

IEICE Global Plaza

—Monthly community plaza in English for students, faculties and engineers—

Essay

Toward An Attractive Academic Institution in Globalizing Environment



Yoshinori SAKAI, Prof., Dr. Director of Tokyo Shibuya Study Center, The Open University of Japan, Emeritus Professor, Tokyo Institute of Technology, President, IEICE

As you know, most of world level academic institutions in the field of electronics, information and communications have been facing the drastic social change of relevant industries and population age structure. We have to evolve The Institute of Electronics, Information and Communication Engineers (IEICE) to match the social change in the globalizing environment. I would like to remark what we should do, as President of IEICE, to meet the expectations of the members and foster next generation of engineers in the field.

Background of IEICE

IEICE has been developed so far since the original organization of IEICE, "The Institute of Telegraph and Telephone Engineers" was launched with the leadership of Dr. Morisaburo Tonegawa, Director of Electro-technical Laboratory under Ministry of Communications in May, 1917. IEICE will have the 100th anniversary of establishment of the organization in two years, with the current membership over 31,500 including more than 3,800 international members. We have to make efforts to take over and evolve the academic activities of IEICE for the next generation. However, unfortunately, IEICE has faced the crisis of the overall membership degeneration in average while the international membership has a trend of slow but steady growth. We think the trend may be due to the change of the domestic population age structure with birthrate reduction causing the reduction of productive generation, and the degeneration of industries related to electronics, information and communication technologies in the competitive global market environment. Therefore, IEICE has to evolve the innovative academic activities which would cover the role of information delivery, fostering younger generation, revolution to a globalized institution.

Change of Environment

Table 1 shows the difference of priority issues for the R&D of science and technology from the national viewpoint specified by the Council for Science and Technology in 2001 and 2013 and indicates the drastic change of world level urgent technical issues in the twelve years. All the fields specified in 2001 fiscal year could be covered by the special fields of IEICE. Meanwhile, those fields disappeared in 2013 fiscal year. The main viewpoint of policy has changed from the technology to the social contribution to the general society. It seems inevitable for the domestic society to solve the urgent issues of natural disaster, energy, foods, health management, with high priority. Every item has come out as urgent issue common in the world. Even in universities which have biased to the fundamental research, nowadays, their opinions tend to weight the output of the research activities.

Strategy of IEICE

The IEICE's roadmap of evolution covers how the society should be evolved up to 2040 and what technologies will be important around that time. The roadmap suggests that new and attractive technologies represented by multi-language translation, brain-machine interface (BMI), and robots will be required. The roadmap also forecasts that the IEEE is likely to

Table 1 Priority issues of R&D specified by the National Council for Science and Technology

2001 year report	2013 year report
[Four priority areas] - Life science - Information and communications - Environment - Nanotechnology and materials	- Clean energy system - Healthy long-lived society - Construction of next-generation infrastructures - Regeneration of regional communities based on local resources - Restoration from the East Japan Earthquake
[ICT] - Advanced networking technology - High-speed computing technology - Human interface technology - Devices and software for the infrastructure	[Use of smart technology] ICT, knowledge processing [Systematization] Convergence of multiple technologies (e.g. smart community) [Globalization] Gaining overseas funding and human resources from outside Japan

become the preeminent organization in the fields of bio-engineering and healthcare engineering.

The fundamental unit of academic activities in IEICE is a Technical Committee. They are indispensable for the institute. I believe when their activities are deteriorated, IEICE will disappear from the world. IEICE also encourages the members to form time-limited Technical Committees to challenge new topics. Even the current regular Technical Committees change their titles or extend their target research areas, or new regular Technical Committees have been established to address emerging technical issues so far.

Responsibility to the General Society

It is not so easy for researchers, especially for the faculty of universities to select research subjects which will match social problems. However, in the modern society where the existence of human beings would be an important issue, it is much significant to contribute to the solution. ICT is expected to play a key role in solving these issues based on the social needs.

It is expected that IEICE will be a forum where the members can find a portal to globalizing engineering societies and their required information, meet people with common interests, enjoy their opinion exchange with different generations, even gain some practical knowledge of other fields, and maintain social activities after retirement.

Hot Topics

The 5th International Conference on Integrated Circuits, Design, and Verification (ICDV 2014) Was Successfully Held at VNU-UET, Hanoi



*Xuan-Tu Tran, Assoc. Prof., Dr., Deputy Director, Key Lab. for Smart Integrated Systems, VNU University of Engineering and Technology (VNU-UET), Hanoi, Vietnam
TPC Chair, ICDV2014, Deputy Representative, IEICE Vietnam Section*

The 5th International Conference on Integrated Circuits, Design, and Verification (ICDV 2014) has been successfully organized and it was held by the IEICE Vietnam Section in collaboration with VNU University of Engineering and Technology (VNU-UET) in Hanoi, Vietnam, from 14th to 15th, in November 2014. I would like to summarize the result of the Conference here as the TPC Chair.

The International Conference on Integrated Circuits, Design, and Verification (ICDV) is an annual international

forum for presenting and exchanging chips and circuit designs in solid-state and semiconductor fields. The previous ICDVs have been held in Ho Chi Minh city (2010), Hanoi (2011), Danang (2012), and Ho Chi Minh city (2013). The ICDV conference is an open-friendly forum for the relevant researchers and students to discuss the leading edge research and development subjects of the integrated circuit and device field, which has served as a vehicle for a variety of exchanges and interactions among researchers and engineers, industry and academia, international communities for the future of LSI and related fields. The ICDV 2014 conference was hosted by VNU University of Engineering and Technology (VNU-UET) in Hanoi, Vietnam on the occasion to celebrate the 10th Anniversary of VNU-UET.

