# edion8ne

# From the Regional Director

O BE GLOBAL OR NOT TO BE... THAT IS THE **OUESTION** 

The word "global" has an intuitive meaning for all of us... With electronic communications and Internet, our engineering environment is global. We are already used to working with a colleague halfway around the world as easily and efficiently as with our neighbor next door. Last year there were five times more e-mail messages sent than the number of pieces of paper mail delivered worldwide — 2.7 trillion (trillion = 10 raised to the power 12) e-mails. The way we buy and

sell, distribute things, teach and interact with each other is global. With the upcoming electronic commerce, the environment of free competition is also changing rapidly and becoming global. It used to take a long time, much effort, and a significant investment to gain a successful market

share in any sector. This is not true anymore. New competitors can now come out of nowhere, overnight, open 24 hours a day, every day of the year. The only requirement is a good team of people, a good project, and a Web site... Their customers generally don't know where they're physically located, and they don't care.

Based on the same intuitive feel, IEEE is a global organization. IEEE operates and has members in practically all countries of the world. IEEE conferences, meetings and seminars are conducted just about anywhere where there are suitable facilities. Those who are interested in IEEE statistics have noticed that the "center of gravity" for regular membership growth, student membership growth, and society membership, has moved out of the traditional USA. Region 8 has been proud to be leading in these areas, but Region 9

> and 10 are also in the same "ballpark."

Is this enough for IEEE to be perceived as "truly global?" The IEEE Strategic Committee and your IEEE Board of Directors did not think so. What are required in addition, are some "Rules

of Behavior" or "Code of Ethics." The first decision has been formalized as "Goal SC4" in the ISF'98 (Institute Strategies for the Future) document which is available on the WEB (http://www.ieee.org/strat\_plan/isf98/).

This objective has been adopted by RAB and TAB, and has been assigned to the Transnational Committee for action. The specific goal is to achieve perceived global equity with respect to IEEE publications, services and benefits, participation in IEEE meetings, representation on IEEE committees, election to IEEE offices and presentation of IEEE awards. I have been representing Region 8, not only in the IEEE Board of Directors, but also in the IEEE Strategic Committee, the RAB/TAB Transnational Committee. I

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#### Goal SC4: Implement full globalization in five years.

While the term "globalization" has been used repeatedly during the past few years in the Institute, there are different understandings of the meaning and benefits of globalization. As a result, we do not know if we are on the right track. For example, while 23%of membership is from Regions 7-10, only 10% of unconstrained top leadership positions (Division Directors and Society Presidents) have been from those Regions.

On the other hand, the development and deployment of information and electro-technologies are definitely global, and so is the business environment.

Accomplishment of this goal requires that we;

- Define globalization for IEEE and IEEE entities,
- Establish a metric/measurement in operational terms,
- Create common understandings, goals and expectations
- · Communicate definitive IEEE globalization plans

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# **Guest Editorial**

#### A PERSPECTIVE FROM LATINO AMERICA

he IEEE Region 9, also known as IEEE Latinoamerica, extends from Mexico in the North to the southern tip of South-America. The geographical extension is more or less similar to R8, but the countries are less populated, and our 500 million people speak just two universal languages: Spanish and Portuguese. As these share a common Latin (Iberian) origin, they are not very different from each other. That is a big asset for any regional collaborative project.

More numbers. There are 28 Sections, most of them coinciding with a country. In the biggest countries, Brazil and Mexico, there are more than one Section. Total membership is about 11000 and growing, with a significant part of Members being Student Members.

Only recently - thanks to the growth of telecommunication facilities and especially the Internet, are cheap, reliable communications among the Sections feasible. In the extensive areas, which Region 9 comprises, our heritage has been a lack of good communications between people who have similar problems and can understand the same language! This has hampered the development of common



activities and projects; of course this difficulty has not only been restricted to IEEE activities.

The need to communicate effectively among ourselves, and with the IEEE Headquarters has been identified many times as our biggest problem in the Region. We do not have significant time-differences among ourselves or with the New York area, but the cost of the telephone calls is significant. Despite the strong Latin American influence in North America, we still experience a communications problem due to language differences.

Due to the fact that communications are continually improving, the incredible potential in our coun-

tries will increasingly be realized. However, only better education and better conditions for our people can provide the conditions to accelerate this development.

We, the IEEE members in our countries can help. This is a three-fold obligation — as citizens of our countries, as engineering professionals, and as IEEE Members. \*

Juan Carlos Miguez
IEEE Director R9 Latinoamerica
j.miguez@ieee.org

# IEEE-SA HOLDS STANDARDS BOARD MEETINGS IN REGION 8 AND UNDERTAKES COOPERATIVE ACTIVITES WITH ETSI

The IEEE-SA Standards Board meetings were held Sept. 13-16, 1998 at the Hotel Royal Casino in Mandelieu. On Sept. 15 the Board had a one day joint meeting with representatives of Euopean Telecommunications Institute at their Sophia-Antipolis location. This event was the result of an invitation extended to the Standards Board by the Region 8 Director and Director General of ETSI. The venue provided an excellent framework for a week of very productive committee meetings and the Standards Board meeting itself.

The one day joint meeting with ETSI was especially worthwhile. The program featured speakers from ETSI and IEEE and covered topics of mutual interest where there was a possibility of cooperative work in the future. Karl-Heinz Rosenbrock led the agenda for ETSI and Dick Holleman did likewise for the IEEE-SA. The day's agenda included presentations and discussions on radio LANs, EMC, communications standards and intelligent transport systems. Maurice Papo's presentation focused on the activities of Region 8 and the IEEE's project on globalization.

The most significant outcome of the IEEE-SA/ETSI meeting was the agreement by both groups to undertake to work cooperatively through a document of understanding that will be drafted for consideration and if agreed, for implementation in 1999.

