

IEICE Communications Society GLOBAL NEWSLETTER Vol. 37, No.1 **Contents**

○ IEICE-CS Related Conference Reports

Report on 9th Asia-Pacific Symposium on Information and Telecommunication Technologies (APSITT 2012)2
Junichi Murayama, Masashi Toyama, Hiroto Nomura, Bo Hu, Takashi Kurimoto, Tomonori Takeda,
Hikaru Suzuki

Report on the 12th International Conference on ITS Telecommunications4
Jia-Chin Lin

Report on 2012 International Symposium on Antennas and Propagation (ISAP2012)6
Keizo Cho

IEICE-CS Related Conferences Calendar9

○ From Foreign Students/Members

The Journey of the ‘Tiny Alien’ in the Land of Sakura10
Roslina Binti Abdul Razak

○ IEICE-CS Activities NOW

Report on ICT-SG Society Activity in CEATEC JAPAN12
Noriyoshi Sonetaka, Atsuhiko Tanaka

ICSANE2012 - Over the Troubled Water14
Shigeru Ozeki

Report on the 4th Workshop of Internet Architecture in Phuket, Thailand16
Keisuke Ishibashi

Report on the 10th QoS Workshop17
Kenji Hikichi, Nobuyuki Nakamura

Joint Conference on Satellite Communications (JC-SAT 2012) Report18
Takashi Hirose, Naoko Yoshimura

Report on the 26th Optical Communication Systems Symposium
– Novel Relationship between ICT and Human Society –20
Technical Committee on Optical Communication Systems

IEICE Fellow Conferred on ten IEICE CS Members22
Michiharu Nakamura

○ IEICE-CS Information

Special Section Calendar of IEICE Transactions on Communications23

CFPs for Special Sections on IEICE Transactions on Communications24

IEICE Overseas Membership Page28

IEICE Overseas Membership Application Form29

IEICE-CS Overseas Membership with Special Annual Fees for Sister Society Members30

From Editor’s Desk32

○ Photogravure

IEICE Transactions on Communications and Communications Express Back cover

***Color Version Available!**

*The PDF (color version) of this issue can be downloaded from IEICE-CS
Web site below:*

http://www.ieice.org/cs/pub/global_news.html

Report on 9th Asia-Pacific Symposium on Information and Telecommunication Technologies (APSITT 2012)

Junichi Murayama, Masashi Toyama, Hiroto Nomura, Bo Hu,
Takashi Kurimoto, Tomonori Takeda and Hikaru Suzuki
APSITT2012 Committees



1. Introduction

The 9th Asia-Pacific Symposium on Information and Telecommunication Technologies (APSITT2012) was successfully held at Santiago and Valparaíso, Republic of Chile on Nov. 5-9, 2012.

2. Concept and Brief History of APSITT

APSITT is aiming to the prosperity of Asia-Pacific region by presenting the opportunities of academic forum for mutual understanding and friendship among researchers and leaders in this region. Since 1993, APSITT has been held as follows:

- 1st: Nov. 1993, Bangkok, Thailand
- 2nd: Mar. 1997, Hanoi, Viet Nam
- 3rd: Aug. 1999, Ulaanbaatar, Mongolia
- 4th: Nov. 2001, Kathmandu, Nepal
(video conference with Atami, Japan)
- 5th: Nov. 2003, Noumea, New Caledonia
- 6th: Nov. 2005, Myanmar Info-Tech, Myanmar
- 7th: Apr. 2008, Bandos Island, Maldives
- 8th: Jun. 2010, Damai Beach Resort, Malaysia

3. Overview

The key facts and statistics on APSITT 2012 are as follows:

- Sponsor: IEICE Communications Society
- Co-Sponsors:
 - IEEE Communications Society
 - University of Chile
 - Federico Santa Maria Technical University
- Organizers:
 - Technical Committee on Information Networks
 - Technical Committee on Network Systems
- Conference Dates: Nov. 5-9, 2012.
- Conference Venues:
 - University of Chile (UCHile), Santiago, Chile
 - Federico Santa Maria Technical University (UTFSM), Valparaíso, Chile
- Participants: 111 persons
- Invited speakers: 15 persons
- Special session speakers^{*1}: 10 persons
- Selected session speakers^{*1}: 20 persons
- Regular session speakers: 22 persons
- Submitted papers: 63 papers / 8 countries

^{*1}) Papers are also published on the IEEE Xplorer in addition to the APSITT2012 proceedings.

4. Invited Sessions

On Nov.5, Prof. Eduardo S. Vera (UCHile) conducted the Opening Session at UChile (Fig.1,2). In this session, Prof. Víctor L. Pérez V. (Rector, UChile) and Prof. Hiroyuki Morikawa (The University of Tokyo) provided Welcoming Speeches entitled "ICT R&D International Collaboration at UChile" and "Making Stories for ICT R&D", respectively. Prof. Alejandro Jofré (UCHile) and Mr. Alvaro Fischer (Fundación Chile) also gave Opening Speech: "Advanced ICT for Mathematical Modeling with HPC" and Keynote speech: "Innovation in Chile: An Enhanced Ecosystem", respectively.



Fig. 1 UChile in Santiago



Fig. 2 Opening Session on Nov. 5

Then Prof. Takeshi Asahi (UCHile) chaired the following Invited Sessions at UChile (Fig.3). In these sessions, Prof. Tohru Asami (The University of Tokyo) offered Technical Program Overview: "Organization Committee Messages for 9th APSITT". Dr. Eduardo Hardy (NRAO-USA / Joint ALMA Office), Dr. Kou Miyake (NTT Data Intellilink) and Mr. Francisco Amiama (Codelco-Chile) gave the Invited Speeches entitled "ALMA Scientific and Technological Challenges", "An Ultra Energy-saving Power Supply System for Data Centers" and "Digital CODELCO", respectively.



Fig. 3 Invited Session on Nov. 5

On Nov.8, Prof. Luis Salinas conducted the Invited Sessions at UTFSM (Fig.4,5). In this session, Prof. Walter Grote provided Welcoming Speeches: "History

and academic activities in ITT at UTFSM". Prof. Milan Derpich (UTFSM), Prof. Tomonori Aoyama (Keio University) and Prof. Tetsuya Miki (University of Electro-Communications) also gave the Invited Speeches entitled "Research in Wireless Communications at UTFSM", "New Generation Networking and Inter-Cloud Computing to Handle Big Data" and "International Project Based Learning using ICT", respectively.



Fig. 4 UTFSM in Valparaíso



Fig. 5 Invited Session on Nov.8

On Nov.9, Prof. Werner Creixell conducted the Closing Session at UTFSM (Fig.6). In this session, Dr. Atsushi Hiramatsu (NTT) and Prof. Yuri Ivanov (UTFSM) gave the Invited Speeches entitled "Optical Packet Transport for Data-Centric Next Generation Network" and "Distributed Computing at LHC ATLAS Experiment", respectively. Finally, Prof. Shigeo Urushidani (NII) provided the Closing Speech: "Joint Research Projects using Advanced Research and Education Networks".

In addition to those speeches, Dr Inoue also gave the speech about a history of the APSITT during the welcome banquet on Nov.5.



Fig. 6 Closing Session on Nov. 9 / Banquet on Nov. 5

5. Technical Sessions

52 papers were presented through three Special Sessions, five Selected Sessions and five Regular Sessions. Special Session papers and Selected Session papers were mainly extracted by means of the peer-review process of "full-submission papers" and "abstract-submission" papers, respectively. They were also published on the IEEE Xplorer as well as the APSITT2012 proceedings. On the other hand, Regular Session papers were appeared only on the APSITT2012 proceedings.

Followings are the list of the technical session fields.

- Applications: 9 papers
- Cloud / Data Center: 13papers
- Software: 6 papers
- Network: 9 papers
- Wireless: 8 papers
- Traffic : 5 papers
- Device Control: 2 papers

Technical Program Committee (TPC) members conducted nine technical sessions on Nov.6 at UChile and four technical sessions on Nov. 8 at UTFSM.

6. Campus Visit Tours / Technical Visit Tours

After the technical sessions, UChile staffs and UTFSM staffs guided us to their campus as the campus visit tours on Nov.6 and Nov.8, respectively. The participants looked over the university's facilities and received explanation of their ongoing studies.

During the bus transportation from Santiago to Valparaíso on Nov.7, we visited Codelco-Chile's El Teniente Division: the world's largest underground mine to study copper extraction and refining processes (Fig.7).



Fig. 7 Underground Mine Visit on Nov.7

In addition, during returning from Valparaíso to the airport in Santiago on Nov.9, we visited William Cole Vineyard: Winery in Casablanca Valley to study premium wine producing facilities (Fig.8).



Fig. 8 Winery Visit on Nov.9

7. Conclusion

Chile is far from Asia, but approximately 80 participants joined the conference from Asia and they were able to know about Chile well. In addition, Chilean participants were able to know the information and communication technology of Asia well. Through this precious conference, we established the good relationship. We hope it will continue forever even after the conference. (Fig.9).



Fig. 9 After the Lunch on Nov.8 in Valparaíso

Further information on APSITT2012 is available at the following URLs.

- APSITT 2012:
<http://www.ieice.org/cs/in/APSITT/2012/>
- Technical Committee on Information Networks:
<http://www.ieice.org/cs/in/eng/>
- Technical Committee on Network Systems:
<http://www.ieice.org/cs/ns/>

Report on the 12th International Conference on ITS Telecommunications

Jia-Chin Lin, Distinguished Professor and Chairman
Department of Communication Engineering,
National Central University (NCU), Taiwan, ROC



1. Introduction

A few months ago, the 12th International Conference on ITS Telecommunications hosted in Taipei, Taiwan, on November 5-8, 2012 (ITST-2012) recently completed one of the most successful events in its 12-year history. Throughout the four-day international event, more than 400 attendees representing 30 different countries gathered together to discuss the latest next-stage ITS Telecommunication trends, applications and co-operations.

2. On November 5

This conference covered diverse topics, including Smart Vehicles, Intelligent Transportation System (ITS), Telecommunications, Positioning and Green Technologies. On November 5 morning, the first opening address was delivered by NCU Vice President Gin-Rong Liu, who was also on behalf of ITST-2012 Honorable Chair, Dr. Wei-Ling Chiang, Minister of the Education Ministry, Taiwan, Republic of China (ROC). Then, the second and third opening addresses were delivered by Dr. John Sun, the President of ITS Taiwan, THI Consultants, Inc. and Dr. Yung-Chang Chang, Managing Director of FETC Co. Ltd., respectively. Finally, the ITST-2012 General Chair: Dr. Jia-Chin Lin, who is a distinguished professor and chairman, delivered the welcome greetings.

ITST-2012 had 5 keynote speeches then. For the first keynote speech, Dr. William C. Y. Lee originally planned to deliver a talk “*Development of Mobile Communications Since 1964.*” Dr. William C. Y. Lee

got a severe cold and asked NCTU Vice President: Prof. Jason Y.B. Lin for making a substitution for him. In the second, Dr. Adam Drobot addressed “*Intelligent Transportation System Communications: .Car .Road .Net*” In the third, Prof. Alberto Broggi addressed “*Driverless Vehicles: Challenges and Future.*” In the fourth, Dr. Michele Fiorini discussed “*The Titanic’s Myth – A Century of Legend and Technology.*” In the fifth keynote speech, Prof. Hanna Bogucka addressed “*Holistic Approach to Future Green Mobile Communications.*”

Later that evening, more than 200 attendees participated at the Welcome Reception, which was held at Spot-Taipei. Spot-Taipei was formerly the residency of the U.S. Ambassador and is now a historical landmark. Professor Alberto Broggi, the Past-President of the IEEE ITS Society, delivered his address “*Introduction to IEEE ITS Society.*” He also awarded



Fig. 1 A corner of audience in the keynote speeches.



Fig. 2 Guests at the welcome reception.

the BPAs then. Dr. Hans Lu, who is an experienced consultant of Industry Verticals Customer Engagement at Ericsson Northeast Asia, spoke on “*When everything connected, the world changed*” and “*The Networked Society is our vision of the future*” in his invited speech. In addition, Dr. Daniel Ludwig, Deputy Coordinator of the GNSS.asia Project, delivered his welcome greetings. The welcome reception was mainly sponsored by Ericsson.

3. On November 6

On November 6 Tuesday morning, the conference renewed with a Special Session on *Multimedia Mobile Communication*, invited talks, the International ITS Cooperation Workshop together with several other technical sessions.



Fig. 3 International ITS Cooperation Workshop.

A Special Session on *Electronic Road Pricing (ERP) and Electronic Toll Collection (ETC)* was organized for the late afternoon on November 6. Mr. Andrew Pickford, the CEO of Transport Technology Consultants Ltd, delivered his invited speech “*Policy, Operations and Technology Developments in Electronic Tolling and Road Pricing.*” Mr. Richard Wu, Vice President of FETC Co. Ltd, delivered his invited speech entitled “*ETC and ERP: Challenges and Potentials in Taiwan.*” A Panel Discussion chaired by Professor Song-Tsuen Peng featured the panelists Mr. Mu-Fu Wu, Chief Engineer for TANFB, MOTC; Dr. Yung-Chang Chang, Managing Director of FETC Co. Ltd.; Dr. S. K. Jason Chang, a Professor of the Department of Civil Engineering of NTU and Dr. John Y. Sun, the President of ITS Taiwan, THI Consultants, Inc.

