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## IEEE HS General assembly

On 31<sup>st</sup> of May 2011 was held the general assembly of IEEE HS to accept the financial balance of 2010. Peter Kadar vice chair overviewed the main events of year 2010. Anikó Szakál, treasurer of IEEE HS presented the balance sheet of IEEE HS of the year 2010. The assembly accepted solidly the report.



## Chapter chair election

The IEEE IAS/PELS Hungarian chapter held an election on 29th of April 2011. For the next period as chair was elected Váradiné Dr. Szarka Angéla, as vice chair Fodor Dénes was elected.



Congratulation, IEEE HS wish a prosperous work for the next period.



## Invited lecture



On 14<sup>th</sup> of April, 2011 the KTE Rail Section and IEEE Industry Applications Society Chapters and Membership

Department organized a lecture with title: „The economy and energetic role of the Electric Car – or really green the electric car?” The presentation was held by Dr. Peter Magyar, IEEE Industry Applications Society, Chapters and Membership Department Chair.



## New Student Branch has been formed

At 24th of January 2011 was founded at the Óbuda University Student Branch. This is the fourth Student Branch in Hungary, beyond the Technical University SB, Veszprém University SB and Pázmány Péter Catholic University SB. This branch is founded by MSC and Phd students from the university. Our mission is to support our members in their studies and research. We are going to hold our first open meeting in September and if everything goes well we will make our first workshop in this year. We are open for any suggestion and contribution. If you are interested please contact

[daniel.kristof.kiss@gmail.com](mailto:daniel.kristof.kiss@gmail.com).

*Daniel K. Kiss, Chair of the IEEE Student Branch at Uni-Obuda*



## Morphotronics presentation

On 8<sup>th</sup> of April at Óbuda University in room Pauli professor Germano Resconi hold a presentation about morphotronics. This theory represents an improvement to traditional computation models used for analysis of mechatronic systems. Morphotronics use Non-Euclidean geometry for context shaping the projection

operators in an ideal network of mechatronic forms. This work shows how the morphotronics can help in design of robotic systems.

G. Resconi is a professor in Artificial Intelligence at the Department of Mathematics and Physics at the Catholic University in Brescia, Italy. He received his M.Sc. degree in physics from the University of Milano in 1968. Prof. G. Resconi with Prof.G. Klir from 1990 to 1995 wrote different papers in the Hierarchical meta-theory of uncertainty based upon modal logic by which different approaches at the fuzzy theory was collected in only one.

G. Resconi was invited in 1998 to present the meta-theory in Japan and in Vietnam. He was also invited to the Physics and Electronic Laboratory (TNO) in Netherlands to present a new architecture based on the non-euclidean geometry in dimensional space for neuron and neuronal network denoted Morphogenetic Neuron.

G. Resconi wrote a book with the title Intelligent Agents that is in print from the Springer editor in Heidelberg. Papers on the foundation of quantum mechanics gives new formal description of the quantum phenomena, different from the classical probability approach. Many different paper were written with Prof. Masoud of Berkeley on the Morpho-computing and also with Prof. Sridhar of Berkeley on a new approach to electronics by Morphogenetic approach. With prof, Chengfu in Beijing

we prepare new approach to Risk Analysis by morphogenetic system. With Prof. Zenon in Australia we published many papers on the Morphotronic applied to SVD and also to new type of computation as Immuno computer and other topic. With prof. Zenon and prof. Braun we prepare a future project for a book and application to Morphotronic systems



### Membership Development strategy 2010-2012



Among the 56 Sections of the IEEE Region 8, the IEEE Hungary Section (HS) held 387 members in 2010 (in comparison the IEEE HS members in 2009 were 371). The membership increase statistics placed IEEE HS on the 28<sup>th</sup> position, exactly at the middle of the Region 8 members.