The expectation is that such an agreement will benefit both bodies and will serve as an example of what can be accomplished when the resources of an IEEE Region - in this case Region 8 - are used in support of another entity of the Institute - the Standards Board of the IEEE-Standards Association. As stated by Dick Holleman, "The Standards Board is very appreciative of having been invited by Region 8 to hold our meetings in France and to increase the level of cooperation and interaction with ETSI. It was clearly a successful event for us all." +

> Richard J. Holleman IEEE Standards E-mail: holleman@us.ibm.com

# Letter from the Editor

ear Reader,

This is my first opportunity to communicate with you as the new Editor for the Region

8 News.

Our Regional Director, Maurice Papo, has in his report, published in the first of the new series of the R8 News for August 1998, given some indication of the rapidity with which things have changed for the R8 News. From our point of view, the R8 News will now be produced mainly electronically, and be distributed as a supplement to IEEE Spectrum. There are significant benefits as far as cost reductions are concerned in this approach. Inevitably, and regretfully, this will also have an impact on our deadlines. We are trying to reduce this effect. It can be done, but only with your cooperation.

The primary objective of the R8 News is to serve you better, and to keep you informed of developments, coming events



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♦ Monthly Electronic Bulletin to be posted on Region 8 homepage

- ♦ R8 news also to be posted in PDF format
- ♦ Printed, hard copy version of R8 News to be distributed with IEEE Spectrum magazine. Will summarize reports appearing in the monthly Electronic Bulletin

and trends within Region 8 and at IEEE. As editor, I will do my best to fulfill the vision that the Region 8 Committee has for the R8 News. For the foreseeable future, therefore, you will still receive the R8 News in hard copy, distributed four times a year with the IEEE Spectrum. It will also be posted on the Region 8 Homepage in PDF format around the time that it is mailed to members. This may be read using Adobe Acrobat. As part of the initiative started by our Regional Director, Maurice Papo, we also plan to post a separate Electronic Bulletin each month on the Region 8 Homepage. This Bulletin will allow more rapid dissemination of information on matters of interest to members in Region 8. Selected material from the Bulletins will be used for the printed copy of the R8 News to be sent to all members. Information on the addresses for the Region 8 Homepage

can be found in the article by our Electronic Communications Coordinator, Christian Borgert, which is published elsewhere in this issue.

For the first and second issue of the new series of the R8 News, I must thank my many colleagues and friends who rose to the challenge to provide material at short notice. As editor, I am only the facilitator. The R8 News belongs to you, the reader. Only you can make it a success. Failure, alas, is the fault of the editor. Credit goes to Fran Zappulla and Bob Smrek and their team at IEEE Publications in Piscataway, for shaping the various contributions into the professional layout you will find both in the electronic and printed copy of the R8 News. Lastly, I must thank Christian Borgert, who as the Coordinator for Electronic Communications has cooperated very closely with our friends and colleagues at IEEE Piscataway to make it possible for us to access the Region 8 News on the WEB

As your new editor I thank the Region 8 Committee for this opportunity to serve our chosen profession, and pledge to do the very best that I can in its and your service. \*

- Duncan Baker, Editor

# Region 8's Historic Meeting in Piscataway -

## A PERSPECTIVE FROM **IEEE STAFF**



he Internet has bridged gaps across vast oceans, massive continents, across languages and cultures. It has brought the world closer together and

enables individuals to interact and conduct business at light speed. Yet the Internet cannot exchange personalities, faces or characteristics. Read on and learn about a wonderful experience for both the volunteers and staff of the IEEE.

The IEEE hosted the Region 8 meeting here at the IEEE Operations Center from 7-10 May 1998. For staff this meeting was a year in the planning. It all began in May 1997 with key officers

from Region 8 visiting the Operations Center to review schedules and finalize the hotel contract and other events.

For participating staff it was the exhilarating experience of meeting volunteers that they have been working with for years, but never had the opportunity to meet face-to-face. This not only enhanced these working relationships, but it also fostered new friendships! Perceptions were enhanced, since you receive a different perspective of an individual from e-mail correspondence. Staff also gained a new appreciation of the workload of these volunteers and enjoyed their eagerness to advance the purposes of the IEEE.

The meeting provided a great occasion for staff to solve problems quickly

and easily. It also provided a great opportunity to better understand the needs and concerns of these volunteer leaders. Staff was allowed the opportunity to demonstrate to these volunteers the technology and knowledge they have to service the geographic entities.

With regards to the actual logistics of the meeting itself, it was - for some - a close working relationship between the volunteers and staff. From the meetings to social events, it was very rewarding to work so closely with these professionals and to learn more about how other cultures handle meeting planning. +

> Mary Ann Hoffman Manager, IEEE Regional Activities m.hoffman@ieee.org

# **Chapter News**

#### **WELCOME TO NEW CHAPTERS**

- (a) Circuits and Systems Chapter, in Greece Section: Interim Chair, A.N.Skodras (Patras) e-mail: skodras@cti.gr
- (b) Joint Chapter, Circuits and Systems with Communications, in Czechoslovakia Section, Interim Chair, Vladimir Weigl (Horni Jeleni) no e-mail address. For e-mail, contact via Czechoslovakia Section Chair, Zbynek Skvor (Prague) e-mail SKVOR@feld.cvut.cz
- (c) Computer Chapter in Bulgaria Section, Interim Chair, Stoicho Stoichev (Sofia), e-mail: stoi@vmei.acad.bg
- (d) Engineering Management in Benelux Section, Interim Chair, A.G.M.

Nijbackker (Ysselstein, Netherlands) - no e-mail available

- (e) Geoscience and Remote Sensing Chapter, in Central and South Italy Section: Interim Chair, Domenico Solimini (Rome) [no e-mail supplied] fax: +39-67 259 7460
- (f) Control Systems Chapter, Central and South Italy Section: Interim Chair, Giuseppe L. Conte (Ancona), e-mail address: gconte@popcsi.unian.it
- (g) Engineering Management Chapter, in Minsk, Belarus (the Chapter is affiliated with the IEEE Poland Section because Belarus does not have its own IEEE Section). The Interim Chapter Chair is

Prof. Vladimir V. Apanasovich, Institute for Management of Technology, Belarussian State University, 4F Skaryha Ave, Minsk, 220050, Belarus. E-mail: apanasovich@rfe.bsu.unibel.by.

