The International Conference on
Information Networking 2012 (ICOIN 2012)

1-3 February 2012
The Patra Bali Resort & Villas, Bali, Indonesia

Sponsored by

IEEE
IEEE Computer Society
IEICE
Korean Institute of Information Scientists and Engineers
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Committee Members</td>
<td>3</td>
</tr>
<tr>
<td>Message from the General Co-Chairs</td>
<td>5</td>
</tr>
<tr>
<td>Message from the Technical Program Committee Co-Chairs</td>
<td>6</td>
</tr>
<tr>
<td>ICOIN 2012 Program at a Glance</td>
<td>7</td>
</tr>
<tr>
<td>Tutorials</td>
<td>8</td>
</tr>
<tr>
<td>Keynotes</td>
<td>10</td>
</tr>
<tr>
<td>Technical Sessions</td>
<td>11</td>
</tr>
<tr>
<td>Poster Sessions</td>
<td>15</td>
</tr>
<tr>
<td>Venue</td>
<td>17</td>
</tr>
<tr>
<td>Travel Information</td>
<td>18</td>
</tr>
</tbody>
</table>


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Yoshihiro Ito  Nagoya Inst. of Tech., Japan
Kenji Fujikawa  NICT, Japan
Greetings

Message from the General Co-Chairs

Welcome to ICOIN 2012, the 26th International Conference on Information Networking 2012 on 1 – 3 February in Bali, Indonesia. It is our pleasure to welcome all of the attendees, authors, invited speakers, and guests.

ICOIN 2012 is sponsored by KIISE, Korean Institute of Information Scientists and Engineers and also technically co-sponsored by IEEE-CS and IEICE. As in the past, we have received a large volume of high-quality submissions, an indicator of ICOIN’s position as a prestigious international conference. We hope you will have a chance to take part in 12 technical sessions including two poster sessions about Sensor networks, Wireless and Ad-hoc Networks, Mobile Networks and Wireless LAN, QoS and Resource Management, Network Security, and Service Management, Internet Applications, and so on.

We also invited distinguished keynote speaker and hosted three valuable tutorial speakers who will give us lectures about Future Internet, WLAN Security, WSN, and Cyber Physical System.

We hope you enjoy the world premier networking conference in our profession and wish this conference will be an opportunity to share the current hot research trends among the high value researchers from around the world.

We are also quite blessed to have a strong Executive Committee, who each have enthusiastically provided their expertise and support. We would like to thank each one of them for their contribution.

Bali Island, the most highly populated and influential of all the Indonesia islands, offers not just beautiful white sand beaches and gentle seas but also various customs. You can refresh mind by watching beautiful scenery along the route and find a uniqueness of its customs.

We are sure you will truly enjoy this conference and wish you a memorable stay!

General Co-Chairs,

Younghan Kim
Cheeha Kim
Panjai Tantatsanawong
Greetings

Message from the Technical Program Committee Co-Chairs

It is our great pleasure to welcome all of you to Bali from February 1 through 3, 2012 for the 26th International Conference on Information Networking (ICOIN). Thanks to its 26 years' tradition, ICOIN 2012 will be an exciting conference covering broad topics on computer communications and ubiquitous networks.

This year we have received 230 paper submissions electronically from 28 countries. A rigorous review process has followed, in which all papers were reviewed carefully by at least three experts. After the reviews and discussions, 53 papers were accepted for oral presentation, and 51 papers for poster presentation.

The 53 oral papers are organized into 10 technical sessions, which will be held in two parallel tracks. The program covers a variety of topics on both of wireless & wired communications and networking technologies. It reflects the growing need to develop cross-layer or converging approaches to address the future challenges in this area.

In addition to the contribution of prominent authors from all over the world, we believe that this year's precious and interesting program is possible by the commitment of technical program committee members. We are indebted to all of the 70 TPC members from 18 countries for their active participation and volunteering their precious time. We also would like to thank our sponsors, KIISE, IEEE Computer Society, and IEICE Communications Society for their support of this successful event. We extend our sincere thanks to the General Co-Chairs, Prof. Younghan Kim, Prof. Cheeha Kim, and Dr. Panjai Tantatsanawong, for their kind support and guidance. We hope that all of you will enjoy the interesting program of ICOIN 2012 as well as the beautiful scenery and attractions of Bali, Indonesia.

TPC Co-Chairs,

Seong-Ho Jeong
Motonori Nakamura
Sinchai Kamolphiwong
# ICOIN 2012 Program at a Glance

