



**25 years of
Hungary Section**

IEEE HS Newsletter

Official news of
IEEE Region 8
Hungary Section
Vol.4. No.2.
2012 fall

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POCO 2012

IEEE 2012 Panel of Conference Organizers conference was held at 19-21 July 2012 in Intercontinental Budapest, Hungary.

This important conference is responsible yearly for 1400 IEEE conferences all over the world. In this year it focused on „Managing Conferences in a Changing World“. IEEE POCO is continuing to evolve to help not only stay current, but seize upcoming trends to help your conferences thrive.

POCO is the perfect place for conference organizers and OU thought

leaders to learn, discuss, explore and share best practices, ideas, issues and vision for a robust future. Lively discussion, interesting topic and the opportunity to meet old friends and make new connections are sure to abound.

From IEEE side William Moses, IEEE Conferences Committee Chair opened the event. Mary Ward-Callan, IEEE Managing Director, Technical Activities; Carl Debono Conferences Coordination Subcommittee, IEEE Region 8 and past president John Víg also attended. IEEE HS Chair professor Imre Rudas welcomed the participants and had a presentation.

There were three distinguished lecturer programs too:

- "The Evolution from SOA to Industry-Specific SaaS" Alexander J. Pasik, Ph.D. Chief Information Officer, Staff Executive Information Technology at IEEE
- "Accurate Clocks and Their Applications" John Vig, Ph.D. IEEE Life Fellow
- "Emerging Electrical Technology" István M. Vajda, Sc.E.E, Ph.D. Budapest University of Technology and Economics

The conference dealt with topics

- Managing Your Conference Financials to a Positive Result

- Developing Effective Conference Programs with Quality Content
- Creating a Conference Community
- Technical Program: The Heart of the Conference Paper Management
- Sponsorships, Agreements and Contracting
- Value of Conference Paper
- Financing Your Conference
- Putting the Event Plan Together Branding
- Plagiarism & Tools
- Publication Production, etc.

The Strategy Sessions followed the next points:

- What Does Social Engagement at Conferences Look Like?
- When Does Partnering with Outside Entities Make Sense For A Conference?
- How Does New Technology Impact Conferences?
- Keeping Your Conference Current – How Do You Keep it Fresh?
- Approaches to Building Your Reach Into New Markets?
- How Best to Incubate New Conferences?
- How Do You Attract New Audiences?
- Best Practices – How to Leverage IEEE's Buying Power?





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Content was offered in various tracts and delivery methods – from general session, break out, small group and one-one discussion. Speakers are IEEE Volunteers, Conference Organizers, Staff and Industry Experts, to ensure appropriate expertise and range of ideas.

The POCO participants are convinced that Budapest is one of the optimal sites for IEEE conferences.



25 years of Hungary Section

The IEEE Board of Directors, the IEEE Member and Geographic Activities Board approved the establishment and boundaries of the IEEE Hungary Section on 21 August 1987. The Hungary Section conducts activities which assist the local IEEE members to enhance their professional careers and their communities.

The local legal entity of IEEE HS in Hungary is the „Villamosmérnökök Magyarországi Egyesülete”.

In the frame of IEEE Day 2012 a festive meeting was held to celebrate the 25th anniversary of Hungary Section on November 6, 2012 at Óbuda University. Professor István Vajda, IEEE HS Vice-Chair welcomed the participants. Tibor

Vámos, IEEE HS Founding Chair had opening address. Professor Imre Rudas, IEEE HS Chair summarized the 25 years of the in IEEE and the HS.

The neighboring countries sent greetings, Igor Kuzle and Aleksandar Szabo from Croatia, Paul Svasta from Romania, Peter Farkas from Slovakia attended at the event and saluted IEEE HS personally.

Péter Kádár IEEE HS Chair Elect gave an overview about the recent activities of IEEE HS. Afterward professor Imre Rudas carried the award ceremony then John Hollerbach robotics specialist had a Distinguished Lecture.

The event was followed by an IEEE HS Life Member meeting



IAS/PELS Chapter election

There was an interval election held for the chapter chair position for IEEE HS IAS/PELS Chapter. The voters have unanimously elected Dr. Dénes Fodor. Congratulation and we wish a fruitful co-operation with other IEEE entities.



Extension of joint chapter

The Executive Committee of IEEE Hungary Section applied for the extension (re-definition) of the Hungarian IEEE AP/Comsoc/MTT/ED joint chapter with the Hungarian members of the Electromagnetic Compatibility (EMC) Society. A detailed justification for the requested extension written by Dr. Lajos Nagy, the current chair of the AP/Comsoc/MTT/ED joint chapter is given below.