In the afternoon, the GNSS.asia Project and the ECCT Technology Committee also held a workshop entitled “*2012 GNSS.ASIA Taiwan Workshop.*”

4. On November 7

On November 7 Wednesday, ITST-2012 continued with tutorial courses and panel discussions. In the afternoon of November 7, ITST-2012 arranged a city tour of the National Palace Museum. The collection of

cultural artifacts held inside the National Palace Museum consists of an enormous treasure trove of objects from the Song, Yuan, Ming and Qing Dynasties. The development of the Museum is closely connected to the social changes of modern Chinese (or Asian) civilization and culture. That evening, more than 200 participants and colleagues gathered for the Gala Dinner at the SILKS PALACE at the National Palace Museum. The Gala Dinner attendees visited the National Palace Museum for the entire afternoon and then spent the entire evening enjoying a special cuisine that reflected the artifacts seen inside the National Palace Museum in the afternoon and banquet entertainments, including a Taiwanese Puppet Show, which originated locally and thus is unique in the world.



Fig. 4 Gala Dinner.

5. On November 8

Thursday, November 8 marked the final day of the event, which was highlighted by as many technical sessions as on November 6 and 7. Finally, ITST successfully completed its 2012 event by offering communications and ITS professionals worldwide with the opportunity to not only network with global colleagues but also address the most important technical and business issues in ITS, Telecommunications and Green ICT technology. More information on ITST-2012 and the photographs taken at the venue could be retrieved via www.ITST2012.org.

Report on 2012 International Symposium on Antennas and Propagation (ISAP2012)

Keizo CHO
Chiba Institute of Technology



1. Introduction

2012 International Symposium on Antennas and Propagation (ISAP2012) was held at Nagoya Congress Center in Nagoya, Japan, from October 29 to November 2, 2012. This symposium, the 17th ISAP, was organized and sponsored by IEICE Communications Society (IEICE-CS) and in cooperation with the Antennas and Propagation Society of the Institute of Electrical and Electronics Engineers (IEEE/AP-S), the International Union of Radio Science (URSI), the Antennas and Propagation Network of the Institute of Engineering and Technology (IET), the European Association on Antennas and Propagation (EurAAP), the Korean Institute of Electromagnetic Engineering and Science (KIEES), the China Institute of Communications (CIC), and the Electrical Engineering/Electronics, Computer, Communications and Information Technology Association of Thailand (ECTI). The conference features 2 plenary talks, 4 invited talks, 57 technical sessions including two poster sessions and 4 workshops. It was attended by 563 researchers and engineers including accompany persons from 31 countries and regions.

2. Conference history

ISAP is intended to provide an international forum for the exchange of information on the progress of research and development in antennas, propagation and electromagnetic wave theory. The first ISAP was held at Sendai, Japan in 1971 and it had been held nine times in Japan until 2004. From 2005, ISAP expanded the conference venue to Asia and Pacific areas and becomes annual conference. The host cities from 2005

to 2011 were Seoul, Singapore, Niigata, Taipei, Bangkok, Macao and Jeju. This symposium is now recognized as one of major conferences in this technical field.

3. Topics of ISAP2012

One of the special features of the ISAP2012 was making a strong collaboration with EurAAP. Call for papers of ISAP2012 appeared in the website and final program of EuCAP2012, which was a largest annual conference in Europe organized by EurAAP. In addition, submission to the ISAP2012 was encouraged at the opening ceremony of the EuCAP2012. ISAP2012 did the same things for EuCAP2013.

Opening ceremony and Plenary Talks

The symposium started with Opening Address by the General Chair, Prof. Koichi Ito, and was followed by brief complimentary addresses from the representatives of technical co-sponsors, IEEE/APS, URSI, EurAAP, KIEES and ECTI.

Two plenary talks were organized in this symposium. In the first plenary talk, Mr. Kimimori Hamada from Toyota Motor Corporation talked about “The Role of Advanced Automotive Electronics: Recent Progress & Development”. He is a General Manager of Electronics Development Division 3 and is responsible for semiconductor development. In the talk, he introduced automotive electronics for improving the environmental friendliness, safety, and comfort of its vehicles, and discusses Toyota’s hopes for radio wave technologies.

In the second plenary talk, Prof. Juan R. Mosig from

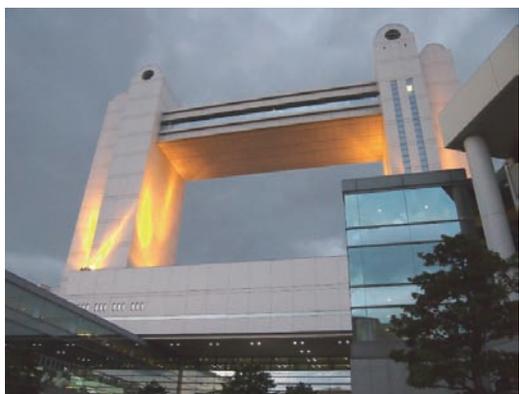


Fig. 1 Nagoya Congress Center



Fig. 2 Opening address: Prof. Koichi Ito

École Polytechnique Fédérale de Lausanne (EPFL) talked about “From Green and Sommerfeld to Takahasi and Mori: recent developments in Computational Electromagnetics”. He is a founding member and Chair of EurAAP and his research interests include electromagnetic theory, numerical methods, and planar antennas. In the talk, he reviewed two algorithms, Weighted Averages(WA) and Double Exponential (DE) quadrature, which were recently used for numerical calculations of Sommerfeld integral and talked about the episodes of Japanese mathematicians, Prof. Mori and Takahasi who devised the DE quadrature.

Invited Talks

Four speakers were invited in the field of antennas, propagation, wireless system and radio astronomy. The invited talks were presented in the related technical sessions. The invited talks were as follows,

- Prof. J. Choi (Hanyang Univ., Korea), “Various antenna design techniques for medical applications”
- Dr. S. Best (MITRE Corp., USA), “The Receiving and Scattering Properties of Antenna Elements and Finite Arrays”
- Dr. N. Umeda (NTT DOCOMO, INC.), “Evolution of mobile broadband and smart-phones -LTE-A technologies and new antenna era-”
- Prof. M. Ishiguro (National Astronomical Observatory of Japan), “Atacama Large Millimeter/submillimeter Array (ALMA)”

Technical Session

381 papers were presented in ISAP2012 from 31 countries and regions. In this symposium, the following topics were highlighted:

- Advanced Application of Small Antennas
- Millimeter-wave/THz Antennas
- Wireless Power Transmission
- Medical Applications
- MIMO and Cooperative Communication Technologies



Fig. 3 Session room

- Metamaterial Antennas
- Computational Electromagnetics
- Antenna Measurement Technologies
- Earth-Space Propagation Paths

In addition to the above topics, special session entitled “Research Activities in Europe” was held as the fruits of the collaboration with EurAAP. Recent research trend in Europe were presented by active key researchers.

4. Workshop

Following tutorial workshops about recent hot topics were organized with free of charge for the attendance.

- Prof. Y.J. Yoon(Yonsei Univ.), “Planar reflector design using metamaterials”
- Prof. S. Maci (Univ. of Siena), “Metasurfing wave antennas”
- Prof. N. Shinohara (Kyoto Univ.), “Coexistence of wireless power transmission and wireless communication”
- Prof. K.-L. Wong (Natl. Sun Yat-sen Univ.) “Internal handheld device antennas : Recent advances and future perspectives”

5. Exhibition

28 exhibitors working on such as EM simulators, measurement equipments, antennas and wireless equipments and components, automotive electronics equipments and communication carriers joined this symposium and demonstrated their recent results and products.

6. Award

ISAP2012 established three awards namely Best Paper Award, Student Paper Award and Poster Presentation Award, which were targeted at all papers, student papers and poster presentation, respectively.

Following five papers received Best Paper Award.

- K. Saho, T. Sakamoto, T. Sato, K. Inoue, T. Fukuda, “Pedestrian Classification Based on Radial Velocity Features of UWB Doppler Radar Images”
- F. Frezza, L. Pajewski, E. Piuzzi, C. Ponti, G. Schettini, “Advances in EBG-resonator antenna research”
- Y. Cui, Y. Yamaguchi, J. Yang, H. Kobayashi, “On Exact Model-Based Scattering Decomposition of Polarimetric SAR Data”
- H. Itakura, K. Saito, M. Takahashi, K. Ito, “Evaluation of Heating Characteristics of Microwave Thermal Therapy using Biliary Stent fed by Coaxial Probe”
- K. Werner, H. Asplund, D.V.P. Figueiredo, N. Jaldén, B. Halvarsson, “LTE-Advanced 8×8 MIMO Measurements in an Indoor Scenario”

Student Paper Award was given to the following five papers,

- G. Minatti, “A Metasurface Antenna for Space Application”
- L. Zhang, “Design of Active Frequency Selective Surface for Electronically Steerable Antenna”
- K. Ochiyama, “Broadband Simplified SAR Measurement Method Using Solid Material”
- N. X. Tung, “Characteristics of a High Gain and Light Weight Radial Line Slot Antenna with Honeycomb Structure in 32GHz band for Data Link in Space Exploration”
- Y. Ushijima, “Polarization Agile Slot-Ring Array Antenna using Magic-T Circuit”

The winners of Poster Presentation Awards were as follows,

- S. Patchaikani, Y. Kuwahara, “Diversity Effect of the Adaptive Antenna Using Blind Algorithm”
- S. Mahmud, S. Dey, N. Saha, “Super Wide Band Wearable Antenna: Assessment of the Conformal Characteristics in terms of Impedance Matching and Radiation Properties”
- J. Shinohara, N. Michishita, Y. Yamada, M. T. Islam, N. Misran, “Measured Electrical Characteristics of an Array Feed Offset Parabolic Reflector Antenna”
- A. Iwase, T. Manabe, W. Chujo, S. Yamamoto, “Effects of Azimuthal Difference on Orbital Diversity Using Multiple Satellites”

In addition to the above, ISAP2012 established Young Scientist Travel Grand (YSTG) to encourage young researchers and engineers to submit papers and to attend the symposium. 12 attendants outside Japan were granted YSTG.

7. ISAP-ISC meeting

ISAP International Steering Committee (ISAP-ISC) meeting was held during the symposium. ISAP-ISC is organized by the researchers of mainly contributed countries and regions in Asia and Pacific areas to ISAP. The operation of the symposium was discussed and future ISAP venue has been decided in the meeting. In this meeting, the representative from Australia, China, Hong Kong, Japan, Korea, Macao, Malaysia, Singapore, Taiwan, and Thailand attended and those from Indonesia also joined the meeting as observers. ISAP-ISC has decided that the venue of ISAP2015 will be Tasmania, Australia in this meeting. Thus the venues up to 2015 have been decided, Nanjin China in 2013 and Kaohsiung, Taiwan in 2014.

8. Conclusion

ISAP2012 Steering Committee thanks for all the contributors to the ISAP2012. All the papers of past ISAP can be seen in the web page “ISAP archives”[1] with free of charge, this is a trial service. The papers of ISAP2012 will appear in ISAP archives in May, 2013.

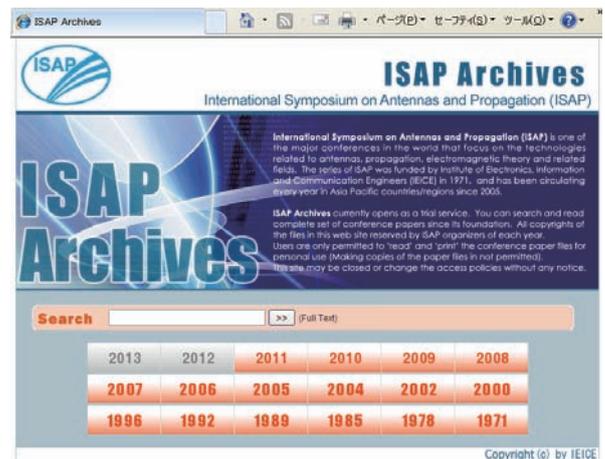


Fig. 4 Top page of ISAP Archives

In addition, the papers of ISAP2012 have been included in IEEE Xplore. The symposium web page of ISAP2013 has been available [2].