<table>
<thead>
<tr>
<th>TIME</th>
<th>Track 1</th>
<th>Track 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>January 31, 2012 (Tuesday)</strong></td>
<td><strong>Organizing Committee &amp; Steering Committee Meetings</strong></td>
<td></td>
</tr>
<tr>
<td>14:00-17:30</td>
<td><strong>Track 2</strong></td>
<td></td>
</tr>
<tr>
<td>08:30-</td>
<td><strong>Registration Open</strong></td>
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</tr>
<tr>
<td>09:00-10:20</td>
<td><strong>Tutorial I</strong></td>
<td><strong>Tutorial III</strong></td>
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<td></td>
<td>Room : The Denpasar Ballroom</td>
<td>Room : The Denpasar Ballroom B</td>
</tr>
<tr>
<td>10:20-10:40</td>
<td><strong>Coffee Break</strong></td>
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<tr>
<td>10:40-12:00</td>
<td><strong>Tutorial II</strong></td>
<td><strong>Tutorial III</strong></td>
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<td>Room : The Denpasar Ballroom A</td>
<td>Room : The Denpasar Ballroom B</td>
</tr>
<tr>
<td>12:00-13:30</td>
<td><strong>Lunch</strong> (Teratai Coffee Shop)</td>
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<tr>
<td>13:30-14:30</td>
<td><strong>Opening/Welcome Address and Keynote Speech</strong></td>
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<tr>
<td>14:30-15:00</td>
<td><strong>Coffee Break</strong></td>
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<tr>
<td>15:00-17:00</td>
<td><strong>Ad-hoc and Sensor Networks I</strong></td>
<td><strong>Internet and Web Applications</strong></td>
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<td>(1A) Room : The Denpasar Ballroom A</td>
<td>(1B) Room : The Denpasar Ballroom B</td>
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<tr>
<td><strong>February 1, 2012 (Wednesday)</strong></td>
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<td>08:30-</td>
<td><strong>Registration Open</strong></td>
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<td>09:00-11:00</td>
<td><strong>QoS and Resource Management</strong></td>
<td><strong>Mobile Networks and Wireless LANs</strong></td>
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<td>(2A) Room : The Denpasar Ballroom A</td>
<td>(2B) Room : The Denpasar Ballroom B</td>
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<tr>
<td>11:00-11:10</td>
<td><strong>Coffee Break</strong></td>
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<td>11:10-12:30</td>
<td><strong>Poster Session I</strong></td>
<td></td>
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<tr>
<td>12:30-13:30</td>
<td><strong>Lunch</strong> (Teratai Coffee Shop)</td>
<td></td>
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<tr>
<td>13:30-15:30</td>
<td><strong>Ad-hoc and Sensor Networks II</strong></td>
<td><strong>Wireless Networking</strong></td>
</tr>
<tr>
<td></td>
<td>(3A) Room : The Denpasar Ballroom A</td>
<td>(3B) Room : The Denpasar Ballroom B</td>
</tr>
<tr>
<td>15:30-15:50</td>
<td><strong>Coffee Break</strong></td>
<td></td>
</tr>
<tr>
<td>15:50-17:50</td>
<td><strong>Network and Service Management I</strong></td>
<td><strong>Network and Service Management II</strong></td>
</tr>
<tr>
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<td>(4A) Room : The Denpasar Ballroom A</td>
<td>(4B) Room : The Denpasar Ballroom B</td>
</tr>
<tr>
<td>18:00-20:00</td>
<td><strong>Banquet</strong></td>
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<tr>
<td><strong>February 2, 2012 (Thursday)</strong></td>
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<td>08:30-</td>
<td><strong>Registration Open</strong></td>
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<td>09:00-11:00</td>
<td><strong>Network Security</strong></td>
<td><strong>Wireless Communications</strong></td>
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<td>(5A) Room : The Denpasar Ballroom A</td>
<td>(5B) Room : The Denpasar Ballroom B</td>
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<tr>
<td>11:00-11:10</td>
<td><strong>Coffee Break</strong></td>
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<tr>
<td>11:10-12:30</td>
<td><strong>Poster Session II</strong></td>
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<td>12:30-13:30</td>
<td><strong>Lunch</strong> (Teratai Coffee Shop)</td>
<td></td>
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</tbody>
</table>
February 1, 2012 (Wednesday)

09:00-10:20
Tutorial Chair: Seong-Ho Jeong (HUFS, Korea)

Tutorial I:
Issues on WLAN Security and Rogue AP Detection
Prof. Souhwan Jung (Soongsil University, Korea)

Abstract:
Recently, WLAN security has been an emerging issue again as more people access WiFi for smart work or streaming services in public areas. New threats such as viral WiFi has been spreading wide for stealing private information of those who use WiFi services on the move. Rogue AP's are recognized as one of big threats to the companies that provides managed WiFi services for their employees. Detecting Rogue APs is not an easy problem as attacks through rogue APs evolves very intelligent. In this talk, we will review recent international standards activities on WLAN security and introduce key security issues on WiFi access and Rogue AP, and present recent research trends for detecting rogue APs.

Short Biography
Souhwan Jung (souhwanj@ssu.ac.kr) received the B.S., M.S., degrees in Electronics Engineering from Seoul National University in 1985, 1987, respectively, and a Ph.D degree in Electrical Engineering from University of Washington, Seattle, USA, in 1996. From 1988-1991, he joined Korea Telecom Research Center as a research staff on topics of Electronic Switching Systems. In 1997, he joined as an Assistant Professor in the Department of Information and Communication at Soongsil University, Korea. He worked as a project leader in several security development projects such as authentication and key management for network and VoIP applications. He also worked as a Program Manager of Information Security for the Ministry of Knowledge and Economy, Korea Government. He has published more than 100 scientific journals, patents, and standards regarding mobile security, network security, and application security. He is currently a professor of Faculty with the School of Electronic Engineering, Soongsil University, Korea. His current research interests are in WLAN security, trusted social network services, m2m security, and network security. He is a vice president of Korean Institute of Information Security and Cryptology.

