

Earthquake? p11

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Franklin's house is opened to public

ON 17 January 2006, the 300th anniversary of Benjamin Franklin's birth was celebrated with the opening of his one-time London home to the public. Franklin, the renowned scientist, philosopher and inventor whose famous kite is the model for the IEEE logo, lived in London for nearly 20 years of his adult life.

Built around 1730, the house at 36 Craven Street has since been variously used as a hotel and as offices, and thus survived demolition for generations but could not be properly visited until now.

The house has enjoyed a special relationship with IEEE since 1988 when it was



This IEEE Milestone plaque was dedicated at the house back in 2003, but now, following a massive restoration programme, the house is both a museum and student science centre.



recognised by the IEEE Board of Directors, and designated a Milestone site. In January 2000, the IEEE Foundation awarded the Franklin House a \$100,000 grant to recreate

Franklin's fabled laboratory. This generous sum encouraged other donors to get involved, and the restoration programme ended up going far beyond merely returning

the house to its original glory. As well as providing a historical visit for the public, it now contains a Student Science Centre and Scholarship Centre, complete with modern audio-visual and network facilities.

Franklin lived on Craven Street between 1757-1775, acting as a diplomat in England for the pre-Revolution colonies. As the home of one of the US' Founding Fa-

thers, it was effectively the first American Embassy. But Franklin is equally famous in engineering circles as a founder of modern physics.

He equipped one of the rooms in the house as a laboratory for scientific research. During his London years, he explored everything from canal depths to daylight savings, with the Gulf Stream thrown in for good measure. He is said to have perfected his famous iron stove and to have invented bifocal lenses for spectacles while at Craven Street.

London folklore even has it that Franklin would send kites aloft along the Thames during thunderstorms. Certainly, his invention of the lightning rod conductor had an almost immediate impact, with lightning rods being installed on major buildings throughout London.

www.benjaminfranklin-house.org

IEEE Job Site goes worldwide



THE IEEE Job Site is a free service, and is now available to members worldwide. After registering online at www.ieee.org/jobs, you can create a profile of your ideal job and update it anytime.

Jobs matching your profile can be viewed immediately or sent to you by e-mail. You choose how much of your identity and information to give to an employer. Sign up and be prequalified for an in-

terview within minutes! Anyone can browse the listings, but members who register can also receive automatic e-mail notifications of job offers in their area of expertise, interest and location.

So far, about 1,000 of our 46,000 members in Region 8 have registered. It would certainly help IEEE negotiations with industry if more members in Region 8 registered for the service: this would lead to more jobs being advertised by companies within the Region.

For more information and to search for employment opportunities worldwide, go to www.ieee.org/jobs now.



Region 8 News' Roland Saam inspects the kit driving the house's audio visual provision, accompanied by architect and project management team chair, Anne Keighr.



MELECON 2006

13th IEEE
Mediterranean
Electrotechnical
Conference

Torremolinos,
Málaga, Spain

16-19 May 2006

www.melecon2006.etsit.uma.es



DURING 20-21 January 2006, the Faculty of Electronics and Information Technologies, Warsaw University of Technology, hosted the XVII Annual Symposium for young researchers. The symposium was devoted to the theory, technology and application of advanced electronic and photonic systems for HEP (High Energy Physics) and FEL (Free Electron Laser) experiments.

The event was organised under the protectorate of the International Institutes IEEE and SPIE, as well as two research bodies, DESY and CERN. The organisers were the IEEE Student Branch of WUT and two WUT.ISE Laboratories PERG (Photonics and Web Engineering Research Group) and ELHEP (Electronics for High Energy Physics Experiments) from the Institute of Electronic Systems (ISE). The Symposium is sponsored by the European Union VIth Framework Program CERN and ELAN, and the IEEE Poland Section.

The Symposium was attended by around 70 people, and a good 50 papers were presented.

Two plenary speeches were delivered. Dr Jacek Sekutowicz spoke on the technology of SRF accelerators, and Dr Stefan Simrock lectured on optimal control-



Participants at the Warsaw University of Technology.

Symposium targets young researchers

lers for SRF resonant cavity 1.3GHz.

It is hoped that the WILGA ELHEP Symposia will become part of a circle of regular ILC, XFEL and CARE meetings on SRF technology and in particular on the LLSRF control and measurement systems. The event is run twice a year, in January and in May/June.

WILGA usually presents its works internationally. In the recognition of this contribution, international experts in the LLRF systems gathered at the recent LLRF Workshop at CERN, initially planned for the 2009 LLRF Workshop in Warsaw, organised by the ELHEP.WUT Laboratory.

The XVII Symposium on ELHEP summed up the 2005 work of the research

teams from Warsaw, Lodz, Hamburg and Fermilab on the LLRF systems for the CARE Program, European X-Ray FEL and its predecessor VUV-FEL, as well as for the ILC. A workshop on this system (SIMCON 3.1.) is planned in Fermilab in February.

The next XVIII ELHEP Symposium will be held on 29 May – 4 June 2006 in WILGA. Around 350 people are expected to participate from the institutions active in the Low Level RF systems for SRF accelerators. Several CARE sessions are planned, as well as X-Ray FEL and ILC. The symposium Web page is wilga.ise.pw.edu.pl.

Ryszard S. Romaniuk ISE, Warsaw University of Technology CARE-WUT-ISE

Joint tech event discusses energy and pump storage

MORE THAN 60 engineers and students met in central-German Thuringen on 13–14 October 2005 during a meeting of the Joint IAS/PELS/IES German Chapter and the PES German Chapter. The event was hosted by the Technical University of Ilmenau and by Vattenfall Europe, which delivered a presentation on its unique pump storage plant at Goldisthal.

An overview about the research areas of the institute of electrical energy and controls was presented by Prof. Dirk Westermann (TU Ilmenau), followed by detailed introductions of the respective chairs.

The research group for electrical equipment was presented by Dr Reichert. Prof. Petzoldt presented the research group for power electronics and controls. Prof. Oesingmann presented the research group for small

electrical machines, followed by Prof. Schulze who spoke about the research group of electro-thermal energy conversion. Participants then visited the laboratories of the Institute of Electrical Energy and Controls.

The second day started in the technology centre of Ilmenau with three presentations about the pump storage plant. The highlight of the meeting was a tour of the pump storage facility itself operated by Vattenfall Europe, including a visit to the turbine cavern nearly 800m inside the mountain.

For information about the IEEE Joint IAS/PELS/IES German Chapter in general including 2006 meeting plan, please visit our Web site at www.ehw.ieee.org/r8/germany/ias-pels.

Dr Ingo Hahn
IEEE Joint IAS/PELS/IES
German Chapter

Bahrain workshop teaches leadership



Kurt Richter (centre) and Matej Zajc (left) helped lead the presentations.

IEEE BAHRAIN Section and IEEE Saudi (East) Section, in cooperation with the College of Engineering, University of Bahrain, has hosted a workshop entitled 'Development of Leadership Skills'.

This intensive workshop, held on 19–20 December 2005, was organised for two groups from the Kingdoms of Bahrain and Saudi Arabia.

The workshop was delivered on each day by Prof. Kurt R. Richter from Austria, with his assistant Dr Matej Zajc from Slovenia.

