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  Hyuk Lim  GIST, Korea
  Hyunggon Park  Ewha Womans University, Korea
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  Joon-Sang Park  Hongik University, Korea
  Kyung-Joon Park  DGIST, Korea
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  Dongsoo Har  KAIST, Korea
  Li-Der Chou  National Central University, Taiwan
  Yee Loo Foo  Multimedia University, Malaysia
  Tapio Frantti  Renesas Mobile Europe Ltd., Finland
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  Nariyoshi Yamai  Sandisk India Device Design Center, India
  Skanda Mutalal  Waterford Institute of Technology, Ireland.
  Steven Davy  International Islamic University IIUM, Malaysia
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  Fumio Teraoka  University of the Faroe Islands, Island
  Qin Xin  Saitama Institute of Tech., Japan
  Katsushi Kobayashi  Kookmin University, Korea
  Kohta Ohshima  Kookmin University, Korea
Greetings

Message from the General Co-Chairs

On behalf of the organizing committee for the ICOIN 2014, we would like to extend our warmest welcome to all of you to the conference and Phuket, one of the most beautiful islands in the world.

Recent advances in information networking technologies have created new possibilities, across the wide spectrum of human life, and will continue to offer tremendous opportunities for economic growth and social prosperity. As information networking systems continue to pervade in our daily lives, so is our need to deal with a host of issues and challenges, some of which were known and became critical as these systems evolved and others arose recently as a result of the increase in their scale, heterogeneity and complexity.

The ICOIN has brought together a rich diversity of authors and speakers from universities, government and industry around the world to share ideas and new perspectives on a wide range of information networking research and technologies. The ICOIN focuses on a broad range of issues and challenges in information networking and weaves them through the Keynote Speech, Tutorials, and Technical Sessions. Continuing the tradition of excellence and success of the past ICOIN events, we have received a large volume of high-quality submissions, an indicator of the ICOIN’s position as a prestigious international conference. This year, the ICOIN will deliver a stimulating, informative and delightful program in the areas of 5G/B4G Cellular Systems, Cloud Systems and Networks, CCN/ICN, Cyber Physical Systems, D2D Communication, Future Internet, Internet of Things, as well as Ad-hoc and Sensor Networks, Mobile Networks, Cognitive Radio and Wireless Networks, Cooperative Communications, Network Security, Applications and Service Management, QoS and Resource Management, Mesh Networking and much more. We are certain that this forum will be further enriched with the keynote speech by Professor Rui Luis Aguiar and two tutorials by Dr. Jose Costa-Requena and Dr. Jerzy Konorski. We hope all participants will have opportunities to exchange their latest research ideas and results and to inspire future breakthroughs.

It is not an easy job to put together a conference of this magnitude, and we would like to thank all the members of the organizing committee for their hard work during the past year in ensuring a top-quality technical program. We would like to acknowledge the tremendous efforts of the Technical Program Committee Co-chairs, Sanghoon Lee (Yonsei University), Sinchai Kamolphirwong (Prince of Songkla University), and Vice Co-chairs, Jussi Kangasharju (University of Helsinki), Xin Wang (Fudan University, Keisuke Ishibashi (NTT), Jang-Won Lee (Yonsei University) Sang-Chul Kim (Kookmin University). Together with the technical program committee members, they worked diligently to select papers and speakers that met the criteria of high quality and relevance to our interest. It takes time and efforts to review a paper carefully, and every member of the technical program committee is to be commended for his or her contribution to the success of this conference.
Greetings

We would like to extend our appreciation to the Vice General Co-Chairs Yeong Min Jang (Kookmin University), Surasak Sanguanpong (Kasetsart University), Tutorial Co-Chairs, Seong-Ho Jeong (HUFS), Poster Chair, Yong-Hoon Choi (Kwangwoon University), Publication Co-Chairs, Ki-Hyung Kim (Aju University), Finance Chair, Myungsik Yoo (Soongsil University), Registration Co-Chairs, Sungrae Cho (Chung-Ang University), Publicity Co-Chairs, Jung Ryun Lee (Chung-Ang University), Song Chong (KAIST), Jongwon Kim (GIST), Carlos Becker (Westphall Federal University of Santa Catarina), Nariyoshi Yamai (Okayama University), Wutjanun Muttitanon (Mahidol University), Hyunseung Choo (Sungkyunkwan University), Meejeong Lee (Ewha Womans University), Web Chair, Jaesung Park (Suwon University), Patron Co-Chairs, Seung Hyong Rhee (Kwangwoon University), Jongwon Choe (Sookmyung Womens University), Yongtae Shin (Soongsil University), Local Arrangement Co-Chairs, Keecheon Kim (Konkuk University), Younggong Kim (Yonsei University), International Cooperation Co-Chairs, Sanghwan Lee (Kookmin University), Teresa Vazão (IDESC-ID, Portugal), Hoon Koh (IPP, Portugal), Christoph Steigner (Institute for Computer Science), Dongkyun Kim (Kyungpook National University), Motonori Nakamura (NII). We are also blessed to have a strong Steering Committee, who have enthusiastically provided their expertise and support.