IEEE Members (and others) living in the Sections above are invited to contact the Interim Chair, to find out about the Chapter activities, or to offer assistance in arranging Chapter events, etc. The Chapters are there to server their local membership and local technical communities. Please give them your support! •

Prof. Anthony C Davies
IEEE R8 Chapter Coordination
Committee Chair

# **Conference News**

## **IEEE AFRICON '99**

# FIRST ANNOUNCEMENT and CALL FOR PAPERS

# Electrotechnical Services for Africa

29 September to 1 October 1999 (Tutorials on 28 September 1999)

CAPE TECHNIKON, Cape Town, South Africa

#### THEMES AND TOPICS:

- · High frequency techniques and antennas
- Computers
- \* Control
- Industrial Electronics, Energy and Power Systems
- + Human Resource Development
- \* Communications and Signal Processing
- Components

#### **CALL FOR PAPERS:**

Submit a 50-word abstract NO LATER THAN 15 FEBRUARY 1999.

#### **WORKSHOPS:**

Submit a proposal with the topic and speakers NO LATER THAN 15 FEBRU-ARY 1999.

#### GRANTS:

The Third World Academy of Sciences may make partial grants available for principal speakers not from South Africa. Please forward your CV, abstract and budget to attend Africon '99 to the Secretariat if you wish to apply for this grant.

#### VENUE:

Cape Town, South Africa's mother city and capital of the Western Cape, has a magnificent natural setting. Its majestic mountain range, surrounded by pristine beaches, with Table Mountain and its rich indigenous plant life as high point, is one of the world's great floral kingdoms. After a cable car ride up Table Mountain one has to agree with Sir Frances Drake who called it "the fairest Cape in all the circumference of the earth".

#### **EXHIBITS:**

Space will be available for exhibits related to the conference topics.

#### FEES:

IEEE/SAIEE members US\$260
Non-members US\$310
Student members US\$75
This early registration fee is applicable before 15 July 1999.

#### **REGISTRATION & ENQUIRIES:**

Chair: Prof. Nico Beute Secretariat: Heidi Neves P O Box 652, 8000 Cape Town, South Africa Tel: (+27 21) 460-3657

Fax: (+27 21) 465-4940

E-mail: Africon@norton.ctech..ac.za Technical Programme Chair:

Dr Petrie Meyer Tel: (+27 21) 808-4322 Fax: (+27 21) 808-4981

E-mail: pmeyer@firga.sun.ac.za \*

# **EARLY ANNOUNCEMENT - MELECON 2000**

The 10th Mediterranean
Electrotechnology Conference is
scheduled for Cyprus from 29 to 31 May
2000. The basic themes of the Conference
are:

Electrotechnology for the Mediterranean Countries

- Power Generation, Supply and Renewable Resources
- \* Regional Communication and

Information Technology

Signal and Image Processing

For more information contact:
Constantinos S Pattichis
Dept. of Computer Science
University of Cyprus
Kallipoleos 75
PO Box 537
CY 1678 Nicosia, Cyprus
E-mail: pattichi@ucy.ac.cy \*

# Conference News continued

#### NDES'98 WORKSHOP IN **BUDAPEST**

**Nonlinear Dynamics of** Electronic Systems-NDES'98

the Department of Measurement and Information Systems, Technical University of Budapest, hosted the sixth international specialist workshop on Nonlinear Dynamics of Electronic Systems (NDES'98) in Budapest on July 16--18, 1998.

The goal of the NDES series of workshops is to bring together engineers, mathematicians, and physicists from across Europe who share common interests in nonlinear phenomena which appear in electrical circuits and systems. Since the workshops are intended primarily to foster cross-fertilization of ideas across Europe, a special effort has traditionally been made to facilitate the participation of scientists from central and eastern Europe by offering reduced registration fees and travel support where possible.

This year eighty-two full manuscripts were evaluated by a panel of thirty international reviewers from academia and industry. Sixty-one were accepted for presentation. Sixty-two participants from twenty different countries registered for the workshop, twenty-eight of these from central and eastern Europe (Hungary, Lithuania, Poland, Romania, Russia, and Ukraine). Three participants traveled from the United States, one from Argentina, one from Israel and seven from Japan.

In a departure from tradition, the duration of the workshop was extended from two to three days, with the first day devoted to tutorials by invited speakers.

Rui de Figueiredo (President of the IEEE Circuits and Systems Society) gave a "New perspective on Volterra and Wiener functional series with applications to nonlinear signal and image processing."

Leon Chua (UC Berkeley), spoke about "Complexity, emergence and synergetics" in high dimensional dynamical systems. He showed that at the heart of complex systems, local activity is the key to understanding global dynamics.

Tony Davies (IEEE CAS Vice President for Region 8 and King's College London)

presented a review of bit-stream signalprocessing entitled "Achieving linear signal conversion and processing with nonlinear components" and Toshimichi Saito (HOSEI University) outlined a formalism for the "Synthesis and analysis of simple chaos generators." Many examples were used to illustrate how non-linear effects in oversampled data converters, digital filters, and mixed-signal processing circuits represent a significant application area for the mathematical tools of nonlinear dynamics which were developed in the sixties and seventies. Today, these application domains are the driving technologies for the next generation of nonlinear analysis and synthesis techniques.

Peter Kennedy (University College Dublin) and Géza Kolumbán (Technical University of Budapest) described the latest developments in the field of digital communication using chaotic carriers. Two major international research and development projects in this area were started during 1998. In the United States, UCSD, UCLA, and Stanford are cooperating in a multimillion dollar

MURI/ARO initiative on "Digital communication devices based on nonlinear dynamics and chaos." The European Union is funding a two-year productfocused research project on "Innovative signal processing exploiting nonlinear dynamics" which is being led by University College Dublin.