9. Reference

- [1] <http://ap-s.ei.tuat.ac.jp/isapx/>
- [2] <http://www.emfield.org/isap2013/>

IEICE-CS Related Conferences Calendar

Date	Conference Name	Location	Note
13 May - 16 May 2014	2014 International Symposium on Electromagnetic Compatibility (EMC'14/Tokyo)	Tokyo, Japan	Submission deadline: 31 Aug. 2013
12 Dec. - 15 Dec. 2013	2013 IEEE Electrical Design of Advanced Packaging & Systems (EDAPS2013)	Nara, Japan	Submission deadline: 25 June 2013
01 Jul. - 05 Jul. 2013	18 th OptoElectronics and Communications Conference / International Conference on Photonics in Switching 2013 (OECC/PS2013)	Kyoto, Japan	
30 Jun. - 05 Jul. 2013	The Pacific Rim Conference on Lasers and Electro-Optics 2013 (CLEO Pacific Rim 2013)	Kyoto, Japan	
29 May - 31 May 2013	2013 IEICE Information and Communication Technology Forum (2013 IEICE ICTF)	Sarajevo, Bosnia and Herzegovina	To be held soon
20 May - 23 May 2013	URSI Commission B 2013 International Symposium on Electromagnetic Theory (EMTS2013)	Hiroshima, Japan	To be held soon
19 Feb - 22 Feb 2013	The third ENRI International Workshop on ATM/CNS (EIWAC2013)	Tokyo, Japan	Done
28 Jan - 30 Jan 2013	The 27 th International Conference on Information Networking (ICOIN2013)	Bangkok, Thailand	Done
05 Nov. - 09 Nov. 2012	9 th Asia-Pacific Symposium on Information and Telecommunication Technologies (APSITT2012)	Santiago and Valparaiso, Chile	Reported on this issue
05 Nov. - 08 Nov. 2012	12 th International Conference on Telecommunications for Intelligent Transport Systems (ITST2012)	Taipei, Taiwan	Reported on this issue
29 Oct. - 02 Nov. 2012	2012 International Symposium on Antennas and Propagation (ISAP2012)	Nagoya, Japan	Reported on this issue

Please confirm with the following IEICE-CS web site for the latest information.
<http://www.ieice.org/cs/conf/calendar.html>

The Journey of the ‘Tiny Alien’ in the Land of Sakura

Roslina Binti Abdul Razak
Graduate School of Engineering, Takushoku University



1. Introduction

First of all, many thanks to the editor for the opportunity to share my experiences about my research and my life as the “Tiny Alien” in Japan with the readers of IEICE-CS GLOBAL NEWSLETTER. I have never thought that I could write an article in this newsletter.

Regarding my brief introduction, my name is Roslina from Malaysia and I hold a Diploma in Electrical and Electronic Engineering from Universiti Industri Selangor, Malaysia, under Japanese Associate Degree Program (JAD). JAD is a project by the Malaysian government to provide scholarships for students to further their studies in Japan. It is a 3+2 twinning program where students will have to do their diploma for three years in Malaysia, then, students further their degree in Japan University for another 2 years. I later got my degree in Bachelor of Engineering from Takushoku University in March 2012. Currently, I am doing my masters degree in Electronics and Information Science Course at the same university, under the supervision of Associate Professor Toshiyuki Maeyama.

In this letter, I am pleased to share with all of you regarding my experience in this Land of Sakura, so that it may be helpful for the foreign students who are thinking to pursue their study in Japan.

2. The ‘Tiny Alien’ in the Town

2.1 Early Life in Japan

The moment I have my ‘Certificate of Alien Registration’ from the District Office, I wondered if that would really translate to real life. Would the Japanese really treat me as an alien, with the difference of my spoken language and hijab on my head? I was also worry if I’d be left alone and not be able to make friends with the Japanese (I am transferred to the 3rd year, and my fellow Japanese peer has already their own clique by then). However, from the moment I entered my first class, my perception changed. I was so overwhelmed with their kindness and I was treated just as fair as the other students. Although, some of them seem quite hard to be approached, it is because they were afraid that if I cannot speak Japanese and it would defer the conversation. After some explanations and continuously trying, they accepted me and willing to help if I were in trouble or even explaining any Japanese words that I do not understand. They also can accept and respect my belief as a Muslim of which I am restricted to consume neither alcoholic beverage nor

pork. Every time they want to offer me some food or drinks, they will check the ingredients of the food before offering them to me. The university also provided a room for the Muslims to pray. I think this kind of tolerance should be instilled to not just only but to everyone as well.



Fig. 1 My Parents and I During The Diploma Graduation Ceremony

2.2 Research Life in Laboratory

Truth be told, on the first day I entered Maeyama Laboratory, I still did not have a clear picture of what should I do for my research. However, with the advice from my supervisor and help from my laboratory partners, I gradually learnt the way of research and finally understand what I should discover through this research. I was taught the whole research process from investigating the problem that we need to solve by reading a lot of journal or thesis, designing, simulation to prototype for fabrication and test process.

I learned many valuable things in this laboratory, such as learning how to deal with “higher-level” people such as seniors, supervisor and researchers from the company who do the collaboration with my laboratory. As we know, in the Japanese society, the kohai-senpai rule is practiced very rigidly, and so, even the language used is accordingly to the hierarchy system. From here, somehow my Japanese ability improved. Furthermore, every Monday of the week, we would have a meeting with all of the laboratory members and we have to present to the entire team on what we have done during the whole week. Other than improving my Japanese ability, I also have learnt on how to be more discipline and more serious with my work. I need to discover new things and obtained new data to present to other members during the next meeting. Here, I also learned that there is no short-cut to succeed. All the comfort

that we have today come from the hard work of the previous researchers. Therefore, I am inspired to work hard in order to ensure my next generation will live in comfort. I have to put more effort into my research to produce quality conference papers and journal papers, indirectly contributing to the advancement of technologies in Japan and to the world.

After one year doing the research during my 4th year of degree, I felt it was not enough, and I was hungry for more. I want to learn more and I want to comprehend deeper and deeper into my research. Hence, I decided to further my study at the same university and the same laboratory for my Masters degree right after I finished my degree.



Fig. 2 IEICE Society Conference 2012

2.3 Achievement Throughout My Research

My research is about Human Body Communication Systems (HBC). HBC is a system or method to transfer various information through the human body instead of using a cable [1]. For instance, with just a shake of hands between two people who are carrying a HBC device, each other's business card information will be sent from, and received by, each other's HBC device. During my 4th year of degree and presence, I have worked on the antenna that can be applied into HBC.

During the 4th year of my degree, I was selected by my supervisor to present my paper in 2011 IEICE Society Conference in Hokkaido. It was my first time standing and presenting my research in Japanese, in front of the public who are more expert in the field and more importantly those who speak Japanese fluently way better than me. It was truly a memorable experience for me. I was so nervous at first because everyone was staring at me with serious face. However through the conference, I learnt so many things to bring back and apply in my research with the help of questions and answer session and exchanging information with the other participants. In November 2011, my team and I had the chance to exhibit our research in The Measurement and Control Show 2011 Tokyo. The Measurement and Control Show is the largest exhibition in industry that brings together both the latest technology of measurement and control. To our surprised, Japan Electric Measuring Instruments Manufacturers' Association has awarded 'Communication Technology Pioneer Award' to our team.

During my master degree, I was also selected from the master degree students to be one of the teaching assistants in my university. Being a teaching assistant

and at the same time I also have to attend my classes and also juggling my time to do my research was not an easy task for me. Along the teaching assistant journey, I am required to write conference papers, attend both local and international conferences, helping me sharpening my presentation skills. However, provided with enormous support system and guidance from my supervisor and college, and spiritual support from family, I managed to pass my first semester exam with flying colors and at the same time, managed to submit and presented my paper in 2012 IEICE Society Conference in Toyama and 7th International Conference on Body Area Network (BODYNETS 2012) in Oslo, Norway. Here, I learnt how to manage my time and how to control my stress. During the BODYNETS 2012, I have met with a lot of people from around the world. Some of the participants are from big and well-known companies and I felt so lucky to be able to exchange information with them and receiving advices on my research. In October 2012, I also have been awarded with 'Student Award (Culture Activities)' during the 2012 Takushoku University Student Award Ceremony.



Fig. 3 Student Award (Culture Activities)

3. Conclusion

Three years as international student in Japan brought me a wider world, and made me a better person with well-trained mind. It opened my eyes to a world-class and truly excellent nation. I am really grateful that I have this opportunity, which is to have this priceless experience and the great research opportunity. I hope this article helps people who are planning to pursue their study in Japan.

Lastly, as world know about the disaster occurred in Japan in March 2011 and received world's condolence for it. From the bottom of my heart, I truly believe that Japan will overcome the misfortune and recover soon from the ruins of the earthquake. I express my sincere sympathy to all the victims of the immense earthquake that struck the Tohoku and surrounding region. I pray for the early reconstruction and rehabilitation of your lives and communities.

4. Reference

- [1] Yui Kano, Birin Raku, Toshiyuki Maeyama, "Study on Electric in Phantom for Human Body Communication System," IEICE Technical Report A-P2011-8(2011-5)

Report on ICT-SG Society Activity in CEATEC JAPAN

Noriyoshi Sonetaka[†], Atsuhiko Tanaka^{††}
Institute of Cyber-Physical Systems, Inc.[†],
NEC Corporation^{††}



1. Introduction

The fifth Information and Communication Technologies in the Smart Grid (ICT-SG) Technical Symposium [1] was held on Oct 5th of 2012 in Combined Exhibition of Advanced Technologies (CEATEC JAPAN), which is the largest Japan's IT and electronics exhibition and conference. The main topic of the symposium was Cyber-physical systems supporting a future society – What are ambient networks which organize the connection between real society and cyber world? The symposium invited the five leaders, and they gave us the following talks.

- Cyber-physical systems: fusion of real world and cyber world, Prof. Tokuda, Keio Univ.
- Demand-side management for smart grid systems – power grid networks and demand response, Prof. Asano, Tokyo Univ.
- Cyber-physical systems in rail systems, Dr. Bekki, Hitachi.
- Variety of ICT technologies, from micro to macro, required in real fields such as medical services and nursing care, Prof. Tani, Hamamatsu University School of Medicine.
- Cyber-physical systems and smart architecture, Dr. Kurata, Kajima Corporation.



Fig. 1 The ICT-SG Symposium Invited Talk Session

After their valuable talks, a panel discussion was held by the moderator, Dr. Sonetaka, with the leaders. Because Japan has experienced severe disaster in 3.11 of 2011, ICT technologies which combine real society

and cyber world could be much important social infrastructures.

2. Discussion

There were about 100 attendees at the symposium, including representatives from domestic industries, universities and foreign companies. The attending companies included electrical manufacturers, telecommunications operators, car companies, and electrical power operators.

Technical Challenge (by Jeannette Wing)



- (How) can we build systems that interface between the cyber world and the physical world? Ideally, with **predictable**, or at least **adaptable** behavior.
- Why this is hard:
 - We cannot easily draw the boundaries.
 - Boundaries are always changing.
 - There are limits to digitizing the continuous world by abstractions.
 - Complex systems are unpredictable.

Fig. 2 Technical Challenges for Cyber-physical Systems

The first presentation explained some of the key concepts of Cyber-physical systems. The first definition of the term was described by NSF-08-611, and its technical challenges were introduced. Prof. Tokuda pointed out that Cyber-physical systems are not traditional embedded real-time systems, but they covers wide range of human activities – transportation, energy and industrial automation, healthcare and biomedical, critical infrastructure, etc. He also presented the technical challenges to achieve a Cyber-physical system.

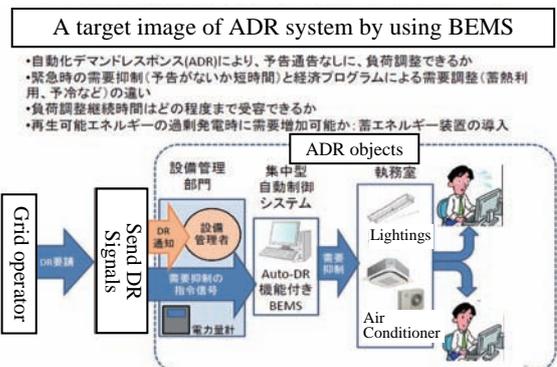


Fig. 3 Automated Demand Response(ADR) with Building Energy Management Systems(BEMS)

Second presentation focused on electric power grid and demand response systems. Prof. Asano stated that predictability and certainty are required for power supply and demand management, and if more reliable ICT infrastructures are widely constructed all over the country, user side energy resources would have much value in the future.

The topic of the third one was railway systems. Its targets include sophistication of total railway traffic control and travel services, optimization of energy consumption, and cost reduction of facility maintenance. Dr. Bekki said that railway Cyber-physical system could realize total system optimization by integrating different types of railway systems.

