

Essay

Toward Smart Community Through Global Entrepreneurship



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Introduction

It is nice for me to have this opportunity to talk to all general readers of the IEICE Global Plaza. I would like to introduce to you the current situation of my university and its paradigm shift toward the future smart community through the global entrepreneurship development which will be focused on the collaborations with international universities, global industries, Governments and international organizations.

Paradigm Shift in Research Activities

A university has the responsibility to perform research activities on its proper specific research fields as well as to foster students who will contribute to construction of nations. The interest on a research field should generally be based on the society needs. For example, current needs on sustainable food supply and energy have prompted researchers to search for the feasible renewable energy and food related science and technology. The advance use of Internet has motivated people to innovate on the information and communication technology, particularly on recently popular big data analytics, the Internet of Things and cloud computing. On the other hand, the rapid urbanization in which about 70% of the world population will live in the urban area in 2050 has also created opportunities in research and innovations on smart city to overcome upcoming problems and challenges of evolving cities. In addition to the human needs, natural phenomena and social issues, such as natural disasters and political situation, also have significant roles in determining the priorities. Hence, the paradigm shift in research is a natural process and the research tends to converge to specific fields.

Accessibility to Required Information

Research process involves problem identification and reviewing the state-of-the-arts of studies which have been conducted in relation to that problem. The ubiquity of the Internet access allows us to search for abundant tools and information to review a possible research problem and to initiate a research work. The availability of information and knowledge should lower the entry barrier to deliver new inventions and innovations. However, it will also cause strong competitions among researchers where several researchers will conduct the same work and predictably produce the same outputs. In addition, unfortunately, everyone doesn't always access to the information due to resource constraints. Therefore, it is not appropriate to manage the issue as usual and we will take a different and unique approach.

Strategy of Education and Research in ITB

Institut Teknologi Bandung (ITB) as a part of academic communities in Indonesia is now also taking the own approach in conducting the education and research to produce optimal results. ITB has a responsibility to educate the people of the nation, Indonesia, as stated in the national constitution. ITB has been recognized for a long time as the reputable university of science and technology in Indonesia. Its contribution to the development of global human resources has been proved with the worldwide reputation to the graduates. In the field of generating knowledge, ITB also has demonstrated as the most prolific institution in producing peer reviewed journals in Indonesia. However, the nation does not only need results in the form of research paper. The community demands more real contribution from ITB in the form of science and technology products that will open the gate to both of the most prosperous domestic community and the world. Research

should be implemented and reach needs of the society. Thus, ITB is now being transformed from the research intensive university into an entrepreneur university to motivate the ITB's academic community to be innovative, to be an entrepreneur, and to develop smart communities in the society. Any education output and research results must be able to create values for the society, either locally or globally. We will encourage faculties to generate patented innovative products and globally recognised scientific inventions, simultaneously we will take the initiative in spreading out the available knowledge in surrounding communities.

Toward a Global Cooperative Society

In addition, ITB has also concerned with the improvement of relevance in research activities. The relevance means strengthening the connectivity systematically. We will begin with embedding research results into teaching activities and then promoting the interaction among researchers, private sectors, governments, and global institutions, in a form of triple-helix, university-industrial linkage, innovation systems and entrepreneurship university. The main challenge of this effort will be accelerated with the reduction of counter-innovation behaviour, such as lack of incentives and angel investors, and the promotion of user behaviour.

Hence, we emphasize the development of multi-discipline and cross-discipline activities to deliver research missions and to create breakthrough. We have to combine the science and technology with society aspects, covering local wisdoms, to make significant the science and technology relevance to the society for the bright future. Finally, universities and industries have to define specific excellences and collaborate with each other to enrich and strengthen their unique excellences for sustainable smart communities.

ITB has made various efforts to improve the competence of its graduates. ITB also has cooperated with all the universities in ASEAN who are members of ASEAN Credit Transfer System, since 2011, and has collaborated with various foreign partners in 40 countries with more than 300 universities over the world. This is based on the strategy that ITB should take the initiative of globalization and developing collaborations of higher education for the readiness of the students and society driven research activities of the staffs and students, with academic institutions not only in ASEAN but also widely over the world. Your contribution and constructive proposals to our globalization scheme is welcome.