Hervé Dedieu (Swiss Federal Institute of Technology, Lausanne) presented an overview of noise reduction techniques for chaotic time series and Paul Curran (University College Dublin) outlined a unified theory of absolute stability which reduces to the circle criterion. In his overview on noise reduction, Dr. Dedieu showed how the deterministic nature of complex nonlinear systems could be exploited for extracting signals from observed or received chaotic signals corrupted by noise.

The workshop itself featured contributed papers on a wide range of subjects including phase-locked loop dynamics, hyperchaos, nonlinear signal processing, synchronization issues, nonlinear circuit and system theory, bifurcations in RF and power electronic systems, and applications

of chaos in echo cancellation, speech synthesis, and channel coding. A detailed program of the workshop can be found at http://www.mit.bme.hu/events/ndes98. Extra copies of the NDES'98 Proceedings can be ordered from kolumban@mit.bme.hu.

Participants were invited by the CAS President to identify the most significant problems in nonlinear circuits and systems, which must be tackled over the next three years, and to suggest ways in which theoretical advances in nonlinear electronics can be transferred more effectively to industry.

Top of the priority list for research topics, came modeling and identification of nonlinear dynamical systems, nonlinear signal processing, synthesis techniques for higherorder sigma-delta modulators, and the development of numerical methods for RF simulations of nonlinear circuits.

The IEEE Circuits and Systems Society has been at the forefront of developments in these areas and can play a leading role in technology transfer to industry through specialist workshops, special issues, publications and university-industry research fora.

Financial support for the workshop was received from the IEEE Circuits and Systems Society, IEEE Region 8, and the Hungarian National Committee for Technological Development.

This enabled us to provide support for twenty-eight participants from needy sections of the IEEE in Central and Eastern Europe.

The Organizing Committee of NDES'98 is grateful for the support of many colleagues and institutions, and it is especially indebted to the IEEE Circuits and Systems Society for its generous financial support of this event.

NDES'99 will be held in Denmark, on July 15--17, 1999.

For information, contact: Erik Lindberg, e-mail: <el@toga.it.dtu.dk>

> Géza Kolumbán Department of Measurement and Information Systems Technical University of Budapest, and

Michael Peter Kennedy Department of Electronic and Electrical Engineering, University College Dublin

# Conference News continued

# IEEE INSTRUMENTATION AND MEASUREMENT TECHNOLOGY CONFERENCE

#### IMITC/99

The IEEE Instrumentation and Measurement Technology Conference will be held in Venice, Italy – during the period May 24-26, 1999.

The conference will cover all aspects of theory and practice of metrology, measurement technologies, instrumentation, and related applications.

A competition will be held during the meeting concerning possible applications and technological solutions about all topics of the conference. The competition will consist of an exhibition of original crafts, systems, devices, software, or any demonstrator suitable to show the use of measurement technologies and to entertain the visitors in any application area.

For more information contact either: Robert Myers,
IMTC/99 Conference Coordinator
3685 Motor Ave., Suite 240,
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phone: (310) 287-1463,
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or

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piuri@elet.polimi.it.,
or piuri@pegasus.ece.utexas.edu
or visit the IMTC/99 web site at
http://www.ims.unico.it/conferences/

#### ISSSTA '98

conferenze/ 1999imtc

The 1998 International Symposium on Spread Spectrum Techniques and Applications of the IEEE Communications Society took place at Sun City, South Africa from 2-4 September 1998. Tutorial Sessions were held in Pretoria, South Africa on 31 August and 1 September 1998. For further details, the interested reader may check the conference Website http://www.alcatel.altron.co.za/~ISSSTA98/. \*

# INTERNATIONAL SYMPOSIUM ON INDUSTRIAL ELECTRONICS

The Industrial Electronics Society held their International Symposium at the University of Pretoria, Pretoria, South Africa from 7 to 10 July 1998. The symposium was hailed a success by the attendees. Those interested in reading more about this event are referred to the article (with photos) on the IES <a href="http://nn.uwyo.edu/NL/">http://nn.uwyo.edu/NL/</a>. Look for the September issue of the electronic Newsletter. Professor Dan Wilamowski has done an excellent job on the IES electronic Newsletter \*

#### "THE FROG JUMPS AGAIN"

An independent observer of the successive venues of the now-annual "Non-linear Dynamics for Electronic Systems" (NDES) Workshops might suppose that they represented the states of a probabilistic discrete-time Markov process. From the initial state (Dresden, 1993) subsequent jumps were to Kraków 1994, Dublin 1995, Sevilla 1996, Moscow 1997, Budapest 1998. Is this data sufficient to estimate the number of states and to predict the next jump? Surely not? In fact, the venues are carefully chosen in response to bids received, taking into account the accessibility of the venue to experts from Eastern and Western Europe, the association of the 'host' with research activity in the field of NDES, and preferably the support of a local IEEE Chapter or Section.

Accordingly, during NDES'98, which took place in July 1998 at the Technical University of Budapest, it was announced that NDES'99 would take place in Denmark, near Copenhagen, 15th-17th July 1999. The Workshop Chairman will be Dr. Erik Lindberg (Technical University of Denmark, Lyngby), e-mail: el@toga.it.dtu.dk. Further details of the Workshop will be announced shortly.

The NDES workshops originated with a focus on chaotic dynamics: they were concerned with demonstrations of and evidence for the occurrence of chaos in various Electronic Circuits and Systems, explanations of the observed behaviour, and a search for engineering applications of such chaos. Chaotic dynamics is now moving towards a mature discipline within Electronic Engineering, and the subject now features regularly in sessions at the major conferences in the Circuits and Systems area (such as ISCAS and ECCTD).

The future of the NDES Workshops will now be re-focused to provide a broader coverage of emerging topics within the non-linear systems area, while maintaining the event as a small-scale one for those actively working in the field or wishing to enter it, and providing a forum for the presentation and discussion of new and ongoing work. The concept of NDES as a meeting place for experts from Eastern and Western Europe will be retained and actively promoted. \*

# AFRICA'S LEADERS HAIL AFRICA TELECOM 98

Editor's Note - This article is placed because of its potential interest to members in Region 8 who are active in the telecommunications field.