We would like to extend our most sincere congratulations to the authors and speakers for a job well done. It is their efforts and vision which provided the impetus to put together this outstanding technical program. The excellence and success of ICOIN would not have been possible without the support of our technical co-sponsors, KIISE, IEEE Computer Society and IEICE Communication Society.

It was our great honor and pleasure to serve as the General Chairs of this conference. We truly hope that you enjoy the conference and have a memorable stay.

General Co-Chairs,
Greetings

Message from the Technical Program Committee Co-Chairs

On behalf of the 2014 TPC committee co-chairs, it is our great pleasure to welcome you to ICOIN 2014, the 28th International Conference on Information Networking (ICOIN). ICOIN is a conference covering broad aspects of computer communications, wireless/mobile networks, and converged networks in the theoretical and practical aspects.

This year we received 238 papers from 17 different countries. Through a rigorous review process, we finally accepted 112 papers (acceptance rate is about 46%) for the presentation at the ICOIN 2014, where 63 of them were selected for oral presentation, and 49 for poster presentation. Almost all of the submitted papers received at least three independent reviews, which involved 59 TPC members, with the support of additional reviewers around the world. We also selected four outstanding papers for the Best Paper Award. The technical program is organized into 12 oral presentation sessions which are held in two parallel tracks, and six poster sessions as well as a keynote and two tutorials. While the program covers a variety of topics on wireless and wired communications and networking technologies, this year we made an effort to reflect the growing interests in future networks and to extend our interest to network applications/service area.

We would like to express sincere thanks to the authors from all over the world for their prominent contributions. In addition to the authors, we are very thankful to all the TPC members. We believe that the precious and interesting program of this year is made possible by their valuable time and commitment for timeliness of the review process and the organization of technical program. We would also like to thank our sponsors, KIISE, IEEE Computer Society, and IEICE Communications Society Internet Architecture Technical Committee for their supports of this successful event. We extend our sincere thanks to the General Co-Chairs, Prof. Hyukjoon Lee, Prof. Ilyoung Chong, Prof. Panjai Tantatsanawong, and Prof. Katsuyuki Yamazaki, and the other members of the organizing committee for facilitating various aspects of our work. We hope that you enjoy the program of ICOIN 2014 and have a great time in Phuket. We also look forward to your continued participation in future ICOIN conferences.

TPC Committee Co-Chairs,

Sanghoon Lee
Yonsei University, Korea

Sinchai Kamolphiwong
Prince of Songkla University, Thailand
### ICOIN 2014 Program at a Glance

<table>
<thead>
<tr>
<th>TIME</th>
<th>Track 1</th>
<th>Track 2</th>
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<tbody>
<tr>
<td><strong>February 9, 2014 (Sunday)</strong></td>
<td></td>
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<tr>
<td>16:00-18:00</td>
<td>Organizing Meeting</td>
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<tr>
<td><strong>February 10, 2014 (Monday)</strong></td>
<td></td>
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<tr>
<td>08:30-09:00</td>
<td>Registration Open</td>
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<tr>
<td>09:00-10:00</td>
<td>Tutorial 1 (Dalah 2 &amp; 3)</td>
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<tr>
<td>10:00-11:00</td>
<td>Tutorial 2 (Dalah 2 &amp; 3)</td>
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<tr>
<td>11:00-12:00</td>
<td>Opening Ceremony/Keynote Speech (Dalah 2 &amp; 3)</td>
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<tr>
<td>12:00-13:00</td>
<td>Lunch Break (Bualuang Restaurant)</td>
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<tr>
<td>13:00-15:00</td>
<td>Oral 1 : Ad hoc/sensor networks I (Dalah 2)</td>
<td>Oral 2 : Cloud computing and networks I (Dalah 3)</td>
</tr>
<tr>
<td>15:00-15:30</td>
<td>Coffee Break</td>
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<tr>
<td>15:30-17:30</td>
<td>Oral 3 : Ad hoc/sensor networks II (Dalah 2)</td>
<td>Oral 4 : MIMO technology I (Dalah 3)</td>
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<tr>
<td>18:00-21:00</td>
<td>Reception (Sky Pool)</td>
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<td><strong>February 11, 2014 (Tuesday)</strong></td>
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<tr>
<td>08:30-09:00</td>
<td>Registration Open</td>
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<tr>
<td>09:00-10:00</td>
<td>Poster 1 : Implementation, measurement, and performance analysis (Hallway of Dalah 2 &amp; 3)</td>
<td>Poster 2 : WLAN/Wibro/LTE, cognitive radio technology (Hallway of Dalah 2 &amp; 3)</td>
</tr>
<tr>
<td>10:00-12:00</td>
<td>Oral 5 : Ad hoc/sensor networks III (Dalah 2)</td>
<td>Oral 6 : Routing, switching, and addressing (Dalah 3)</td>
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<tr>
<td>12:00-13:00</td>
<td>Lunch Break (Bualuang Restaurant)</td>
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<tr>
<td>13:00-15:00</td>
<td>Oral 7 : LTE/heterogeneous networks (Dalah 2)</td>
<td>Oral 8 : Cloud computing and networks II (Dalah 3)</td>
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<tr>
<td>15:00-15:30</td>
<td>Coffee Break</td>
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<tr>
<td>15:30-17:30</td>
<td>Oral 9 : Internet and web applications (Dalah 2)</td>
<td>Oral 10 : Cloud computing and networks III (Dalah 3)</td>
</tr>
<tr>
<td>17:30-18:30</td>
<td>Poster 3 : Internet security and web applications (Hallway of Dalah 2 &amp; 3)</td>
<td>Poster 4 : Smart grid and home networks, multimedia service (Hallway of Dalah 2 &amp; 3)</td>
</tr>
<tr>
<td>18:30-21:30</td>
<td>Banquet (Orchid Grand Ballroom)</td>
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<td><strong>February 12, 2014 (Wednesday)</strong></td>
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<tr>
<td>08:30-09:00</td>
<td>Registration Open</td>
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<tr>
<td>09:00-10:00</td>
<td>Poster 5 : Communication technology (Hallway of Dalah 2 &amp; 3)</td>
<td>Poster 6 : Network modeling, management, performance and security (Hallway of Dalah 2 &amp; 3)</td>
</tr>
<tr>
<td>10:00-12:00</td>
<td>Oral 11 : Cognitive radio, QoS and resource management (Dalah 2)</td>
<td>Oral 12 : MIMO technology II (Dalah 3)</td>
</tr>
</tbody>
</table>

