



The International Conference on Information Networking 2012 (ICOIN 2012)



Conference Program

1-3 February 2012

The Patra Bali Resort & Villas, Bali, Indonesia

Sponsored by



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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

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

TIME	Track 1	Track2
January 31, 2012 (Tuesday)		
14:00-17:30	Organizing Committee & Steering Committee Meetings	
February 1, 2012 (Wednesday)		
08:30-	Registration Open	
09:00-10:20	Tutorial I Room : The Denpasar Ballroom	
10:20-10:40	Coffee Break	
10:40-12:00	Tutorial II Room : The Denpasar Ballroom A	Tutorial III Room : The Denpasar Ballroom B
12:00-13:30	Lunch (Teratai Coffee Shop)	
13:30-14:30	Opening/Welcome Address and Keynote Speech	
14:30-15:00	Coffee Break	
15:00-17:00	Ad-hoc and Sensor Networks I (1A) Room : The Denpasar Ballroom A	Internet and Web Applications (1B) Room : The Denpasar Ballroom B
February 2, 2012 (Thursday)		
08:30-	Registration Open	
09:00-11:00	QoS and Resource Management (2A) Room : The Denpasar Ballroom A	Mobile Networks and Wireless LANs (2B) Room : The Denpasar Ballroom B
11:00-11:10	Coffee Break	
11:10-12:30	Poster Session I	
12:30-13:30	Lunch (Teratai Coffee Shop)	
13:30-15:30	Ad-hoc and Sensor Networks II (3A) Room : The Denpasar Ballroom A	Wireless Networking (3B) Room : The Denpasar Ballroom B
15:30-15:50	Coffee Break	
15:50-17:50	Network and Service Management I (4A) Room : The Denpasar Ballroom A	Network and Service Management II (4B) Room : The Denpasar Ballroom B
18:00-20:00	Banquet Room : The Denpasar Ballroom	
February 3, 2012 (Friday)		
08:30-	Registration Open	
09:00-11:00	Network Security (5A) Room : The Denpasar Ballroom A	Wireless Communications (5B) Room : The Denpasar Ballroom B
11:00-11:10	Coffee Break	
11:10-12:30	Poster Session II	
12:30-13:30	Lunch (Teratai Coffee Shop)	

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 protocol developments 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 stack, 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.

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)

10:40-12:00

Tutorial Chair: Hyukjoon Lee (Kwangju University, Korea)

Tutorial III: Cyber Physical Systems: A New Science for Convergence

Prof. Kyung-Joon Park (DGIST, Korea)

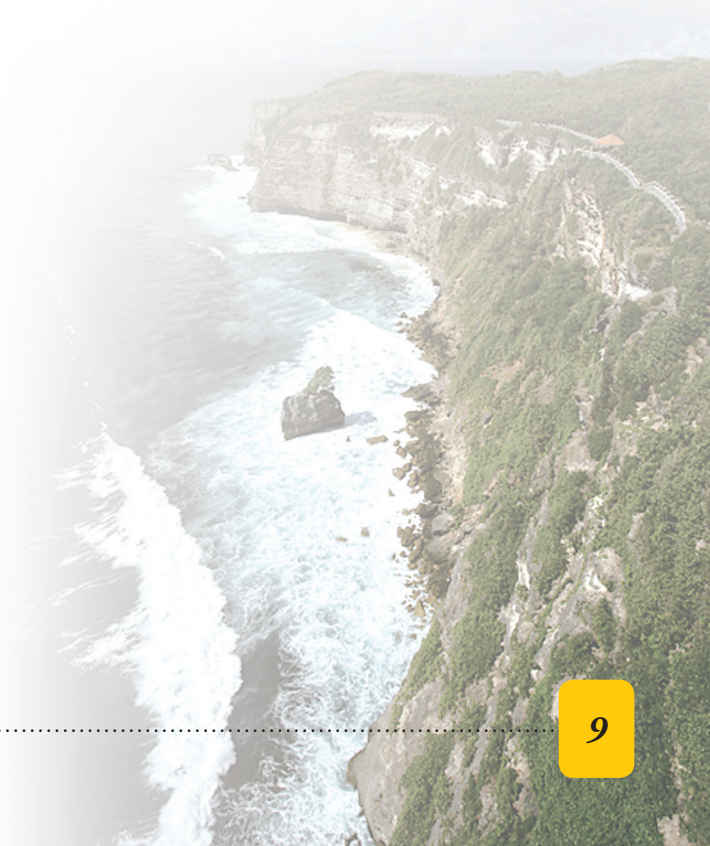
Abstract:

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,





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 Supérieure des Telecommunications (ENST) in Paris, in 1975, 1977 and 1984 respectively.