Johannesburg, South Africa - The South African government played host to the fourth regional Telecommunications Exhibition and Forum for the Africa Region, organized by the International Telecommunications Union, and held in Johannesburg from 4-9 May 1998. This was the latest in the ITU TELECOM Series. The Series strives, amongst other objectives, to keep the membership of the Union and the wider telecommunications community informed of the latest advances in all fields of telecommunications, and the possibility of applying them to the benefit of all Members of the Union, particularly the developing countries.

The next in the ITU TELECOM Series, TELECOM 99, is coupled with INTERACTIVE 99, and will be held in Geneva from 10 to 17 October 1999. It is expected to be the largest and most influential telecommunications event ever held.

For more information on TELECOM, visit the Website: http://www.itu.ch/TELE-COM. \*

# IEEE HISTORICAL MILESTONE FOR SOUTH AFRICA

# FIRST OPERATIONAL USE OF WIRELESS TELEGRAPHY

It is not generally appreciated that, as far as can be established, the first operational use of wireless telegraphy was in South Africa during the Anglo-Boer War of 1899-1902. This aspect of the early history of radio communications has been carefully researched and documented. On the strength of these findings, the South Africa Section of the IEEE, supported by the South African Institute for Electrical Engineers in terms of a Cooperation Agreement with the IEEE, nominated this event as an Historical Milestone. The IEEE History Committee supported the proposal, and the IEEE Executive Committee during its August 1998 meeting approved the nomination. The citation reads:



The Ruhmkorff coil spark transmitter



Receiver

Morse code tape inker

# FIRST OPERATIONAL USE OF WIRELESS TELEGRAPHY

The first use of wireless telegraphy in the field occurred during the Anglo-Boer War (1899-1902). The British Army experimented with Marconi's system and the British Navy successfully used it for communication among naval vessels in Delagoa Bay, prompting further development of Marconi's wireless telegraph system for practical uses.

The Boer forces of the old Transvaal Republic ordered several wireless telegraph sets from Siemens in Germany. These arrived after the outbreak of hostilities, and were confiscated by the British on arrival in Cape Town. A refurbished Siemens set consisting of a Ruhmkorff coil for the transmitter, a receiver with coherer and Morse code relay, an inker for printing the Morse symbols on tape, and a battery are exhibited at the War Museum of the Boer Republics in Bloemfontein, South Africa. \*

Photos courtesy of The War Museum of the Boer Republics, Bloemfontein, South Africa.

# NEWS FROM SAUDI ARABIA

# The 5th Annual IEEE Technical Exchange Meeting

The Saudi Arabia IEEE Section held its Fifth Annual Technical Exchange Meeting in cooperation with the Electrical Engineering Department at King Fahd University of Petroleum & Minerals (KFUPM), Dhahran during May 19-20, 1998. The theme of the meeting was "Technology Impact on Industry." More than 300 engineers and scientists attended the meeting in which 35 papers were presented in eight technical sessions. The presentations were highly appreciated by the audience. The participants came from all the regions of the Kingdom. They represented universities, colleges, electric utilities, ministries, petrochemical industries, electronic and communication companies, and many others.

Two tutorial courses were conducted on May 18th, the day prior to the meeting, on the following topics:

- Power Quality and System Harmonics
- Website Development for Internet Users

Students from KFUPM conducted a poster session during the meeting. This was much appreciated by the audience.

Dr. Samir A. Al-Baiyat, Chairman of the IEEE Saudi Arabia Section announced that the next technical meeting was scheduled for April 20-21, 1999 at KFUPM. The meeting abstracts are due by September 30, 1998. \*

# **IEEE RECOGNIZES TURKISH COMPANY**

# AWARD FOR INNOVATIVE PRO-FESSIONAL DEVELOPMENT EFFORTS

PISCATAWAY, NJ, August 13, 1998 – The IEEE presented The Employer Professional Development Award to Turk Elektrik Endustrisi AS (TEE) for dynamic efforts providing quality continuing education to its employees. At the August 6 IEEE Turkey Section meeting in Istanbul, Ender Cakiroglu, TEE general manager accepted the award from Maurice Papo, IEEE Region 8 Director.

This is the first time since the inception

of the award, that the IEEE has recognized a non-U.S. company. TEE follows Texas Instruments and Motorola who received the award in 1997.

TEE is the leading motor manufacturer in Turkey. The company was founded in 1965 and since than has reached a workforce of 2,200 employees. With proactive professional development and annual training programs as its educational strategy, TEE expects to meet the professional demands of the 21st century and achieve its short- and long-term interests in the global business community. TEE provides its

employees with educational opportunities through various delivery methods such as seminars, workshops, conferences, and symposia.

The Employer Professional
Development Award, established in 1995 by
the Educational Activities Board, recognizes organizations employing IEEE members for contributions to employee continuing education and professional development. •

Tatiana Garnys E-mail: tgarnys@ieee.org

# **Awards and Recognition**

#### **REGION 8 SERVICE AWARD**

Our friend and colleague Heinrich Lantsberg, the Vice-Chair of the Russia Section, was recently honored with the Region 8 Service Award for his outstanding services in support of IEEE objectives in our Region. The Award was presented by the Regional Director Maurice Papo, on 19 May during a meeting of the Popov Society in Moscow.

A short CV describing Dr. Lantsberg's career was published in the Region 8 News of August 1997.

### **OUTSTANDING BRANCH COUNSELOR AND ADVISOR**

#### **AWARD FOR 1998**

Congratulations to our colleague Florian Haberey who is the recipient for 1998 of the prestigious "Outstanding Branch Counselor and Advisor Award" by the IEEE Student Activities Committee. This Award is well deserved and recognizes Florian's contributions in the vital area of Student Activities.