※ Coffee will be served at the Hallway of Dalah 1 from 9:30~10:30AM on Feb 10, 11 and 12.
February 10, 2014 (Monday)

11:00-12:00

Keynote Speech Chair: Hyunseung Choo (Sungkyunkwan University)

Keynote Speech:
Ten Years of Future Internet Research: was it any good?
Presenter: Prof. Rui Luis Aguiar (the University of Aveiro)

Abstract:
The talk will reflect on the large area of research known under the name of Future Internet. A small historic overview of european trends over the last years, and on the major trade-offs under discussion, will be made in order to reach an understanding of what were the key issues being addressed, with special emphasis on mobile environments. Finally, a critical view of the state of the Internet, and the contributions that Future Internet research has made in the last years, will be made, highlighting promising challenges for future research.

Short Biography
Rui Luis Aguiar, born 1967, is currently a Professor at the Electronics, Telecommunications and Informatics Department at the University of Aveiro. He also held an Adjunct Professor position at Carnegie Mellon University, associated to the Institute of Networking Information, from 2007 to 2011. He is the leader of the ATNOG research group since its creation, inside the Instituto de Telecomunicacoes. He holds more than 300 papers in international and national journals and conferences on communication systems. He has contributions to several standardization fora, including IEEE and IETF. He has participated in multiple European Union R&D projects, in networking and distributed computing. He was Chief Architect of the Daidalos project, a five-year, 74M budget project, and was the coordinator of the networking activities of a dozen international projects, in areas such as All-IP networks, Future Internet, Grid computing, and mobile networks. He was the General Chair of ICT2006 (International Conference on Telecommunications), MONAMI 2011, and Technical Co-Chair of the IEEE ISCC2007 (International Symposium on Computer Communications), and ICSN 2005 (International Conference on Networking and Services), and is the current General Co-Chair of ISCC 2013. He has been invited as a speaker in several fora, both industry and academia-oriented, including talks to ARIBE, in Japan. Prof. Aguiar is currently Associate Editor of ETT, and sits on the Steering Board of several Initiatives and Conferences. Recently he has been elected for the Steering Board of the 5G industry association in Europe.
February 10, 2014 (Monday)

09:00-10:00

Tutorial Chair: Yong-Hoon Choi (Kwangwoon University)

Tutorial I:
**Softwarization of Mobile Networks, the Next Processing Platform - What is beyond 4G?**

Presenter: Dr. Jose Costa-Requena (AALTO University, Finland)

Abstract:
This tutorial provides an overview of the Software Defined Networks (SDNs), Long Term Evolution (LTE) mobile networks and Network Functions Virtualisation (NFVs) as the driver technologies leading mobile networks beyond 4G. SDN together with NFV are decoupling forwarding from control and hardware from networking software, using open interfaces to connectivity resources. Softwarization of Mobile network elements enables them to be offered as service. The Softwarization will transform the walled garden LTE mobile networks into commoditized components that can run from the cloud. Moreover, Softwarization simplifies not only the management plane in centralized location but introduces also a disruption in the access network but also transport plane after removing mobile specific technologies. This will lower the entrance barrier to mobile network manufacturers and operators. The Softwarization will facilitate the deployment of mobile optimized services such as video streaming and caching that can be used for new revenue models to mobile service providers. The tutorial finally provides some scenarios on how future mobile networks based on SDN and NFV introduce new business models.