February 1, 2012 (Wednesday)

10:40-12:00
Tutorial Chair: Sanghyun Ahn (University of Seoul, Korea)

Tutorial II:
Controllable Resiliency of WSNs for the Protecting from Internal Attacks
Prof. Xu Huang (University of Canberra, Australia)

Abstract:
A wireless sensor network (WSN) has been making up of a mass of spatially distributed autonomous sensors to monitor physical or environmental conditions, such as sound, water contamination, temperature, pressure, motion and other pollutants. In fact wireless sensor network has become part of our daily life.
However, security threats to WSNs become increasingly diversified, prevention based due to the open nature of the wireless medium an adversary can easily eavesdrop and replay or inject fabricated messages. Different cryptographic methods can be used to defend against some of such attacks but very limited. For example, node compromise is another major problem of WSN security as it allows an adversary to enter inside the security perimeter of the network, which raised a serious challenge for WSNs.
This tutorial will bring you to wireless sensor network security world, particularly we shall focus on internal attacks. What are the internal attacks? What is the “resiliency” of WSNs? What are the characterizers? What are the major challenges to those people who are working on this field? How to handle those challenges? What are current situations about this area? What are the future expecting outcomes for this area? Also the very current research results will be introduced.

The tutorial is useful for all network engineering, in particularly for those people who are working on the basic three layers (in terms of TCP/IP stuck, namely Network layer, data link layer and Physical layer. Currently we may say “network security becomes everybody’s business” so it can be understood this tutorial would contribute to almost every one. This tutorial will explore the attractive research areas dealing with every day’s business related to almost every field you can think of, especially the fields linking those three layers.

Short Biography
Xu Huang (Xu.Huang@canberra.edu.au) has received the B.E. and M.E. degrees and Ph.D. in Electrical Engineering and Optical Engineering prior to 1989 and the second Ph.D. in Experimental Physics in the University of New South Wales, Australia in 1992. He has earned the Graduate Certificate in Higher Education in 2004 at the University of Canberra, Australia. He has been working on the areas of the telecommunications, networking engineering,
wireless communications, optical communications, and digital signal processing more than 30 years. Currently he is the Head of the Engineering at the Faculty of Information Sciences and Engineering, University of Canberra, Australia. He is the Course Conveners “Doctor of Philosophy,” “Masters of Information Sciences (by research),” and “Master of Engineering.” He has been a senior member of IEEE in Electronics and in Computer Society since 1989 and a Fellow of Institution of Engineering Australian (FIEAust), Chartered Professional Engineering (CPEng), a Member of Australian Institute of Physics. He is a member of the Executive Committee of the Australian and New Zealand Association for Engineering Education, a member of Committee of the Institution of Engineering Australia at Canberra Branch. Professor Huang has published about one hundred and fifty papers in high level of the IEEE and other Journals and international conference.

February 1, 2012 (Wednesday)
10:40-12:00

Tutorial Chair: Hyukjoon Lee (Kwangwoon University, Korea)

Tutorial III:
Cyber Physical Systems: A New Science for Convergence
Prof. Kyung-Joon Park (DGIST, Korea)

Abstract:
Recently, the convergence of cyber and physical spaces has transformed traditional embedded systems into cyber physical systems (CPS), which are characterized by tight integration and coordination among computation and physical processes by networking. In CPS, various embedded devices with computational components are networked to monitor, sense, and actuate physical elements in the real world. Examples of CPS encompass a wide range of man-made systems such as avionics, healthcare, transportation, automation, and smart grid systems. In addition, the recent proliferation of smart phones and mobile Internet devices equipped with multiple sensors can be leveraged to enable mobile cyber-physical applications. In this tutorial, we provide an overview of CPS by summarizing recent research efforts and future opportunities for CPS. This tutorial will be especially useful for engineers and researchers in communication and networking, who are interested in understanding a new area of CPS and exploring new research opportunities in the convergence area.

Short Biography
Kyung-Joon Park received his B.S. and M.S. degrees from the School of Electrical Engineering and Ph.D. degree from the School of Electrical Engineering and Computer Science, Seoul National University (SNU), Korea. He is currently an Assistant Professor in the Department of Information and Communication Engineering, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea. He was a Postdoctoral Research Associate in the Department of Computer Science, University of Illinois at Urbana-Champaign (UIUC), IL, USA from 2006 to 2010. He was with Samsung Electronics, Suwon, Korea as a Senior Engineer, from 2005 to 2006, and was a visiting graduate student in the Department of Electrical and Computer Engineering, UIUC in 2001 and 2002. His current research interests include modeling and analysis of cyber physical systems and design of medical-grade protocols for wireless healthcare systems. He is currently serving on the editorial boards of European Transactions on Telecommunications. He is also currently serving as a workshops co-chair of IEEE SECON 2012. He has served as a TPC member of numerous international conferences on wireless networking. He has awarded the Samsung Human-Tech Thesis Prize multiple times. He is also a recipient of the Gold Prize in the Samsung InsideEdge Thesis Competition.
February 1, 2012 (Wednesday)

13:30 – 14:30

Keynote Speech : Towards the Internet of the Future

Keynote speaker : Professor Yanghee Choi, Seoul National University

Abstract:
As compared to the wireless telecom network which keeps its innovations every five years by introducing a new generation of solutions and products, Internet has not changed much since its invention forty years ago. However, Internet is experiencing a rapid growth as more devices are on the net, and as video becomes the primary information type carried over the Internet. It is now generally agreed that a new Internet with more powerful security and data carrying features is necessary to accommodate the ever expanding list of new requirements from the users, network and content providers.

In this keynote, a strategy “OPEN” is suggested and discussed. Open platform, open data, and open R&D will be the main components of the “OPEN” strategy for innovations and inventions in the Internet domain.

The Internet in the remote future will be very different from today’s Internet. What should be the fundamental characteristics of the Internet in 2030 will be the next main subject of the keynote.

Short Biography
Yanghee Choi received B.S. in electronics engineering from Seoul National University, M.S. in electrical engineering from Korea Advanced Institute of Science, and Doctor of Engineering in Computer Science from Ecole Nationale Superieure des Telecommunications (ENST) in Paris, in 1975, 1977 and 1984 respectively.