#### **REGION 8 TECHNICAL FIELD AWARDS FOR 1998**

 IEEE Masura Ibuka Consumer Electronics Award to Leonardo Chiariglione, non-member and division head, CSELT, Torino, Italy. "For technical leadership in the development of the Moving Picture Experts Group (MPEG) international standards for motion video and audio."

\* IEEE Frederik Philips Award to Roger J. Van Overstraeten, IEEE Fellow and president of IMEC (Interuniversity Microelectronics Center) and Professor, Katholieke Universiteit Leuven, Leuven, Belgium. "For leadership in the creation and management of the Interuniversity Microelectronics Center (IMEC)." +

> Hans Peek E-mail: h.peek@ieee.org

# CALL FOR NOMINATIONS FOR IEEE AWARDS

Dear friends,

We have always complained that not enough awards were given to Region 8... This is the time to send your nominations to our award representative:

Hans Peek

Awards and Recognition Region 8 hpeek@cs.kun.nl or h.peek@ieee.org

> Best regards Maurice Papo, Regional Director

# CALL FOR RAB AWARD **NOMINATIONS:**

Do you know a person who is involved with your Section or Region and doesn't get the recognition they deserve? Have you ever wanted to acknowledge someone's contribution but didn't know how? Here's your opportunity to say Thank You and recognize the person who contributes to IEEE but goes unnoticed. The Regional Activities Board announces that nominations will now be accepted for following awards:

## LARRY K. WILSON TRANSNATIONAL AWARD

Recognizes the accomplishment judged to be the most significant and effective in fulfilling one or more of the Transnational goals of the Regional Activities Board. One award will be presented.

#### **RAB INNOVATION AWARD**

Recognizes a volunteer judged to be the most innovative and effective in fulfilling one or more of the goals and objectives of the Regional Activities Board. The criteria for winning the Larry K. Wilson Transnational Award is the same, except that the goals on which the nominees are judged are limited to Transnational ones. One award will be presented.

#### RAB ACHIEVEMENT AWARD

Recognizes individuals involved with RAB and/or the Regional Network for singular achievement in the development and completion of a project(s) or activity(ies) which are directed to the fulfillment of one or more of the goals and objectives of RAB. As many as six (6) awards will be presented.

#### RAB LEADERSHIP AWARD

Recognizes those individuals who have exhibited exemplary and substantive leadership of an extraordinary nature in implementing activities which support RAB goals and objectives at the local, regional, national, and/or international level. Up to three (3) awards will be presented.

## FRIEND OF IEEE REGIONAL **ACTIVITIES AWARD**

Created to specifically recognize support provided to the Institute of Electrical and Electronics Engineers (the Institute) and its members in support of its goals, by firms, divisions of firms or individuals. Individuals or organizations are eligible to nominated for a Supporting (One year) or Sustaining (Three years)

## RAB AWARDS AND RECOGNI-**TION PROGRAM NOTES**

These awards are designed to recognize outstanding effort by IEEE volunteers. These awards are NOT technical achievement awards. Nominees for RAB awards may be from any Region. Everyone is eligible. The Nominee does not have to be affiliated with the Regional Activities Board to be nominated.

The deadline for submitting completed nomination forms is 15 October 1998. For more information visit the web site: http:// www.ieee.org/ra/rab/RABAWARDS.htm .

## HEINRICH HERTZ MEDAL **NOMINATIONS SOUGHT:**

The IEEE Awards Board is currently accepting nominations for the 1999 IEEE Heinrich Hertz Medal.

Sponsored by the IEEE Foundation, the medal is one of the highest awards bestowed by the IEEE Board of Directors. It is presented to an individual in recognition of outstanding achievement in hertzian (radio) waves. The award consists of a gold medal, bronze replica, certificate and cash prize.

Deadline for submission of nominations is 1 October 1998. For additional information, contact the IEEE Awards Department or visit the web site:

http://www.ieee.org/awards. +

# **Electronic Communication News**

here are many benefits to being a member of IEEE! But how do we reach the people in a huge region like ours to give almost

42 000 members all the information for getting these benefits? Using *Electronic Communications* is one of the easiest solutions for this problem; that's why we have an ECC (Electronic Communication Coordinator) in Region 8.

There are some good news concerning Electronic Communications in Region 8!

First: The personal e-mail alias in the format *y(our).name@ieee.org* is open for all IEEE members. Please request your personal alias, including a free virus scan-

ning, using the URL: http://www.ieee.org/eleccomm/

Be proud to be a member of IEEE and show this by using the alias as your standard email address,

Currently we are changing and updating the Region 8 Web-pages. The official addresses for the Region 8 Homepage are as follows:

http://www.ewh.ieee.org/reg/8/ and http://www.ieee.org/regional/r8/

In future as part of our ongoing commitment to improving our services to members, we expect to place a monthly electronic News Bulletin on these Homepages to keep you advised of activities in Region 8. The Regular Region 8 News will also be placed here at the time that the final copy is approved for publication and distribution with the IEEE Spectrum. Please use only these URLs for bookmarks and references.

A lot of pages will change during the next weeks in order to give you a useful tool to find all the information you need. Please be patient and check our pages regularly. I will come back to you with more information as soon as possible. Thanks! •

Christian Borgert (Region 8 ECC) c.borgert@ieee.org

# From the Regional Director continued

am also chairing both the Globalization Survey subcommittee, and the Transnational Projects subcommittee, so let me tell you some of the exciting projects which are going on.

# Globalization survey subcommittee

Two independent surveys will be conducted before the end of 1998:

- one "outwards" survey directed to National Societies, Government Agencies, Universities, Industries; to be conducted by direct interviews, and
- one "inwards" survey by mail directed to IEEE Members and Volunteers.
- The purpose of the Outwards survey is to determine:
- how the IEEE is viewed from the outside in Regions 8-10,
- what the IEEE can do to become more global, and
- what benefit this would bring to the members and the engineering profession.
- \* Five Sections have been selected in each of Regions 8, 9, 10 for the survey.
- The purpose of the internal survey is the same as the external survey except that it is inwardly focused.
- The internal survey will be sent to 1000

IEEE volunteers in Regions 8-10 in the third quarter of 1998.