Short Biography

Jose Costa-Requena received his M. Sc. in Engineering in 1999, his Licentiate in Telecommunications Engineering in 2004 and his Doctor in Engineering degree in 2007 from Helsinki University of Technology. From 1998 through early 2009, he worked as a research staff at Helsinki University of Technology focusing on mobile networks, routing, security and adhoc networking publishing several journals and articles in the field of computer networking. Since 2009 he has been a research manager leading EU telecommunication projects partnering with major companies and operators while also teaching networking at Aalto University. He is currently a Research Manager in the Department of Communications and Networking in the Faculty of Electronics and Communications and Automation at Aalto University. He has been managing the ICT Labs SDN activity with 5 other international partners at the European Institute of Technology. Dr. Costa-Requena also lead the architecture work package of EU project under CELTIC framework, MEVICO with 20+ international participants and the objective of defining next generation mobile network architecture. Dr. Costa-Requena was simultaneously working in industry gaining 10+ years of experience in system architecture and product development for world market products. He worked for Nokia Mobile Phones and Nokia Networks as Senior Design Engineer from 1999 to 2001 where he contributed to 3GPP standardization. In addition to standardization Dr. Costa-Requena was acting as System Program Manager until 2009 in Nokia Software & Services where he managed the Remote Home Access system program. He defined RHA architecture; managed the R&D team formed by 11+ subcontractors and 100+ developers to develop components in S60, Linux, Windows and Linux. Currently he holds 15+ granted patents and 40+ filed applications in the area of local area networks and mobile networks and received award of top 3 inventor of the year. Moreover, Dr. Costa-Requena was a respected member of Nokia patent board for several years.
February 10, 2014 (Monday)

10:00-11:00

Tutorial Chair: Sanghoon Lee (Yonsei University)

Tutorial II:
Wireless Networking in a Noncooperative Paradigm: Challenging Common Sense?
Presenter: Dr. Jerzy Konorski (Gdansk University of Technology, Poland)

Abstract:
Noncooperative behavior, nowadays recognized in many networking settings, defies the traditional engineering paradigm of systems design, which optimizes a multivariate performance criterion subject to feasibility and cost constraints. Recently, a "microeconomic" approach has gained importance in autonomous system design, whereby a device's noncooperative behavior is regarded as rational and thus predictable. It recognizes that little can be done by administrative means, since devices are often as good as anonymous, and so are hard to single out and punish. Instead, incentive compatibility measures should be applied so that selfish devices find themselves worse off than they would be when acting cooperatively. In particular, we are interested in situations where noncooperative behavior backfires if it does not contribute to a well-defined social goal. We analyze interactions between rational devices and the impact of their noncooperative behavior upon system-wide performance. The main formal apparatus is that of game theory, an operational research tool largely borrowed from modern economics and sociology. We give an overview of selected basic game models applicable in the context of distributed computer and communication environments, along with the corresponding solution concepts and a number of educational examples that illustrate the differences between decision problems and simple games.

Short Biography
Jerzy Konorski received his M. Sc. degree in telecommunications from Gdansk University of Technology, Poland, and his Ph. D. degree in computer science from the Polish Academy of Sciences, Warsaw, Poland. He is currently with the Faculty of Electronics, Telecommunications and Informatics, Gdansk University of Technology, where he conducts research and teaching in computer networking, probability, optimization methods, operational research, performance evaluation, and distributed systems. He has authored or co-authored about 150 scientific papers and led several national and U. S. Government-funded projects, including "Teaching Program for telecommunications", funded by the European Union, "Cooperation Security in Wireless Networks", funded by the Ministry of Science and Higher Education, Poland, and "User Misbehavior in Distributed Computer Systems and Networks", "Information Transfer in Wireless Networks", and "Information and Cooperation in Self-Organizing Networks", funded by the US Air Force Office of Scientific Research. He was also a task leader in three other projects funded by the European Union and National Science Centre, Poland. Dr Konorski was co-Editor of IFIP PWC 2000 and WMNC 2009 proceedings, and has served on the TPC for over 40 international networking and distributed systems conferences. His current work focuses on applications of game theory in wireless networks and low-level Future Internet security architectures.
February 10, 2014 (Monday)
13:00 - 15:00

**ORAL SESSION 1**
Ad hoc/sensor networks I
Chair: Sebastian Schellenberg (Technische Universität Ilmenau)

Wen-Hwa Liao, Yu-Chieh Lin and Ssu-Chi Kuai (Taiwan)

[O1-002] Routing-based and Location-aware Service Discovery in Mobile Ad-hoc Networks
Sebastian Schellenberg, Amirhossein Saliminia, Silvia Krug, Jochen Seitz, Thomas Finke and Juergen Schroeder (Germany)

[O1-003] Data Aggregation with Multiple Sinks in Information-Centric Wireless Sensor Network
Yonghui Shim and Younghan Kim (Korea)

[O1-004] Collaborative Data Transmission in Vehicular Ad-Hoc Networks
Shou-Chih Lo and Shan-Jung Lin (Taiwan)

[O1-005] Error Tolerant Non-binary Error Correction Code for Low Power Wireless Sensor Networks
Yousef Qassim and Mario Edgardo Magana (USA)