He was also Visiting Scientist to IBM T. J. Watson Research Center for the year 1988-1989. He is now leading the Multimedia and Mobile Communications Laboratory in Seoul National University. He was president of Open Systems and Internet Association of Korea. He was president of Korean Institute of Information Scientists and Engineers. He was also dean of Graduate School of Convergence Science and Technology (http://gscst.snu.ac.kr ), and president of Advanced Institutes of Convergence Technology (AICT, http://aict.snu.ac.kr ).

He is a fellow of Korean Academy of Science and Technology (KAST), the National Academy of Engineering of Korea (NAEK). He is also a member of President’s Council on Informatization Strategies (CIS). He is now the chair of Future Internet Forum (http://fif.kr ). He has published over 600 papers in Internet, multimedia communications and wireless networking.
February 1, 2012 (Wednesday)
15:00-17:00

Session 1A
Ad-hoc and Sensor Networks (I)
Chair: Albert K. Wong, Hong Kong University of Science and Technology, Hong Kong

[1A-1] A Route Discovery Method Based on Received Power of Repeater Nodes for Sensor Networks
Makoto Sugita, Yoshihiro KAINUMA, Kenko OTA, and Hideaki MATSUE (Tokyo University of Science, Suwa, Japan)

[1A-2] Timing Control for Protecting from Internal Attacks in Wireless Sensor Networks
Xu Huang, Muhammad Ahmed, and Dharmendra Sharma (University of Canberra, Australia)

[1A-3] Performance Improvement of TOA localization using IMR-based NLOS Detection in Sensor Networks
Kazutaka Fukuda and Eiji Okamoto (Nagoya Institute of Technology, Japan)

[1A-4] DC-MAC: Directional Cooperative MAC for Ad-Hoc Networks
Jung-Hyok Kwon, Eui-Jik Kim, Hyanhee Park (Korea University, Korea), Sang-Hong Lee (KT, Korea), and Chul-Hee Kang (Korea University, Korea)

Hikaru Ookura, Hiroshi Yamamoto, and Katsuyuki Yamazaki (Nagaoka University of Technology, Japan)

Session 1B
Internet and Web Applications
Chair: Younghwan Yoo, Pusan National University, Korea

[1B-1] The Evaluation of Communication Characteristic of Cellular Network and Development of Retransmission-Controlled TCP
Shuta Yokoyama, Hiroshi Yamamoto, and Katsuyuki Yamazaki (Nagaoka University of Technology, Japan)

[1B-2] An iterative Partial Path Protection-based approach for routing static D-connections in WDM transparent networks with SRLG constraints
Maroua Bakhri, Mohamed Koubaa, and Ammar Bouallegue (University of Tunis El Manar, Tunisia)

[1B-3] Lightpath-Level Active Rerouting Algorithms in All-Optical WDM Networks with Alternate Routing and Traffic Grooming
Sheng-Wei Wang and Chin-Yen Wen (Fo Guang University, Taiwan)

Ahmed Frikha (INRIA/IRISA - University of Rennes 1, France), Samer Lahoud, Bernard Cousin (IRISA, University of Rennes 1, France)

[1B-5] Secure Web Referral Service
Vijayakrishnman Nagarajan and Dijiang Huang (Arizona State University, USA)

[1B-6] Promoting Mashup Creation through Unstructured Data Extraction
Nassim Laga, Emmanuel Bertin (Orange Labs, France), Noel Crespi (Institut Télécom, Télécom SudParis, France)

February 2, 2012 (Thursday)
09:00-11:00

Session 2A
QoS and Resource Management
Chair: Emad Aboelela, Taibah University, Saudi Arabia

Cuong T. Do, Nguyen H. Tran, and Choong Seon Hong (Kyung Hee University, Korea)

Christian Schwartz, Rastin Pries, and Phuoc Tran-Gia (University of Wuerzburg, Germany)

Sunghee Lee, Seoang-Jun Oh (Kwangwoon University, Korea), Jinyo Hong (Hankuk University of Foreign Studies, Korea), Kwangsu Chung (Kwangwoon University, Korea)

Zaw Htike, Jun Lee, and Choong Seon Hong (Kyung Hee University, Korea)

Chan-Myung Kim, Yong-kwan Kim, In-Seok Kang, Kang-Whan Lee, and Youn-Hee Han (Korea University of Technology and Education, Korea)

Session 2B
Mobile Networks and Wireless LANs
Chair: Eiji Okamoto, Nagoya Institute of Technology, Japan

[2B-1] Coordinated TCP Westwood Congestion Control for Multiple Paths over Wireless Networks
Tuan Anh Le, Choong Seon Hong, and Eui-Nam Huh (Kyung Hee University, Korea)
Technical Sessions

Yongping Kong, Zhimin Zhong, Guanglong Yang (Guangzhou Research Institute of China Telecom, P.R. China), Xin Luo, Albert K. Wong (Hong Kong University of Science and Technology, Hong Kong), Haibin Zhai (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China)

[2B-3] Effective Packet Buffering for FMIPv6 Protocol over DiffServ Domain
Kwang Myung Kim, Suk Jung Yong, Back Sun Sim, Hee Yong Youn (Sungkyunkwan University, Korea), Ohyoung Song (Chung-Ang University, Korea)

[2B-4] Broadcast Packet Collision and Avoidance Method in Wi-Fi based Broadcast system
Dong Hyun Kim and Jong Deok Kim (Pusan National University, Korea)