Note by the Editor

The author, Prof. Kadarsah Suryadi Kadarsah served ITB as Vice Chancellor for Academic and Student Affairs in 2011-2014 and he inaugurated the Rector of ITB for the five years term of 2015-2020, in December 2014, and he has taken the initiative in the entrepreneurship evolution in academic societies. He also serves UNESCO as a Coordinator in charge of Regional Observatory on the Information Society in Asia and Pacific region, and the Steering Committee of the "AUN-USR and S" (Asia University Network - University Social Responsibility and Sustainability) as the delegate.

He also serves the Ecole des Mines de Nantes in France as a visiting Professor for Decision Making and Knowledge Management since 2012. He received his BS degree from Department of Industrial Engineering, ITB in 1986, MS degree from Department of Industrial Technology, Ecole Centrale Paris, France in 1988, Ph.D. degree from Universite d'Aix Marseille-3, France in 1992. He also had his post doctoral studies on based on the scheme of Japan Society for Promotion of Science (JSPS) at Tokyo Institute of Technology in 1997. His article will encourage the researchers and students for their fruitful and innovative collaborations with his experience.

Hot Topics

**Introduction of New Representatives of
IEICE International Sections
for the 2015/2016 IEICE Fiscal Year**
no.6

IEICE International Affairs Committee

The former issues of IEICE Global Plaza have introduced ten of twelve current IEICE International Section Representatives who were approved by the first 2015/2016 Fiscal Year Meeting of IEICE International Affairs Committee on June 17, 2015, in alphabetical order of Section titles. This issue refers to one of the left two International Sections, IEICE Taipei Section.

IEICE Taipei Section



*Hoang Yan Lin, Prof. Dr.,
National Taiwan University, Taiwan, R.O.C.,
Representative, IEICE Taipei Section,
Member, IEICE*

Vision

The IEICE Taipei Section was founded with the leadership of Prof. Hung-Chun CHANG of National Taiwan University (NTU) in 2003, as well as the other Sections in Bangkok, Beijing and Singapore, when IEICE established the new project called "IEICE Overseas Area Representative Program" in order to expand IEICE academic activities to Asian countries toward a global academic institute. The academic activities of the Section has been evolved by the successors, Prof. Tzong Lin Wu and Prof. Liang Hung Lu of NTU. Prof. Hoang Yan Lin took over the Representative of IEICE Taipei Section from the predecessor, Prof. Liang Hung Lu in the beginning of 2015.

IEICE Taipei Section will promote the academic activities of IEICE through the regional activities of education, research and collaborations with industries. For educational activities, the Section will help the courses and contests for senior high school, undergraduate, and graduate programs in the relevant fields. The examples are International Science and Engineering Fair of Taiwan for senior high school, the contest of master and doctoral theses for 3D interaction and display technology, and etc. For research activities, the Section will sponsor or co-sponsor the conferences and workshops. The examples are the 3D Systems and Applications 2015, Numerical Simulation of Optoelectronic Devices 2015, 3DIDA Advanced Technology Forum, and the invited speeches by Nobel-prize Laureates. For industrial activities, we will get involved in the academic collaborations of industrial research centers, such as NTU-TSMC, NTU-MTK, and NTU-Intel research centers. The Section will also promote IEICE membership and paper submission.