"IEEE EMC Society has actually 11 active members in Hungary, working on the same field however at the moment



mostly isolated from each other. Those members are working for 5 different companies, active in a variety of domains (universities, multinational industrial companies, private company). Forming an IEEE EMC Chapter may offer all the benefits that are in general created by IEEE chapters, like helping efficient networking, exchanging technical information, organizing common technical events, finding synergies in integration of competences collected in both academic and industrial environments. IEEE EMC Hungarian Chapter to be formed has strong intention to join and internally cooperate with other sub-Chapters of the already existing IEEE MTT/AP/ED/ComSoc Joint Chapter in Hungary. Networking possibilities to the ~80 members of that joint chapter holds an unmissable chance for fruitful communication/cooperation with broader set of colleagues on antenna propagation, high frequency electronics, electromagnetic phenomena, and several other elements of the EMC field that are also in the direct focus of those sub-Chapters."



IEEE IES chapter meeting



On November 29., 2012 at BUTE (Budapest University of Technology and Economics) the Department of Automation and Applied Informatics hosted the chapter meeting of IERA (Industrial Electronics & Robotics and Automation Joint Chapter). The two distinguished lecture presentation was sponsored by IEEE IES (Industrial electronics Society).

Presentation 1.

Professor Paul Bauer, Delft University of Technology: **GREEN ENERGY AND CHARGING OF ELECTRIC VEHICLES. IS THERE A FUTURE FOR ELECTRIC VEHICLES?**



Paul Bauer received his Masters in Electrical Engineering at the TU Kosice ('85), Ph.D. from Delft University of

Technology ('95) and title prof. from the president of Czech Republic at the Brno University of Technology (2008). Since 1990 he is with Delft University of Technology, teaching Power Electronics and Electrical Drives. From 2002 to

2003 he was working partially at KEMA (Arnhem) on different projects related to power electronics applications in power systems. P. Bauer published over 60 journal and 300 conference papers in his field (with H factor18), he is an author or co-author of 6 books, he holds international patents and organized several tutorials at the international conferences.

Challenges of future electric vehicle charging technology and charging by green energy are reviewed. Two quick charge replenishment methods: fast charging and battery swapping are compared. Further the stationary contactless charging and on road charging is suggested. This on-road charging consists of contactless power transfer systems for powering electric vehicle while driving. In this way, the electric vehicles passing-by are charged without any physical interconnection with the charging system. A sustainable micro grid located on the roadside in order to supply the on-road charging of electric vehicles is considered. This sustainable microgrid consists of wind turbines, solar panels and stationary storage system. The optimum sizing, topology and power management are discussed. Both the grid-connected and the stand-alone options are investigated.



Presentation 2.

Professor Babak Nahid-Mobarakeh,
University of Lorraine, Nancy, France:

**AVAILABILITY OF ISOLATED ELECTRIC
SYSTEMS**

Babak Nahid-Mobarakeh is Associate Professor at University of Lorraine, Institut National Polytechnique

(Lorraine INP), FranceGREEN Lab.

(Groupe de Recherche en Electrotechnique et Electronique de Nancy) His main research interests are: Analysis of stability and stabilization of power systems, Fault detection in electric systems, Degraded mode control of electric actuators. He is IEEE Senior Member, Associate Editor of *IEEE Transactions on Industry Applications*, Officer of Industrial Automation and Control Committee - *IEEE IAS*, Active reviewer in *IEEE Transactions on Industry Applications*, *Industrial Electronics* and *Power Electronics*, Chairman of several sessions in *IEEE* conferences (*IAS* annual meetings, *IECON* and *ISIE*). He has more than 100 publications.

Reliability and availability are important issues in electric systems and

particularly in isolated ones like transportation systems. Reliability of a system is primarily related to its ability to perform its function under given conditions and during a given time interval. It is often measured by (and sometimes confused with) the probability that the drive remains healthy on the considered time interval. Another measure is the failure rate which is used for unreliability. The reliability of a system is improved by its ability to tolerate faults and/or to operate in degraded mode.

The presentation, will focus on a typical DC power network employed in transportation systems. This network supplies electric loads mostly constituted by variable speed drives.

The following issues will be addressed:

- real-time fault detection in variable speed drives;
- fault-tolerant control of variable speed drives;
- large signal stability analysis and stabilization of DC power networks.

For each topic, the most frequently used techniques will be presented and compared. The emphasis will be put on the last two topics.