Young-Jun Kim, Eung-Kyu Kim, Byoung-Woo Nam, Ilyoung Chong (Hankuk University of Foreign Studies, Korea)

13:30-15:30
Session 3A
Ad-hoc and Sensor Networks (II)
Chair: Ren-Song Ko, National Chung Cheng University, Taiwan

Md. Nurul Huda, Farzana Yasmeen, Shigeki Yamada, and Noboru Sonohara (National Institute of Informatics, Japan)

Haosong Gou, Sungryul Kim, and Younghwan (Pusan National University, Korea)

Kohta Ohshima, Hiroshi Hara, Yoichi Hagiwara, and Matsuaki Terada (Tokyo University of Agriculture and Technology, Japan)

Emad H. Aboelela and Altaf H Khan (Taibah University, Saudi Arabia)

Jaekwang Kim and Jee-Hyang Lee (Sungkyunkwan University, Korea)


Session 3B
Wireless Networking
Chair: Zbigniew Dzong, ETS (University of Quebec), Canada

Gunwoo Kim, Song-nan Bai, Pyungsun Park, Joonghyun Moon, and Jae-il Jung (Hanyang University, Korea)

Adnan Nasir, Hock Beng Lim, and Boon Hee Soong (Nanyang Technological University, Singapore)

[3B-3] A Practical Group Based Key Management Scheme for Ubiquitous Sensor Networks
Sanghwan Lee, Min Sun Jeong (Kookmin University, Korea), Hyunchoel Jeong, Hyang Jin Lee, Eun Young Choi (Korea Internet & Security Agency (KISA), Korea)

[3B-4] Mobility Tracking using GPS, Wi-Fi and Cell ID
Xiaoli Wang, Albert K. Wong (Hong Kong University of Science and Technology, Hong Kong), Yongping Kong (Guangzhou Research Institute of China Telecom, P.R. China)

[3B-5] A Low-Complexity Delay Injection Algorithm For Improving TCP Performance During LTE Intra Handover
Wooin Ahn, Yongsu Gwak, and Young Yong Kim (Yonsei University, Korea)

15:50-17:50
Session 4A
Network and Service Management (I)
Chair: Kuochen Wang, National Chiao Tung University, Taiwan

Shin Moriyasu (Tokyo University of Agriculture and Technology, Japan), Koji Tajima (Gifu National College of Technology, Japan), Kohta Ohshima, Matsuaki Terada (Tokyo University of Agriculture and Technology, Japan)

[4A-2] Distributed Hierarchical Service Network for Automotive Embedded System
Kabru Han, Yongsgeop Kwon, Wooyeon Kim, and Jeonghun Cho (Kyungpoong National University, Korea)

[4A-3] Centralized and distributed heuristic algorithms for application-level traffic routing
Kazuhiro Matsuda, Go HASEGAWA (Osaka University, Japan), Satoshi KAMEI, Masayuki MURATA ((NTT Service Integration Laboratories, Japan)

Ginhung Wang and Kuochen Wang (National Chiao Tung University, Taiwan)
Technical Sessions

Session 4B
Network and Service Management (II)
Chair: Hiroshi Yamamoto, Nagaoka University of Technology, Japan

[4A-5] A New Bit Rate Estimation Scheme for Unsupervised Segmentation of Video Content in IPTV Services
Hye-Jeong Cho, Kwangsu Lee, and Seoung-Jun Oh (Kwangwoon University, Korea)

Soung Yue Liew and Ming-Lee Gan (Universiti Tunku Abdul Rahman, Malaysia)

Session 4B
Network and Service Management (II)
Chair: Hiroshi Yamamoto, Nagaoka University of Technology, Japan

[4B-1] Greedy Virtual Network Embedding under an Exponential Cost Function
Hyungjin Kim and Sanghwan Lee (Kookmin University, Korea)

[4B-2] Multipath Interdomain Routing via Deviation from Primary Path
Donghong Qin, Jiuhai Yang, Hui Wang, Bin Zhang, Lei Gao, and Zhuolin Liu (Tsinghua University, P.R. China)

[4B-3] Toward Efficient Multi-Link Failure Diagnosis by Using Monitoring Cycle for All-Optical Mesh Networks
Chi-Shih Chao and Szu-pei Lu (Feng Chia University, Taiwan)

Hyeokju Lee, Myoungjin Kim, Joon Her, and Hanku Lee (Konkuk University, Korea)

[4B-5] Fast Enlarging a BitTorrent Swarm via Social Networking
Shu-Ming Chang and Ren-Song Ko (National Chung Cheng University, Taiwan)

February 3, 2012 (Friday)
09:00-11:00

Session 5A
Network Security
Chair: Ching-Lung Chang, National Yunlin University of Science & Technology, Taiwan

[5A-1] Iterative Method for Correction of Messages protected by symmetric Cryptographic Check Values
Zivic Natasa (University of Siegen, Germany)

[5A-2] Quantum Cryptography Based Key Distribution in WiFi Networks
Xu Huang, Shirantha Wijesekera, and Dharmendra Sharma (University of Canberra, Australia)

[5A-3] Stopping Time Condition for Practical Cryptographically Generated Addresses
Ahmad AlSa’deh and Hosnieh Rafiee, and Christoph Meinel (Hasso-Plattner-Institut, Germany)

[5A-4] Detecting and Defending against Malicious Attacks in the iTrust Information Retrieval Network
Yung-Ting Chuang, Isai Michel Lombera, Michael Melliar-Smith, and Louise E. Moser (University of California, Santa Barbara, USA)