15:30 - 17:30

**ORAL SESSION 3**
Ad hoc/sensor networks II
Chair: Asma Elmangoush (Technische Universität Berlin)

[O3-001] Fully-Distributed Multicast Routing Protocol for IEEE 802.15.8 Peer-Aware Communications
Jeongseok Yu, Taejin Kim, Woongsoo Na, Hyoyungchel Bae, Yunsyoung Lee, Juho Lee, Zeynep Vatandas, Sungrae Cho and Junbeom Hur (Korea)

[O3-002] Geometric Algorithm for Height Filtering in Intruder Monitoring System
Jaeseok Shim, Yujin Lim and Jaesung Park (Korea)

Nirzhar Saha, Ratan Kumar Mondal, Md. Shareef Ifheekhar and Yeong Min Jung (Bangladesh)

Asma Elmangoush, Ronald Steinke, Adel Al-Hezmi and Thomas Magedanz (Germany)

[O3-005] Two-Hop Communication Scheme for FlashLinQ Device-to-Device Communication System
Sueng Jae Bae, Jaheon Gu and Min Young Chung (Korea)

**ORAL SESSION 2**
Cloud computing and networks I
Chair: Han-Chieh Chao (National Ilan University)

Tanasak Janpan, Vasaka Visootitiveth and Ryousei Takano (Thailand)

Ling Tang, Jinghui Qianz, Lei Xuy, and Yan Yu (China)

[O2-003] A Novel VM Workload Prediction using Grey Forecasting Model in Cloud Data Center
Jhu-Jyun Jheng, Fan-Hsun Tseng, Han-Chieh Chao and Li-Der Chou (Taiwan)

[O2-004] An Architecture to Evaluate Scalability, Adaptability and Accuracy in Cloud Monitoring Systems
Guilherme Da Cunha Rodrigues, Glederson Lessa Dos Santos, Vinicius Tavares Guimaraes, Lisandro Zambenedetti Granville and Liane Margarida Rockenbach Tarouco (Brazil)

[O2-005] Profiling Cloud Applications with Hardware Performance Counters
Alexandre Kandalintsev, Renato Lo Cigno, Dmitry Kliazovich and Pasquale Bonvry (Italy)

[O2-006] An SLA-aware Load Balancing Scheme for Cloud Datacenters
Chung-Cheng Li and Kuochen Wang (Taiwan)

**ORAL SESSION 4**
MIMO technology I
Chair: Roland Wagner (Beuth Hochschule für Technik)

[O4-001] A Study on Detection of Receiving Signal Status Change with Array Antenna
Seiya Kato, Kenta Umebayashi and Yasuo Suzuki (Japan)

[O4-002] Beamspace MIMO System with Different Elements Distances in ESPAR Array Antenna
Bong-Jun Kim and Heung-Gyoon Ryu (Korea)

Kazukihiro Yamaguchi, Kohei Miyasaka, Takaharu Nagahashi, Takuya Akiyama and Hideaki Matsue (Japan)

[O4-004] Multi-Flow Transmission Scheme in Millimeter-wave Mobile Network with Massive Antenna Structure
Eun Soo Bae, Jun Suk Kim, Min Young Chung, Sooyang Kang, Sung-Min Oh and Ae-Soon Park (Korea)

[O4-005] Improved Beamforming Code Book for WiGig using Maximal Ratio Combining
Atchareeya Kongbuntad, Monthippa Uthansakul and Peerapong Uthansakul (Thailand)

[O4-006] A Noble Circularly Symmetric Gaussian Covariance Matrix Based Channel Estimation Scheme for Large-Scale MIMO Systems
Mohammad Abu Hanif, Moon Ho Lee and Sang Seob Song (Korea)
February 11, 2014 (Tuesday)

10:00 - 12:00

**ORAL SESSION 5**

**Ad hoc/sensor networks III**

Chair: Shih-Cheng Horng (Chaoyang University of Technology)

[O5-001] Study of Target Tracking and Handover in Mobile Wireless Sensor Network
Ehsan Tabatabaei Yazdi, Amirhossein oravejsharieh and Sayan Kumar Ray (New Zealand)

[O5-002] A Partitioning Scheme to Guarantee Minimum Execution Time for Multiple Applications in Sensor Network Nodes
Daehoon Kim, Beomseok Kim and Jinsung Cho (Korea)

[O5-003] Intrusion Tolerance Mechanisms using Redundant Nodes for Wireless Sensor Networks
Wei Min and Keecheon Kim (Korea)

[O5-004] Grid-Based Directional Minimum Cost Routing for Massively Dense Wireless Sensor Networks
Jing-Ya Li and Ren-Song Ko (Taiwan)

[O5-005] Joint Channel and Flow Assignment Algorithm for Wireless Mesh Networks
Hee-Tae Roh and Jang-Won Lee (Korea)

**ORAL SESSION 6**

**Routing, switching, and addressing**

Chair: Xiaofeng Zhong (Tsinghua University)

[O6-001] Rich Semantic Content-Oriented Routing for Mobile Ad Hoc Networks
Huey-Ing Liu and Wen-Jing He (Taiwan)

Chunghee Lee, SeokYoon Kang and Ki-Il Kim (Korea)