However, regarding the renewal statistics in 2009 / 2010 the IEEE HS achieved to be placed on the 6<sup>th</sup> place in Region 8, with a 87.4% of renewed memberships (256 renewed IEEE members and 64 renewed IEEE student memberships).

Hence, it can be concluded that IEEE HS represents a **stable member group**, but there are potentials to increase the membership. Consequently, a Membership

Development (MD) strategy was developed by the IEEE HS MD Officer, and accepted by the IEEE HS board. Its main points are presented in the followings, while the whole document can be downloaded from the IEEE Region 8 site ([http://www.ewh.ieee.org/reg/8/cms/index.php?option=com\\_phocadownload&view=category&download=149:ieee-hungary-md-report-may-2011&id=7:md&Itemid=400014](http://www.ewh.ieee.org/reg/8/cms/index.php?option=com_phocadownload&view=category&download=149:ieee-hungary-md-report-may-2011&id=7:md&Itemid=400014)) being included in the Region 8's May report and given as an example for the other Region 8 sections wherefore we are proud of.

#### IEEE HS strategy for IEEE members

- For efficient register or recruitment, MD volunteers should be elected in institutes / universities, also Student Branches should be created;
- MD strategy should be separated on register and recruitment.

#### Recruiting members

As IEEE HS member group is relatively stable, priority should be focus on recruitment of young members, especially students.

- Formation of Student Branches at universities should be the first priority;
- At the beginning of MSc, PhD studies (beginning of each academic year) IEEE HS MD presentation on IEEE membership benefits should be held, being organized by the corresponding Student Branch (use of IEEE Recruitment Kit, recruitment supplies).

- **New student members** can participate on their first year **without registration fee** at IEEE HS programs / conferences;
- **New members** (IEEE Member) discounts: 50% discount in the first year (the regular membership is 147 USD), or **e-membership** possibility (only 63 USD!);
- Present **IEEE e-membership** benefits at IEEE HS events, institutes / universities;
- Communication with IEEE HS Arrears (e-mail, reminders);
- On IEEE sponsored / co-sponsored conferences or programs, MD presentations specially focused on IEEE HS (programs, membership information, chapter information, statistics) should be held (in close collaboration with IEEE HS Board);
- Use of IEEE recruitment supplies.

#### IEEE HS registered members

Due to the stable member group of IEEE HS, dynamic communication is required with IEEE HS members.

Summarizing:

- Use of IEEE member register (SAMIEEE) for statistics;
- Reminders of membership renewal;
- Informing IEEE HS members about IEEE HS programs / conferences (ex. newsletter);
- Updating IEEE HS web page;
- Accentuating registration fee discounts for IEEE HS members on IEEE HS conferences;
- Short presentation about IEEE HS activities, membership statistics on IEEE HS general meetings or IEEE HS programs (in close collaboration with IEEE HS board);

- Communication with Arrears (e-mail, reminders);
- IEEE HS MD presentation on Student Branch annual meetings (in close collaboration with IEEE HS Student Activities Officer);
- Awards (ex. student conferences);
- Use of IEEE recruitment supplies.

#### Conditions of IEEE HS to sponsor / co-sponsor programs

- Link to IEEE HS on the dedicated program's web page;
- IEEE HS MD materials at the information desk of the program / conference;
- Information about IEEE HS, IEEE HS MD in the final program book of the conference (necessary condition to include conference papers in the IEEEExplore);
- Include IEEE and IEEE HS recruitment / renewal materials in registration packages;
- Accentuating registration fee discounts for IEEE HS members at IEEE HS conferences;

*Levente Kovács  
IEEE HS MD Officer*



#### Nominate a Senior Member Initiative

Goal: The Nominate a Senior Member Initiative was designed to encourage all IEEE Sections and Societies to become actively involved in promoting the Senior Member grade.

This initiative aims to:

encourage grade advancement in IEEE;  
simplify the application process;  
offer financial incentives for approved Senior Member applications;  
offer increased benefits for Senior membership.