Hosnieh Rafiee, Ahmad AlSa’deh, and Christoph Meinel (Hasso Plattner Institute, University of Potsdam, Germany)

Session 5B
Wireless Communications
Chair: Jung Ryun Lee, Chung-Ang University, Korea

[5B-1] Efficient Nonlinear Equalization Scheme for MIMO Constant Envelope Modulation Receivers Affected by Quantization Error
Kohei Koteru, Osamu Muta, and Hiroshi FURUKAWA (Kynshu University, Japan)

[5B-2] Doppler Spread and its Compensation by FDE and Turbo Code
Haeseong Jeong, Do-Hoon Kim, and Heung-Gyoon Ryu (Chungbuk National University, Korea)

[5B-3] Power Analysis and Modeling Based on Field Measurements Using 3.5 GHz WiMAX Network
Yazan Alqudah (PSUT, USA)

[5B-4] Regular Deployment Patterns for p-Coverage and q-Connectivity in Wireless Sensor Networks
Yong-Iwan Kim, Chan-Myung Kim, Dong-Sun Yang, Young-Jun Oh, and Tae-Hy Hee Han (Korea University of Technology and Education, Korea)

[5B-5] Performance Evaluation of Crosspoint queued Switch Supporting Multicast Traffic
Ting Zhou, Youjian Zhao, and Yunmei Xiao (Tsinghua University, P.R. China)
February 2, 2012 (Thursday)
11:10-12:30

Poster Session I
Chair: Jussi Kangasharju, University of Helsinki, Finland

[P1-1] Design and Implementation of Scalable Distributed Wireless Network Emulator for High-Speed Mobility
Minoru Koizumi, Tomoichi Ebata (Yokohama Research Laboratory, Japan), Tomoaki Tsutsumi, Kohta Ohshima, Matsuaki Terada (Tokyo University of Agriculture and Technology, Japan)

Sungwoon Tuk, Taehoon Kim, and Heekyum Kim (Pusan National University, Korea)

Xu Huang, Dharmendra Sharma (University of Canberra, Australia), Hongyan Cui (Beijing University of Posts and Telecommunications, China)

[P1-4] Performance Evaluation of Energy Saving in Core Router Architecture with Low Power Idle for OBS Networks
Won-Hyuk Yang, Jin-nyo Yang, and Young-Chon Kim (Chonbuk National University, Korea)

[P1-5] Bandwidth Allocation Algorithm for Improving QoS in EPON with Sleep Mode
Jin-nyo Yang, Won-Hyuk Yang, and Young-Chon Kim (Chonbuk National University, Korea)

Yonchanok Khaoaew Khaokaew (King Mongkut’s University of Technology North Bangkok, Thailand), Sirikarn Pukkawanna (Nara Institute of Science and Technology, Japan)

[P1-7] An Efficient AP Channel Scanning Scheme for Mobility over WiMax
Heesong Kim, Jun Yeol Choi, Kyu Sung Ahn, Hee Yong Youn (Sungkyunkwan University, Korea), Ohyoung Song (Chung-Ang University, Korea)

Hyocheol Jeong, Hyeonjun Jeong, and Younghwan Yoo (Pusan National University, Korea)

Anbin Kim and Seong-Ho Jeong (Hankuk University of Foreign Studies, Korea)

[P1-10] A Deployable Upload Acceleration Service for Mobile Devices
Yan Pu and Akihiro Nakao (University of Tokyo, Japan)

Do Tronghop, Junho Hwang, Souhwan Jung, Yoan Shin, and Myungsik Yoo (Soongsil University, Korea)

[P1-12] Capacity-Optimal Relay and Base Station Placement in Wireless Networks
Md H Islam, Zhiguo Dziong (University of Quebec, Canada), Kazem Sohraby (University of Arkansas, USA), Mahmoud Daneshmand, Rittwik Jana (AT&T Labs Research, USA)

Gunhee Lee, Jae Hoon Ko, Seongyoul Oh, Chee-Ha Kim (POSTECH, Korea)

[P1-14] SISO Polarized Flat Fading Channel Modeling for Dual-polarized Antenna Systems
KwangHyun Jeon, Bing Hui, KyungHi Chang (Inha University, Korea), HyeongSook Park, Youn Ok Park (Electronics and Telecommunications Research Institute, Korea)

Woo Sik Lee(Kyonggi University, Korea), and Min Choi (University of Chungbuk), Namgi Kim (Kyonggi University, Korea)

Sang-woo Chang, Jin Cha, and Sang-Sun Lee (Hanyang University, Korea)

[P1-17] Surveying Wikipedia Activity: Collaboration, Commercialism, and Culture
Ossi Karkulahti and Jussi Kangasharju (University of Helsinki, Finland)

[P1-18] Inter-pMIPv6 Mobility Management using Core-Edge Separation Network
Whosjung Jung, Jaeyong Lee, and Byungchul Kim (Chungnam National University, Korea)

Sangdo Lee, Aran Kim, Hyeopgeon Lee, and Yongtae Shin (Soongsil University, Korea)

[P1-20] An Enhanced Key Management Using ZigBee Pro for Wireless Sensor Networks
Kyung Choi, Minjung Yun, Kijoon Chae (Ewha Womans University, Korea), Mihui Kim (Hankyong National University, Korea)

[P1-21] Transparent Caching Scheme on Advanced Relay Nodes for Streaming Services
Sho Nishimura (University of Kitakyushu, Japan), Masayoshi Shimamura (Tokyo Institute of Technology, Japan), Hiroyuki Koga (University of Kitakyushu, Japan), Takeshi Ikenaga (Kyushu Institute of Technology, Japan)

