
- Source Coding for Videophone. Ir. Plompen, PTT Research
- Real-time Video: from Idea to IC. Dr. van Roermund, Philips Research

Section Chairman: Professor D. Van Dommelen, Katholieke Universiteit, Luven, Elektrotechnisch Instituut, Kardinal Mercierlaan 94, B 3030 Luven -Heverlee, Belgium

Letter to the Editor

Sir,

I am trying to improve the standard of living here by using the unemployed to make things that the local people need. The function of the community sponsored technical centre is to encourage the people to use their training and start business of their own on a semi-production scale.

It is my belief that if a simple sun-powered radio could be designed that we could assemble here it would be most useful. The criterion would be overall simplicity, with of course the important factor of cost and availability of components. As an exercise I would be interested in contacting someone who would be interested in doing some extra curricular research to help me find a practical and simple radio design and of course a source and cost of the components. I have written to a US manufacturer for

assistance but they showed no interest. I wonder if you could give me some guidance.

The labour costs here are of course low. Should someone have other practicable items to suggest I would appreciate the information. Yours etc.

If any member is able to help, would he please contact: Mr. Chester B. Wells, Mutomo Technical Centre, PO Box 147, Mutomo (Futui) Kenya.

Greece

I regret that a line of print was omitted from the Greece report, page 9, of the November Region 8 News. The second paragraph should read "Elections have also been held in the Student Branch of Athens and a new and "active-looking" committee has taken over. Another election took place

in the Power Chapter - the newly elected Chairman is Dr. Eleftherios Economacos". (Ed)

Spain

I have been informed that the Students' article on page 12 of the November Region 8 News should have given the authors as: Josep Salas, Josep M. Alvarez and Xavier Perramon. On the same page, in the article by Nikko Katajamaki the E-Mail address of the Spain Student Branch should be "ieeesb@et-setb.upc.es" (Ed)

Nobel Prize-winner Shockley

William B. Shockley, one of the three Nobel inventors of the Transistor at Bell Laboratories, and

founder of Silicon Valley, has died at the age of 79. He was born in London of American Parents and grew up in Palo Alto, California. With his two collaborators, Bardeen and Brattain, the thin-film field effect amplifier, the point-contact transistor and the junction transistor were conceived and demonstrated. Shockley later started his own company but his management style cost him several of his top physicists and engineers, who eventually formed Fairchild Semiconductors; two others founded the Intel Corporation in California.

In later years Shockley's interest turned to genetics, principally in connection with his theories concerning the differences between IQ scores of black and white populations; he was still analysing genetic data until a few weeks before his death. (Information submitted by Dr. Hugo Rüchardt)

CNNA '90 - International Workshop

CELULAR NEURAL NETWORKS & APPLICATIONS

A New Multi-dimensional Approach
to "Neural" Computing Technology, with
Real-time Image Processing Applications.

BUDAPEST, 17-19th DECEMBER 1990

This Workshop will provide:

- A one-day tutorial session for professionals who are not yet active in this innovative field
- The Shared experience of the participants
- Demonstrations of design and simulation tools
- An exploration of future research potential

There will be a strong emphasis on details of the latest developments in Cellular Neural Networks and on the hardware and software tools needed for research and development in this field. There will be discussions on user-friendly software developed by several laboratories; this will be made available to the participants during the summer so that they may launch their own development projects.

The principal topics will be: • Qualitative Theory (realisability, stability etc.) • Hardware and Software Design and Simulation tools. • VLSI developments • Applications - Template Library.

Full papers and short contributions are solicited. There is a special emphasis on design aids, including their demonstration. Video and live presentations on personal computers are welcome.