Dr Isa Gamber, the IEEE Bahrain Section chair, summarised the key points thus:

- To identify problems and create winning solutions.
- To motivate and lead effectively with inspiration.
- To be in control of your world.
- To manage your personal resources effectively.
- To be the president of your own company.
- To be a millionaire, if you aren't already.
- The difference between leadership and management.

Photo quiz revisited

THE PHOTO quiz we ran in the September 2005 issue of *Region 8 News*, and its solution given in December, prompted the curator of the Popov museum to put us right on a few points.

According to LETI museum director Larisa Zolotinkina, there is no transmitter in the photo, only a transmit-

ting antenna, shown on the right with the oil discharger in the centre.

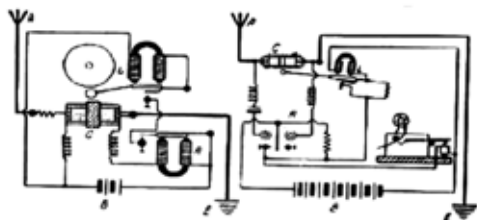
The object on the left is Popov's receiver with the antenna and the vibrator inside it. There is no 'charged capacitor' inside this receiver (see *Popov and Marconi's receiver diagrams, below*). The antenna vibrator is con-



nected directly to a coherer inside the receiver.

The metal sphere on the rod shown in the middle of the photo really exists in the museum but it has no relation with the transmitter. In one version of the receiver, Popov employed such device only as receiving antenna.

Travellers can visit the Alexander Popov Museum at Professor Popov ul. 5, St. Petersburg Electrotechnical University 'LETI', 197376 St. Petersburg, Russia.





L-R: Dr Nim Cheung (IEEE Communications Society president-elect), Jaafar Elmighani (University of Wales, Swansea), Mike Kincaid (IEEE Communications Society awards chair) and Curtis Siller (IEEE Communications Society president).

Swansea professor earns top awards

THE ACHIEVEMENTS of Prof. Jaafar Elmighani of the University of Wales, Swansea, in promoting collaboration in telecommunications research were recognised this year with two prestigious awards from the IEEE.

Prof. Elmighani, head of the new Institute of Advanced Telecommunications at Swansea University, received the IEEE Communications Society 2005 Harold Sobol Award for Exemplary Service to Meetings and Conferences.

In addition, the IEEE UK and RI Communications Chapter was named as the 'Superior Regional Chapter',

and Prof. Elmighani received the award on the Chapter's behalf.

Prof. Elmighani received the awards at the 48th annual IEEE Global Telecommunications (GLOBECOM'05) Conference in St Louis, USA, on 29 November 2005.

He said: "This is a very exciting time for telecommunications. From medicine to education, transport to entertainment, telecommunications touches everyone's lives and I am very proud to be able to make a contribution to research that has the potential to transform the way we live."

Mari Hooson

Czech GOLD section talks non-verbal

THE THIRD meeting of Czech GOLD members together with student members took place on 7 December 2005 in the assembly hall of the Faculty of Electrical Engineering, Czech Technical University in Prague.

The meeting was opened by a short performance by the Pichl Trio, who played short pieces by Corelli and Haydn. The performance established a pleasant atmosphere.

The meeting continued with a talk by Prof. Lenka Šulova on 'Psychology and Communication among Peo-

ple'. Prof. Šulova teaches at the Faculty of Philosophy, Charles University in Prague, where she is head of the Department of Social Psychology. Prof. Šulova specializes in problems of partnership and family relations, and takes interest in various branches of applied social psychology. The talk focused on non-verbal, social and psychological aspects of communication among people.

The discussion after the talk, over wine, sandwiches and other small refreshments, was pleasant and

Technical activities report

ALL AREAS of technical activities have been very productive and have made significant achievements in 2005.

Conferences coordination

EUROCON 2005, held on 21–24 November 2005 in Belgrade, was an extremely successful conference, with over 400 papers and over 500 attendees. After the Conferences in Ljubljana (2003) and Belgrade (2005), it seems that it has become an important and stable event. In the future we intend to organise additional events in conjunction with EUROCON, such as Chapter chairmen meetings.

Chapter coordination

Particular attention should be given to the fact that the number of Chapters has exceeded 400 and most of them are decisively active. An important annual event is the Chapter of the Year contest. It should be noted, though, that a large number of Chapters do not report their activity and have therefore been placed on the list of inactive chapters.

Industry relations

I would like to note that the preparation of the IRO Guide has been completed, but most of all, we have seen the consolidation of a very strong team devising major plans for future activities.

Education & accreditation

This year it should be most of all pointed out that, apart from regular Subcommittee activities, which are detailed in particular reports, several new E-S chapters have been formed this year as a result of EASC activity,

which opens new possibilities in terms of Education activities.

Moreover, a Memorandum of Understanding has been signed between the IEEE R8 Director and EAEEIE (European Association for Education in Electrical and Information Engineering), which creates opportunities for wider future cooperation.

Standards

Promotion and participation in the Conference Standards for Global Business, which was held on 26–27 September 2005 in Munich, were aimed at increasing R8 participation in the standards development process.

MORE DETAILED reports from the Subcommittee Coordinators/Chairs can be found in the minutes of R8 Committee Meeting. Subcommittee compositions can be found online at ewh.ieee.org/reg/8/technical_activities.

Let me now introduce the Chairs/Coordinators who will head the Subcommittees during 2006:

Industry relations – Rahmi Mushcab (Saudi Arabia)

Standards – Yang Yang (UK)

Conference coordination – Peter Farkas (Slovakia)

Chapter coordination – Nino Stojadinovic (Serbia)

Education & accreditation – Victor Fouad Hanna (France)

I would like to express my sincere thanks to the outgoing Coordinators, Jean Gabriel Remy and Ingo Ruesch.

Jozef Modelski

Vice chair for Technical Activities



The Pichl string trio opens the meeting.

unhurried. All participants agreed that the talk was interesting and that the event was enjoyable.

We plan to hold such meetings twice a year with talks on general topics that could be of interest to a wide range of people. We will try to organise these meetings in other towns outside Prague.

Jan Machac, GOLD Officer
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Standards in education

IN THE mid-1990s, engineering education recognised the importance of standards in design to achieving global penetration of markets for products, processes and services. For this reason IEEE developed a Web-based educational service through its Educational Activities Board and Standards Association.

The goal is to enable engineering students to become acquainted with standards and how to use them in their major design experience.

The following products are available:

- Baseline Tutorial: provides information about different standards.

- Domain Tutorial: provides information about standards in a technological domain such as wireless telephony.
- Case Illustrations: describe the application of standards to achieve a specific design objective.
- Applications: submitted by students and/or faculty.
- Reference Guide: provides a list of standards development bodies and standards related terminologies.
- Glossary: contains words or phrases used.

For access to these products, please visit www.ieee.org/standardseducation.

Ingo Ruesch

R8 Standards Coordinator

What's in the print?



IN DECEMBER I visited The New York Public Library to see an exhibit of illuminated manuscripts made around 500 years ago. The books and pictures are as beautiful today as the day they were made. Just take a look for yourself at www.nypl.org/research (click on 'Splendor of the Word').

The very beauty of these hand-copied and meticulously crafted manuscripts meant they were highly valued and preserved by subsequent generations, providing a physical, material connection to their creators and the age they lived in.