Senior Member Nomination Letter: To assist sections and societies in this initiative, a standard letter is available that can be used by nominators to provide information about the Senior Member application and nomination process. The [Senior Member Nomination Letter](#) (DOC, 89KB) is an electronic document that can be customized and forwarded as an e-mail attachment to the prospective nominee.

Deadline: To qualify for the 2011 Nominate A Senior Member Initiative, completed [Senior Member application and reference forms](#) must have been received at IEEE no later than 11 November 2011.

*from IEEE volunteer resources*



#### Power and Energy chapter

Some activities in year 2010:

- A social meeting for members and industrial visitors was held in April.
- Administrative meeting to discuss next year program in June.

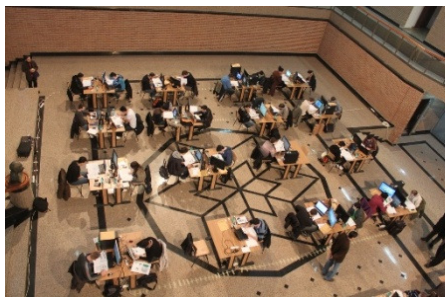
- Lectures and factory visits and test field visit organisation for the Student Branch. Advisory activity for students.
- Seminars: " Energy policy in China" by Mr. Kimpian in September with 45 people. "Network development" by Mr Kovacs in November attended by 38 pax.

*Laszlo Jermendy*



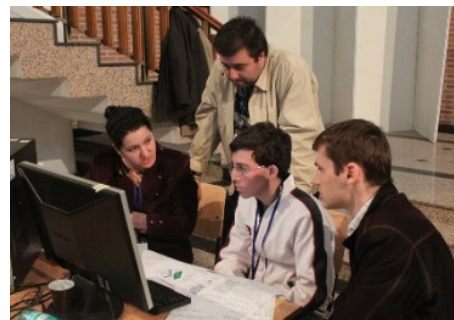
## IEEE-CPMT: 20<sup>th</sup> TIE – students' CAD contest in Bucharest

TIE, which stands for Interconnection Techniques in Electronics, is a professional student competition with a reputable objective; promoting Computer Aided Design (CAD) of electronic modules. The first contest was organized in 1992. Since then the significance and the impact of TIE is constantly growing. The organizers (UPB-CETTI; IEEE-CPMT Hu&Ro Joint Chapter; and IEEE Romania Section) prove constant expansion of the event in many aspects year by year. The 20th TIE contest was not only an outstanding anniversary for a traditional event, but a ceremony of CAD design, a model of edifying competition and an exemplary opportunity of networking between the industrial and academic people, including students as well.



*From 13 universities 38 students took part in the contest*

The 20th contest in Bucharest, 13-16 April, 2011 was a real success in proving the importance of cooperation between academic and industrial experts. The students were able to meet the local representatives of the electronics industry (such as Continental and National Instruments) to discuss practical requirements of industry, to discuss experience and ideas about state of the art designing. In-depth workshops helped the competitors to find out the new trends and features of the market leader Cadence and Mentor CAD softwares. The subject of the contest also had a deliberate hint for a practical approach in automotive area: the students had to design the PCB panel of an automobile HUD with all the small finesses of mechanical and electronic design required in the field. With a transparent evaluation method, students competed in a fair-play manner.



*Three evaluators review a student's work*

The 20th TIE offered an experience of real-life challenge and also achieved world-level standards in every aspect. The numbers also prove this statement: thirteen universities joined the contest from two countries (Romania and Hungary), and 38 students competed against each other. Not only the winners gained benefit from their top position: each student gained valuable experience from the intensive competition. The best of them who were able to reach a given score were also recommended by the Industrial Advisor Committee as a professional PCB designer. The participants, the organisers and the industry representatives are looking forward the next edition of TIE, which will be organized in Sibiu. Let's wish that the aforementioned momentum with the 21st edition will only increase keeping the prestige and the value of this remarkable IEEE event.