**IEEE HS Life Member meeting**

On 18th December 2012 the Life Member group of the HS together with the Executive Board of the IEEE HS had had an end-of-year meeting. During this friendly and informal event lot of plans and ideas were discussed focusing on a hot and evergreen topic of the HS: student and young generation recruitment in the IEEE. The LM members of the HS have explained their own motivations how and why have they remained so many years in the IEEE and how do they see the present possibilities for the students. The Executive Board of the HS have presented their own plans as well



regarding the new year. All of the members ended the meeting with a general wish: MERRY CHRISTMAS and a HAPPY NEW YEAR for all the IEEE HS members.

Levente Kovács



Geza Kolumban Distinguished Lecturer

Geza Kolumban has been appointed to CASS Distinguished Lecturers program for the 2-year term 2013-2014. The proposed lectures and outstanding qualifications passed the very stringent selection process by DLP committee and the membership will greatly benefit from the lectures and interactions.

The accepted presentations:

- Software Defined Electronics: A new research field for CAS Society
- New approach for design and implementation of future communications systems

Congratulations on the DLP selection!



IEEE R8 SB&GOLD Congress 2012

Two Hungarian student members participated in the IEEE Region 8 Student Branch & GOLD Congress 2012. The congress was held in Madrid between 25th-29th July, where Gábor Lipcsei as the Secretary of the IEEE BME IAS/PES Student Branch Chapter and Nóra Orsolya Kovács as an IEEE Student Member have attended several workshops and cultural activities. Earlier in 2010, the IEEE Student Branch & Gold Congress was held in Leuven, where Beáta Polgári, Richárd Celkó and Bálint Németh represented the Hungary Section. In this year the SBC international event was organized by the Student Branch Madrid, where more than 400 engineering students and young professionals from more than 350 universities attended from Europe, Africa, Russia, and the Middle East.



One of the major locations of the event was the Colegio Mayor San Juan Evangelista Student Residence where we received the Welcome Pack, which contained the badge, the room key, the T-shirt and other useful conference materials. The 16 enthusiastic Spanish

hosts provided insights into the world of Spanish culture and organized an unforgettable 5 days for us. During the registration time, ice-breaking games were organized to crack the distance between the newly introduced participants. The organized group left the accommodation at 19:00 in order to arrive at 20:00 to the Welcome Act that took place near the Town Hall, "El Retiro". It is the largest and a popular park at the edge of the city center, very close to the Puerta de Alcalá and not far from the Prado Museum.



The next day started with the Opening Act that was held in the School of Telecommunications in the Technical University of Madrid. During Committee Presentations, basic information was given about the R8 Anniversary and History and the Importance of Professional Activities in engineering career by Emilio Corchado. After that an IAS Presentation took place, which was followed by the R8 Director-Elect Candidate Debate between Saurabh Sinha and Costas Stasopoulos. The next program was the introduction of the sponsors; the EVERIS, IE Business School, Google,



Altiria, and others. The Technical Workshops began after the lunch. The participants could choose one of the following topics: Computing, Telecommunications, AI and Robotics, Humanitarian and Accessible Tech, Electronics, Energy, Bioengineering or Education. In the evening the Gala Dinner took place in the "Hotel Convención", where the R8 50th Anniversary was celebrated with a cake-cutting ceremony.



On the third day, the visiting of the research centers was scheduled. Numerous technical visits could be attended; the Hungarian delegation attended the Barajas Airport or Research Center for Smart Buildings and Energy Efficiency, and the European Space Astronomy Centre. The technical workshops continued after that in the School of Telecommunications.

The Multicultural Dinner began in the evening, where the IEEE R8 Sections presented their typical and cultural foods, clothes and beverage. That was the appropriate occasion for the

different nationalities to learn each other's customs and view of the world.



On the next day the participants visited the San Lorenzo de Escorial. The workshops were held inside the monastery, in the Alfonso XII School. Non-technical tracks could be attended after the plenary- and semi-plenary sessions. Speeches were given by Gordon Day, 2012 IEEE President, Peter Staecker, IEEE President Elect, Moshe Kam, IEEE Past President, Marko Delimar, R8 Director, Jamie Moesch, Director Member Strategy, and Babak Mehesti, Faculty Member at the School of Engineering and Computing Sciences of the New York Institute of Technology. The dinner was organized outside the school ground where Paella and Tortilla de patatas were served.