- Both sets of surveys will be completed in 1998.
- Initial recommendations of TC subcommittees will be made in 1998, and will be refined, following the survey, for endorsement by TC in February 1999.
- Preparation of a set of policy recommendations and an overall business plan will be completed and presented to RAB and TAB for endorsement in June 1999.
- \* Presentation of the globalization plan to the BOD will be made in November 1999.
- Surveys will be repeated in 2001 and 2003 to determine progress.

# Transnational Projects subcommittee

Without waiting for the results and recommendations of the Globalization survey subcommittee, the Transnational Projects subcommittee is already working on some specific projects which have each been assigned to Region 8-10 volunteers.

These are:

- Increase Representation from Region 8-10 on IEEE Committees and Activities
- Take Better Advantage of Telecommunications Globally
- Increase Chapter Growth Globally
- \* Improvement in Dealing with Cultural Issues Globally

- Increase Awards & Fellows Globally
- Achieve Equity in Member Services Globally
- Increase Technical Meetings Globally

I hope the above will give you a good perspective of the important actions IEEE is engaged in for a better and more global IEEE in the future, as well as some of the activities of your Director! Keep in touch with the progress....

Maurice Papo Director, Region 8

# **DEADLINES**

March 1999.

The attention of potential contributors to the R8 News is drawn to the deadlines for the February and May 1999 issues of the R8 News. In view of the tight deadlines for the IEEE Spectrum only a limited amount of material submitted after the deadlines will be able to be handled for a week or so after the dates given below. Publication space may be a limiting factor for such material.

February 1999 – material to reach me by 30 November 1998.

May 1999 – material to reach me by 8

- Duncan Baker Editor, R8 News

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# regionsstudent news

**Editors:** Levent Onural Region 8 Vice-chair (Student Activities) l.onural@ieee.org Gozde Bozdagi (Student Activities Chair) bozdagi@baskent.edu.tr Jens Hannemann (Student Representative)j.hannemann@ieee.org

# **Editorial**

Hi folks,

The impressions I got from meeting many of the branch people during the Student Branch Congress in Istanbul are still very fresh for me. I found it incredible to see with how much enthusiasm IEEE student volunteers work throughout the Region 8, and how high also the quality of that work is. Gozde and I will try very hard to make this a regular event since the first version of the congress has been very successful. I would like to bring your attention to the comment on the congress by Nahel Amirah. He says he learned a lot about IEEE, but we also learned from him that he has founded a Student Branch at his university with an initial membership of 105 (!) which all of us found absolutely incredible.

But of course, the congress was not only a good opportunity to discuss IEEE matters - like always in IEEE, especially when it comes to student activities, the "fun factor" of the event was extremely high (Thanks to the Visserman's friends!). It seems that wherever in the world you meet IEEE members, you're sure to have a good time. That's one of my favorites about IEEE!

Hope to see you all again real soon.

Jens Hannemann, Studentt Representative

# REGION 8 STUDENT BRANCH CONGRESS

nce again the summer is over and we are all back at school. This summer we had a very exciting event in Region 8. The first Student Branch Congress was held in Istanbul, Turkey from 10-13 August 1998. During this 4-day congress, we had tutorials, branch leadership training, intercultural exhibitions and plenty of socio-cultural events.

During the branch leadership training, the students had a chance to get an overview of IEEE, Region 8 specific issues, awards, funds, electronic communication issues related to IEEE, the GOLD program, and IEEE globalization from key IEEE volunteers. In addition they had the experience of problem solving and brainstorming on real IEEE issues. Three representatives from 3 branches who are successful in their activities made presentations on how they manage to have active branches. Specific questions on how to get funding, presentation materials on IEEE, how to attract new members, and how to organize different activities were addressed and discussed during these presentations.

Two tutorials were given. One was by Prof Martin Bastiaans on Time Frequency Signal Representation, and the other by Prof Joachim Mucha on Testing of Advanced Electronic Components.

At the intercultural exhibition, the students displayed local IEEE related materials such as meeting pictures and conference announcements together with local ethnic materials. This was a great opportunity to learn about different cultures, and also what kinds of activities are being held at different student branches.

The socio-cultural events are always a good opportunity for people to get to know each other better and to learn the history of the country they are visiting. The boat trip on the legendary Bosphorous, visits to several mosques, palaces and museums gave

everybody a chance to feel the rich history of Istanbul where several civilizations have been born.

Let us take this opportunity to thank once more the people who make this event a success. Levent Onural, RAB Vice-chair in charge of Student Activities has put a tremendous amount of work into this activity starting with the planning through to the end of the congress. The student branch of Bogazici University, did a great job in the organization in spite of how busy they are with the final exams and projects. Without the significant amount of money out of the Region 8 budget allocated for the Student Branch Congress, it would have been difficult to organize this event. Also, there was support from the section chairs for branches within their sections to attend this event. The student branch chairs, committee members, counselors and representatives from sections who attended this congress were the key people for the success. About 70 students from 51 student branches attended the congress together with 3 counselors and 3 representatives from sections. We also had the chance to host the IEEE President Elect Kenneth Laker, Vice President Daniel Benigni, Region 8 Director Maurice Papo, and Region 8 Director Elect Rolf Remshardt during the congress. The students had a chance to benefit from their experiences and talk to them one to one about several IEEE related things. Thanks to all of you once more for making the congress a success.

> - Gozde Bozdagi, Region 8 Student Activities Chair

# COMMENTS ON THE CONGRESS

"I found SBC'98 a good place for networking the world. [..]

I think that the best about SBC is that you can meet great people from all over the

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# regionsstudent news

world face to face. We can discuss ideas and opinions with our friends from other branches and with important IEEE persons."