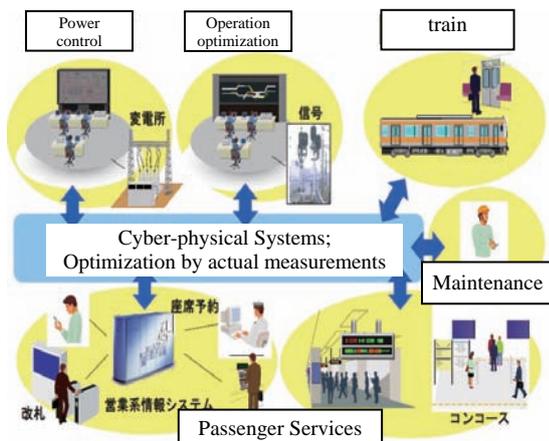


Fig. 4 Total Railway System Integrated with Cyber-physical Systems

The next one was applications of various ICT technologies to medical services, presented by Prof. Tani. Many devices, in such area, have monitoring and communication functionalities. For example, implant style heartbeat sensing device monitors the timing and strength of heartbeat and send measured data outside body. During the patient transportation, physical condition should be monitored in a harmonized viewpoint with ICT technologies when the patient is on an ambulance, emergency medical helicopter, and/or in a hospital.

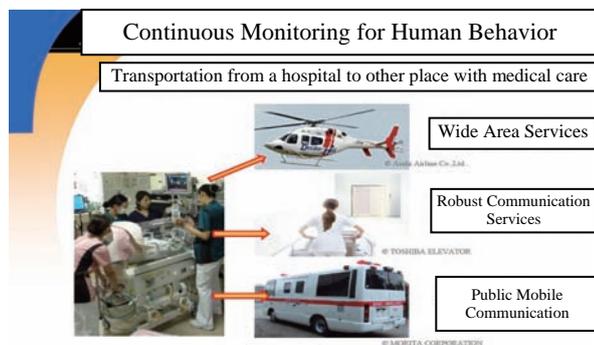


Fig. 5 Monitoring System in Medical Area using various ICT Technologies

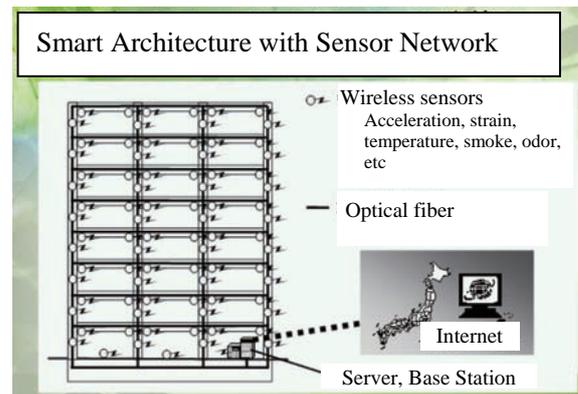


Fig. 6 Ubiquitous Monitoring System in a Building with Sensor Networking Technologies for a Smart Architecture

The last talk was a smart architecture by using ICT technologies. To protect buildings, eventually humans and our society, from a severe earthquake, structural monitoring should be realized by putting more sensors in a target building with less operation cost. Dr. Kurata pointed out that not only a building scale monitoring system but also nationwide infrastructure is necessary for developing a real smart architecture.

Finally, the panel session was held with the five invited speakers. The moderator pointed out that future vision was introduced by Prof. Tokuda, and other talks were the excellent activities in each research area, and thus much collaboration should be necessary to develop real Cyber-physical systems.



Fig. 7 Panel Discussion with Five Invited Speakers

3. Conclusion

The ICT-smart grid will require cooperation among different companies and industrial areas, and changing industrial structures are required at a scale never before experienced by mankind. In order to serve members of all different cultures and all different societies, a new concept of the world must be created. The next coming ICT Smart Grid Technical Symposium will examine the viewpoints of industry and the university, and about the future prospects of ICT-SG will also be discussed.

[1] ICT-SG HP URL: <http://www.ieice.org/cs/ict-sg/>

ICSANE2012 - Over the Troubled Water

Shigeru OZEKI
Electronic Navigation Research Institute



1. Introduction

The International Conference on Space, Aeronautical and Navigational Electronics 2012 (ICSANE 2012) was held at Songdo Convensia (Fig. 1) in Incheon, Korea from October 10th to 12th, 2012, as the Joint Conference with ISRS (International Symposium on Remote Sensing). ICSANE 2012 and ISRS 2012 are co-organized by the Technical Committee on Space, Aeronautical and Navigational Electronics (SANE) of the IEICE Communications Society, KSRS, Korea and the Standing Committee of Environmental Monitoring from Space of East Asia (EMSEA), Chinese (Taipei) Society of Photogrammetry and Remote Sensing (CSPRS), and Remote Sensing Society of Japan (RSSJ) [1].



Fig. 1 Songdo Convensia

The ICSANE 2012 was held in cooperation with IEEE Aerospace and Electronic Systems Society (AESS) Japan Chapter, The American Institute of Aeronautics and Astronautics (AIAA), Korea Ocean Research & Development Institute (KORDI, Korea), Indonesia Remote Sensing Society, Center for Remote Sensing, Institut Teknologi Bandung (Indonesia), Center for Remote Sensing – Lapan (Indonesia), Fudan University of China, National Natural Science Foundation of China, Japan Aerospace Exploration Agency (JAXA), Center of Space Science and Application - Chinese Academy of Science, National Institute of Information and Communications Technology (NICT, Japan), Chinese Academy of Space Technology (CAST), Ocean University of China (OUC, China), and Electronic Navigation Research Institute (ENRI, Japan).

A total of 241 people have registered in both the ISRS and the ICSANE. The number of presentations was 241 for both the symposia. The number of

participants was 60 people in the ICSANE 2012, and there were 57 presentations with including 17 international presenters for the ICSANE 2012. The participants came from Korea, Indonesia and Japan.

2. Opening Ceremony

The opening ceremony was held on the first day on October 10th. The welcome message was first given by Prof. Kyu-Sung Lee who was a general co-chair of the ICSANE. The congratulatory messages were also given by Prof. Liang-Chien Chen (CSPRS, Taiwan), Prof. Yuei-An Liou (Taiwan Group on Earth Observation: TGeo), Prof. Yasushi Yamaguchi (RSSJ, Japan), Prof. Cheon Kim (EMSEA, Korea) and, Prof. Hajime Fukushima (EMSEA, Japan). I also presented the welcome address and the activities by the IEICE-SANE as a co-chair of the ICSANE steering committee and as the chair of IEICE-SANE committee as well.

3. Technical Session

The topics are covered by ICSANE 2012 as follows.

- Satellite and space-station systems,
- Remote sensing and scientific observation technology,
- Radar systems and applications, and
- Navigational and communication systems.

After reviewing process by the technical program committee, 57 papers were finally accepted for the presentation. 43 papers were accepted for the oral presentation. 14 papers were accepted for the poster presentation. Those presentations were given with covering the topics for SANE and discussed by many participants after sessions as well.

In the ICSANE 2012, we had 10 technical sessions, 2 poster interactive sessions and 2 plenary sessions. One of the plenary sessions is the joint technical session with ISRS on the common interest about remote sensing satellites and the other is the special invited talk as a part of opening ceremony.

Prof. Masanobu Hashimoto, Kyoto University, had his presentation on “Surface movements during the 2011 Great Tohoku-Oki Earthquake Detected by ALOS/PALSAR” as the special invited talk [2]. It is the presentation on recent results of data processing after the measurements with space-borne Synthetic Aperture Radar, SAR. This presentation was received well favorably as this theme covers both interests for ISRS and ICSANE.

There were 14 Korean presenters and an Indonesian presenter. They discussed on the satellite system in Korea, application on remote sensing or SAR,

measurement for harmful jamming source for GPS and collision avoidance radar.

4. Awarding Ceremony

The Technical Program Committee conducted a review to determine the recipients and had an onsite meeting on the third day, October 12th, just before the closing ceremony. The committee conferred the following awards on them respectively. The Awards ceremony was held as a part of closing ceremony of the Joint Conference ISRS-2012-ICSANE.

- Best Student Paper Award: Mr. Ryo Yamaguchi, University of Electro-Communications, Japan.
- Best Presenter Award: Dr. Masatoshi Uno, JAXA, Japan.
- Best Paper Award: Dr. Yuta Kobayashi, JAXA, Japan.



Fig. 2 Awarding Mr. Yongho Song

The ICSANE2012 steering committee decided to give more awards as follows: The committee gave the Best Contribution Award to Prof. Woo-Kyun Lee, Executive Director of KSRS; Best Support Award to Mr. Yongho Song, ISRS Coordinator from KSRS; Best Achievement Award to ICSANE2012 Support Team, University of Korea. ICSANE2012 was held very smoothly by their great contribution over the troubled water.

5. Over the Troubled Water

The ICSANE organizing committee shared hard time with many other committees for Korea-Japan joint conference during the preparation period on around August 2012. Many authors thought about possibility to withdraw their papers from submitted Korea-Japan joint conferences because of uncomfortable political exchanges between Korean and Japanese governments.

Even so, Prof. Korehiro Maeda (University of Tokyo) and Dr. Chan-Su Yang (KORDI) lead TPC together as usual. I appreciate the secretary teams for KSRS and ICSANE, because they were doing their best together to promote the conference with leading it to success even under the given pressure.

I thank especially Prof. Tu-Hwan Kim (Ajou University) for his words. I met Professor at first time on the June 2012 meeting for SANE at JAXA in Tsukuba. His words on that time encouraged the activities by ICSANE. He said as follows.

“Korea and Japan have exchanges for about two thousand years as very good neighbors or like as

brothers. Our bad times are no more than one hundred years by Hideyoshi and by World Wars. Such a good relationship is very rare case in the world.”

In addition, Professor helped ICSANE secretaries to promote the conference in Korea with inviting many presenters.

ICSANE secretary team thanks especially Mr. Yongho Song for his finding some inconsistencies between the programs for ISRS and for ICSANE. He found three presentations were submitted to ISRS team with intending for the presentation at ICSANE. He warned for ICSANE secretary team to save those three presentations as soon as possible. The ICSANE secretary team suspended the printing process by IEICE, and submitted the revised program quickly. Three authors would lose their chance to have their presentation without the warning from Mr. Song. Also, the ICSANE secretary team thanks for the quick reaction by IEICE office to control the printing process.

At last, the secretary teams from ISRS and ICSANE shared relaxed lunch time after the closing ceremony with recalling the time over troubled water.

6. Future Plans of ICSANE

We have the plan for ICSANE 2013 in Hanoi, Vietnam scheduled tentatively for October 2013. We would like to encourage you to discuss on your research results at ICSANE 2013.

7. Acknowledgements

The conference would like to express gratitude and appreciation to all members of the organizing committee and the technical program committee, especially Prof. Kyu-Sung Lee, Prof. Woo-Kyun Lee, Dr. Chan-Su Yang, their local committee members from KSRS and Prof. Tu-Hwan Kim. Without outstanding contributions of all these members we would not have such an excellent conference.

The ICSANE 2012 was supported by IEEE Aerospace and Electronic Systems Society (AESS) Japan Chapter, The American Institute of Aeronautics and Astronautics (AIAA), Korea Ocean Research & Development Institute (KORDI, Korea), Indonesia Remote Sensing Society, Center for Remote Sensing, Institut Teknologi Bandung (Indonesia), Center for Remote Sensing – Lapan (Indonesia), Fudan University of China, National Natural Science Foundation of China, Japan Aerospace Exploration Agency (JAXA), Center of Space Science and Application - Chinese Academy of Science, National Institute of Information and Communications Technology (NICT, Japan), Chinese Academy of Space Technology (CAST), Ocean University of China (OUC, China), and Electronic Navigation Research Institute (ENRI, Japan).

8. Reference

- [1] ICSANE 2012 official website, <http://www.ieice.org/cs/sane/ICSANE2012/>.
- [2] IEICE Technical Report SANE2012 (2012-10).

Report on the 4th Workshop of Internet Architecture in Phuket, Thailand

Keisuke Ishibashi

Vice-Chair, Technical Committee of Internet Architecture, IEICE



1. Introduction

The Technical Committee on Internet Architecture (TCIA) has held international workshops since 2009, aiming for further internationalization of IEICE. This year, TCIA successfully organized the 4th international workshop at Phuket, Thailand, on Oct. 18 and 19, 2012, with dedicated supports of Department of Computer Engineering, Faculty of Engineering, Prince of Songkla University (PSU), Thailand. This article is a brief report on the workshop activities.

2. Workshop Overview

Assoc. Prof. Charun Bunyakan, Dean, Faculty of Engineering, PSU, provided the opening speech to welcome the workshop. Then, we had two days programme including four invited talks and 15 technical talks.

Two invited talks on first day were provided on wireless technology and its application for emergency communications;

- “A Robotic MANET for Disaster Emergency Communications,” by Dr. Chalernpol Charnsripinyo, NECTEC, Thailand,
- “Adaptive Path Switching for Vertical Handover Using mSCTP” by Prof. Sunyoung Han, Konkuk University, Korea.

Further, two invited talks on second day were on the Internet architecture during the East Japan Disaster;

- “Effect of Earthquake-Resistance Design of Campus Information Infrastructure,” Prof. Hideaki Sone, Tohoku Univ.
- “Information Communication Technology Issues in Disaster Recovery Activities,” Masahiro Hiji, Hitachi East Japan Solutions

15 technical talks were presented in the following five sessions; Ecology for Internet, Networking Technologies, Implementation and Satellite



Fig. 1 Workshop participants

Communication, Distributed Systems, and Network Protocols. It should be mentioned that five of the above technical presentations were provided by Thai students. For those presentations, the student research awards were presented at the end of two days fruitful workshop.