*by Zsolt ILLYEFALVI-VITÉZ*



## Visit and lecture of Dongkai Shangguan at BME



*Dr. Dongkai Shangguan*

Dr. Dongkai Shangguan, Ph.D., MBA, IEEE Fellow, a distinguished lecturer of IEEE Component Packaging and Manufacturing Technology Society visited the Budapest University of Technology and Economics on the 6th of May, 2011.

Dr. Shangguan currently serves on the IEEE CPMT Society Board of Governors, on the IPC Board of Directors, on the first Board of Directors for the Solar Engineering & Manufacturing Association (SEMA), on the Advisory Board of the Sustainable Electronics Manufacturing (SEM) Working Group, and on several editorial/advisory boards of technical journals.

The IEEE-CPMT Hu&Ro Joint Chapter and The Department of Electronics Technology of BME hosted the lecture of Dr. Shangguan about Electronics

Product Miniaturization and Reliability. The presentation reviewed advanced packaging and assembly technologies for miniaturization; and outlined the scope of development for complete assembly capability, including PCB design; solder alloy; process optimization; equipment technology; reliability, etc. Several critical reliability issues in lead-free solder interconnects were also discussed. It was also pointed out that miniaturization, functional densification and integration, along with environmental compliance, fast time to market, low cost and high reliability continue to represent the leading trend for electronics products.



*The presentation of Dr. Dongkai Shangguan*

Dr. Shangguan is currently Vice President with Flextronics, a leading EMS (Electronics Manufacture Service) provider, who has four plants in Hungary and several others in the surrounding countries. Flextronics is also a gold level sponsor of BME.

After his presentation, a visit was organized for Dr. Shangguan by Prof. Gábor Harsányi, Prof. Gábor Stépán, Prof. Tibor Czigány and Prof. József Karger-Kocsis to the laboratories of the Department of Electronics Technology, the Department of Applied Mechanics and the Department of Polymer Engineering, respectively.

*by Zsolt ILLYEFALVI-VITÉZ*



## 34th International Spring Seminar on Electronics Technology



*The logo of ISSE 2011*

The 34th ISSE, the International Spring Seminar on Electronics Technology was organized by the Faculty of Electrical Engineering and Informatics at Technical University of Košice (FEI-TUKE), Slovakia in Tatranská Lomnica, which is a beautiful town of High Tatras and one of the three most important Tatra tourist resorts. The event was technically sponsored by IEEE-CPMT and took place between the 11th and 15th of May, 2011.

ISSE – a series of annual seminars – was founded in 1977 and year by year the conference has moved to different sites within Europe. Since 1977 the event has been hosted by 11 universities with rising technical level and unique multicultural atmosphere.

ISSE 2011 was an international event focused on exchange of information between senior and young scientists from academic communities and electronic industries. The leading title of the conference – "New Trends in Micro/Nanotechnology" – defined this year's hot topics, which included experimental and theoretical work in a very wide-spread field of electronics, micro and nano-electronics technology and packaging.



*Poster presentation at the hall of the conference hotel*

The conference was opened by heartfelt speeches of Liberios Vokorokos, the Dean of FEI-TUKE, Prof. Klaus-Jürgen Wolter, the ISSE Steering Committee Chair and Prof. Alena Pietriková, the Conference Chair. The keynote speakers – Prof. Jan Felba and

Prof. Chris Bailey – gave presentations about innovative technologies, fitting the hot topics of ISSE 2011: "Inkjet printed electrically conductive structures for microelectronics" and "Interconnect Technologies using Carbon Nanotubes". Both talks discussed the present and future challenges of these promising technologies.

Based on a unique combination of oral and poster presentations as well as individual meetings, this forum provided unique opportunities for professors, students, senior and junior researchers to discuss their scientific and educational topics and organize international cooperation in a convenient atmosphere during the conference days.