More than 100 participants from many countries including Vietnam, Japan, Korea, Malaysia, India, Israel, Belarus and others shared their ideas and works in the IC design related fields.

The Conference was inaugurated by Prof. Dr. Ngoc-Binh Nguyen, Ex-Rector of VNU-UET, Representative of IEICE Vietnam Section, and it provided the total 30 accepted papers (22 papers for their oral presentation and 8 papers for their poster presentation). In particular, one Keynote Speech was given by Dr. Diego Puschini, CEA-LETI, MINATEC, France, and 9 invited presentations were given by the guest speakers. The Conference gave a good mix of digital, analog, and RF circuits including low power and voltage techniques, advanced VLSI designs, and their applications for image/video processing, wireless communications, and so on. Even though ICDV may not have enough capacity today to discuss all of those issues, it certainly contributed to creating seeds to discuss new research ideas as well as forming a human network among researchers, students and faculty members from a variety of institutions. Best Paper Awards were granted to two best papers in the conference.



Fig. 1 Opening Speech given by Prof. Ngoc-Binh Nguyen



Fig. 2 Keynote Speech given by Dr. Diego Puschini



Fig. 3 Technical Session



Fig. 4 Best Paper Award Giving Ceremony

The ICDV 2014 conference was sponsored by the IEICE Vietnam section, Technical Committee on Integrated Circuits and Devices of IEICE Electronics Society (IEICE-ICD) and Technical Committee on VLSI Design Technologies of IEICE Engineering Sciences Society (IEICE-VLD), and co-organized by the Section, VNU-UET. The conference was also technically supported by Technical Committee on Microwave Engineering, IEICE Electronics Society, IEEE SSCS Japan Chapter, IEEE SSCS Kansai Chapter, IEEE SSCS Vietnam Chapter, The Radio Electronics Association of Vietnam (REV), and Vietnam National University Hanoi. More information about ICDV events can be found at : <http://www.uet.vnu.edu.vn/icdv>

Reminder

IEICE's International Conference ICTF2015 Will Be Held in Manchester UK!



**Haris Gacanin, Dr.,
Alcatel-Lucent Bell N.V., Antwerp, Belgium
Representative of IEICE Europe Section**

The 2015 IEICE Information and Communication Technology Forum (IEICE ICTF2015) is organized by IEICE Europe Section and it will be held in Manchester, UK on June 3-5, 2015. It is our pleasure to invite you to contribute with your work to the Conference. The conference was set up in a week before IEEE ICC2015 in London.

IEICE ICTF 2015 has been soliciting original and previously unpublished papers addressing research challenges and advances towards a world of unified communications. It is my pleasure to invite you to contribute with your work to the 2015 IEICE ICTF.

As well as every year, we will have a number of technical tracks, workshops and keynote sessions that cover Communications, Electronics and Engineering Societies. We are waiting for your proposals for tutorials and workshops. Please contact the general Chairs for any inquiry that you may have.

For more information and topics of interest, please visit : <http://www.ictf2015.ieice-europe.org>

The details of CFP and paper submission process is available at : http://confair.ieice-europe.org/files/12/cfp_ictf2015.pdf

All the publications will be uploaded on the digital data base of IEICE (I-Scover) in the near future and it will be very useful for your impact factor enhancement. We hope to see you there.

Important Dates

- Full Manuscript Due : February 15, 2015
- Notification of Acceptance : March 15, 2015
- Camera Ready Paper Submission Due : April 1, 2015

For any question of activities of IEICE Europe Section, please contact the Secretary at piotr.zwierzykowski@put.poznan.pl.

Upcoming International Conferences

ICIN2015-IEICE Communications Soc., in Paris, France, on Feb. 17-19, 2015, <http://www.icin.co.uk/>

APRICOT-APAN2015-IEICE Communications Soc., in Fukuoka, Japan, on Feb 24-Mar 5, 2015, <http://2015.apricot.net/>

IWSS-IEICE Communications Soc., in New Orleans, USA, on Mar. 9, 2015, <http://wcnc2015.smartspectrum.net/>

WDN-CN2015-IEICE Communications Soc., in New Orleans, USA, on Mar. 9, 2015, <http://www.icwdn.org/>

ISMICT2015-IEICE Communications Soc., in Hayama, Japan, on Mar. 24-26, 2015, <http://www.ismict2015.org/>

ISADS 2015 -IEICE Communications Soc., in Taichung, Taiwan, on Mar. 25-27, 2015, <http://isads2015.asia.edu.tw/>

IBP2015-IEICE Communications Soc., in Bali, Indonesia, on Apr. 23-25, 2015

ICTF2015-IEICE Europe Section, IEICE Communications Soc., in Manchester, UK, on Jun. 3-5, 2015, <http://www.ictf2015.ieice-europe.org/index.php?layout=0>

OECC2015-IEICE Communications Soc., in Shanghai, China, on Jun. 28-Jul. 2, 2015, <http://www.oecc2015.sjtu.edu.cn/>

APSITT2015 -IEICE Communications Soc., in Colombo, Sri Lanka, on Aug. 4-7, 2015, <http://www.ieice.org/cs/in/APSITT/2015/cfp.html>

Message from TFIPP Secretariat

This issue is delivered also by a free mail magazine "IEICE Global Plaza Online" with updated news of interest for you. Please contact Prof. Takahashi, TFIPP (Task Force for International Policy and Planning) at global@ieice.org, if you need. Back numbers are available in archives at : http://www.ieice.org/eng/global_plaza/index.html/

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