In addition to the technical talks and discussions, in the evening of the first day, participants enjoyed Thai cuisine at the banquet.



Fig. 2 Welcome speech by Prof. Sinchai Kamolphiwong



Fig. 3 Keynote speech by Prof. Charun Bunyakan

3. Conclusion

We believe that all participants were satisfied with the presentations, discussions and experience exchanging. TCIA thanks to all the speakers and participants for their efforts. TCIA also thanks for warm hospitality by faculty member of PSU, specifically Assoc. Prof. Sinchai Kamolphiwong.

Next workshop is expected to be held at Seoul in Korea. Please visit the TCIA web page for more update information; <http://www.ieice.org/~ia/eng/index.php>.

Report on the 10th QoS Workshop

Kenji HIKICHI* and Nobuyuki NAKAMURA**
 * Fujitsu Labs., ** Oki Electric Industry Co., Ltd.



1. Workshop and Venue

The 10th QoS Workshop was held on November 2, 2012 at Tokyo Tech Front, Meguro-ku, Tokyo, Japan. The workshop was organized by IEICE Technical Committee on Communication Quality (CQ), which covers the broad range of research topics on communication quality. This workshop focused on the hot topics on ICT Service Quality in the age of Big-data. Dr. Yamazaki, the general chair, introduced that the workshop has a large advantage with distinguished invited talks and active discussions in the poster session as his opening remarks (Fig. 1).

2. Technical and Poster Sessions

Sixty five people participated in this workshop. The workshop consisted of a technical session (3 invited talks) and a poster session (12 posters).

In the technical session, we had 3 invited speakers presenting “Machine learning techniques for finding the intrinsic patterns hidden in data” by Dr. Hiroshi Sawada (NTT), “Constructing wide-area sensor networks that enable advanced sensor information aggregation and analysis” by Dr. Yuichi Teranishi (NICT), and “Viewers' Behavior Analysis in Social-VOD Services Teleda” by Dr. Narichika Hamaguchi (NHK).

Dr. Sawada introduced Non-negative Matrix Factorization (NMF) and its wide range of applications. Dr. Teranishi showed the several architectures of sensor networks and discussed the quality of service for the networks. Finally, Dr. Hamaguchi introduced the effect of social media on the user’s behavior in VOD services with a large amount of experimental results.

In the poster session, one-minute presentations were provided by all poster presenters at the beginning of the session. In the poster room, all the attendees discussed actively in a friendly atmosphere (Fig. 2). The four presenters have won the poster awards (Fig. 3). The best poster award was conferred to Mr. Toru Kikuchi (Shibaura Institute of Technology) for his poster “Bandwidth Allocation Method Considering Users' QoE of Communication Speed”.

3. Conclusion

QoS and QoE related issues will attract more attentions in the research areas of Future Internet and future communications. The issues are growing into interdisciplinary areas of network and human activities. The next QoS workshop will be held in autumn, 2013.

4. Reference

- [1] The 10th QoS Workshop Web Site,
http://www.ieice.org/cs/cq/jpn/qos_workshop10/.



Fig. 1 Opening Remarks by Dr. Yamazaki

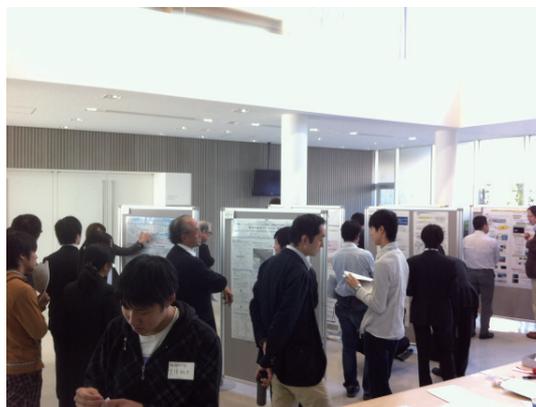


Fig. 2 Poster Session



Fig. 3 Poster Award Winners

Joint Conference on Satellite Communications (JC-SAT 2012) Report



Takashi Hirose, Nippon Telegraph and Telephone Corporation

Naoko Yoshimura, National Institute of Information and Communications Technology

1. Introduction

The Joint Conference on Satellite Communications 2012 (JC-SAT 2012) was held on 24th and 25th October, 2012 at the main hall of Korea federation of small and medium business in Seoul. The conference has been annually held with jointly organized by Technical Committee on Satellite Communications of IEICE (IEICE SAT) and Korea Society of Space Technology (KOSST) since 2000. It aims at information exchange and enhancing mutual understanding between satellite communication researchers and engineers of both Japan and Korea.

This year, 13th, we had presentations of 2 keynote speeches, 21 technical papers, associated with related discussions, questions and answers over two conference days, with about 60 participants each day. They all contributed to the good success of the conference. The best paper awards of JC-SAT 2012 were granted to two distinguished papers at the closing session.

2. Program

The session started with opening speeches by the organizing committee chairs, Prof. John-Won Eun, the president of the KOSST (Fig. 1) and Dr. Naoto Kadowaki, the chair of IEICE SAT (Fig. 2).



Fig. 1 Opening Speech by Prof. John-Won Eun, the president of KOSST

Those were followed by a pair of key note speeches. The first one was presented by Dr. Sang-Ryool Lee of Korea Aerospace Research Institute, KARI, entitled “Satellite Development Programs in Korea”



Fig. 2 Opening Speech by Dr. Naoto Kadowaki, the chair of IEICE SAT



Fig. 3 Key note speech by Dr. Sang-Ryool Lee of KARI

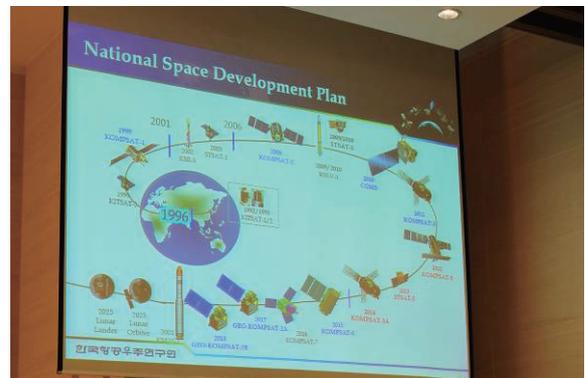


Fig. 4 National Space Development Plan in Korea

introducing the national space development plan as shown in Fig. 3 and Fig.4. The second was presented by Dr. Naoto Kadowaki of National Institute of

Information and Communications Technology, NICT, entitled “Research and development of resilient networks technology for disaster relief and recovery.” It provided the status of satellite communications in Japan, by introducing the use case of Wideband InterNetworking engineering test and Demonstration Satellite named WINDS, which was used for disaster relief and recovery operations after the Great East Japan Earthquake and tsunami.

Five sessions were organized, and 21 technical papers were presented through the sessions. The session titles are as follows:

- Satellite Communication Systems and Applications
- Satellite Communication Technologies
- Satellite Systems Technologies
- Disaster Recovery Operations and Utilization Safety-I
- Disaster Recovery Operations and Utilization Safety-II

At some sessions, satellite communication systems used after the Great East Japan Earthquake were introduced. The importance of the satellite communications for disaster recovery operations was reinforced by these presentations.

3. Best Paper Awards

The best paper awards of JC-SAT were granted to the distinguished papers selected from both Japan and Korea. One was “Performance Investigation of a Polarization Multiplexing Satellite Systems with a Simple Channel Model” by Julian Weber, Masanori Yofune, Kazuto Yano, Hiroshi Ban and Kiyoshi Kobayashi of ATR Wave Engineering Laboratories, and the other was “GIS based Implementation of the Communication Networks Disaster Management Systems for Solar Maximum” by Jong-Woo Oh of Namseoul University. A set of certificate and gift was handed to each representative of the authors during the closing session (Fig. 5 and Fig. 6).



Fig. 5 Best Paper Award given by Dr. Bong Yang Koo of KOSST to Dr. Julian Webber



Fig. 6 Best Paper Award given by Dr. Bong Yang Koo of KOSST to Prof. Jong-Woo Oh of Namseoul University

4. Conclusion

A closing session was held in the end of day-2 with presentations of Dr. Kadowaki of IEICE SAT and Dr. Bong Yang Koo of KOSST, having remarks of great success of the conference and notes on the next conference in 2013. Figure 7 shows JC-SAT 2012 participants gathering after the closing session.

The next conference, JC-SAT 2013, will be held on 24th and 25th October, 2013, in Fukuoka, Japan. The detailed information of JC-SAT 2013 will be provided on the web page of the committee. Your paper submissions as well as participations will be greatly welcomed. Please join the conference and meet together in Fukuoka!



Fig. 7 JC-SAT 2012 Participants gathering after the closing session

Report on the 26th Optical Communication Systems Symposium – Novel Relationship between ICT and Human Society –

Technical Committee on Optical Communication Systems



1. Overview

The 26th Optical Communication Systems (OCS) Symposium, sponsored by the IEICE Technical Committee on OCS, and in cooperation with the IEEE Photonics Society Japan Chapter, the Photonic Internet Forum, and the IEICE Technical Committees on Extremely Advanced Optical Transmission Technologies (EXAT) and Photonic Network (PN), was held during Dec. 13–14, 2012 at the Toray Human Resources Development Center in Mishima City. The symposium, hosting 197 participants, was held to explore the “Novel relationship between ICT and human society” according to the agenda shown in Table 1. This symposium included poster presentations from young researchers and from four national projects related to optical communications. An exhibition of the products of 21 companies was also included in the lobby adjacent to the conference room.

Table 1 Symposium agenda

Date	Program
12/13	1. Opening Remarks 2. Keynote Speech 3. OCS Award Ceremony 4. Workshop I 5. Reception 6. Rump Session
12/14	7. Invited Lectures 8. IEEE Photonics Society Commemorative Lecture 9. Workshop II 10. Closing Remarks

2. First day – Dec. 13

At the opening session of the symposium, Mr. Osamu Ishida, the IEICE OCS committee chair presented the opening address. He reported the activities of the OCS technical committee in 2012. Regarding IEICE general/society meetings, in 2012 we hosted eight normal technical meetings and three special sessions included the 25th Anniversary Symposium of the OCS.

The technical sessions began with a keynote speech entitled “Revolutionary service infrastructure of telecommunication carrier by Software Defined Networking (SDN)” given by Mr. Yukio Ito of NTT Communications Corp. (Fig. 1). First, he introduced the trend of traffic increase on the backbone network and reported installation of optical transmission technologies in the field networks. Subsequently, he emphasized the merits of network integration based on service integration. MPLS-TP technology and network



Fig. 1 Keynote speech by Mr. Yukio Ito.

virtualization technology using OpenFlow technique offer great potential for advanced communication networks.

The OCS award ceremony was held after the keynote speech (Fig. 2). The OCS Technical Committee presented two awards: The “IEICE Communication Society OCS Best Paper Award” and the “IEICE Communication Society OCS Young Researchers Award” for excellent presentations at OCS technical committee meetings throughout the year. One paper was selected for the Best Paper Award:

- “Effects of inter-core crosstalk in multi-core fiber on Q -factor” by Mr. Tetsuya Hayashi, Mr. Takashi Sasaki, and Mr. Eisuke Sasaoka, of Sumitomo Electric Industries.

Two researchers received Young Researchers Awards:

- Mr. Manabu Arikawa (NEC Corp.): “Long-haul transmission of 127 Gb/s PM-QPSK signal with real-time DSP-based full CD compensation at the receiver”, and
- Mr. Takema Satoh (Osaka Univ.): “Experiment demonstration of 10-GS/s 5-bit optical quantization for photonic analog-to-digital conversion”.

The OCS chair presented a testimonial, a glass trophy, and a book certificate to each award recipient.



Fig. 2 OCS award-winners: from left, Mr. T. Satoh, Mr. M. Arikawa, Mr. O. Ishida (Presenter), Mr. T. Hayashi, and Mr. T. Sakaki.

After the award ceremony, Workshop I “Future opened by ICT and optical communication technologies – Toward active Japan –” was chaired by Mr. Takeshi Kamijoh of Oki Electric Industry Co. Ltd. The workshop included three invited talks (Fig. 3), which described (1) Prospects for an advanced information and communications society, (2) Story, Connection, and Infrastructure resulting from ICT, and (3) Sustainable society supported by C&C cloud and green ICT.



Fig. 3 Panel discussion of Workshop I: from left, Mr. T. Miyoshi, Prof. H. Morikawa, and Mr. N. Nishi.