Profile

He received his BS and PhD degrees from Electrical Engineering Department, National Taiwan University (NTU) in 1987 and Graduate Institute of Electrical Engineering, National Taiwan University in 1993, respectively. He worked as a post-doctoral researcher and focused on ultra-fast laser optics in Atomic and Molecular Science Institute, Academia Sinica (Central Research Academy headquartered in Taipei, founded in Nanjing, 1928, see it at https://en.wikipedia.org/wiki/Academia_Sinica) Taipei from 1993 to 1995. He worked on diffractive optics, micro-optics, and projection display technology in Opto-Electronics and Systems Laboratories, Industrial Technology Research Institute, Hsinchu from 1995 to 2005. He joined the faculty of NTU and became the Associate Professor of Graduate Institute of Electro-Optical Engineering and Electrical Engineering Department, NTU in February 2005. Now he is the Professor of Graduate Institute of Electro-Optical Engineering and Department of Electrical Engineering, NTU. The current research interests of his group are design of optical components and integration of optical systems for digital display systems. He is a member of the Optical Society of America (OSA), the Society of Information Display (SID), and 3D Interaction and Display Association (3DIDA).

Call for Papers

2016 IEICE General Conference Comes Up! Let's Join the Complete English Session BS-3 IEICE Communications Society

The 2016 IEICE General Conference will be held at Kyushu University, Ito Campus, in Fukuoka, Japan, on March 15-18, 2016. The campus in Itoshima Peninsula is located at the center of the newly developed Kyushu University Academic City stretched over the wide area from Fukuoka City to Karatsu City. It will

consecutively provide a complete English Session during the four-days of the Conference as well as in the former General Conferences.

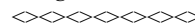
This event has been organized to accelerate the globalizing academic activities of IEICE by encouraging younger researchers, engineers and foreign scholars studying in Japan with international participants. It has been planned and managed by the IEICE Technical Committee on Network Systems (NS) under IEICE Communications Society so far since 2005. It has covered more than 70 papers in English every year. The event has gained a high reputation by the participants so far. The best papers will be awarded by the Society. Please try to submit your paper to this English Session. The important dates are summarized as follows:

Available Sessions: Everyday during the Conference
Session BS-3: entitled "Advanced Networking Technologies for Innovative Information Networks"

Topics of interest: Any topics concerned with Network, Service, Optical and Wireless

Paper length: 2 pages (1 page is also acceptable)

Submission deadline: 17:00, January 6, 2016 (Please follow https://www.gakkai-web.net/gakkai/ieice/kaikoku_e/index.html)



IEICE ICTF 2016 Will Be Held in Patras, Greece on July 6-8, 2016



*Haris Gacanin, Dr.,
Alcatel-Lucent Bell N.V.,
Chair, ICTF2016 Steering Committee,
IEICE Europe Section*

The IEICE Information and Communication Technology Forum 2016 ("IEICE ICTF 2016") will be held at the Conference Centre of the University of Patras in Patras, Greece on July 6-8, 2016. The Web site is available at <http://www.ictf2016.ieice-europe.org/>. It will be organized by IEICE Europe Section with the sponsorship of IEICE and IEICE Communications Society.

The IEICE ICTF 2016 is focused on encouraging the collaboration of researchers between academia and industry over the world, especially in Europe. It is expected to provide a Forum for the exchange of ideas and discussion on major trends and challenges in all aspects of information and communication technologies, among engineers and scientists from all over the world. This conference will include six keynote speeches. Please see the speech abstract and biography of each speaker at <http://ictf2016.ieice-europe.org/index.php?m=40&id=0&layout=2>.

The IEICE ICTF 2016 especially welcomes PhD students who will contribute to the topics summarized in the Call for Papers. All the presented papers will be included and indexed in the IEICE digital library I-Scover (See it at <http://i-scover.ieice.org/?lang=en>), while post-conference publications are possible. The important dates are summarized as follows:

Full paper due: March 13, 2016

Notification of acceptance by: April 30, 2016

Camera ready paper due: May 30, 2016

This conference will be useful for you to develop new human relations or research activities in collaboration with researchers in Europe. We are looking forward to seeing you in the conference. For any question, please do not hesitate to contact the Secretary of IEICE Europe Section at piotr.zwierzykowski@put.poznan.pl.

Message from TFIPP Secretariat

This issue is delivered also by a free mail magazine "IEICE Global Plaza on Line" 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/activities/ieice_global_plaza.html.

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