

# The 2013 World Cybermatics Congress (WCC 2013)

The 2013 IEEE International Conference on Green Computing and  
Communication (GreenCom 2013)

The 2013 IEEE International Conference on Internet of Things  
(iThings 2013)

The 2013 IEEE International Conference on Cyber, Physical and Social Computing  
(CPSCoM 2013)

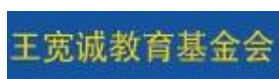
August 20-23, 2013, Beijing, China

Conference Program and Information Booklet



Organized by  
Beihang University, China

Sponsored by  
IEEE, IEEE Computer Society,  
IEEE Technical Committee on Scalable Computing (TCSC),  
Ministry of Industry and Information Technology of the People's Republic of China,  
Natural Science Foundation of China (NSFC)



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# WELCOME PAGE

Dear Friends;

We believe that the frontier information science are basically characterized by not only catching up with the human intelligence (e.g. intelligent sensing, making decision and control, etc), but also learn much from the nature-inspired attributes (e.g., dynamics, self-adaptability, energy saving). Among such research areas, a newly-emerged interdisciplinary, Cybermatics (i.e., cyber technology) as we called here, includes three main aspects: Internet of Things (IoT), cyber, physical and social computing, and green computing and communications. Therefore, we have launched three international conferences according to the three aspects.

Cybermatics is characterized by mapping the physical and social spaces into the cyber space to achieve the convergence of the three spaces, i.e., physical, social, and cyber. In the cyber space, ubiquitous entities are greatly independent from the space-time constraints which exist in the physical space. However, could the thinking space be directly mapped into the cyber space? The answer may be a YES, but it is probably an ultimate limit state, i.e., Internet of Thinking (IoTk) which is a collaborative wisdom and thinking beyond the space-time constraints. Thanks to the development of the computer and Internet, Cybermatics has been growing well at its initial stage, which will last for a period of time.

It is predicted that Cybermatics will lead industrialization and IT application to a new level and profoundly change the way of production, living, and even thinking of the mankind.

The 2013 World Cybermatics Congress (WCC 2013) has attached researchers, engineers, and managers from academia, industry, education, and government to jointly promote the further development of Cybermatics. The WCC includes three IEEE main conferences (including the 2013 IEEE International Conference on Green Computing and Communications (GreenCom 2013), the 2013 IEEE Internet of Things (iThings 2013), and the 2013 IEEE Cyber, Physical and Social Computing (CPSCoM 2013)), and two symposia (i.e., Symposium on Frontiers of Internet of Things (SymIoT), and Symposium on Frontiers of Cyber-Physical-Social Computing (SymCPS)), 20+ workshops, and 10+ SCI/E indexed special issues. The WCC 2013 provides a high-profile, leading-edge framework for researchers, engineers, and practitioners to present the state-of-art advances and innovations in the Cybermatics.

We sincerely thank IEEE, IEEE Computer Society, IEEE Technical Committee on Scalable Computing (TCSC), Natural Science Foundation of China (NSFC), and Wang Kuancheng Education Fund for the supports on the success of the 2013 World Cybermatics Congress.