Before joining the School of Computer Science and Engineering, Seoul National University in 1991, he has been with Electronics and Telecommunications Research Institute (ETRI) during 1977-1991, where he served as director of Data Communication Section, and Protocol Engineering Center. He was research student at Centre National d’Etude des Telecommunications (CNET), Issy-les-Moulineaux, during 1981-1984.

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://fifkr>). 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, Hyunhee Park (Korea University, Korea), Sang-Hong Lee (KT, Korea), and Chul-Hee Kang (Korea University, Korea)

[1A-5] Development and Evaluation of Walking Path Estimation System using Sensors of Android Device and Vector Map Matching

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 Bakri, 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)

[1B-4] Candidate-Cycle-based Heuristic Algorithm for Node-and-Link Protection of Dynamic Multicast Traffic in Optical DWDM Networks

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

Vijayakrishnan 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

[2A-1] Throughput Maximization for The Secondary User over Multi-channel Cognitive Radio Networks

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

[2A-2] A Queuing Analysis of an Energy-Saving Mechanism in Data Centers

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

[2A-3] Adaptive Rate Control Scheme to Improve QoS of Multimedia Streaming Application

Sunghee Lee, Seoung-Jun Oh (Kwangwoon University, Korea), Jinpyo Hong (Hankuk University of Foreign Studies, Korea), Kwangsue Chung (Kwangwoon University, Korea)

[2A-4] A MAC Protocol for Cognitive Radio Networks with Reliable Control Channels Assignment

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

[2A-5] A Scheduling Algorithm for Connected Target Coverage under Probabilistic Coverage Model

Chan-Myung Kim, Yong-hwan 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)

[2B-2] A Non-Parametric Kernel Method for CDMA2000 Network Indoor Localization Using Multiple Observations
 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 Broadcasting system
 Dong Hyun Kim and Jong Deok Kim (Pusan National University, Korea)

[2B-5] Service Composition using New DSON Platform Architecture for M2M Service
 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

[3A-1] An Approach for Short Message Resilience in Disaster-Stricken Areas
 Md. Nurul Huda, Farzana Yasmeen, Shigeki Yamada, and Noboru Sonehara (National Institute of Informatics, Japan)

[3A-2] A Bit Collision Detection Based Query Tree Protocol for Sensor Tags in Logistics management
 Haosong Gou, Sungryul Kim, and Younghwan (Pusan National University, Korea),

[3A-3] Field Investigation of the Radio Transmission Performance and Distance in a Environmental Wireless Sensor Network
 Kohta Ohshima, Hiroshi Hara, Yoichi Hagiwara, and Matsuaki Terada (Tokyo University of Agriculture and Technology, Japan)

[3A-4] Wireless Sensors and Neural Networks for Intruders Detection and Classification
 Emad H. Aboelela and Altaf H Khan (Taibah University, Saudi Arabia)

[3A-5] ViTAMin: A Virtual Backbone Tree Algorithm for Minimal Energy Consumption in Wireless Sensor Network Routing
 Jaekwang Kim and Jee-Hyong Lee (Sungkyunkwan University, Korea)

[3A-6] An Improved Routing mechanism using Bio-Inspired for Energy Balancing in Wireless Sensor Networks
 Ahmed M. Shamsan Al-Mshreqi, Borhanuddin Mohd Ali, Mohd Fadlee A. Rasid, Alyani Ismail, and Pooria Varahram (UPM, Malaysia)

Session 3B

Wireless Networking

Chair: Zbigniew Dziong, ETS (University of Quebec), Canada

[3B-1] A Structured TDMA-based V2I MAC Protocol for Automated Guided Vehicle Control Systems
 Gunwoo Kim, Song-nan Bai, Pyungsun Park, Joonghyun Moon, and Jae-il Jung (Hanyang University, Korea)