Jangkyu Yan, Jihun Han, Gihyuk Seong, Wooseong Cho, Jihoon Seo, Murad Khan, Byounghoong Kim, Giset Park, Jihun Han and Kijun Han (Korea)

[O6-004] A Network Routing Method based on Received Power of Repeater Nodes and QoS for Mobile Ad-hoc Networks
Kazuhiko Yamaguchi, Hayato Iriyama, Yoshihiro Kainuma, Makoto Sugita and Hideaki Matsue (Japan)

[O6-005] FRT-2-Chord: A DHT Supporting Seamless Transition between One-hop and Multi-hop Lookups with Symmetric Routing Table
Yasuhiro Ando, Hiroya Nagao, Takehiro Miyao and Kazuyuki Shudo (Japan)

13:00 - 15:00

**ORAL SESSION 7**

**LTE/heterogeneous networks**

Chair: Yao-Liang Chung (National Taipei University)

[O7-001] An Efficient Power-Saving Transmission Mechanism in LTE Macrocell-Femtocell Hybrid Networks
Yao-Liang Chung (Taiwan)

[O7-002] Policy-based Pricing for Pervasive Services in Future Heterogeneous Wireless Access Networks
Jairo A. Gutierrez and Sayan Kumar Ray (New Zealand)

Jeehyeon Na, Dae-Ik Kim, Jungno Moon, Sangho Lee and Yeonseong Shin (Korea)

[O7-004] Interference Evaluation of Control Channels under the Co-existence of LTE-FDD and TD-LTE
Jie Wei, Xiaofeng Zhong, Liaowei Liu and Xiaolong Fu (China)

Abdelhakim Khif and Ridha Bouallegue (Tunisia)

**ORAL SESSION 8**

**Cloud computing and networks II**

Chair: Charles Hung-Pin Wen (National Chiao Tung University)

[O8-001] Requirement Identification and Experiments for a Flexible Media Format Based on Mobile and Cloud Computing
Roland Wagner, Wang Jing and Yanbo Han (Germany)

[O8-002] Cooperative Cache Sharing among ISPs for Reducing Inter-ISP Transit Cost in Content-Centric Networking
Kazuhito Matsuda, Go Hasegawa and Masayuki Murata (Japan)

[O8-003] Publisher Mobility Support in Content Centric Networks
Dooikyoung Han, Minyoung Lee, Kideok Cho, Ted “taekyoung” Kwon and Yanghee Choi (Korea)

Shao-Heng Wang, Patrick P.-W. Huang, Charles H.-P. Wen and Li-Chun Wang (Taiwan)

[O8-005] Data Center Infrastructure Management: WLAN Networks for Monitoring and Controlling Systems
Montri Wiboonrat (Thailand)
Technical Sessions

February 12, 2014 (Wednesday)

10:00 - 12:00

ORAL SESSION 11
Cognitive radio, QoS and resource management
Chair: Jerzy Sziuzdak (Instytut Telekomunikacji PW)

[O11-001] Power Control under QoS and Interference Constraint in Femtocell Cognitive Networks
Cuong T. Do, Duc Nho Minh Dang, Tuan LeAnh, Nguyen H. Tran, Rim Hay and Choong Seon Hong (Korea)

Adalu Mendes Bernardes Júnior and José Marcos C. Brito (Brazil)

[O11-003] Cooperative Spectrum Sensing and Analysis of the Optimum Users Number Based on the Primary User Transmission with Relay
Yannan Zou, Xianzhong Xie, Xiaofeng Hu and Ting Song (China)

[O11-004] Proposal of Flexible Time-slot Assignment Algorithm for Sub-lambda Switching Network
Keisuke Okamoto and Tatsuro Takahashi (Japan)

[O11-005] Guaranteeing Threshold Attendance of W/WSAN Nodes in a Reverted Security Paradigm
Jerzy Konorski and Artur Makutunowicz (Poland)

ORAL SESSION 12
MIMO technology II
Chair: Peter Butovitsch (Ericsson)

[O12-001] Analysis and Suppression of Phase Noise and IQ Imbalance for Dual-band MIMO-OFDM
Junyeong Bok and Heung-Gyoon Ryu (Korea)

[O12-002] Uplink CoMP and the Applications in TD-LTE Networks: Principles and the Field Trial
Lei Li, Peter Butovitsch, Qing Wang, Lifeng He and Yi Zheng (China)

[O12-003] Performance Analysis of Nakagami-m MIMO Channel in the Presence of Multiple Keyhole
Md Mizahidul Islam, Md Razibul Haque, Md Rezaul Islam and Md Golam Mostafa (Bangladesh)

Xin Wang, Bong-Jun Kim and Heung-Gyoon Ryu (Korea)

[O12-005] Analysis of the Match Probabilities for the iTrust Information Network with Message Forwarding
Louise Moser and P. Michael Melliar-Smith (USA)
February 11, 2014 (Tuesday)

09:00 - 10:00

POSTER SESSION 1
Implementation, measurement and performance analysis
Chair: Yong Ik Yoon (Sookmyung Women's University)

Jeongho Kim and Eunseok Lee (Korea)