Around 1550, the printing press was invented. Books could be printed more cheaply than manuscripts, but information was still in material form.

Print is now being replaced by virtual. Eventually, Google, Microsoft and others will have scanned, copied, in-

dexed every conceivable book and publication. New gadgets for display and instant recall of information will be needed to replace books. Will they last 500 years? And are they as accessible as print and manuscripts?

Virtual information is not permanent. It is disposable and may even never get seen, let alone read.

I'm happy that *Region 8 News* still comes out in print and is sent to all 55,000 members in our region four times a year. Over time it becomes a permanent, physical record of the subject, a history of IEEE activities in Region 8, every year.

At the same time, I've been aware of the need for an improved Web site for *Region 8 News*. I'm working on it and welcome your suggestions—email us at r8news@ieee.org with the subject 'website'.

Roland J. Saam

Volunteers in philanthropy

WHAT IS the IEEE Foundation? Established in 1973 as a not-for-profit grant-making organisation, its mission is support the charitable goals of the IEEE in the areas of Education, Awards, History, and Special Initiatives of IEEE Units.

The IEEE Foundation awards grants to new and innovative projects that seek to improve the worldwide technological literacy of society and by serving as fund administrator for educational, historical preservation, and peer recognition programs.

You can explore the recently developed Foundation homepage at www.ieee.org/foundation. It explains in more detail the Foundation's areas of support and gives several project examples, along with results and de-

scriptions of worldwide Foundation projects under the header 'Success Stories'.

Apply for a grant

The grants process is explained online too. Download an application form, fill it out and send it back to foundation@ieee.org or g.gotthardt@ieee.org. Submission deadlines are 15 April and 16 September 2006.

Donations

The Foundation relies upon the generosity of sponsors and individual donors. Members can support the Foundation with donations offered together with their IEEE dues or directly by using our 'Online donation' feature on the Web site.

Rolf Remshardt
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Bylaws and descriptions of the committee offices — refer to www.ieee.org/r8

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Submitting articles We welcome articles from any member of the IEEE. Submit your articles to the editor as plain text files, or by email to R8News@ieee.org. Please put *R8 News* in your email subject line.

Graphics, photos and images should be high resolution (300dpi). They may be uploaded to the Region 8 website using the file transfer protocol <ftp://ewh.ieee.org/r8>

Deadlines for upcoming issues

June 2006 issue 1 April 2006
September 2006 issue 1 July 2006
December 2006 issue 1 October 2006
March 2007 issue 1 January 2007

Israel WIE Section stamps its mark on 2005

ISRAEL WIE Section was founded in December 2004. Over the course of 2005, many women engineers and students took part in its activities, and the year witnessed a doubling of its membership.

Successful start

The first full WIE meeting took place on 30 March 2005 at Tel Aviv University. The IEEE secretary Ella Eisenberg helped to organise the event, at which many experiences were shared.

Students Moran Gariby and Avital Palesky explained how they ignored the old "you're too pretty to be an engineer" cliché, instead pressing ahead with their studies towards successful professional careers.

Dr Rakefet Kol, a principle architect in Zoran, an adjunct lecturer in the EE department at the Technion, and a WIE senior member, gave an interesting presentation of her past work experience and current work



Above and left: The WIE group participates in Tel Aviv's feminist festival.



Below: At the second WIE meeting.



as principle architect in the DVD Recording group.

Olga Lieberman, the Israeli WIE chair and space electronic engineer, spoke on IEEE organisation and

the WIE chapters across the world, before presenting her work, 'Lessons We Learned from Space Projects'.

The second WIE meeting took place on 28 July in

Rehovot, Scientific Weitzman Park, at Electro Optic Industries' new administration building. This event was designed around the IEEE recommendations for 'How to prepare successful seminars', complete with room decorations, snacks and drinks.

Enthusiastic delegates exchanged ideas on how to succeed in technical professions dominated by men. The women were so enthusiastic about telling their personal stories, that the general agenda of the meeting has to be changed in order to give the opportunity to each woman to express herself.

Feminist festival

Tel Aviv hosted a feminist festival between 22–23 September, organised by the Feminist House fellowship. Various women's organisations took part in this festival, and of course the WIE group was represented too. All attendees who wished to promote women's role in science and engineering

were given IEEE leaflets and explanations from WIE representatives.

On 13 December, Girls' Day took place in Haifa Technion. WIE representative Dr Rakefet Kol led an interesting meeting with 16–17 year old schoolgirls concerning their future studies and careers.

Gender studies

The Weizmann Institute of Science in Rehovot organised an two-month course, 'Women and gender studies', and WIE members actively participated in all 10 sessions. It offered a broad scheme of theories and practices in history, sociology and culture, within critical discourses regarding representations of gender and sexuality, and gender roles in modern society.

Another achievement in 2005 was the establishment of an Israel WIE Web site at ewh.ieee.org/r8/israel/wie. Visit us online!

Mrs Lieberman Olga
WIE Israel chair
Olgali@elop.co.il

Women in Engineering grows leaps and bounds

THE WOMEN in Engineering (WIE) is a sub-committee of the IEEE specially dedicated towards issues that affect women and the engineering profession. Its primary focus is to facilitate an increase in the number and advancement of females in our noble profession and in the IEEE.

The WIE has affinity groups in all regions of the IEEE, although I'm proud to say that Region 8 has the largest number of them all.

Group organisation

There are two types of WIE affinity group: student groups formed by at least six WIE students, and professional groups organised by full IEEE and WIE members. To start a WIE affinity group, you re-

quire a minimum of at least six members to sign a petition and a volunteer to serve as interim chair.

There is a lot to gain from being an active member of WIE. Apart from the monthly newsletter and information about women in science and technology worldwide, the WIE also provides an opportunity for members to engage in community service.

Different affinity groups organise activities that encourage women to become and remain engineers. These events vary according to the needs of the local community. Activities range from seminars for pre-college and university girls, to special tutorial classes for female engineering and science students

in universities.

One of the key activities for the WIE is the annual Engineering Week during which programmes are organised to introduce girls to engineering. These WIE activities help volunteers to sharpen their organisational skills and enhance their management skills in an informal environment. The WIE also provides a forum for sharing and meeting the particular needs of women in science and engineering in different countries.

WIE activities

Right now, our focus is to ensure that WIE affinity groups make an impact in their various sections. Please join the fun and participate in your



Kenyan section chair and prospective WIE Kenya Affinity Group members at the Engineering Students Exhibition in Nairobi, 2005.

local WIE activities. We have had excellent reports from United Arab Emirates, Spain, Nigeria, Jordan and Kenya. I encourage affinity groups to be creative in activities.

If you require more information on starting up an affinity group or if you require ideas on what activities you can organise in your section, please contact me, I shall be very happy to help.

Clementina Saduwa
R8 WIE Coordinator
clementina@ieee.org

IEEE Nigeria elects officers

NEW OFFICERS have been elected for IEEE Nigeria Section for the period starting in January 2006. The Section chair is Tunde Salihu (tunde_salihu@yahoo.com), the vice chair is Dr Gloria Chukwudebe (chukwudebe@yahoo.com), and the secretary is Julius Aguni (aguni@ieee.org). Dr Bamidele Oluwade (bamidele.oluwade@ieee.org) was elected publicity secretary, and Mrs Clementina Saduwa (clementina@ieee.org) is treasurer.