- Nahel Amirah. Chair SB Higher Technological Institute, 10th of Ramadan City,

Egypt

"Before the congress I was ignorant of what IEEE really means. Now I have become a well educated person who deeply understands the IEEE. A thing that makes me want to make every effort to enhance the performance of my branch, and invite more people to join the IEEE, especially after I saw how everyone, in this great institute, is kindly credited and rewarded for any good work."

> - Hyman Shanan, Chair SB Cairo University, Egypt

"It was such a nice pleasure for me to meet you in Istanbul.I hope we can get together again. How about a visit to Iran?"

> - Ali Shahrokni, Chair SB Tehran University,

# **CASE STUDY: TEHRAN STUDENT BRANCH**

niversity of Tehran – Founded 1934 – has 38 faculties, institutions and centers and is the first and largest university in Iran.

The Department of Electrical and Computer Engineering provides courses of study for B.Sc., M.Sc. and Ph.D. candidates and has about 1 000 students at all levels of study. The IEEE student Branch at the University of Tehran started formal operation on November 1997 as new officers took over the leadership. Since the concept of student branches was a new idea among students, a great deal of effort was made to introduce the functions of a student branch and the role of the IEEE. Based on this, two introductory public meetings were held. During these we were able to provide students with useful infor-

mation about the IEEE, as well as forming different teams to run different social and scientific activities.

Now the Branch has seven major groups as follows:

- 1. Scientific Activities.
- 2. The Internet.
- 3. Bulletins and Newsletters.
- 4. Fundraising.
- 5. Voluntary Activities.
- 6. Sports Activities.
- 7. Cultural Activities

The Scientific Group, the most important of all, has been trying to encourage students to get involved in research and teamwork by holding weekly forum discussions, which are mostly presented by students, and concern their own projects. Technical sightseeing trips and contests have also been scheduled.

The Internet Group is another important section of our Branch. Thanks to the assistance of many students, our Branch now has a rich web site. Innovative methods have been utilized to provide students with online information about the University, the IEEE, the Branch and its current activities. Our web site was registered with the SAC web site at http://sandbox.ieee.org and we also took part in the Student Branch web site contest.

Sports and cultural activities are supported to create a friendly and enthusiastic atmosphere throughout our school and

among students. Different programs such as weekend hikes, table tennis matches, and a panel discussion about the history of classical music were held with great student participation. We always request feedback and continually strive to improve our performance. To facilitate this several questionnaires have been designed and students have been asked to answer the questions at the end of each program.

As a new member to the IEEE family we realize we have much to learn, and look forward to the Student Branch Congress as an opportunity to gain from the experience of older and more established members.

# **IEEE REGION 8 CONFERENCE SUPPORT**

tudent members may get a voucher for up to \$30 to be used for their 1999 membership renewal. The guidelines for this support are as follows:

- 1. Student members of IEEE residing in Region 8 are eligible for this support.
- 2. To get this support, a student must have attended a conference (anywhere) and actually paid conference registration fees. Support cannot be provided in advance.
- 3. Only those conferences where IEEE is involved are eligible. Basically, if the IEEE name or the logo appears on the call for papers, or on the proceedings,

# **Deadlines & Upcoming Events**

November 1 - Annual Plan of Activities due to student services. Upon timely receipt, \$20 or \$50 allotment sent based on membership size as of December 31 statistics.

December 15 - Student Paper Contest deadline. For more information, see the announcement in this issue.

December 31 - Student Branch rebate (\$1.10 per member) is based on year-end membership statistics.

January 10 - Complete Membership rosters as of December 31 sent to branch counselors

February 1 - Exemplary Student Branch Award nominations deadline. Send nominations to RSAC (Gozde Bozdagi).

If you want your local student branch activity listed here, just drop us an email.

# ion*sstudent* news

the conference is eligible.

- 4. The form of support is a voucher issued by the Regional Student Activities Chair. The voucher cannot be converted to money, but it can be used as a payment for the membership renewal. The voucher should be used fully during the next renewal following the attended conference.
- 5. Applications must be made individually. The application should include a) the member's name, membership no, and mailing address, b) the proof of payment of the conference registration fee and brief descriptive information about the conference. c) The proof of attendance (like badge, attendee list, etc.) All material must be mailed to the SAC Chair. Gozde Bozdagi, Electrical and Electronics Engineering Department, Baskent University, Baglica Campus, Ankara TR-06530 Turkey.

# 1999 STUDENT PAPER CONTEST

the Regional Student Paper Contest is one of the most important activities

in our region. By participating in this contest, students can improve both written and oral communication skills, interact with local section representatives, have a chance to present their work in front of experts in their fields and win cash awards of up to \$500. Submission to the Student Paper Contest must be made through Student Branches. Once each year, each Branch may hold a Paper Contest under its own responsibility and the winner of it may compete for the Region 8 Student Branch Contest. The branches may submit more than one paper based on the number of their members. indeed for each 50 members one paper can be submitted.

The students can only submit the work they have done before they get their first professional degree to the contest. The student should also be an IEEE Student Member at the time of the original submission.

The deadline for the Student Paper Contest is December 15, 1998.

Six copies of the paper must be sent to the SAC Chair, Gozde Bozdagi, by that time. More information about the contest

can be obtained from http://www.baskent.edu.tr/~bozdagi/ieee.html - Gozde Bozdagi, Student Activities Chair

# TRAVEL GUIDE **ANNOUNCEMENT**

Attention Student Engineers,

I will be in Europe for the next year writing a travel guide specifically aimed at engineers. If you have suggestions for interesting sites or would like a fellow IEEE student to attend your branch activities, please contact me at a.marsh@ieee.org.

Thanks.

Allison Marsh. Region 2

## **CHANGE OF ADDRESS**

Please note a change in the Student Representative's mailing address. It is now: Jens Hannemann

Gaussstr. 38

D-24143 Kiel, Germany.

The email address (j.hannemann@ieee.org) is not affected thanks to the IEEE e-mail alias service. +

#### E-MAIL ADDRESSES OF REGION 8 COMMITTEE OFFICERS - 1998

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