Huansheng Ning, Beihang University, China

**Joint Executive Chair of GreenCom/iThings/CPSCoM 2013**

Jianhua Ma, Hosei University, Japan

Laurence T. Yang, St Francis Xavier University, Canada

**Joint Steering Chairs of GreenCom/iThings/CPSCoM 2013**

# IEEE GREENCOM/iTHINGS/CPSCOM 2013 PROGRAM AT A GLANCE

**Tuesday, August 20, 2013, Beihang University**

## IEEE GreenCom/iThings/CPSCOM 2013 Program

8:40-10:40	GreenCom VeSAN	GreenCom-Next #1/3	BR&A
	Room 2, Meeting Center, New Main Building	Room 3, Meeting Center, New Main Building	B228, New Main Building
	CPSIP	CS&IC	ECTE #1/2
	B216, New Main Building	A209, New Main Building	A212, New Main Building
	EDI #1/2	e-WiSe	GS&GSP #1/2
	A208, New Main Building	Room 5, Meeting Center, New Main Building	B204, New Main Building
	HBC&BSP #1/4	HBC&BSP #2/4	IWMMC
	B221 New Main Building	C201, New Main Building	Room 4, Meeting Center, New Main Building
	LTLS	OC&A	PhoneCom
	Room 7, Meeting Center, New Main Building	A209, New Main Building	Room 6, Meeting Center, New Main Building
	SeloTA	SNDCS #1/2	TFWS
	B201, New Main Building	B225, New Main Building	B201, New Main Building
	UUMA #1/4	UUMA #2/4	
	B206, New Main Building	B208, New Main Building	
10:40-11:00	Coffee Break		New Main Building
11:00-12:40	GreenCom-Next #2/3	GreenCom-Next #3/3	CV2N
	Room 2, Meeting Center, New Main Building	Room 3, Meeting Center, New Main Building	Room 6, Meeting Center, New Main Building
	ECTE #2/2	EDI #2/2	EPS
	A212, New Main Building	A208, New Main Building	Room 4, Meeting Center, New Main Building
	GS&GSP #2/2	HBC&BSP #3/4	HBC&BSP #4/4
	B204, New Main Building	B221 New Main Building	C201, New Main Building
	NMCV4SC	SDPI	SNDCS #2/2
	Room 6, Meeting Center, New Main Building	B201, New Main Building	B225, New Main Building
	SSO	UUMA #3/4	UUMA #4/4
	Room 7, Meeting Center, New Main Building	B206, New Main Building	B208, New Main Building

12:40-14:00	Lunch	Beihang University
14:00-15:30	Opening Ceremony	The First Reporting Hall of New Main Building
15:30-19:30	Visit Aviation Museum, Reception	Beihang University

### Wednesday, August 21, 2013, Park Plaza Beijing Science Park Hotel

#### IEEE GreenCom 2013 Program

8:20-10:00	GreenCom SBDCC #1/2	GreenCom SPTC	GreenCom OACCS #1/2
	Tianhong 1	Tianhong 2	Tianhong 3
10:00-10:20	Coffee Break		Park Plaza Hotel
10:20-12:25	GreenCom SBDCC #2/2	GreenCom MMASA	GreenCom OACCS #2/2
	Tianhong 1	Tianhong 2	Tianhong 3
12:25-14:00	Lunch		Park Plaza Hotel
14:00-14:50	GreenCom Keynote I (Dr. Chih-Lin I)		Grand Ballroom 2
14:50-15:40	GreenCom Keynote II (Dr. Tarik Taleb)		
15:40-16:00	Coffee Break		Park Plaza Hotel
16:00-16:50	GreenCom Keynote III (Prof. Zhisheng Niu)		Grand Ballroom 2
19:30-22:00	Banquet		Pending

#### IEEE iThings/CPSCoM 2013 Program

8:20-9:00	iThings/CPSCoM Tutorial Talk (Prof. Vincenzo Piuri)		Grand Ballroom 1 & 2 & 3
9:00-9:40	iThings/CPSCoM Keynote I (Prof. Mohammad S. Obaidat)		
9:40-10:00	Coffee Break		Park Plaza Hotel
10:00-10:40	iThings/CPSCoM Keynote II (Dr. Zhen Liu)		Grand Ballroom 1 & 2 & 3
10:40-11:40	CPSCoM 2013 Panel		
11:40-12:30	IoT/CPS Demo and Exhibition Madness, Cybermatics Creative Video Contest		
12:30-14:00	Lunch		Park Plaza Hotel
14:00-15:40	iThings SDME #1/2	iThings DSC	iThings IDPUC #1/2
	Grand Ballroom 1	Grand Ballroom 3	Golden 1
	iThings ABSSI #1/2	CPSCoM AS #1/2	CPSCoM STP #1/2
	Golden 3	Tianhong 1	Tianhong 2
	CPSCoM STP #2/2	SymIoT #1/6	SymCPS #1/4
	Tianhong 3	Four Seasons 5	Four Seasons 6
15:40-16:00	Coffee Break		Park Plaza Hotel
16:00-18:20	iThings SDME #2/2	iThings AI	iThings IDPUC #2/2
	Grand Ballroom 1	Grand Ballroom 3	Golden 1
	iThings ABSSI #2/2	CPSCoM AS #2/2	CPSCoM DMSA #1/2
	Golden 3	Tianhong 1	Tianhong 2
	CPSCoM CCN	SymIoT #2/6	SymCPS #2/4
	Tianhong 3	Four Seasons 5	Four Seasons 6
18:00-19:00	IoT/CPS Demo and Exhibition		Golden 2