I would like to add my thanks to all our Region officers, Section officers and other volunteers for making IEEE what it is. I look forward to more activities in the coming year 2006 and beyond.

Isaac A. Adekanye



HELLO LADIES and gentlemen! I'd like to take the opportunity of this first edition of 2006 to wish all of you happiness and health for the year.

Like many people around the world today, I enjoy solving Sudoku puzzles. Why? I think it's because I really like to use logic to fill the gaps in the grid. It's exactly the same reason when I ask myself why I became a part

of IEEE family: we are also using our logic to fill the gaps in our life, in the case of IEEE by realising new ideas, organising and taking part in activities, meeting new people, and learning about new technologies thanks to the opportunities opened up by IEEE membership.

Our intention over the next few pages is to reveal how student members are taking advantage of these

opportunities. Here, you'll read news, announcements and updates from a variety of Region 8 student branches, and also learn a little more about what IEEE has to offer in an educational role. For example, turn to our *Did You Know* article (opposite) now to learn how to get personally involved in one of the IEEE's core functions, the standardisation process.

I always like to remind all

student members that IEEE activities need not be limited to local branches. You can always expand your horizon to other student branches, other countries and—who knows?—other planets in the future. So keep in touch with other student branches in your section and around the world. Combine your power and organise joint activities, and invite other student branches to your

student branch events to share experience, knowledge and friendship. Have fun with your IEEE membership!

Başak Yüksel
R8 Student News Editor

R8 student activities update

HELLO FRIENDS! 2005 was a great year for IEEE student activities, which leaves us with the very difficult task of doing even more this year. But we have many great events to look forward to in 2006.

SBC 2006

From 31 August to 3 September, the IEEE Region 8 Student Branch Congress will

take place in Paris, France. The SBC is the biggest student event in the Region, and we expect over 200 participants. Over four days, student branch leaders will network in workshops, training sessions and competitions, and enjoy many other fun activities. The SBC is a unique opportunity for you to learn more about the IEEE and interact with

other IEEE volunteers from all over the world. Please make sure your branch is represented at the Congress. For news updates, see www.ieee.org/sbc2006.

Activate!

Having an active student branch is very important. Student branches are the focus of local student activities and the base for student membership benefits. Does your University have a student branch? Is it active? Can we help? If you need ideas for your student branch activities, I am sure you can find many on these pages. If you have any questions/comments, please contact us, your R8 Student Activities team. We are here for you, and we'll be glad to help. See us at www.ieee-r8sac.org or drop us a line at r8sac@ieee.org.



Power dressing: IEEE volunteers (L-R) Michael, Marko and Ricardo at IEEE Sections Congress, Tampa.

Student Member and Graduate Student Member grades remains eight years.

Share!

In 2005 we saw the launch of 32 new student branches, branch chapters and affinity groups. Region 8 now has more student members than ever, and we are constantly working on introducing new member benefits. March/April is the best time of the year to introduce IEEE to your friends and colleagues. If they join now, they will enjoy several months of free IEEE services and pay a low membership fee of US\$12.50. You can also earn a small token of appreciation for introducing your friends to IEEE if they enter your name and member number as their recruiter on the online application form. For more information, see www.ieee.org/sgs.

Till next time...

Marko Delimar
R8 Student Activities Chair
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Ternopil State Economic University, Ukraine:

Software contest winners

IEEE UKRAINE Section, Instrumentation & Measurement/Computational Intelligence Joint Societies Chapter (ewh.ieee.org/r8/ukraine/im_c) held its first meeting on 19–20 December.

During this meeting, a competition of Software Engineering among the students of the Faculty of Computer Information Technologies was held. The competition was won by Vladyslav Horblyansky, with Rostyslav Strubytsky as runner-up and Pavlo Romanuk in third place.

The top three contestants won \$25 for their annual IEEE membership fees.

Pavlo Bykovyy
IEEE SB Chair, Ternopil State Economic University
ieeesb@tanet.edu.te.ua



Vladyslav Horblyansky, winner of the software engineering contest.



Aachen University, Germany:

Students play their part at day of engineering

THE IEEE Student Branch Aachen was present in the Day of Electrical Engineering and Information Technology at the RWTH-Aachen University on 2 December 2005.

This is the third time that the student branch has participated in this important activity of the Faculty of Electrical Engineering and Information Technology.

Our main goal during

the day was to promote the advantages of being a member of the IEEE as a global player in the Electrical and Electronics Engineering sector. The student branch stand (see photo above) was also visited by important members of the faculty.

Martha Lucia Clavijo Velasco
SB Aachen Treasurer
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GSM

This is a new acronym in IEEE; and no, it has nothing to do with mobile phones. In 2006, the official promotion of the new Graduate Student Membership grade will begin. The GSMs will enjoy privileges of both Student and Member grades. This gives Region 8 roughly 7,000 new voting members and the same number of potential volunteers for the Sections and the Region. Helpfully, GSMs will still pay the same low membership fees as other students. Keep in mind that the total cumulative period allowed in the

Dogus University, Istanbul, Turkey:

New student branch for Dogus

IEEE DOGUS University Student Branch in Istanbul, Turkey, has been established, with elections held on 20 October 2005.

The challenging task of establishing an IEEE Student Branch was begun at the beginning of 2003 by seven IEEE student members. In 2004, the number of student members increased to 16 with the efforts of Prof Cem Goknar (an IEEE Fellow). Finally in 2005, the number of student members had reached 35, including students from the Computer Engineering Department and the Electronics and Communication Engineering Department (ECED).

We have set up a Micro-processors and Microcontrollers Committee, a Web Designing and Computer Based Designing Committee, and a Social Activity Committee.



Charter members and board of directors of the branch.

Our aim is to inform and help IEEE Student Branch members about the future of our profession, the advances in relevant technologies, and developments in related fields.

A number of activities are planned for this academic year, including a series of lectures, the first of which took place on 21 December 2005. This was organised in cooperation with ECED and

was entitled 'The Future of the Telecommunication Sector and Developing Information Sector'.

A project contest is also being planned for May 2006 in cooperation with ECED and IEEE CAS Turkey Chapter. The contest will be on the general area of electronic circuits and systems, and financial support has been obtained from the CAS Society and Dogus University.

Faculty of Engineering Technology, Al-Balqa' Applied University, Jordan:

Latest news from BAU

THE STUDENT Branch at BAU has been very active since the beginning of the academic year, and is busy planning many forward events too. Here's a breakdown of what's happening.

Clubs

Our Student Branch has two clubs: the Computer Center Club (CCC) and the Chemical Engineering Club (CEC).

CCC is considered to be the first of its kind, with the aim of organising the efforts of professional students in order to make use of their experience in computer labs, the college's Web site and network, etc, and also to pass on their knowledge and experience.

As CCC and IEEE members, we participated in the Computer Center's conference. For now, there are different groups working in the three sections of the club: maintenance, networking and Web page.

The other club, CEC, is currently being set up for chemical engineering students. Their first activity has them involved in activating the gas chromatography laboratory in FET.

Courses Committee

Several courses have been run for students, including those on image processing using MATLAB 7, and PIC Microcontroller. Other courses have been run in cooperation with external parties, such as the project management course in ETC which was delivered in cooperation with a Jordan Engineers Associate on 28 January 2006.