On the last day at the closing ceremony Peter Magyar, IEEE IAS Chapters and Membership Development Department Chair announced the newly formed Student Branch Chapters and held a

short presentation about the IAS, encouraging the student members to form branches. After those successful five days, the Hungarian delegation said goodbye to Madrid and returned to the missed homeland.



What could we benefit from this experience? Making friends from different cultures, broaden our way of thinking and cultural horizon and of course learn a lot about IEEE. We would like to thank for the support of the IEEE Hungary Section and the Region 8 Student Activities Committee for making us possible participating in the congress.

*Nóra Orsolya Kovács
Gábor Lipcsei*



On 14th of November 2012 György Sárosi manager of Power Technology of Sydskraft/SYCON Sweden held a presentation at Óbuda University about the large scale power generators.



Title awards

On November 26th 2012 the Óbuda University gave title "Doctor Honoris Causa" for

- professor Antal Bejczy for the space research and in the area of robotics
- professor Oussama Khatib for dynamics in robotics and
- Ralf Wilde for quality control system developments.

Antal Bejczy had presentation titled „Interfaces for Human-Robot Interaction”; Dr. Oussama Khatib „Journey in Robotics” and Ralf Wilde about „Globalization opportunities and Challenges”



CV of ANTAL BEJCZY



He was born in Hungary in 1930. Graduated from high school with excellence in 1948.

Started electrical engineering studies at the Technical University of Budapest.

After the Hungarian revolution in 1956 he left Hungary and went to Norway where he received the PhD equivalent degree (cand.real) in physics at the University of Oslo, Norway, in 1963.

He was married in 1957. He was then teaching at that university until 1966. He came to CALTECH with a NATO/Fulbright fellowship as a Senior Research Fellow in 1966, working on optimal control and nonlinear filtering problems. He joined JPL as a Member of the Technical Staff in 1969. Robotics and its application in space exploration became his major research interest at JPL. He initiated work on sensing based intelligence in robot control, and published over 150 technical papers and 12 book chapters on topics in sensing, dynamic modeling, control, telerobotics, virtual environments, and human-machine interaction in robotics. He became a Senior Research Scientist in 1985 and was Technical Manager of the robotics program at JPL for eight years. He was the Principal Investigator of a robot arm force-torque sensor flight experiment on the Space Shuttle in 1993. He was also an Affiliate Professor in Systems Science and Mathematics at Washington University, St. Louis, MO since 1983 with the duty of establishing and maintaining graduate studies in robotics. He

supervised the work of ten PhD. students together with professor T. J. Tarn in 11 years.

Bejczy was a frequent organizer of tutorials, workshops and sessions on robotics at IEEE and other technical conferences. He gave lectures on robotic at twenty four universities in nine countries.

He was Chairman of the IEEE Control System Society Technical Committee on Robotics and Automation from 1983 to 1985, General Chairman of the IEEE International Conference on Robotics and Automation in San Francisco, CA in 1986, and President of the IEEE Council of Robotics and Automation in 1987 when he helped to transform the Council to the current IEEE Robotics and Automation Society (RAS) with about seven thousand members. He served as a member of the governing board for the IEEE RAS during 1989-1991, and reelected for 1994-1999. He was the General Chair of the 8th International Conference on Advanced Robotics (ICAR) in Monterey, CA in 1997 and the General Co-Chair of the 10th ICAR in Budapest, Hungary in 2001. He received 43 NASA innovation awards, and holds seven U.S. patents. He received the IEEE Fellow grade in 1987 for "Contributions to the theory and applications of robotics" and the Jean Vertut Award of the SME&RI for "Remote application of robotic technology." In 1991 he received the



NASA Exceptional Service Medal and in 2000 the IEEE Third Millenniums Medal. After the political turnover in Hungary in 1990, he served as a Curatorium member of the Zoltan Bay Foundation for Applied Sciences from 1993 till 1999. He received the Gabor Baross and György Szechenyi awards in Hungary recognizing his scientific and technological accomplishments and his loyalty to his Alma Mater.

In 1999 He became an Honorary Professor at the Banki Donat Polytechnic in Budapest. In 2006 became an Civitate Honoris Causa at the Budapest Tech. In 2007, IAA (Institute of Aeronautics and Astronautics) recognized his work on space robotics and automation, dealing with large distances, communication time delays and unknown environments. In 2009 he received the IEEE TFA (Technical Field Award) for leadership and sustained contributions to a broad set of innovative robotic and automation techniques applicable to space research and on Earth. He resides with his wife for 55 years, Margit, in Pasadena, CA. Both are U.S. citizens since 1978. He retired from JPL in October, 2001 after 32 years of service.