[P1-002] Copyright Protection and Distribution System for Scanned Books/Comics
Seonghyun Kim, Sang-Hoon Lee, Taegeun Oh, Nakyeon Choi, Justin Daegull Ryu, Hogaab Kang and Sanghoon Lee (Korea)

[P1-003] Performance Evaluation of 802.11p WAVE System On Embedded Board
Zhen Qin, Zhen Meng, Xiaoyi Zhang, Bin Xiang and Lin Zhang (China)

[P1-004] Network-based Content Identification System via Content-based Comics Fingerprint
Jiwoo Kang, Taegeun Oh, Nakyeon Choi, Sang-Hoon Lee, Sanghoon Lee and Hogaab Kang (Korea)

[P1-005] Examining The Performance of Topic Modeling Techniques in Twitter Trends Extraction
Mutia Nadyah Kurniati, Woo-Jong Ryu, Md. Hijbul Alam and Sangkeun Lee (Korea)

[P1-006] Load Balancing based on Dynamic Overlay Clustering
Hojae Lee, Seonghyun Kim, Sooyong Choi, Chungyong Lee, Daesik Hong, Sanghoon Lee, Jungshin Park and Jonghyung Kwun (Korea)

[P1-007] Tracking System for Mobile User based on CCTV
Yong Ik Yoon and Jee Ae Chun (Korea)

[P1-008] Experimental Evaluation of FairWLAN
Simão Silva, Ricardo Lopes Pereira and Rui Valadas (Portugal)

POSTER SESSION 2
WLAN/Wibro/LTE, cognitive radio technology
Chair: Samuli Tiirio (Tokyo University of Agriculture and Technology)

[P2-001] Expected Capacity Based Handoff Scheme for Multimedia Data in WLAN
Dong-Hyun Kim, Seung-Kyu Byun and Jong-Deok Kim (Korea)

[P2-002] Confidential Aggregation for wireless Transmissions
Soohwa Sung (Korea)

[P2-003] An Efficient Uplink Admission Control for erTPS in IEEE 802.16
Minho Park, Dong Kun Noh and Souhwan Jung (Korea)

[P2-004] Cooperative Source Number Estimation for Cognitive Radio Networks
Samuli Tiirio, Kenta Umebayashi and Yasuo Suzuki (Japan)

[P2-005] Spectrum Handoff Model Based on Hidden Markov Model in Cognitive Radio Networks
Chuan Pham, Nguyen H. Tran, Cuong T. Do, Seung Il Moon and Choong Seon Hong (Korea)

[P2-006] Probability-based Spray and Wait Protocol in Delay Tolerant Networks
Eung-Hyup Kim, Jae-Choong Nam, Jae-In Choi and You-Ze Cho (Korea)

[P2-007] DoA Localization for Wireless Networks with Imperfect Clock Synchronization
Ryangsoo Kim, Taejin Ha, Hyuk Lim and Daewon Jung (Korea)

17:30 - 18:30

POSTER SESSION 3
Internet security and web applications
Chair: Sunyoung Han (Konkuk University)

[P3-001] A Novel Scheme for Preventing Out-of-Order Packets in Fast Handover for Proxy Mobile IPv6
Anh Khung, Dongsoo S. Kim and Hyunseung Choo (Korea)

[P3-002] Passive Packet Loss Detection in Wi-Fi Networks and its Effect on HTTP Traffic Characteristics
Saeed Ullah, Imdad Ullah, Hassan Khalig Qureshi, Rim Haw, Sungman Jang and Choong Seon Hong (Korea)

Yoon-Seop Chang, Seong-Ho Lee, Jaechul Kim and Young-Jae Lim (Korea)

[P3-004] Content Caching with Bi-level Control for Efficient IPTV Content Streaming Service
Jong-Geun Park, Hoon Choi and Bhum-Cheol Lee (Korea)

[P3-005] The Lexicon-based Sentiment Analysis for Fan Page Ranking in Facebook
Phan Trong Ngoc and Myungsik Yoo (Korea)

[P3-006] Permission-based Malware Detection Mechanisms for Smart Phones
Ming-Yang Su and Wen-Chuan Chang (Taiwan)

[P3-007] Secure Key Management Scheme based on ECC Algorithm for Patient's Medical Information in Healthcare System
Young Sil Lee, Eko Alasaarela and Hoon Jae Lee (Korea)

[P3-008] A Collaborative Solution for SNMP Traces Visualization
Vincius Guimarães, Gléderson Santos, Guilherme Da Cunha Rodrigues, Lisandro Zambenedetti Granville and Liane Margarida Rockenbach Tarouco (Brazil)

[P3-009] Efficient Bandwidth Estimation for HTTP Adaptive Streaming
Dooyeol Yun, Kwangsue Chung and Junpyo Hong (Korea)
**Poster Sessions**

**POSTER SESSION 4**

**Smart grid and home networks, multimedia service**

Chair: Jose Costa-Requena (AALTO University)

[P4-001] A Genetic Algorithm Based Power Consumption Scheduling in Smart Grid Buildings
Eunji Lee and Hyokyung Bahn (Korea)