Lectures

Since our branch aims to spread diverse knowledge, we held a number of scientific lectures, some in cooperation with specialists in their fields. These lectures ran throughout last semester. Subjects included MATLAB for engineers, mass gas chromatography detectors, protection systems, time management, and how to realise your goals and ambitions.

WIE Committee

This committee has been working on the arrangements for our participation in the 6th Jordanian International Electrical & Electronics Engi-



BAU student members at one of the SB's many events.

IEEE's standards process

DID YOU KNOW?

IN THE mid-1990s, engineering education recognised the importance of standards in design for achieving the global penetration of markets for products, processes and services. The early response in the US – now followed widely around the world – was to treat the consideration of standards as a major part of the design experience.

This is reflected in the wording of criterion 4 of the ABET Engineering Criteria for accreditation of engineering programmes: "Students must be prepared for engineering practice through the curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work and incorporating engineering standards and realistic constraints".

However, surveys conducted in 2004 of IEEE and IRO/IRC members in Region 8 revealed that while three-quarters of the respondents used standards in their work, fewer than 10% were involved in standards development.

This may be due to a simple lack of knowledge of the standardisation process. To challenge this problem, the IEEE has set up a Standards Development Online Web site, which should provide all the information you need. It can be found at: standards.ieee.org/resources/development. Here you can obtain information about the standards process and details on how to join the IEEE-Standards Association, along with training material, a standards companion, the standards and operation manuals, FAQs, and last but not least you can buy IEEE standards electronically.

The Standards for Global Business Conference, held in Munich on 26–27 September 2005, has shown once more that in a world of merging markets, merging technologies and merging networks, global standards are essential. The conference also showed that the IEEE Standards Association with its three products—IEEE standard, IEEE corporate standard and ISTO specification; the Double Logo Agreement with IEC; and its cooperation with ISO and ITU—meet all needs. But because of the dominant influence of standards on products and services, it is of unalterable necessity that R8, especially its industry, participates more actively in IEEE standards activities.

Ingo Ruesch
R8 Standards Coordinator
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neering Conference (JIEEE), led by Rana Ramadan, chief of the affinity group for WIE in Jordan. Our role at the conference, to be held in March 2006, will be to prepare a presentation about WIE and GOLD activities/members. By the time you read this, members of the committee will also have participated in a workshop presented by Ms Ramadan on 18 February.

Media Committee

This committee organised an orientation week for university students to publicise IEEE, its activities and its benefits.

It also ran a scientific weekly quiz distributed to all FET students.

The Digital Library

We maintain a library that contains the most important CDs that could help students on their way to success.

Magazine Committee

Coming soon... The committee is about to issue its first publication, *The Knowledge Gate*, that contains information on diverse topics.

Mohammed Awny Jouda
Branch Chair
m_awnj@ieee.org

Alexandria University, Egypt:

Alexandria visits Cairo for SB meet

THE NEW executive committee attended ESBM (Egyptian Student Branches Meeting) 2006, held at Cairo University. The two-day event attracted branches from around the country.

Our branch participated in lectures on both days. Former Alexandria SB secretary and subsection student representative, Ramy Omar, delivered a talk on IEEE student events. Ahmed Raafat, former branch

mentor (2005), chairman (2004) and vice-chairman (2003), spoke from his wide experience about event planning. The next day, Mohamed Wahba, our branch secretary, gave a lecture on Alexandria Student Branch achievements and how membership reached 400 last year due to the hard work and creative ideas of the branch team.

The meeting was closed with a lecture by Mohamed Aboud, Egypt GOLD chairman, about how to be proactive. The talk ended with the handing out of certificates from IEEE to the Alexandria Student Branch team for their work. All of us felt so proud in that meeting and hope that we, as a branch and a team, will continue to maintain our high reputation.

*Mohamed Wahba
Branch secretary
m.wahba@ieee.org*



American University in Dubai:

AUD's seminar series

ON 28 September 2005, Ali Ben Haj Hamida, the Desalination Sales Manager of General Electric Co (GE), gave a presentation on water desalination at AUD. The seminar was attended by mostly engineering faculty members and students (see photo, above).

Mr Hamida spoke on the various technological advances made by GE over the years, and revealed the much anticipated opening of the Gulf region's first research center in Doha, Qatar, set up by GE. He then

highlighted the water scarcity issues facing the world today, and explained some of GE's desalination technologies. Mr Hamida finished by mentioning the opportunities of student summer internship programs at the company.

Our second seminar, on power electronics, was given by Dr Rashid Mohamad. Dr Rashid spoke of the six basic levels of complexity of thinking, and described several practical uses of power electronics. He finished with a Q&A session.

Rashid Khan & Tariq Khwaja



Alexandria Student Branch Board and Dr Nevine Darwish, the hostess of ESBM.

Jordan University of Science and Technology:

Student numbers rocket at JUST

THE IEEE Jordan University of Science and Technology (JUST) Student Branch has experienced an extraordinary growth in membership, activities and interrelationships with major companies in Jordan over recent months.

This growth has been led by the exponential increase of members from all different majors in the university. The number of members at the beginning of 2005 was around 60, but today the number is 180 and rising.

The Student Branch has run events to promote IEEE for students. One of these events was IEEE Day, which launched the first Computer Society Student Branch Chapter in Jordan and a Woman in Engineering Affinity Group, and hosted presentations on IEEE, WIE and the Computer Society Student Branch Chapter.

After the Computer Society Student Branch Chapter was launched, it began its own activities in conjunction with major companies such as Rubicon (www.rubicon.com.jo), and conducted a seminar on e-learning technologies and their programming techniques. The Chap-

ter has already gathered lots of students from Computer Engineering and Computer Science majors.

The new WIE affinity and planning group intends to organise many activities targeting women for the next semester.

As well as the IEEE Day, we ran MATLAB and GSM training courses, held at the university. These were well received, so we plan to run advanced courses in MATLAB and electronic device maintenance next semester.

Currently, we are preparing to take part in the First Wireless Euro-Mediterranean International Conference (WEMIC 2006) at JUST, co-sponsored by the IEEE Communication Society.

Amer Abu Baker



Top: IEEE JUST SB WIE Affinity Group.

Above: Student Branch members at the IEEE Day.

University of Ibadan, Nigeria:

Anderson opens telecentre as UI's guest of honour

THE IEEE University of Ibadan (UI) Student Branch, in conjunction with IEEE Nigeria Section, had the unique privilege of hosting IEEE's president, Cleon Anderson, along with his wife Dixie, Harry Goldstein (IEEE Spectrum's senior associate editor) and Stella Oduyela (IEEE director of accounting) during a four-day visit to Nigeria. This was at the instance of the commissioning of an ultra-modern telecentre recently donated to the university by the IEEE Foundation in partnership with Hewlett Packard.

Mr Anderson was welcomed with a well-attended ceremony. Those present included Dr Fakolujo (head of the Department of Electrical and Electronics Engineering), Engineers Isaac Adekanye and Tunde Salihu

(Nigeria Section executives), and many other members of the department, the UI Student Branch, and even other IEEE Student Branches from around the country. Reporters from the National Television Authority and other press agencies also attended.