*Awarding ceremony at the closing session of ISSE2011*

With a remarkable organization, the conference was a real success with 20 oral and 110 poster presentations of nearly one-and-half hundred participants from 23 universities of 17 countries. Most of the

papers had very high level and would be included into the IEEE Xplore Digital Library. The Steering Committee had to apply a very thorough evaluation process to find the four best and six excellent presentations for the categories of oral and poster presentations made by senior and young scientists.



*by Zsolt ILLYEFALVI-VITÉZ*



### **50 years jubilee of IEEE membership of György GERGELY**

Dr. György József Gergely DSc. Born 1923 (Vác, Hungary). Graduated electrical engineer (1947) and Dr. Techn. (1949) by József Nádor Techn. Univ. Budapest. Hung. Acad. Sci. and Phys. Sci. (1956), Dr. Phys. Sci (1992). Employments: Tungfram Res. Lab. 1948-1950. Res. Inst. Telecommunications, Budapest (1950-1966) head. Phys. Dept. UNESCO Expert, Buenos Aires (1962-64). Res. Inst. Technical Phys. Hung. Acad. Sci. (1966-97). UNESCO Sci Advisor Islamabad, Pakistan (1975). Inst. Tech. Phys. Materials Sci (1998-2005) sci. advisor. Prof. Emeritus Inst. (2006). IEEE Member (1961), later Senior Member. Life-Member (1993).

Activities: Development of radar and TV picture tubes (team work). Semiconductor Physics of wide band gap semiconductors. Determination of carrier diffusion length and surface recombination velocity, energy conversion efficiency of II-VI compounds. Surface physics since 1968. Development of Auger electron spectroscopy and REELS in Hungary (team work). Development of ellipsometry for Si MOS technology (team work). Elastic peak electron spectroscopy (EPES) ISO 18115/7.26: 2001 and 2007/PDAM2. It was applied for determination of the electron IMFP (inelastic mean free path, information depth) and SEP (surface excitation parameter (team work)). > 240 publications, 2 monographs and 3 chapters in books, 10 Patents. Awards: Marcus Marci Medal (Spectro. Soc. Prague) (2002), Physics Prize Hung Acad. Sci. (2007). Eötvös Medal, Roland Eötvös Hung. Phys. Soc, Simonyi Prize (2009).



IEEE HS wish health and more nice years to professor Gergely.



## Call for Papers – SIITME 2011



Dear Colleagues, The organizing committee of SIITME 2011 kindly invites you to submit a paper/abstract to 2011 IEEE 17th International Symposium for Design and Technology in Electronic Packaging (SIITME). The scientific event shall take place in Timisoara, a beautiful town located in the Western Romania, close to the Hungarian border, on October 20th–23rd, 2011. Web page:

<http://www.siihme.ro>

### SUBMISSION OF ABSTRACTS:

Interested authors are invited to submit a two-page abstract according to the template, as MS-Word document, Version 97 or later, and as PDF document.

Presented papers will be included in the IEEE Xplore Digital Library  
Please note: electronic submission only.  
Submit the abstracts to:

<http://www.siihme.ro/submission>

### TOPICS

1. Emerging Technologies & Trends in Advanced Packaging
2. Power Electronics and Microsystems Packaging
3. Assembly and Manufacturing Technology
4. Electrical Design, Simulation & Modeling
5. Optoelectronics & Advanced Communication Packaging
6. Applied Reliability
7. Challenge in Global Education

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Publication Chair: Zsolt ILLYEFALVITÉZ, Budapest University of Technology, Hu

### IMPORTANT DATES:

Submission of Abstracts: June 6th, 2011  
Notification of acceptance: June 27th, 2011  
Submission of Camera-ready papers: September 5th, 2011  
Registration for reduced price: September 5th, 2011  
Registration deadline: October 3rd, 2011



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