The rump session began after the reception. The title was “Possibility and further issues of space division multiplexing (SDM) technologies on optical fiber communications toward the future capacity of Peta-bps/fiber.” Mr. Yoshinari Awaji of NICT, and Mr. Shoichiro Matsuo of Fujikura were invited as panelists. They talked about recent trends related to SDM and photonic bandgap fibers. Diverse opinions from attendees were presented as if at a year-end party. The able chairmanship of Mr. Kazushige Yonenaga of NTT Network Innovation Lab. produced a friendly atmosphere for this session, which was filled with fruitful discussion.

3. Second day – Dec. 14

The second day began with a technical session consisting of four invited lectures designed to enhance participants’ knowledge of the future of optical communications (Fig. 4). The first invited lecture, given by Prof. Noriyuki Kawaguchi of National Astronomical Observatory of Japan, was entitled “Optical fiber connection of radio telescopes in Japan.” He introduced high-precision radio telescopes using Very Long Baseline Interferometry (VLBI), which uses arrangements of observation points in a decentralized manner, with each point linked with high-speed optical fiber transmission. The second lecture, by Mr. Keigo Majima of Japan Broadcasting Corp., was entitled “Hybridcast: Cooperative System between broadcasting and communication.” He first introduced the concept and recent trends in Smart TV. Key technologies in coming services in Japan were also explained, such as Hybridcast, which is digital TV broadcasting incorporated with internet communication. The third lecture, given by Mr. Hiroaki Mukai of Mitsubishi Electric Corp., was entitled “Recent trend in standardization of optical access communication systems in the next generation.” He reported aspects of conventional PON technology and introduced requirements and several schemes for a Next

Generation (NG)-PON system. He finally reported the recent progress of standardization in NG-PON systems. The last lecture was sponsored by the IEEE Photonics Society Japan Chapter as a commemorative lecture. The lecture was given by Mr. Hiroshi Takahashi of NTT Photonics Lab., and was entitled “Integrated-optic devices for advanced optical communications by silica planar lightwave circuit technology”. He introduced basic waveguide theory and advanced design techniques of PLC. Many application PLC circuits were also presented for use with large capacity optical fiber communications.



Fig. 4 Presenters at the invited lecture session: from left, Prof. N. Kawaguchi, Mr. K. Majima, Mr. H. Mukai, and Mr. H. Takahashi.

The final session, chaired by Prof. Joji Maeda of Tokyo University of Science, was Workshop II, entitled “Innovative technologies for optical communications in the next generation.” The workshop included five invited talks (Fig. 5). The invited speakers presented (1) Optical Nyquist-pulse fiber transmission technology, (2) Inter-connection between high-density electrical chips based on silicon photonics technologies, (3) Prospects of optical fiber technologies for optical MIMO transmission, (4) Recent trends in multi-core optical fibers technology, and (5) Software Defined Photonic Networks / Elastic Optical Path Networks.



Fig. 5 Presenters of Workshop II: from left, Top: Prof. T. Hirooka, and Mr. Y. Urino. Bottom: Mr. T. Sakamoto, Mr. R. Sugizaki, and Mr. T. Tsuritani.

4. Conclusion

We believe that all participants were satisfied with the presentations at this symposium, which were filled with novel concepts and future prospects. Discussions held this time must encourage us to explore ICT for human society. Finally, the OCS technical committee would like to thank all the speakers and participants for their efforts.

IEICE Fellow Conferred on ten IEICE CS Members

Michiharu Nakamura
Director of Planning and Member Activities,
IEICE Communications Society



1. Introduction

The title of IEICE fellow is conferred on IEICE members who are recognized as having made a significant contribution to the institute in academic, technical or related fields. In 2012, IEICE fellow is conferred on 32 IEICE members including 10 from Communications Society. They are listed in the table 1.

2. The Conferment Ceremony

In the evening on 12th September 2012 during the IEICE society conference in Toyama, the 13th IEICE fellow conferment ceremony was held (Fig.1). In the ceremony, Prof. Susumu Yoshida, president of IEICE handed a fellow badge and a certification plate to each new fellow. The ceremony was followed by conference reception where some local food and sake were served.

3. Contribution to the GLOBAL NEWSLETTER

As a part of fellows' continuing contribution to the IEICE, Prof. Kato and Prof. Furuya have already contributed their articles to IEICE-CS GLOBAL NEWSLETTER and I hope other fellows will follow.

Table 1 New IEICE Fellows from Communications Society

name	contribution contents
Kazuhiro Uehara	For contributions to research and development of software defined radio and cognitive radio technologies

Yasuo Okabe	For contributions to research on autonomous distributed public wireless LAN and its application to construction of national academic federation platform
Hiroshi Onaka	For contributions to R&D and practical application of optical multi-level phase modulation technologies
Nei Kato	For contributions to research and development of IP satellite networks
Yoshihiko Konishi	For contributions to R&D and practical application of mobile satellite communication antennas
Junichi Takada	For contributions to radio channel measurement and modeling, and their application to spectrum sharing
Yukitsuna Furuya	For contributions to digital radio communications and global standardization of 3G mobile radio
Tsuneo Horiguchi	For contributions to research and development of optical fiber measurement techniques including Brillouin optical fiber sensors
Hideaki Yoshino	For contributions to research on communication traffic and service quality
Osami Wada	For contributions to EMC modeling and standardization of high-speed digital circuits and boards



Fig. 1 New IEICE fellows from Communications Society with Prof. Susumu Yoshida, president of IEICE and Prof. Yoshiaki Tanaka, president of IEICE Communications Society

Special Section Calendar of IEICE Transactions on Communications

Issue	Special Section	Note
Feb. 2014	Technologies for Effective Utilization of Spectrum White Space	Submission due: 5 June 2013 See page 27
Jan. 2014	Management for Flexible ICT Systems and Services	Submission due: 17 May 2013 See page 26
Dec. 2013	Network and System Technologies for Sustainable Society	Submission due: 14 Mar. 2013 See page 25
Nov. 2013	Progress in Information Network Science	Submission due: 15 Mar. 2013 See page 24
Oct. 2013	Recent Progress in Antennas and Propagation in Conjunction with Main Topics of ISAP2012	
Sep. 2013	No special section	
Aug. 2013	No special section	
Jul. 2013	Internet Architectures, Protocols, and Management Methods that Enable Sustainable Development	
Jun. 2013	Heterogeneous Networks for Future Cellular Systems	
May 2013	No special section	
Apr. 2013	No special section	
Mar. 2013	No special section	
Feb. 2013	Quality of Communication Services Improving Quality of Life	Vol. E96-B, No. 2
Jan. 2013	Network Virtualization, and Fusion Platform of Computing and Networking	Vol. E96-B, No. 1
Dec. 2012	Coding and Coding Theory-Based Signal Processing for Wireless Communications	Vol. E95-B, No. 12
Nov. 2012	Satellite Communication Technologies in Conjunction with Main Topics of JC-SAT2011	Vol. E95-B, No. 11
Oct. 2012	Medical Information Communication Technology for Disaster Recovery and Human Health Care Support	Vol. E95-B, No. 10

Please confirm with the following IEICE web site for the latest CALL FOR PAPERS.
<http://www.ieice.org/event/ronbun-e.php?society=cs>

Call for Papers

----- Special Section on Progress in Information Network Science -----

The IEICE Transactions on Communications announces that it will publish a special section entitled "Special Section on Progress in Information Network Science" in **November 2013**.

Information networking technologies have been achieving tremendous growth as an indispensable infrastructure in our society. The technologies, however, lack the solid theoretical foundation to resolve new quantitative and qualitative challenges posed in current and future networks, since they have been created in a patchwork or ad-hoc approach. In order to maintain the progress of these technologies, more systematic and scientific foundation, which is often called Internet science or network science of complex systems etc., has been highly demanded. For developing the theory of information networking technologies, we encourage multidisciplinary studies including mathematical engineering, theoretical physics, biological system engineering, and computer science etc. We are thus planning to publish a special section (scheduled to appear in the November 2013 issue) to further promote research and development of progress in information network science.

1. Scope

This special section aims at timely dissemination of research in these areas. Possible topics include, but are not limited to:

- novel approach for information network science, theory of information network as complex systems etc.
- theory and/or application of autonomous distributed systems and self-organized networks
- theory and/or application of very large-scale systems including Internet of Things (IoT)
- novel modeling, performance measure, analyzing methods for information network
- theory and/or application of network information theory such as network coding
- advanced physics for information networks, such as statistical physics, photo-physics, and quantum mechanics
- theory of nature-inspired information networking
- theory and/or application of information networking as social networks
- physical systems and devices inspired by network science
- novel energy engineering for information networks
- novel network analysis method based on computer science and applied mathematics

2. Submission Instructions

The standard number of pages is 8. The page charges are considerably higher for extra pages. Manuscripts should be prepared according to the guideline in the "Information for Authors". The latest version is available at the web site, http://www.ieice.org/eng/shiori/mokuji_cs.html. Note that the IEICE Transactions on Communications has discontinued LETTERS. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for regular issues (60 days) because of the tight review schedule.

This special section will accept papers only by electronic submission. Prospective authors are requested to follow carefully the submission process described below.

1. Submit a manuscript and electronic source files (TeX/Word files, figures, authors' photos and biographies) via the IEICE Web site https://review.ieice.org/regist_e.aspx **by March 15, 2013 (Japan Time)**. Authors should choose the [Special-EB] Progress in Information Network Science as a "Type of Section (Issue)/ Transactions" on the online screen. **Do not choose [Regular-EB]**.
2. Send "Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration" by E-mail, FAX or postal mail to the following address (guest editor of the special section) by the above due date. We may withdraw the submission if these documents have not been received by the due date, even if the manuscript has been received by electronic submission. For additional guidelines on manuscript preparation, please visit: http://www.ieice.org/eng/shiori/mokuji_cs.html

Send the above documents to:

Takeru Inoue

ERATO Minato Discrete Structure Manipulation System Project, Japan Science and Technology Agency

Address: Graduate School of Information Science and Technology, Eng. C306

Hokkaido University, North 14 West 9, Sapporo, 060-0814 Japan

Tel: +81-11-728-8280, Fax: +81-11-728-8277, Email: netsci-ss@mail.ieice.org

3. Special Section Editorial Committee

Guest Editor-in-Chief: Masaki Aida (Tokyo Metro. Univ.)

Guest Editors: Takeru Inoue (JST), Takeshi Kubo (KDDI R&D labs.)

Guest Associate Editors: Tetsuya Asai (Hokkaido Univ.), Hiroaki Harai (NICT), Mikio Hasegawa (Tokyo Univ. of Science), Kenji Ishida (Hiroshima City Univ.), Nobuharu Kami (NEC), Hiroyoshi Miwa (Kwansei Gakuin Univ.), Tatsuto Murayama (NTT), Hajime Nakamura (KDDI), Makoto Naruse (NICT), Jun Ohkubo (Kyoto Univ.), Masato Uchida (Chiba Inst. Tech.), Naoki Wakamiya (Osaka Univ.)

* Please note that if the submitted paper is accepted, all authors, including authors of invited papers, are requested to pay for the page charges covering partial cost of publications. Authors will receive 50 reprints.

* At least one of the authors must be an IEICE member when the manuscript is submitted for review. Invited papers are an exception. We recommend that authors unaffiliated with IEICE apply for membership. For membership applications, please visit: <http://www.ieice.org/eng/member/OM-appli.html>

Call for Papers

----- Special Section on Network and System Technologies for Sustainable Society -----

The IEICE Transactions on Communications announces a forthcoming section on “Network and System Technologies for Sustainable Society” to be published in **December 2013**.

Information and communication technology (ICT) has been playing an important role as a social infrastructure in various areas such as energy, distribution, medicine and agriculture. For realizing sustainable society, network and system technologies should be designed considering new paradigms: energy-awareness, environment and sustainability. Research and development of network systems for sustainable society have been emerged: green by/of ICT, smart grid, wired/wireless machine-to-machine (M2M) communications, visualization, robustness and dependable networks. This special section is being planned (scheduled to appear in the December 2013 issue) to discuss network and system technologies for sustainable society. The submissions concerning new technique and discovery on various types of network architecture, network system and networking technology for sustainable society, are highly welcome.

1. Scope

This special section is aimed at timely dissemination of research in these areas. Possible topics include, but are not limited to:

- Green by/of ICT
- Smart grid
- Green data centers
- Visualization
- Energy-aware, robust and dependable next/new generation networks
- Wireless/wired networking architecture considering sustainable society
- Network and application technologies for sustainable society
- Machine-to-Machine (M2M)
- Energy-aware routers
- Network virtualization
- Robustness, fault tolerance
- Sensor networks
- Green network appliance
- Software-defined networks (SDN)
- Dependable networks

2. Submission Instructions

The standard number of pages is 8. The page charges are considerably higher for extra pages. Manuscripts should be prepared according to the guideline in the “Information for Authors”. The latest version is available at the web site, http://www.ieice.org/eng/shiori/mokuji_cs.html. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for regular issues (60 days) because of the tight review schedule.

This special section will accept only papers by electronic submission. Prospective authors are requested to follow carefully the submission process described below.