Mr Anderson paid a courtesy visit to the Vice Chancellor and the International Institute of Tropical Agriculture, a renowned resource and research institute at Ibadan. Later on, he took a guided tour of Ibadan—"a city mixed with gold and dust" as described by J.P. Clark.

At a dinner organised by the Student Branch and the departmental student body, the Society of Electrical and Electronic Engineering Students (SEEES), the president received a Facilitator award on behalf of the IEEE Foun-

dation. Facilitator Awards also went to Harry Goldstein, who conceived the project as a means of adding value to IEEE membership benefits in Nigeria and Africa; to Hewlett Packard, for partnering with great innovators; to the IEEE Department, as project hosts; and to the Dean of the PG School, for his support.

The following day, the president chaired the Nigerian Section quarterly meeting. He challenged engineers to drive the nation forwards in technological advancement, using manpower and raw materials to their full capacity.

It was indeed a privilege to host the IEEE President, and proves the UI Student Branch is going places and doing great things.

Kelechi Kaycee Amamba (chair) and Dasola Ayotunde Oluge (vice chair)

Nnamdi Azikiwe University, Nigeria:

Joint SB/GOLD congress is a resounding success

THE VERY first IEEE SB/GOLD Congress in the Nigeria Section and Africa in general was organised by the IEEE Nnamdi Azikiwe University Student Branch (NAUSB) on 26–29th October 2005 in Awka, Nigeria.

About 250 IEEE student members, potential members and lecturers from 10 universities attended the event, along with industry representatives from all over the country. The congress created a forum to promote the exchange of ideas between student (including WIE) and GOLD members from different industries and academia, as well as other walks of life. The congress was well attended by the various student branches in the Nigeria section.

Many technical papers were presented, including one by our guest lecturer, Simone Tosoni of the University of Milan, Italy. Introductory talks on the IEEE, GOLD and Student membership were also given, alongside project exhibitions by Student Branches.

Student Branch/GOLD cooperation sessions were also organized. Student Branches had the opportunity to network and socialize with



Top: Student Branch/GOLD Congress Local Organising Committee.

Above: IEEE Nigeria Student Branches Women in Engineering Group.

Below: SB/GOLD Congress participants.

other student branch members and also with the GOLD members.

Special seminars were arranged by the WIE group, with the theme 'Excelling as a Woman Engineer' and hosted by the IEEE NAU WIE Chapter. WIE student



chapters from other Nigerian universities were represented too, including the Institute of Management and Technology (IMT) Enugu, ESUT Enugu, and the University of Ibadan (UI) chapters.

The WIE technical sessions were led by a number of professional engineers and academics, including Mrs Chukwudebe (PhD), Mrs Patricia Iheanacho, Mrs Joy Eneh, and the WIE Counsellor of the host Student Branch, Mrs Okezie.

The Congress was fun, too, with events such as the Dinner/Award Night and a breath-taking picnic to the exotic Grand Hotels Poolside Asaba, on the Niger Delta.

The success of the Congress has opened the way for similar events to take place on a biannual basis. For more information please visit www.ieeesbcng.com or email sb.nau@ieee.org.

Mbakwe Somkene
Ebere Offor
www.ieee.org/nau
www.ieeesbcng.com



Dr Eesa Bastaki, chair of IEEE UAE Section, inspects the labs at BPDC.

BPDC, Birla Institute of Technology and Sciences, Dubai:

BPDC founds branch

BITS-PILANI DUBAI Campus (BPDC) is a branch campus of the reputed Birla Institute of Technology and Sciences. It has now formed its own IEEE Student Branch, and is one of the largest and most active branches in its section.

The Student Branch was started by four student volunteers who had joined IEEE after learning about it through Web sites and interaction with students at other institutes. Dr G. Vijaya, a senior member of the IEEE and Associate Professor, Electronics & Instrumentation Engineering, helped spread the message by delivering a talk on the IEEE and its activities. This talk alone resulted in the registration of 69 BPDC students during 19–20 September 2005.

After petitioning for the formation of a Student Branch at BPDC, the campus had the honour of wel-

coming Dr Eesa Bastaki, chair of IEEE UAE Section, and Dr Hassan Al-Nashash, student activities chair of IEEE UAE Section, to make an inspection of the institute's infrastructure, facilities and curriculum on 15 November. The visiting delegation then recommended that our application be approved, and BPDC officially became a Student Branch of the IEEE on 5 December 2005. Today, the branch has a total of 125 student members.

Continuing its mission of increasing professionalism and technical knowledge, the BPDC Student Branch is committed to giving its members the best exposure possible. We plan to organise a multitude of events, ranging from workshops, field trips, technical competitions and international symposium for the benefit of our members.

Mehul Jain, Chairman

University of Jordan:

Student Web site now online

AFTER A very energetic start to the academic year, we thought we should announce what we have been doing!

New Web site

We have launched a web-site, www.ieee-ju.com, in which we are trying to focus on many things which our members need to get involved more in the exciting world of IEEE. We have established a forum which carries our thoughts, plans,

and activities to become our first method of communication between members.

Presentations

On 22 November 2005, Dr Mohammed Hawa launched our first meeting with an exciting presentation about the benefits of becoming an IEEE member. The branch chair, Mohammed Kharbat, followed up with a brief talk about the many services that the branch offers. Finally, our

guest speaker, Dr Monther Ebaid, the head of KADDB at the university, spoke on KADDB's schema for funding graduation projects.

More recently, Dr Hawa led a session on wireless networks and how IEEE established the 802.11 standard.

Field trip

IEEE members were invited for a special visit to Jordan Innovation centre where Yousef abu Hmaidan gave an



Introductory Presentation in full swing.

overview of the incubators at the centre and how they help Jordanian researchers.

Training courses

The branch is organising valuable training courses for small fees. These courses cover Microchip PIC, PCB and VB.NET.

Social event

The branch is running a bowling contest to take place at Mecca Mall. All members are invited to participate.

For more information and photos on all these events, please visit our Web site.

Mohammed Kharbat
Branch chair

Arab Academy for Science & Technology, Alexandria, Egypt:

WIE highlights importance of interdisciplinary knowledge

REALISING THE importance of interdisciplinary information in the 21st century, the WIE AAST IEEE Community decided to start a series of events aimed at demonstrating cross-field exchange of experience and knowledge.

The Tri-Profession Crossroad was the first initiative in this direction that represented a crossroad between the three major disciplines encountered in life: engineering, medicine and business. This event was a two-day workshop that took place on 18–19th November 2005.

The link between engineering and medicine was established in sessions on biomedical engineering, led by



Above: IEEE AAST Student Branch Members at the Tri-Profession Crossroad event.

Right: The workshop participants.



representatives from Philips Medical Systems, Siemens Biomedical Solutions and the EIO (Egyptian Import Office). We were also fortunate

to have speakers from the Medical College and from the University of Ulm, Germany, to further diversify the information being presented.

Merging engineering and business is what brings ideas and applications to the market. These concepts were explored in sessions by experienced professors from the College of Business & Administration. Another session, entitled 'Starting out your own Private Business' was presented by a company, Entrepreneurs Business Forum, that encourages fresh graduates to develop their ideas and put them into action through joint ventures. International competition and business planning were also covered to complete the sessions.

This workshop has opened the door to similar events that would link two or more different fields to help engineers unleash their creativity.