[P1-22] Mobility Aware Hybrid Routing Protocol for Mobile Ad hoc Network
Mi-Seon Kang, Dong-Won Kun, Jae-Seoung Bae, You-Ze Cho, (Kyungpook National University, Korea), Anh-Ngoc Le (Electric Power University, Vietnam)
Jiwon Jang, Hyunwoo Nam, and Younghan Kim (University of Soongsil, Korea)

[P1-24] Hybrid Recommender System with Temporal Information
Farman Ullah, Ghulam Sarwar, Sunghang Lee (Korea Aerospace University, Korea), Yun Kyung Park, Kyeong Deok Moon, Jin Tae Kim (ETRI, Korea)

Seungchur Yang and Jong-Deok Kim (Pusan National University, Korea)

[P1-26] Carbon Offsetting through Computer Network Redesign
Sami Habib and Paulvanna Nayaki Marinuthu (Kuwait University, Kuwait)

February 3, 2012 (Friday)
11:10-12:30
Poster Session II
Chair: Ho-Hyun Park, Chung-Ang University, Korea

[P2-1] The Design of Video Streaming Proxy in High-Speed Train
Ching-Lung Chang, Xan-Hua Hsieh (National Yunlin University of Science and Technology, Taiwan), Wei-Ming Chen (National Ilan University, Taiwan)

[P2-2] A Reliable Contents Distribution Middleware System for Peer-to-Peer Networks
Sanghyun Ahn (University of Seoul, Korea), Yoonhee Kim (Sookmyung Women's University, Korea)

Hiroomi Isozaki (Kitakyushu National College of Technology, Japan); Shingo Ata, Ikuo Oka (Osaka City University, Japan)

[P2-4] QoS Support for Advanced Multimedia Systems
Anhbin Kim, Seong-Ho Jeong (Hankuk University of Foreign Studies, Korea), Pyung-Koo Park, Ho Yong Ryu (Electronics and Telecommunications Research Institute, Korea)

Jin Sun Kim, Jongwon Choe (Sookmyung Women's University, Korea), Hyukjoon Lee (Kwangwoon University, Korea)

[P2-6] Differences in Bandwidth Requirements of Various Applications due to IPv6 Migration
Saowaphak Sasanus (TOT Public Co. Ltd. Thailand), Kamol Kaemarungsi (National Electronics and Computer Technology Center, Thailand)

[P2-7] Battery Life Time Extension Method Using Selective Data Reception on Smartphone
Min Woo Kim, Dong Geun Yun (Chungbuk National University, Korea), Jong Min Lee (SK Telecom, Korea), Seong Gon Choi (Chungbuk National University, Korea)

Hyungkus Park and Yilhyung Lee (Yonsei University, Korea)

Seung Hyung Rhee, Hwa-Sung Kim (Kwangwoon University, Korea), Seung-Won Sohn (ETRI, Korea)

[P2-10] Multidimensional Assessment and Principal Component Analysis of QoE in Interactive Multi-View Video and Audio IP Communications
Takayoshi Ichikawa, Toshiro Nunome, and Shuji Tasaka (Nagoya Institute of Technology, Japan)

[P2-11] Power Analysis and Communication Capacity of 1-60GHz Wireless Communication in Multipath Environment
Jae Hoon Choi, Junyeong Bok, and Heung-Gyoon Ryu (Chungbuk National University, Korea)

[P2-12] An Adaptive UDT Congestion Control Method with Reflecting of the Network Status
Dosik An, Jongseon Park (Chonbuk National University, Korea), Gicheol Wang (KISTI, Korea), Cho Gihwan (Chonbuk National University, Korea)

Sung-Min Jung, Tai Myoung Chung, and Nam-Uk Kim (Sungkyunkwan University, Korea)

[P2-14] Implementation of Inter-Domain Path Computation Element
Byeongsik Kim (ETRI, Korea)

Hongsook Lee, KangWoo Lee, Kwan Min Lee, and Hyunseung Choo (Sungkyunkwan University, Korea)

[P2-16] A Case Study on Oscillating Behavior of End-to-End Network Latency
JunSeong Kim, Jongsu Yi, Ho-Hyun Park (Chung-Ang University, Korea)

[P2-17] A Trust-based Broadcasting Algorithm for Safe USN
Ji-Young Choi, Hyo-Jin Kim, Jin-Ki Park, JunSeong kim, and Ho-Hyun Park (Chung-Ang University, Korea)

Min Wei and Keecheon Kim (Konkuk University, Korea), Ping Wang (Chongqing University of Posts and Telecommunications, China)
Poster Sessions

[P2-19] Dynamic Spectrum Allocation in Adjacent Regions with Physical Interference Based Geographic Coupling Parameter
Yunseok Kang, Sooyeol Im, and Hyuckjae Lee (Korea Advanced Institute of Science and Technology (KAIST), Korea)

Kyengheum Na, Heungwoo Nam, and Sunshin An (Korea University, Korea)

[P2-21] FiRST Cloud Aggregate Manager Development over FiRST: Future Internet Testbed
Hyunjun Kim and Sungwon Lee (Kyung Hee University, Korea)

Gaolei Fei and Guangmin Hu (University of Electronic Science and Technology of China, P.R. China)

Guofu Xiang, Hai Jin, and Deqing Zou (Huazhong University of Science and Technology, P.R. China)

[P2-24] Hardware Complexity of SHA-1 and SHA-256 Based on Area and Time Analysis
Jun-Cheol Jeon, Kang-Joong Seo, and Kee-Won Kim (Woosuk University, Korea)

K. S. Kim (CoreEngineering, Korea), K. Y. Kim, K. H. Lee (Chungbuk National University), T. K. Kim (KOBIC, Korea), W. S. Cho (Chungbuk National University, Korea)

Conference Room Map
Reservation Information for The Patra Bali Resort & Villas

Location:
Just 5 (five) minutes from the airport and central Kuta, The Patra Bali Resort & Villas is strategically located from which to enjoy the island at your own leisurely pace.