1. Submit a manuscript and electronic source files (TeX/Word files, figures, authors’ photos and biography) for publishing using the IEICE Web site https://review.ieice.org/regist_e.aspx **by March 14, 2013 (Japan Time)**. Authors should choose the “[Special-EB] Network and System Technologies for Sustainable Society” as a “Type of Section (Issue) / Transactions” on the online screen. **Do not choose [Regular-EB]**.
2. Send “Copyright Transfer and Page Charge Agreement” and “Confirmation Sheet of Manuscript Registration” by E-mail, FAX or postal mail to the following address (a guest editor of the special section) **by March 14, 2013 (Japan Time)**. There is a possibility that we shall withdraw the manuscript without receiving them by the due date, even if we have received the manuscript by electronic submission. For additional guidelines on manuscript preparation, please visit the web-page: http://www.ieice.org/eng/shiori/mokuji_cs.html

Send the above documents to: Masaki Bandai

**Dept. of Information & Communication Sciences,
Sophia University
Address: 7-1 Kioicho, Chiyoda, Tokyo 102-8554, JAPAN
Tel/Fax: +81-3-3238-3272, Email: ns-ss2013-kanji@mail.ieice.org**

3. Special Section Editorial Committee

Guest Editor-in-Chief: Shigeo Urushidani (NII)

Guest Editors: Takuji Tachibana (Fukui Univ.), Masaki Bandai (Sophia Univ.)

Guest Associate Editors: Yutaka Arakawa (Kyushu Univ.), Kotaro Ise (Toshiba), Masato Uchida (Chiba Inst. Tech.), Eiji Oki (Univ. of Electro-Commun.), Chikara Ohta (Kobe Univ.), Noriaki Kamiyama (NTT), Kiyohide Nakauchi (NICT), Go Hasegawa (Osaka Univ.), Norihito Fujita (NEC)

* Please note that if accepted, all authors, including authors of invited paper, are requested to pay for the page charges covering partial cost of publications. Authors will receive 50 copies of reprints.

* At least one of the authors must be an IEICE member when the manuscript is submitted for review. Invited papers are an exception. We recommend that authors unaffiliated with IEICE apply for membership. For membership applications, please visit the web-page: <http://www.ieice.org/eng/member/OM-appli.html>

Call for Papers

---- Special Section on Management for Flexible ICT Systems and Services ----

The IEICE Transactions on Communications announces that it will publish a special section entitled "Special Section on Management for Flexible ICT Systems and Services" in **January 2014**.

Cloud computing is getting popular: a lot of users share CPU resources and network resources which exist as 'cloud' in the Internet. For sharing these resources safely and efficiently, virtualization technology is emerging. The virtualization technology, such as virtual machine and Software-defined Network (SDN), brings the Information and Communication Technology (ICT) systems much utility and flexibility. It becomes, however, difficult for system administrators to operate the flexible ICT systems because of many variations of configurations of the systems, dynamic changes of the behavior of the systems, and so on. The role of operations and management technology reducing such complexity is, therefore, getting important. A special section is planned (scheduled to appear in the Jan 2014 issue) to further promote research and development of Management for Flexible ICT Systems and Services.

1. Scope

This special section aims to identify emerging research topics regarding managing virtualized systems and networks including future services which the flexible ICT systems bring. The topics covered by this special section include, but not limited to, the following topics:

- Network management and operations (Software-defined networks, Virtual network, Overlays, Sensor/Ad-hoc network, Cognitive radio network, Software-defined radio networks)
- System management (Virtual machine management, Datacenter management, Device management)
- Service management (Business model, Smart grids, Cloud computing, IT service management, Big data, IoT)
- Management techniques (Monitoring, Performance evaluation and management, Traffic controls, QoS, Accounting, Failure management, Configuration management, Security)
- Fundamental theories (Control theory, Optimization theory, Simulation, Experimental approaches)
- Other related topics

2. Submission Instructions

The standard number of pages is 8. The page charges are considerably higher for extra pages. Manuscripts should be prepared according to the guideline in the "Information for Authors". The latest version is available at the web site, http://www.ieice.org/eng/shiori/mokuji_cs.html. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for regular issues (60 days) because of the tight review schedule.

This special section will accept papers only by electronic submission. Prospective authors are requested to follow carefully the submission process described below.

1. Submit a manuscript and electronic source files (TeX/Word files, figures, authors' photos and biographies) via the IEICE Web site https://review.ieice.org/regist_e.aspx **by May 17, 2013 (Japan Time)**. Authors should choose the [Special-EB] Management for Flexible ICT Systems and Services as a "Type of Section (Issue)/Transactions" on the online screen. Do not choose [Regular-EB].
2. Send "Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration" by E-mail, FAX or postal mail to the following address (guest editor of the special section) by the above due date. We may withdraw the submission if these documents have not been received by the due date, even if the manuscript has been received by electronic submission. For additional guidelines on manuscript preparation, please visit: http://www.ieice.org/eng/shiori/mokuji_cs.html

Send the above documents to:

Kiyohito Yoshihara (KDDI Laboratories)

Address: 3-10-10, Iidabashi, Chiyoda-ku, Tokyo 102-8460, Japan

Tel: +81-3-6678-6126, Fax: +81-3-6678-0457, Email: icm-trans-si@mail.ieice.org

3. Special Section Editorial Committee

Guest Editor-in-Chief: Toshio Tonouchi (NEC)

Guest Editor: Kiyohito Yoshihara (KDDI Laboratories)

Guest Associate Editors: Takuya Asaka (Tokyo Metropolitan University), Shingo Ata (Osaka City University), Shigeo Urushidani (NII), Kazuhiko Kinoshita (Osaka University), Noriyuki Sasaki (NTT Comware), Koji Sasayama (NTT), Yuji Nomura (Fujitsu Laboratories), Eiji Takahashi (NEC), Kyoko Yamori (Asahi University)

* Please note that if the submitted paper is accepted, all authors, including authors of invited papers, are requested to pay for the page charges covering partial cost of publications. Authors will receive 50 reprints.

* At least one of the authors must be an IEICE member when the manuscript is submitted for review. Invited papers are an exception. We recommend that authors unaffiliated with IEICE apply for membership. For membership applications, please visit:

<http://www.ieice.org/eng/member/OM-appli.html>

---- Special Section on Technologies for Effective Utilization of Spectrum White Space ----

The IEICE Transactions on Communications announces that it will publish a special section entitled "Special Section on Technologies for Effective Utilization of Spectrum White Space" in **February 2014**. Spectrum scarcity is one of the significant problems for emerging wireless services, and it requires urgent solution. Among the approaches proposed to tackle this problem, cognitive radio techniques have been paid much attention for enabling the utilization of the television (TV) white space. In this approach, for the effective utilization of TV white space and protection of TV receivers, high accuracy/reliable environment recognition techniques, and dynamic spectrum management/allocation technique have been investigated. In addition, for enabling TV white space utilization by cognitive radio network, development of laws, and discussions among TV operators, regulatory agencies and emerging wireless service providers are required. For utilizing the white spaces also in other bands than the TV bands, fundamental investigations from information theoretic aspects, investigations of applications of white space and implementation/experiment techniques are also required. Because of these reasons, a special section is being planned (scheduled to appear in the February 2014 issue) to further promote research and development of technologies for effective utilization of spectrum white space which is not limited to TV white space.

1. Scope

The general scope of this section includes, but is not limited to, the following:

- Experimental prototypes/Measurement results/Modeling for effective utilization of spectrum white space
- Architecture and Implementations/Hardware issues/Software defined radio
- Spectrum sensing/measurement for effective utilization of spectrum white space
- White space database/Radio environment map
- Resource management/sharing/allocation for effective utilization of spectrum white space
- PHY/MAC layer techniques for effective utilization of spectrum white space
- Network issues for effective utilization of spectrum white space
- Security issues for effective utilization of spectrum white space
- Information theory for effective utilization of spectrum white space
- Applications of white space (sensor network, intelligent transportation system, cellular system)
- Regulations and standardizations (IEEE 802.22, 802.11af, 802.19, P1900.4a)

2. Submission Instructions

The standard number of pages is 8. The page charges are considerably higher for extra pages. Manuscripts should be prepared according to the guideline in the "Information for Authors". The latest version is available at the web site, http://www.ieice.org/eng/shiori/mokuji_cs.html. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for regular issues (60 days) because of the tight review schedule.

This special section will accept papers only by electronic submission. Prospective authors are requested to follow carefully the submission process described below.

1. Submit a manuscript and electronic source files (TeX/Word files, figures, authors' photos and biographies) via the IEICE Web site https://review.ieice.org/regist_e.aspx **by June 5, 2013 (Japan time)**. Authors should choose the [Special-EB] Technologies for Effective Utilization of Spectrum White Space as a "Type of Section (Issue)/Transactions" on the online screen. Do not choose [Regular-EB].
2. Send "Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration" by E-mail, FAX or postal mail to the following address (guest editor of the special section) by the above due date. We may withdraw the submission if these documents have not been received by the due date, even if the manuscript has been received by electronic submission. For additional guidelines on manuscript preparation, please visit: http://www.ieice.org/eng/shiori/mokuji_cs.html

Send the above documents to:

Kenta Umebayashi

Tokyo University of Agriculture and Technology

Address: 2-24-16 Nakacho, Koganei-shi, Tokyo 184-8588, Japan

Tel: +81-42-388-7483, Fax: +81-42-388-7483

Email: ume_k@m.ieice.org

3. Special Section Editorial Committee

Guest Editor-in-Chief: Yukitoshi Sanada (Keio Univ.)

Guest Editors: Kenta Umebayashi (Univ. of Agriculture and Tech.), Takeo Fujii (Univ. of Electro-Commun.)

Guest Associate Editors: Alexander M. Wyglinski (Worcester Polytechnic Institute), Janne Lehtomaki (University of OULU), Minseok Kim (Tokyo Inst. of Tech.), Masayuki Ariyoshi (NEC), Kentaro Ishizu (NICT), Masahiro Umehira (Ibaraki Univ.), Shigenobu Sasaki (Niigata Univ.), Shunsuke Saruwatari (Shizuoka Univ.), Hiroyuki Shiba (NTT), Kazuya Tsukamoto (Kyushu Inst. Tech.), Hiromasa Fujii (NTT DoCoMo), Kazuto Yano (ATR)

* Please note that if the submitted paper is accepted, all authors, including authors of invited papers, are requested to pay for the page charges covering partial cost of publications. Authors will receive 50 reprints.

* At least one of the authors must be an IEICE member when the manuscript is submitted for review. Invited papers are an exception. We recommend that authors unaffiliated with IEICE apply for membership. For membership applications, please visit: <http://www.ieice.org/eng/member/OM-appli.html>



Membership for Overseas Candidates: Overseas Members may opt to join **one IEICE Society of their choice** and may request to receive the **IEICE Transactions of online version** of that Society. Furthermore, Overseas Members may request to receive the IEICE Journal (written in Japanese) and Transactions (published in paper) at an additional cost. Similar services are available to **Overseas Student Members**. Voting privileges in the IEICE election do not apply to Overseas Members. Note that the Overseas Membership applies only to candidates who reside outside of Japan and who have citizenship in countries other than Japan.

OMDP (Overseas Membership Development Program): OMDP is provided for candidates **from countries/areas in Asia (except Republic of Korea and Taiwan), Africa, Central America, and South America**. This program is designed so that IEICE can contribute to and support the progress of science and technology throughout the world. Scientists and engineers in these countries/areas are encouraged to apply to the program.