Sara El-Kady
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Student Branch Congress 2006 registrations

Paris, 31 August – 3 September 2006

The biggest student event of Region 8 is once again waiting for you: during four days, Region 8 students will meet in Paris for workshops, training, networking and fun. The Student Branch Congress is a unique opportunity for student branch volunteers to learn more about IEEE and to get in contact with other IEEE members from all over the world.

Registration for the Student Branch Congress 2006 is now open, so watch out for more news about this great event in the future. For more information on funding and registration, go to www.ieee.org/sbc2006.

Scientific literacy test

by Levent Sevgi of Dogus University, Istanbul
(lsevgi@dogus.edu.tr)

LAST ISSUE we looked at the importance and necessity of the scientific literacy in society today, in an information and technology century that has revolutionised lifestyles, from communication to marketing, and education to medicine. I noted then that society's critical response skills ought to be sharpened up accordingly. Subjects such as science, technology in society, public understanding of science, and innumeracy really ought to be worked into all levels of education.

Back in 2002, I introduced a 14-week course entitled 'Science Technology and Society' at Dogus University, and have taught the course regularly since then, not only at Dogus but also in other universities in Istanbul. We discuss a wide range of topics, including those hinted at above as well as how to understand and interpret terms like accuracy, precision, resolution, sensitivity, error and uncertainty.

To give yourself a flavour of the course, have a go at answering the six questions opposite. The questions are taken from the actual final exam.

- What do you think are the differences and similarities between...
 - method– scientific method
 - result–scientific result?
- Match the words with their explanations:
WORDS: (a) Law, (b) Rationalism, (c) Induction, (d) Empiricism, (e) Hypothesis.
EXPLANATIONS:
 - Understand or derive a conclusion from rational thought alone.
 - Understand or derive a conclusion from careful observation.
 - A scientific claim which is to be subjected to empirical tests.
 - A scientific statement which is believed to be true beyond any reasonable doubt.
 - To arrive at a law or a theory, based on the facts gained from experiments.
- Match the words with their explanations:
WORDS: (a) Precision, (b) Accuracy, (c) Resolution, (d) Uncertainty, (e) Sensitivity.
EXPLANATIONS:
 - Closeness of agreement between a measured/computed value and a true value.
 - Smallest physically indicated division that an instrument displays or is marked.
 - A small change in electrical / physical signals ratio.
 - Fluctuations in the values of a physical quantity obtained by repeated measurements.
 - Potential deficiency due to a lack of information.
- Match the words for unethical conduct in scientific publication:
WORDS: (a) Duplication, (b) Fabrication, (c) Plagiarism, (d) Falsification.
EXPLANATIONS:
 - To produce, report or publish data which are not obtained by research.
 - To make alterations on research data in a manner leading to different results.
 - To use someone else's ideas, data or texts without giving appropriate credit, including reference, permission and acknowledgment.
 - To publish (or submit) the same research results in more than one journal.
- The Ministry of Labor declared that with an uncertainty of $\pm 0.6\%$ the unemployment rate was 17.3% last year, but it is 16.4% with the same uncertainty this year in Turkey. How do you comment on that? Do you think unemployment rate is decreasing or increasing, and why?
- The travel time of a constant speed car is measured as 5 ± 0.05 hr. What is the travel distance if its measured speed is 80 ± 0.5 km/hr?

Earthquake early warnings: prediction or guesswork?

Do you have something to say? Write in to Region 8 News with your opinions on issues that matter to IEEE members. Send your letters and articles to r.saam@ieee.org.

Opinions expressed are those of the author and not necessarily of the IEEE or the editor of R8N.

HAVING READ the article 'Earthquake Alarm' by Tom Bleier and Friedemann Freund in the December 2005 issue of *IEEE Spectrum* (pp. 16–21), I am concerned about the way in which this topic is presented—in terms of public awareness, interest and expectations.



The problem lies in presenting artificial optimism in relation to short-term earthquake prediction (EP) based on precursors from seismic investigations, as if these studies are mature and already scientifically proven.

Relying on 'experts'

This impression is dangerous in countries with poor scientific literacy where municipalities fearlessly extend city plans right through faults and people construct weak buildings. Earthquakes don't kill people; it is the collapse of man-made structures that does most of the damage. So surely the best way of preparing society for strong and devastating earthquakes and to mitigate their worst effects is to develop better urban land use plans and construct stronger buildings.

If artificial optimism is imposed via respectful journals that earthquake early warning systems will be ready in a few years, people may simply rely on 'experts' to protect them with predictions, when they should be taking immediate measures to improve building safety.

Retrospective analysis

In general, EP methods could be divided into two: statistical methods for seismicity and observations of precursors to large earthquakes. The necessary and sufficient conditions of a precursor-based EP are to observe and discriminate the quantity, to

show the causal correlation, and finally to build a model. It is not scientific to try to build up an earthquake early warning system—such as a network of hundreds of sensors—instead of showing the causal correlation and understanding the physical phenomena in details first. EP methods are still far from maturity and are controversial too: see R.J. Geller, 'Earthquake prediction: A critical review', *Geophys. J. Int.* 131 pp.425-450, 1997, for an excellent review.

All that can be done currently is to try to show that recorded anomalies are related to the earthquakes occurred, and this may only become apparent some hours or several days (even months) after the earthquakes occur: a case of retrospective correlation.

What's missing in these studies is Karl Popper's falsification principle of systematic rule out of the known natural and artificial sources of signals from the precursors of the earthquakes. We know there is a relationship between the anomaly observed and earthquakes but the mechanism and parameters of this relationship are yet unknown.

Advance warning

Long-term projections of an earthquake in a certain area with a high probability within some decades is possible by studying historical earthquake records, monitoring the motion of the Earth's crust by satellite, and measuring with strain monitors below the Earth's surface. This is important for the policy makers. But short-term EP involves stating precisely where, when, at what depth, how strong, and with what probability an earthquake will occur within the stated error/uncertainty bounds.

Experts who use statistical models prefer to talk about 'earthquake forecasting', and only use the term 'earthquake prediction' for specific instances where a forecast has a temporarily and exceptionally high probability and imminence. More importantly, they consider their studies and statistical test results as a tiny step to-

are followed by earthquakes. Although views on the topic are quite different, it is generally accepted that all of the EP studies based on variety of precursors are quite low-quality and pseudo-scientific works, and that exaggerated claims tend to be made by scientifically unqualified publicity seekers.

Moreover, all of the de-

are exhaustive in their attention to detail and requirement for double-checking and cross-referencing of the way in which precursors are recorded.

Yet it remains that any phenomena occurring before an earthquake can be called precursors whether or not they have a causal relation to the earthquake. Therefore observations of these signals and studies for their correlation with the earthquakes are only worthwhile if issued scientifically. Jumping directly to the conclusion from these early studies that an accurate earthquake early warning system is already within reach is not scientific.

Exercise caution

The scientific goal should be the understanding of fundamental physics of earthquakes and physics-based theory of the precursors (their causal correlation), not the reliable prediction of individual earthquakes. In view of the lack of proven forecasting/prediction methods, everybody should exercise caution in issuing public earthquake warnings.

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'Earthquakes don't kill people; it is the collapse of man-made structures that does most of the damage'

wards physical understanding of earthquakes and occurrence.