19:30-22:00	Banquet	Pending
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## Thursday, August 22, 2013, Park Plaza Beijing Science Park Hotel

### IEEE GreenCom 2013 Program

8:20-10:00	GreenCom CN #1/3	GreenCom CN #3/3	GreenCom DHSMT #1/2
	Tianhong 1	Tianhong 2	Tianhong 3
10:00-10:20	Coffee Break		Park Plaza Hotel
10:20-12:25	GreenCom CN #2/3	GreenCom Short Paper Sub-Track	GreenCom DHSMT #2/2
	Tianhong 1	Tianhong 2	Tianhong 3
12:25-14:00	Lunch		Pending

### IEEE iThings/CPSCoM 2013 Program

8:30-9:15	iThings/CPSCoM Keynote III (Prof. Ivan Stojmenovic)		Grand Ballroom 1 & 2 & 3
9:15-10:00	iThings/CPSCoM Keynote IV (Prof. Xindong Wu)		
10:00-10:20	Coffee Break		Park Plaza Hotel
10:20-11:05	iThings/CPSCoM Keynote V (Prof. Mahmoud Daneshmand)		Grand Ballroom 1 & 2 & 3
11:05-11:50	iThings/CPSCoM Keynote VI (Prof. Yang Xiao)		
12:00-13:30	Lunch		Pending
13:30-17:00	China-EU IoT Interoperability Workshop		Grand Ballroom 3
14:00-15:40	iThings NC #1/3	iThings IM	CPSCoM DMSA #2/2
	Golden 1	Golden 3	Tianhong 1
	CPSCoM SN	SymCPS #3/4	SymIoT #3/6
	Tianhong 2	Tianhong 3	Four Seasons 5
	SymIoT #4/6		
	Four Seasons 6		
15:40-16:00	Coffee Break		Park Plaza Hotel
16:00-18:20	iThings NC #2/3	iThings NC #3/3	CPSCoM CSUN
	Golden 1	Golden 3	Tianhong 1
	CPSCoM SAN	SymCPS #4/4	SymIoT #5/6
	Tianhong 2	Tianhong 3	Four Seasons 5
	SymIoT #6/6		
	Four Seasons 6		

## Friday, August 23, 2013

Time	Activity	Location
8:00-18:00	OpenChina-ICT Thematic Workshop on Internet of Things and the Future Internet	Park Plaza Hotel

# IEEE GREENCOM/iTHINGS/CPSCOM 2013 KEYNOTES/TUTORIAL TALK

## iThings/CPSCOM Tutorial Talk

### *Biometric Technologies for Ambient Intelligence in the Internet of Things*

**Professor Vincenzo Piuri**

IEEE Fellow

Università degli Studi di Milano, Italy

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#### **Abstract:**

Adaptability and advanced services for ambient intelligence in the internet of things require an intelligent technological support for knowing the needs and the desires of users in the interactions with the environment for their daily use. To this purpose in some cases we can discover these characteristics by observing the human behavior, while in others we can retrieve stored information associated to the person. In both cases, the use of biometrics can be extremely useful both to understand the human behavior and to identify the person or the class of persons with similar characteristics so as to derive their needs and desires.

Biometric technologies allow in fact for analyzing human traits (e.g., face, fingerprint, palm) for identity management without requiring individuals to carry tokens or remembering information. These technologies allow also for classifying the persons by observing some soft-biometric traits (e.g., gait, height, weight, emotions), thus associating the needs typical of the detected class. Besides, some other soft-biometric traits (e.g., gestures, gait) allow for specifying actions desired by the person.

This talk will analyze the opportunities offered by biometric technologies and applications to support the realization of adaptable operations and intelligent services in the internet of things for ambient intelligence, based on a user-centric philosophy. Attention will be also given to a comprehensive system design methodology to take into account all application requirements, including the need for privacy protection.

#### **Biography:**

**Vincenzo Piuri** has received his Ph.D. in computer engineering at Politecnico di Milano, Italy (1989). He has been Associate Professor at Politecnico di Milano, Italy and Visiting Professor at the University of Texas at Austin and at George Mason University, USA. He is Full Professor in computer engineering (since 2000) and has been Director of the



Department of Information Technology at the Università degli Studi di Milano, Italy.