[3B-2] An Integrated Vehicular and Urban Sensing System: Framework and Modeling
 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), Hyuncheol 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
 Woojin 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

[4A-1] Group Synchronization Method with Fast Response Time for VoD Services

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
 Kabsu Han, Yongseop Kwon, Wooyeon Kim, and Jeonghun Cho (Kyungpook National University, Korea)

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

[4A-4] An Efficient Hybrid P2P MMOG Cloud Architecture for Dynamic Load Management
 Ginhung Wang and Kuochen Wang (National Chiao Tung University, Taiwan)

[4A-5] A New Bit Rate Estimation Scheme for Unsupervised Segmentation of Video Content in IPTV Services

Hye-Jeong Cho, Kwangsue Chung, and Seoung-Jun Oh (Kwangwoon University, Korea)

[4A-6] An Exact Optimum Paths-Finding Algorithm for α +1 Path Protection

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, Jiahai 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)

[4B-4] Implementation of MapReduce-based Image Conversion Module in Cloud Computing Environment

Hyekju 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)

[5A-5] Multicore-Based Auto-Scaling SEcure Neighbor Discovery for Windows Operating Systems

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 Kotera, Osamu Muta, and Hiroshi FURUKAWA (Kyushu 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-hwan Kim, Chan-Myung Kim, Dong-Sun Yang, Young-jun Oh, and Youn-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)

[P1-2] A Performance Comparison Study of k-Shortest Disjoint Forwarding Paths in Ship Backbone Networks

Sungwoo Tak, Taehoon Kim, and Heekyum Kim (Pusan National University, Korea)

[P1-3] Fuzzy Controlling Window for Elliptic Curve Cryptography in Wireless Sensor Networks

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-hyo Jung, and Young-Chon Kim (Chonbuk National University, Korea)

[P1-5] Bandwidth Allocation Algorithm for Improving QoS in EPON with Sleep Mode

Jin-hyo Jung, Won-Hyuk Yang, and Young-Chon Kim (Chonbuk National University, Korea)

[P1-6] Time Series Anomaly Detection using Recessive Subsequence

Yonchanok Khaokaew, 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

Heeseong Kim, Jun Yeol Choi, Kyu Sung Ahn, Hee Yong Youn (Sungkyunkwan University, Korea), Ohyoung Song (Chung-Ang University, Korea)

[P1-8] Dynamic Probabilistic Flooding Algorithm based-on Neighbor Information in Wireless Sensor Networks

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

[P1-9] A QoS/QoE Control Architecture for Multimedia Communications

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)

[P1-11] Modeling and Analysis of the Wireless Channel formed by LED Angle in Visible Light Communication

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, Zbigniew Dziong (University of Quebec, Canada), Kazem Sohraby (University of Arkansas, USA), Mahmoud Daneshmand, Rittwik Jana (AT&T Labs Research, USA)

[P1-13] Sensing and Transmission Parameter Determination for Cognitive Radio Networks

Gunhee Lee, Jae Hoon Ko, Seoungyool 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), Hyeongsok Park, Youn Ok Park (Electronics and Telecommunications Research Institute, Korea)

[P1-15] Experimental Link Channel Characteristics in Wireless Body Sensor Systems

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

[P1-16] Adaptive EDCA Mechanism for Vehicular Ad-hoc Network

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

Whojin Jung, Jaeyong Lee, and Byungchul Kim (Chungnam National University, Korea)

[P1-19] A Secure Information Flow Architecture for Public Web Service

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 Kum, Jae-Seoung Bae, You-Ze Cho, (Kyungpook National University, Korea), Anh-Ngoc Le (Electric Power University, Vietnam)

[P1-23] Mobile Device-controlled Live Streaming Traffic Transfer for a Multi-Screen Service

Jiwon Jang, Hyunwoo Nam, and Younghan Kim (University of Soongsil, Korea)

[P1-24] Hybrid Recommender System with Temporal Information

Farman Ullah, Ghulam Sarwar, Sungchang Lee (Korea Aerospace University, Korea), Yun Kyung Park, Kyeong Deok Moon, Jin Tae Kim (ETRI, Korea)