● **IEICE Societies and Publications**

Society	Transactions	Editorial Subject Indexes
A (Fundamentals of Electronics, Communications and Computer Sciences)	EA (English) A (Japanese)	Engineering Acoustics, Noise and Vibration, Speech and Hearing, Ultrasonics, Digital Signal Processing, Analog Signal Processing, Systems and Control, Nonlinear Problems, Circuit Theory, VLSI Design Technology and CAD, Numerical Analysis and Optimization, Algorithms and Data Structures, Graphs and Networks, Reliability, Maintainability and Safety Analysis, Cryptography and Information Security, Information Theory, Coding Theory, Communication Theory and Signals, Spread Spectrum Technologies and Applications, Mobile Information Network and Personal Communications, Intelligent Transport System, Image, Vision, Computer Graphics, Language, Thought, Knowledge and Intelligence, Human Communications, Neural Networks and Bioengineering, Multimedia Environment Technology, Communication Environment and Ethics, Concurrent Systems, Measurement Technology, General Fundamentals and Boundaries
B (Communications)	EB (English) B (Japanese)	Fundamental Theories for Communications, Devices/Circuits for Communications, Transmission Systems and Transmission Equipment for Communications, Optical Fiber for Communications, Fiber-Optic Transmission for Communications, Switching for Communications, Switching for Mobile Communications, Network, Network Management/Operation, Internet, Wireless Communication Technologies, Terrestrial Radio Communications, Satellite Communications, Optical Wireless Communications, Antennas and Propagation, Electromagnetic Compatibility (EMC), Sensing, Navigation, Guidance and Control Systems, Energy in Electronics Communications, Terminals for Communications, Multimedia Systems for Communications, Broadcast Systems, Integrated Systems for Communications, Space Utilization Systems for Communications
C (Electronics)	EC (English) C (Japanese)	Electromagnetic Theory, Lasers, Quantum Electronics, Optoelectronics, Microwaves, Millimeter-Waves, Ultrasonic Electronics, Electronic Circuits, Electronic Materials, Organic Molecular Electronics, Electronic Components, Electromechanical Devices and Components, Semiconductor Materials and Devices, Integrated Electronics, Electron Tubes, Vacuum and Beam Technology, Electronic Displays, Superconducting Electronics, Storage Technology, Electronic Instrumentation and Control
D (Information and Systems)	ED (English) D (Japanese)	Computation and Computational Models, Automata and Formal Language Theory, Algorithm Theory, Complexity Theory, Computer Components, VLSI Systems, Computer Systems, Fundamentals of Software and Theory of Programs, System Programs, Software Engineering, Database, Contents Technology and Web Information Systems, Data Mining, Networks, Dependable Computing, Application Information Security, Distributed Cooperation and Agents, Artificial Intelligence and Cognitive Science, Human-computer Interaction, Office Information Systems, e-Business Modeling, Educational Technology, Rehabilitation Engineering and Assistive Technology, Pattern Recognition, Speech and Hearing, Image Processing and Video Processing, Image Recognition, Computer Vision, Computer Graphics, Multimedia Pattern Processing, Natural Language Processing, Biocybernetics, Neurocomputing, Biological Engineering, Music Information Processing, Kansei Information Processing, Affective Information Processing
Journal of IEICE (written in Japanese only)		

● **Membership Charges (<http://www.ieice.org/eng/member/OM-appli.html#c>)**

Basic Membership Charge is as follows. It will change the term when you join IEICE. Please refer to the above website.

Basic Membership Charge (UNIT : Japanese YEN)

Service coverage for overseas members	Admission charge	Online Version		Paper Version (optional)		
		Registration of the first society (includes its online version transactions)	Registration of additional societies (includes its online version transactions)	Journal (written in Japanese)	Transactions (written in Japanese or in English)	
					(In one society)	
One title	Two titles					
Member (overseas)	1,400	7,000	3,500 / 1society	6,000	4,000	10,000
Member (overseas) with OMDP*	1,000	5,000	3,000 / 1society	5,000		
Student member (overseas)	-	2,000	2,000 / 1society	6,000		
Student member (overseas) with OMDP*	-	1,000	1,500 / 1society	5,000		

NOTE

- You need to choose one Society, and you can subscribe Transactions online of your registered society.
Example: If you want to subscribe to Transaction of EA, please check Society Registration as "A", and your membership fee amounts to 7,000 yen / 5,000 yen.
- If you want to register other Societies and Transaction of web version, please check "Additional Society registration".
Example: If you want to subscribe to Transaction of EA and EB, please check Society Registration as "A", Additional Society registration (optional) as "B". Your membership fee amounts to 7,000+3,500 yen / 5,000+3,000 yen.
- If you want to subscribe to one Transaction of paper version, please check "Additional Transaction subscription (published in paper)".
Example: If you want to subscribe to Transaction of EC in paper version additionally, please check Society Registration as "A", and Additional Transaction subscription (in paper version) as "C" or as "EC". Your membership fee amounts to 7,000+4,000 yen / 5,000+4,500 yen.
- If you want to change membership from Member (In Japan) to Overseas Member, you don't need to pay an Entrance charge.

● **Optional Rapid Mailing Service**

Surface mail charge is included in the membership charge. Optional rapid mailing service is available by air mail or surface air lifted (SAL) mail. The additional charge per year periodical depends on the mailing address, as shown in the right table.

Areas	Air mail	SAL mail
Asia; Guam; Midway islands	5,600 yen	3,200 yen
Oceania; Near & Middle East; North & Central America; Europe	7,800 yen	4,400 yen
Africa; South America	11,000 yen	5,600 yen

Please contact the IEICE Membership Section: E-mail: member@ieice.org FAX: +81 3 3433 6659 Please fill out the application form printed on the opposite side of this page.

IEICE-CS Overseas Membership with Special Annual Fees for Sister Society Members

To foster the cooperation between the Sister Society and the IEICE Communications Society (IEICE-CS), the Sister Society agreement enables members of each institution to become members of both societies by granting special annual fees.

A 10% - 20% discount* of the annual fees will be granted to the sister society members to become the IEICE-CS overseas members. The discounted fees will be applied for the individual members when the new membership is starting or the current membership is renewing. The details of this discount can be found in the following IEICE-CS Web page:

URL http://www.ieice.org/cs/member/sister_society.html

* The discount does not apply to the optional items and services i.e. “Additional Society”, “Additional Transactions of paper version” and “Rapid Mailing Service”.

----- Please send the following Sister Society membership information, together with membership application form in the next page. -----

Sister Society membership information

To apply discount rates for this IEICE-CS Sister Society member’s application, please indicate your Sister Society Membership number below, and attach a copy of your Sister Society Membership certificate or card to this form.

Sister Society: IEEE ComSoc KICS VDE-ITG

Membership number (Member): _____

Copy of Membership certificate or Membership card:

(Attached here)

IEICE Overseas Membership Application Form for IEICE-CS Sister Society Members

URL <http://www.ieice.org/eng/member/OM-appli.html> E-mail member@ieice.org FAX +81-3-3433-6659

◆ **Please type or print in English. The deadline for submitting application form is the 1st day of every month.**

Personal Information

Full name: _____ Nationality: _____ Male
First name Middle name Last name Female

Prof. Dr. Mr. Ms. Place of birth: _____ Date of birth: _____
Day Month Year

Mailing Address

Home Office

Name of Company/School/College Department/Section

Street City State/Province

Postal code Country

TEL FAX E-mail

Academic Background

The highest academic degree: Ph.D. Masters Bachelors Others: _____

University/college/school of the highest academic degree Month & year of graduation

Application Information

Membership: I want to apply for the following membership*:

- Member Member (including Japanese Journal subscription)
 Student Member Student Member (including Japanese Journal subscription)
 *Membership applies only to applicant who reside outside of Japan and who have non-Japanese citizenship.
 ◆ If you want to apply for OMDP (Overseas Membership Development Program), please check; OMDP

Society registration (Membership fee includes one Society of Transaction of Online version.):**

B: Communications

**Discount rate (see the URL below) is applied to this IEICE-CS Sister Society Member's application.

URL http://www.ieice.org/cs/member/sister_society.html

----- Discount rate is not applied for the following optional items. -----

Additional Society (optional): A: Engineering Sciences C: Electronics D: Information and Systems

Additional Transactions of paper version (optional):

- EA: Fundamentals EB: Communications EC: Electronics ED: Information and Systems
 A: Fundamentals (Japanese) B: Communications (Japanese) C: Electronics (Japanese) D: Information and Systems (Japanese)

Remittance

Remittance is available only in **Japanese yen** by a **credit card**.

Admission charge.....¥ _____ Journal subscription (optional).....¥ _____
 Annual charge..... ¥ _____ Mailing option: Air mail.....¥ _____
 Additional Society (optional) ¥ _____ SAL mail.....¥ _____
 Additional Transactions (optional).....¥ _____ **Total.....¥ _____**

Credit Card: UC Master Card VISA JCB American Express

Card number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Expiry date: _____ / _____ Credit Card Holder: _____ Signature: _____
Year Month

Endorsement

The following endorsement for this Sister Society member's application will be given by an IEICE-CS director (any related action of endorsement by applicant is not necessary if a copy of your Sister Society Membership certificate or card is indicated).

I recommend this applicant for IEICE membership.

(Director of Planning and Member Activities, IEICE-CS)

Endorser's name Membership number Endorser's signature Date

From Editor's Desk

● When March Comes ...

When March comes, we have no more severe cold days. Animals wake up from hibernation. In central Japan, we are already enjoying blossoms on plum trees and cherry will start to bloom by the end of the month. In Japan, school year ends in this month. All students who graduate from their schools get their diplomas or certificates. I myself remember that I felt entire fulfillment and enjoyed total freedom having no duties at all. Meanwhile, some of top Japanese universities are said to be considering to shift the school year to be global competitive. Although I still feel that delightful spring atmosphere would be the best season to celebrate the end of the school year, it would be nice if more students come and go so easily from/to Japanese universities and they contribute to IEICE-CS GLOBAL NEWSLETTER.

Some students may have the last duty as a student at the IEICE general conference, which will be held in Gifu university from 19 to 22 March. Please attend and celebrate them.

IEICE-CS GLOBAL NEWSLETTER Editorial Staff

Editorial Staff of this issue

No special order is observed



Michiharu NAKAMURA

Fujitsu Laboratories, Ltd.

Network Systems Laboratories

Director, Planning and Member Activities, IEICE Communications Society



Fumio FUTAMI

Tamagawa University

Quantum ICT Research Institute

Director, Planning and Member Activities, IEICE Communications Society



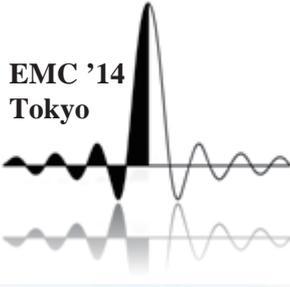
Takao NAITO

Fujitsu Laboratories, Ltd.

Network Systems Laboratories

Director, International Publication, IEICE Communications Society

EMC '14
Tokyo



EMC '14/Tokyo

2014 International Symposium
on Electromagnetic Compatibility, Tokyo, JAPAN
May 13-16, 2014

Hitotsubashi Hall (National Center of Sciences), Chiyoda, Tokyo



Call for papers

About This Symposium

The 2014 International Symposium on Electromagnetic Compatibility (EMC'14/Tokyo) will be held in "Hitotsubashi Hall", Chiyoda, Tokyo from May 13 to 16, 2014. EMC'14/Tokyo is the 7th International Symposium on Electromagnetic Compatibility organized by Institute of Electronics, Information and Communication Engineers, Communications Society (IEICE-CS). We wish to invite all engaged in research and development in the various fields of electromagnetic compatibility to participate in this Symposium. The Symposiums have been held every 5 years and it will be the 30-year anniversary in its history. The first Symposium was held in Tokyo in 1984, which was the first IEEE EMC Symposium held outside USA sharing sponsorship with IECE (current IEICE). Since 2nd Symposium they were sponsored by IEICE.

Session Topics

1) EMC Measurements :

*Measurement & Instrumentation,
Measurement Techniques, EMC Test Facilities, Antennas*

2) High Power & High Voltage EMC :

*Lightning & Overvoltage Protection,
Intentional EMI & EMP, High Power Electromagnetics,
Grounding Phenomena in Power Systems*

3) EMC Management and Standards :

*Standards & Regulations, Electromagnetic Product Safety,
System-Level EMC, EMC Management, EMC Education*

4) Chip, Package, PCB & Cables :

*IC & Semiconductor EMC,
Electronic Packaging & Interconnection, PCB,
Transmission Lines & Cables, Power & Signal Integrity*

5) Immunity / Susceptibility, ESD and Transients :

6) Shielding, Grounding & Materials :

*Shielding & Grounding, EM Absorber,
Material in EMC Applications, Meta-materials*

7) Numerical Modeling :

*Computational Electromagnetics,
Large-scale Numerical Simulation, GPU Simulation*

8) EMF Safety & Biomedical issues :

*Human exposure to ELF/RF EM fields,
Biological Effects, Medical Application,
Medical Devices & Hospital Equipment*

9) Power System EMC :

*Smart Grids, Power Quality Issues,
EMC in Power Plants & Substations,
Solar Power Systems, Wireless Power Transmission*

10) Power Electronics & Vehicles :

*Automotive EMC, Electric Vehicle,
Railway & Naval EMC, EMC in Space*

11) Communication System EMC :

*Wired & Wireless Communications,
Antennas, Propagation & Scattering,
Power Line Communications,
Information System Security*

Important Dates (Tentative Schedule)

2013 May 1 ----- Start of Paper Submission on the Web Site

2013 August 31 ----- Deadline for Full-length Paper Submission

2013 November 30 ----- Notification of Acceptance

2014 January 31 ----- Final Paper Due and Registration Deadline

Sponsored by

The Institute of Electronics, Information and Communication Engineers, Communications Society (IEICE-CS)

Technically Co-sponsored by (being processed)

*IEEE EMC Society, IEEE EMC-S Japan Chapter and Sendai Chapter, IEEE Tokyo Section,
Technical Committee on EMC of The Institute of Electrical Engineers of Japan (IEEJ TC-EMC)*

Technically Co-operated by (being processed)

CISPR, IEC/TC77, URSI, VCCI Council

Information and Contact

EMC'14/Tokyo website : <http://www.ieice.org/~emc14/>

Contact to E-mail : emc14-contact@mail.ieice.org

Proposals for organized sessions : emc14-pc@mail.ieice.org