Reservation Department The Patra Bali Resort & Villas:
• Phone: +62-361-9351-161
• Fax: +62-361-9352-030

Address:
Jl. Ir. H Juanda, South Kuta Beach, Kuta 80361, Bali – Indonesia.
Travel Information

General Information: Bali (Indonesia)

Bali Island, the perfect holiday destination for all ages offers something for everyone. Bali offers not just various customs but also various "adrenalin pump" parks. Many exciting amusements are available in Bali, with something new opening all the time. The number of offshore and inland attraction are on the rise because many tourists want them. This tropical paradise has a unique blend of modern tourist facilities combined with wonderful shopping and a rich past and heritage. After white water rafting that has gained popularity in Bali, comes offshore rafting or ocean rafting. The more adventurous sort of amusement has now become an alternative sport for tourists. Meanwhile white water rafting is still a popular activity with trips on Ayung, Telaga Waja, Unda Rivers, etc. The tourists can refresh their mind by watching beautiful scenery along the route. Those are not enough, some of the best surfing beaches in the world can be found on the western side of the island whilst conversely the eastern side is a wonderful haven for families, with beautiful white sand beaches and gentle seas.

Bali is small island, just 140 Km by 80 Km and lies between Java, the most highly populated and influential of all the islands, and Lombok, one of the quieter and moderately slower paced islands. Like many islands, Bali has developed a world of its own. It not only captures what is special about Indonesia but also has a uniqueness of its own.

• Geographically
Bali is volcanically active and extravagantly fertile. Bali has an area of 5,620 sq km, measures approximately 140 km by 80 km and is just 8 degrees south of the equator.

• Climate
Bali has a climate that is tropical all year. The average temperature hovers around 30 degrees Celsius year-round. There are dry and wet seasons -dry from April to September and wet from October to March- but it can rain at any time of year and even during the wet season rain is likely to pass quickly. In general May to August are the best months in Bali. At that time of year the climate is likely to be cooler and the rains lightest. Around the coast, sea breezes temper the heat and as we move inland we also move up so the altitude works to keep things cool.

• Population
With 2.5 million people, Bali is a very densely populated island. The population is almost all Indonesian, with the usual small Chinese contingent in the big towns, a sprinkling of Indian merchants, plus a number of more or less permanent visitors amongst the Westerners in Bali.
Travel Information

• **Culture**
Each stage of Balinese life is marked by a series of ceremonies and rituals known as Manusa Yadnya. They contribute to the rich, varied and active life the average Balinese leads. There are ceremonies for every stage of Balinese life but often the last cremation ceremony is the biggest.

• **Pura Luhur (Uluwatu) Temple**
Pura Luhur Uluwatu is one of Bali’s kayangan jagat (directional temples) and guards Bali from evil spirits from the SW, in which dwell major deities, in Uluwatu's case; Bhatara Rudra, God of the elements and of cosmic force majeures. Bali’s most spectacular temples located high on a cliff top at the edge of a plateau 250 feet above the waves of the Indian Ocean. Uluwatu lies at the southern tip of Bali in Badung Regency. Dedicated to the spirits of the sea, the famous Pura Luhur Uluwatu temple is an architectural wonder in black coral rock, beautifully designed with spectacular views. This is a popular place to enjoy the sunset. Famous not only for its unique position, Uluwatu also boasts one of the oldest temples in Bali, Pura Uluwatu. Most of Bali's regencies have Pura Luhur (literally high temples or ascension temples) which become the focus for massive pilgrimages during three or five day odalan anniversaries. The photogenic Tanah Lot and the Bat Cave temple, Goa Lawah, is also Pura Luhur. Not all Pura Luhur are on the coast, however but all have inspiring locations, overlooking large bodies of water.

• **UBUD**
Ubud is Bali’s cultural heart. This area is located in the cool mountains, just one hour's drive north of the airport and the resorts of southern Bali, this traditional country town is the home of the Balinese Royal family and a flourishing arts centre. Most of Bali's museums and galleries are centered in Ubud, but culture and history rich Bali is peppered with museums and galleries. These museums and galleries offer paintings, woodcarvings, textiles and all kinds of souvenirs for viewing and also purchase. Puri Lukisan Museum in centre of Ubud, Neka Museum in Campuhan, Seniwati Gallery and Agung Rai Museum in Pengosekan is a must, to see the difference between creative art and more commercial products.

• **Tanah Lot Temple**
Tanah Lot is located about 12 kilometers from Tabanan City and 20 kilometers from Denpasar. The area comprises a wondrous mixture of natural beauty and sheer human effort. Here lies an idyllic white sand beach with crashing waves, complemented by a small yet majestic temple. This temple, known as Pura Tanah Lot, juts out to sea on a rocky background. Tanah Lot attracts throngs of both locals and tourists daily. Most come here longing to catch a glimpse of the romantic Tanah Lot sunsets, a regular occurrence during the dry season (April to November).