An Inaugural Lecture by Prof. Leon O Chua (U.C. Berkley)

Schedule

Two Page Extended Summary : 30th June 1990

Notification of Acceptance : 15th August 1990

Camera-ready Copy : 15th September 1990

Enquiries

Dr. Tamás Roska, CNNA-'90 Workshop
MTA SzTAKI, Hungarian Academy of Sciences,
űri-u, 49, Budapest, H-1014, Hungary
Telephone: +36 1 156 1057
Fax: +36 1 166 7503

V. Cimagalli (Italy)
M. Hasler (Switzerland)
J.L. Huertas (Spain)
D. Maio (Italy)

Scientific Committee

T. Matsumoto (Japan)
J.A. Nossek (F.R. Germany)
T. Roska (Hungary)
J. Vandewalle (Belgium)

Organised by the IEEE Hungary Section. With as Co-sponsors: IEEE Region 8, IEEE Sections - Austria, Benelux, Germany, Central & South Italy, North Italy, Poland, Portugal & United Kingdom and Republic of Ireland.

Preliminary Registration Form

I am interested in attending the CNNA-'90 Workshop

I intend to present a paper []; a short communication []; a demonstration [].

Please send me further information to the following address:

Name.....

Address.....

.....

.....

CALL FOR PAPERS

United Kingdom & Republic of Ireland Section Workshop

London, Tuesday 9th May 1990

Passive Optical Networks for the Local Loop

Topics will include: Architectural Options for the Implementation of a Passive Local Network Infrastructure, economic projections and trade-off for practical loop installations, system protocols and technical design options, field operations and maintenance issues, broadband upgrade aspects and evolution towards the future BISDN.

It is the intention to stimulate international discussion on this topical subject amongst both optical systems researchers and telephone company planners, in order to facilitate on-going passive loop research and experimental field trials.

Prospective organisers and authors are invited to submit an abstract of approximately 200 words before 23rd February 1990 to:

UNITED STATES

H.L. Lemberg
Bellicore
445 South Street 2M-289
Morristown, N.J. 07960
U.S.A.

EUROPE & FAR EAST

J.R. Stern
British Telecom Research Labs
Martlesham Heath
Ipswich IP5 7RE
U.K.

Notification of Acceptance will follow by 9th April

Academic Position Open

Université Catholique de Louvain (ref. 90/23-FAI)

The microelectronics lab in the Electrical Engineering Department has an opening for a full time professor. Applications are invited. Applicants should have a distinguished research record and a strong commitment to teaching in the area of integrated systems (analog and digital). They should have an earned Ph.D. Degree.

The microelectronics lab provides an adequate CAD environment with industrial design tools. A basic silicon fabrication facility is also available. Applicants should have the ability to attract external funding and lead IC design work in fields such as: signal processing, telecommunications, robotics, medical electronics, instrumentation etc.

Applicants are invited to send a detailed resume, including a list of references, before 15th May 1990 to the Rector: Prof. P. Macq, Place de l'Université 1, B-1348 Louvain-la-Neuve (Belgium). They may contact the head of the microelectronics division for additional information: Prof. P. Jespers, Place du Levant 3, B-1348 Louvain-la-Neuve (Belgium)

Region 8 News

wishes all its readers

a very happy and successful

1990

CALL FOR PAPERS



IEEE United Kingdom & Republic of Ireland Section.
International Symposium

Spread Spectrum Techniques and Applications

King's College, London
24-26th September 1990

Papers on research, development and new concepts are invited. The scope includes but is not limited to:

Those wishing to offer a paper should submit full typescripts, not more than 5 A4 pages, before 18th May 1990 to:

Spread Spectra in:

- * Mobile and Indoor communications
- * Military Applications
- * Navigation and satellite communications
- * Local Area Networks, optical & radio
- * Theoretical Advances, future technology

Professor A.C. Davies
Dept of Electronic & Electrical Engineering,
King's College London, Strand
London, WC2R 2LS, UK.

Tel: +41 1 873 2898

Fax: +44 1 836 4781

HAMBURG
8-12 MAY 1991

Advanced Computer
Technology, Reliable
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Computer Architecture
Dedicated Systems
Computer Communications
Systems & Software
Models & Algorithms
VLSI Design, Production and Testing
Computer Components

First Call for Papers

2000 Word Extended Abstract: 15th July 1990
to:
Prof. R. Negrini, Dipartimento di Elettronica del Politecnico,
Via Ponzio 34/5, 20133 Milano, Italy

Further details on page 4 of this Region 8 News