[P1-25] Association Information Management using MAC Subnet Addressing in Wireless Mesh Networks

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

[P1-26] Carbon Offsetting through Computer Network Redesign

Sami Habib and Paulvanna Nayaki Marimuthu (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)

[P2-3] Modeling of Flows based on Behavior of Applications

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

[P2-4] QoS Support for Advanced Multimedia Systems

Anbin Kim, Seong-Ho Jeong (Hankuk University of Foreign Studies, Korea), Pyung-Koo Park, Ho Yong Ryu (Electronics and Telecommunications Research Institute, Korea)

[P2-5] Multipath AODV Extension with CORE-node using Path Accumulation

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 Kaemarungsri (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 (SKTelecom, Korea), Seong Gon Choi (Chungbuk National University, Korea)

[P2-8] A Method for Transferring More Information Between Objects on Offline Network

Hyungkun Park and Yillbyung Lee (Yonsei University, Korea)

[P2-9] The Effect of Decentralized Resource Allocation in Network-Centric Warfare

Seung Hyong 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)

[P2-13] The Clusterhead Chaining Scheme Considering Scalability of the Wireless Sensor Networks

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)

[P2-15] Similarity Attraction Effects in Mobile Advertisement: Interaction between User Personality and Advertisement Personality

Hongseok 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

JunSeon 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)

[P2-18] Research on A Mutual Authentication Scheme for Wireless Sensor Networks

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)

[P2-20] Wireless Sensor Network using Internetworking

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)

[P2-22] Temporal Dependence Network Loss Tomography Using Maximum Pseudo Likelihood Method

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

[P2-23] A Comprehensive Monitoring Framework for Virtual Computing Environment

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

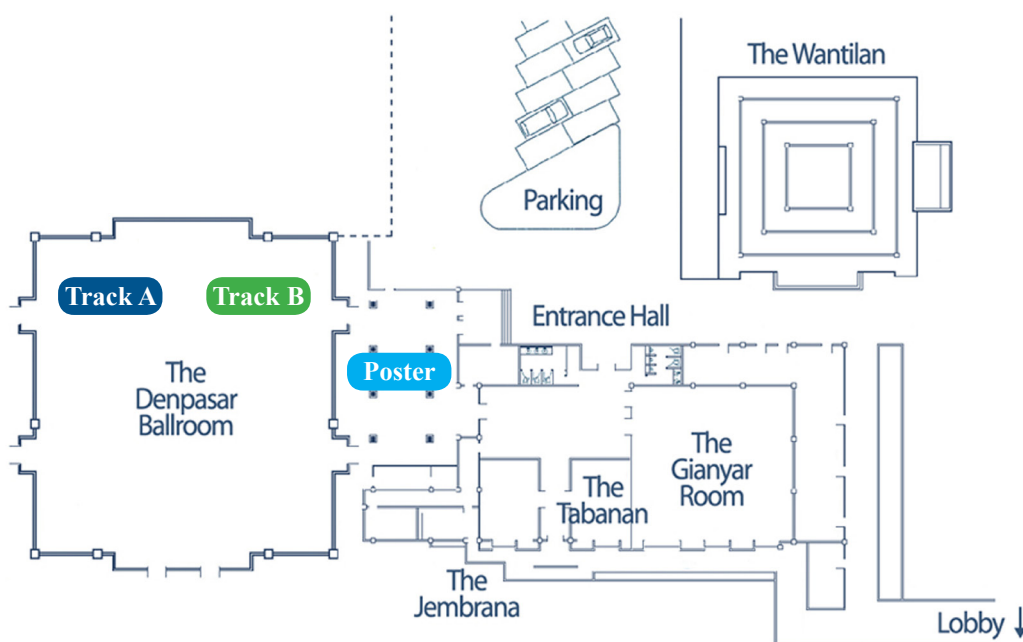
[P2-24] Hardware Complexity of SHA-1 and SHA-256 Based on Area and Time Analysis

Jun-Cheol Jeon, Kang-Joong Seo, and Kee-Won Kim (Woosuk University, Korea)

[P2-25] Design and Implementation of Web Crawler Based on Dynamic Web Collection Cycle

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



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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.

• 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 majeure. 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).





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