Obituary

Dr. A Dallos physicist engineer, formerly director of the Research Center(Ujpest) in the Research Inst. Telecommunications, deceased August 21, 2012 in Wayland, Mass, USA at the age of 91. He was Doctor of the Hung. Acad. Sci. and winner of the Kossuth Award. He was an outstanding scientist with international reputation in vacuum electronics. Since 1961, he was IEEE Member. The microwave electron tubes and the TV picture tube have been developed under his direction in the Res. Inst. Telecom. in Hungary. His main scientific work was the determination of pumping speed of the ion-getter pump. The fundamental book of Roth, Vacuum Technology, the Bible in this field presents this work. After his UNESCO duty in Pakistan, he joined Raytheon and played an important role in the development of the Patriot rocket. We save his memory.

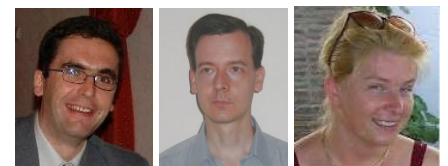
Dr G. J. Gergely DSc, IEEE Life Member



The executive committee of
IEEE HS wishes Merry
Christmas and Happy new
year for all HS members!



I. Rudas, P. Kádár, I. Vajda



L. Kovács, G. Szederkényi, A. Szakál



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IRUN Winter School on Nonlinear Dynamics in Cellular Wave Computing

Dear Sir/Madam, dear IRUN colleague,

From Monday January 28 until Wednesday noon, January 30, 2013, in Budapest, Hungary in collaboration with the IEEE Hungary Section Joint Chapter on Circuits and Systems and Computers, a two and a half day Winter School will be organized on

Nonlinear Dynamics in Cellular Wave Computing

The main theme is also related to Non-Boolean nanoscale Architectures and Algorithms, as well as the related nonlinear phenomena, such as stability, synchronization, bio related and mission critical applications.

We think that you might also be interested to visit the many research groups of the Jedlik Laboratories of the Pazmany University, hosting the event.

The three IRUN Universities organizing the event and related organizers are

Pazmany P. Catholic University, Budapest (Professor Tamás Roska, host chair)
Jagiellonian University, Krakow (Professor Maciej Ogorzalek, co-Chair)
University of Siena (Professor Mauro Forti, co-Chair)

Prospective authors from the IRUN Universities (Professors and their graduate students) as well as some invited Professors and their graduate students are kindly asked to send their **proposed titles, authors and a summary** before **January 6, 2013** to Marianna Szalay, Manager for International Affairs, Faculty of Information Technology, Pazmany University at

Szalay Marianna szalay.marianna@itk.ppke.hu or at
inter@itk.ppke.hu

Registration is free for IRUN University applicants, members of the IEEE Hungary Section, and the invited participants.

For registration (open November 25, 2012) please send mail to the address
irun.winterschool@itk.ppke.hu

For more information about the Winter School see
<https://itk.ppke.hu/en/education/irun/winter-school>

On behalf of the IRUN Winter School on Nonlinear Dynamics in Cellular Wave Computing

Tamas Roska
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0 June 2012

LAMAR KRISZTIAN
FACAN UTCA 1
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HUNGARY

Dear Lamar Krisztian

Congratulations! It is a pleasure to inform you that the requirements of the Member and Geographic Activities Board Operations Manual have been met, and the IEEE Industry Applications Society Student Branch Chapter at the Obuda University has been formed. The effective date of this Student Branch Chapter formation is 28 April 2012.

On behalf of the IEEE and its members, I would like to welcome your Branch Chapter to the student program. If you have any questions or need assistance, please do not hesitate to contact our Student Services department at:

Student Services
IEEE Member and Geographic Activities Department
445 Hoos Lane
Piscataway, NJ 08854

student-services@ieee.org (email)
+1 732 562 5507, phone
+1 732 463 6359, fax

Sincerely,

Cecelia Jankowski
Managing Director
Member and Geographic Activities

- cc: M. Delirnar – Region 8 Director
E. Nasar – Region 8 Student Activities Chair
J. Soares – Region 8 Student Representative
B. Lequesne – Industry Applications Society President
P. Menyan – Industry Applications Society Chapter & Membership Development
Y. Yao – Industry Applications Society Chapter Committee Chair
J. Castellanos Arias – Industry Applications Society Student Branch Chapter Committee Chair
I. Bernstein – Industry Applications Society Administrator
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I. Rudas – Hungary Section Student Activities Chair
D. Kiss – Student Branch Chair
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