[P4-002] WoO based User Centric Energy Management System in the Internet of Things
Zia Ush Shamszaman, Sanghong Lee and Ilyoung Chong (Korea)

[P4-003] User-Friendly Demand Side Management for Smart Grid Networks
Hyounghel Bae, Jongha Yoon, Yunseong Lee, Juho Lee, Taejin Kim, Jeongseok Yu and Sungrae Cho (Korea)

[P4-004] An Evaluation of Load Distribution Method on Multi-Source P2P Sensor Data Stream Delivery System
Tomoya Kawakami, Yoshimasa Ishi, Tomoki Yoshihisa and Yuuichi Teranishi (Japan)

[P4-005] Pipeline Architecture for Mobile Data Analysis
Arlindo F. Conceicao, Dario Vieira and Vladimir Rocha (Brazil)

[P4-006] QoE-enhanced Adaptation Algorithm over DASH for Multimedia Streaming
Dongeun Suh, Insun Jang and Sangheon Park (Korea)

[P4-007] Data dissemination on MANET using Content Delivery Network (CDN) Technique
Nattiya Khaitiyakun, Teerapat Sanguankotchakorn and Apinun Tunpan (Thailand)

[P4-008] A Sequential Pattern Mining Using Dynamic Weight in Stream Environment
Pilsun Choi, Hwan Kim and Buhyun Hwang (Korea)

February 12, 2014 (Wednesday)

09:00 - 10:00

**POSTER SESSION 5**

**Communication technology**

Chair: Ricardo Lopes Pereira (INESC-ID/Instituto Superior Técnico) / Kwang-deok Seo (Yonsei University)

[P5-001] Dynamic Transmission Control to Save Power while Considering Communication Quality
Yutaka Fukuda, Yasuaki Yamashita and Takeshi Ikemoto (Japan)

[P5-002] FTTx with Dynamic Wavelength and Bandwidth Allocation
Pichitta Kanjanopas, Rachata Maneekut and Pasu Kaewplung (Thailand)

[P5-003] Efficiency of Different Modulation Types in Optical System with Limited Bandwidth
Jerzy Suzałok (Poland)

[P5-004] Joint Source-channel Distortion Model for Optimal FEC Code Rate Decision
Tae-jun Jung, Kwang-deok Seo and Yo-won Jeong (Korea)

[P5-005] Effects of MLSE Equalization for Constant Envelope Modulation Signals Affected by ADC Nonlinearity
Ryuta Fukunaga, Osamu Muta and Hiroshi Furukawa (Japan)

Hojun Kim and Taejin Jung (Korea)

[P5-007] Data Aggregation using Temporal and Spatial Correlations in Advanced Metering Infrastructure
Kyung Choi and Kijoon Chae (Korea)

[P5-008] Approximate Recovery of Network Coded Real-time Information
Minhae Kwon and Hyunggon Park (Korea)

[P5-009] Partial Swarm Merger: Increasing BitTorrent content availability
António Homem Ferreira, Ricardo Lopes Pereira and Fernando M. Silva (Portugal)

**POSTER SESSION 6**

**Network modeling, management, performance and security**

Chair: Bassant Youssef (Virginia tech)

[P6-001] Indoor TD-LTE Small Cell Deployment Study: Benefit of Adding Cells is Not Always Existing
Yi Wu and Peter Butovitsch (China)

[P6-002] Path Selection in Inter-domain Dynamic Circuit Network (DCN) Based on a Probabilistic Link Failure Model
Tananun Orawiwattanakul, Hideki Otsuki, Eiji Kawai, Shinji Shimojo, Kazutoshi Tamaji and Motonori Nakamura (Japan)

[P6-003] IASM: An Integrated Attribute Similarity for Complex Networks Generation
Basant E. Youssef and Hoda M. Hassan (USA)

[P6-004] Optimization of Broadband Wireless Networks with Centralized Control Using Memetic Algorithm
Shih-Cheng Horng and Feng-Yi Yang (Taiwan)

[P6-005] Cryptographic Computation of Private Shared Key based Mutual Authentication Protocol: Simulation and Modeling over Wireless Networks
Ndihanje Bruce and Hoon Jae Lee (Korea)

[P6-006] Towards a Trust Management for VANETs
Yeongkwan Kim, Injo Kim and Charlie Y. Shim (USA)

[P6-007] Resource Allocation Policy to Avoid Interference between Cellular and D2D Links/ and D2D Links in Mobile Networks
Hyung-Sab Kim, Jihoon Na and Eunsun Cho (Korea)

[P6-008] A Security Mechanism of Smart Grid AMI Network through Smart Device Mutual Authentication
Sangji Lee, Jinsuk Bong, Sunhee Shin and Yongtae Shin (Korea)
Conferences Room Map

Dalah 2&3 for ICOIN 2014 on 10-12 February 2014

Orchid Grand Ballroom (Gala Dinner) for ICOIN 2014 on 11 February 2014
Sky Pool for ICOIN 2014 (Reception Cocktail) on 10 Feb 2014
Venue

Phuket Graceland Resort and Spa

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Location