The February 1999 *Nature* debate (www.nature.com/nature/debates/earthquake) includes many papers discussing the possible signals of different phenomena including seismic, electrical, electromagnetic and luminosity that either accompany or

bate contributors agree that the deterministic prediction of an individual earthquake, within sufficiently narrow limits to allow a planned evacuation programme, is an unrealistic goal.

The International Association of Seismology and Physics of the Earth's Interior (IASPEI) outlined guidelines for precursor-based EP. These

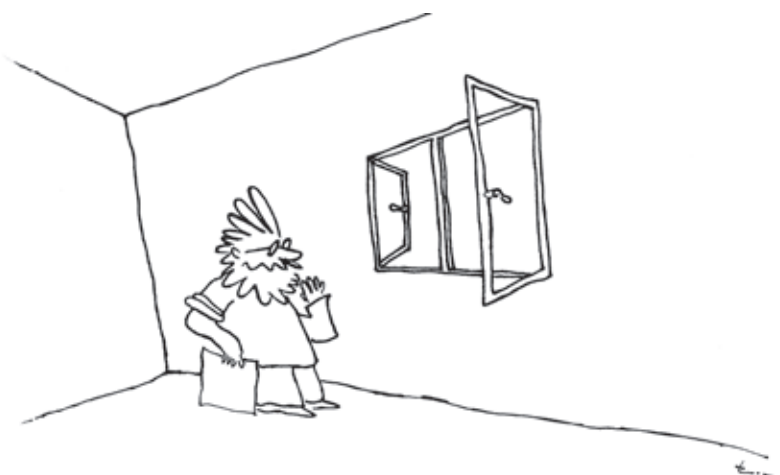


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Cartoon © Toyfun April 2005

Reminder calendar Workshops, conferences & symposia in Region 8

MARCH

4th Karlsruhe Workshop on Software Radios

Karlsruhe, Germany
22–23 March 2006
www.int.uni-karlsruhe.de

AMC'06

9th International Workshop, Advanced Motion Control
Istanbul, Turkey
27–29 March 2006
fens.sabanciuniv.edu/amc06

APRIL

UKSim06

9th International Conference on Computer Modelling and Simulation
Oriol College, Oxford, UK
4–6 April 2006
www.comp.glam.ac.uk/staff/kbegain/UKSim06

EDERS-2006

Digital Signal Processing Education and Research Symposium
Munich, Germany
4 April 2006
j.soraghan@eee.strath.ac.uk

AINA 2006

IEEE 20th International Conference, Advanced Information Networking & Applications, SNDS-06
Workshop, Security in Networks & Distributed Systems
Vienna University of Technology, Austria
18–20 April 2006
www.comp.polyu.edu.hk/SNDS06

DDECS 2006

9th IEEE Workshop on Design and Diagnostics of Electronic Circuits and Systems
Czech Technical University, Prague, Czech Republic
18–21 April 2006
novako3@fel.cvut.cz
ddec06.felk.cvut.cz

IMCL2006

1st International Conference, Interactive Mobile & Computer Aided Learning
Amman, Jordan
19–21 April 2006
www.imcl-conference.org

MAY

MELECON 2006

13th IEEE Mediterranean Electrotechnical Conference
Torremolinos, Málaga, Spain
16–19 May 2006
www.melecon2006.etsit.uma.es

ISCAS 2006

IEEE International Symposium on Circuits and Systems
Kos Island, Greece
21–24 May 2006
www.iscas06.org

ICEIS 2006

8th International Conference on Enterprise Information Systems
Paphos, Cyprus
23–27 May 2006
www.iceis.org

WSES 06

1st International Workshop on Workflow systems in e-Science
28–31 May 2006
University of Reading, UK
www.iccs-meeting.org/iccs2006

WILGA2006

18th Joint Symposium on Photonics and Web Engineering, Electronics for Astronomy and High Energy Physics Experiments
Warsaw University of Technology Resort, Poland
29 May – 4 June 2006
wilga.ise.pw.edu.pl
photonics@ise.pw.edu.pl

JUNE

ELMAR-2006

48th International Symposium on Multimedia Signal Processing and Communications
Zadar, Croatia
7–10 June 2006
www.elmar-zadar.org

ICC 2006

2006 IEEE International Conference on Communications
Istanbul, Turkey
11–15 June 2006
www.icc2006.org

PMAPS2006

9th International Conference on Probabilistic Methods Applied to Power Systems
Royal Institute of Technology (KTH), Stockholm, Sweden
11–15 June 2006
www.PMAPS2006.org

AHS-2006

1st Conference on Adaptive Hardware and Systems
Istanbul, Turkey
16–18 June 2006
ehw.jpl.nasa.gov/events/ahs2006

EMBS Summer School

7th IEEE EMBS International Summer School on Biomedical Imaging
Berder, France
17–25 June 2006
ieeess.enst-bretagne.fr

PARA 06

Workshop on State-of-the-art in Scientific and Parallel Computing
Umea, Sweden
18–21 June 2006
www.hpc2n.umu.se/para06

ICPS06

IEEE International Conference on Pervasive Services
Lyon, France
26–29 June 2006
www.ens-lyon.fr/LIP/RESO/icps2006

BIOSIGNAL 2006

18th Biennial International EURASIP Conference
Brno, Czech Republic
28–30 June 2006
bs2006@feec.vutbr.cz
www.dbme.feec.vutbr.cz/bs2006.html

REV2006

3rd International Symposium, Remote Engineering & Virtual Instrumentation
Maribor, Slovenia
29–30 June 2006
www.online-lab.net/rev

ISCE 2006

10th IEEE International Symposium on Consumer Electronics
St Petersburg, Russia
29 June – 1 July 2006
www.isce2006.ru

JULY

DEBS'06

5th International Workshop on Distributed Event-Based Systems
Lisbon, Portugal
2–3 July 2006
www.cs.waikato.ac.nz/~hinze/DEBS2006

SAMOS 2006

2006 International Conference on Embedded Computer Systems: Architectures, Modeling and Simulation
Samos, Greece
17–20 July 2006
samos.et.tudelft.nl/samos_vi

AUGUST

EPE-PEMC 2006

12th International Power Electronics and Motion Control Conference
Portoroz, Slovenia
30 Aug – 1 Sep 2006
www.ro.feri.uni-mb.si/epe-pemc2006

SEPTEMBER

ICEM 2006

17th International Conference on Electrical Machines
Chania, Crete Island, Greece
2–5 September 2006
www.ntua.gr/ICEM2006

UPEC 2006

41st International Universities Power Engineering Conference
Northumbria University, Newcastle-upon-Tyne, UK
6–8 September 2006
www.upec2006.org

ECWT 2006

European Conference on Wireless Technology
Manchester, UK
10–12 September 2006
www.eumw2006.com

PWC 2006

11th IFIP International Conference on Personal Wireless Communications
Albacete, Spain
20–22 September 2006
www.i3a.uclm.es/pwc06

7th World TPV Conference

Thermophotovoltaic Generation of Electricity
El Escorial, Madrid, Spain
25–27 September 2006
www.ies.upm.es/TPV7/index.html

ICL2006

9th International Conference on Interactive Computer aided Learning
Villach, Austria
27–29 September 2006
www.icl-conference.org

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