His main research interests are: biometrics, pattern analysis and recognition, signal and image processing, machine learning, theory and industrial applications of neural networks, intelligent measurement systems, industrial applications, fault tolerance, digital processing architectures, embedded systems, and arithmetic architectures.

Original results have been published in more than 350 papers in international journals, proceedings of international conferences, books, and book chapters.

He is Fellow of the IEEE, Distinguished Scientist of ACM, and Senior Member of INNS. He is Editor-in-Chief of the IEEE Systems Journal (2013-15), and has been Associate Editor of the IEEE Transactions on Neural Networks and the IEEE Transactions on Instrumentation and Measurement. He is IEEE Director and IEEE Delegate for Division X, and has been President of the IEEE Computational Intelligence Society, Vice President for Publications of the IEEE Instrumentation and Measurement Society and the IEEE Systems Council, Vice President for Membership of the IEEE Computational Intelligence Society, and Vice President for Education of the IEEE Biometrics Council.

He received the IEEE Instrumentation and Measurement Society Technical Award (2002) for the contributions to the advancement of theory and practice of computational intelligence in measurement systems and industrial applications, the IEEE Instrumentation and Measurement Society Distinguished Service Award (2008), and the IEEE Computational Intelligence Society Meritorious Service Award (2009).



## **iThings/CPSCoM Keynote I**

### ***A Novel Biometric Scheme for Risk-Based Authentication in Web Environments***

**Professor Mohammad S. Obaidat**

IEEE Fellow and SCS Fellows

Monmouth University, USA

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<http://www.theobaidat.com/>; <http://bluehawk.monmouth.edu/mobaidat/>

#### **Abstract:**

Existing risk-based authentication systems rely on basic web communication information such as the source IP address or the velocity of transactions performed by a specific account, or originating from a certain IP address. Such information can easily be spoofed, and as such, put in question the robustness and reliability of the proposed systems.

Risk-based authentication can be applied from two different perspectives: proactively and reactively. When applied proactively, risk-based authentication can be integrated with the login process and used to block from the beginning access to users flagged as risky. In contrast, reactive risk-based authentication can be used to identify and revert ongoing or completed transactions considered as risky.

Although proactive risk-based authentication may be considered as more desirable than reactive risk-based authentication, the cost of a misclassification error is far greater in the former than in the latter. In other words, more stringent accuracy requirements underlie proactive approaches compared to reactive ones. Actually, each category is adequate for specific scenarios. While proactive risk based authentication is important in situations where confidentiality is essential such as in military or intelligence transactions, reactive risk-based authentication may be enough in situations where integrity is the primary concern. For instance, in online banking transactions, malicious transactions (e.g. illegal transfer between accounts) can be reverted (immediately) by the end of the session if the user is classified as risky.

In this talk, we propose a new online biometric risk-based authentication system that provides more robust user identity information by combining mouse dynamics and keystroke dynamics biometrics in a multimodal framework. Experimental evaluation of our proposed model with 24 participants yields an Equal Error Rate of 8.21%, which is promising considering that we are dealing with free text and free mouse movements, and the fact that many web sessions tend to be very short. Moreover, we believe this performance is adequate for reactive risk-based authentication, where the goal is not to

prevent the user from using the system, but rather to identify malicious sessions and trigger appropriate risk mitigation measures.

## Biography:



**Mohammad S. Obaidat** (IEEE Fellow and SCS Fellow) is an internationally well-known academic/researcher/ scientist. He received his Ph.D. and M. S. degrees in Computer Engineering with a minor in Computer Science from The Ohio State University, Columbus, Ohio, USA. Dr. Obaidat is currently a full Professor of Computer Science at Monmouth University, NJ, USA. Among his previous positions are Advisor to the President of Philadelphia University for Research, Development and IT, President of SCS, Chair of the Department of Computer Science and Director of the Graduate Program at Monmouth

University and a faculty member at the City University of New York. He has received extensive research funding and has published over Fifteen (15) books and over Five Hundred and Sixty (560) refereed technical articles in scholarly international journals and proceedings of international conferences, and currently working on three more books. Professor Obaidat has served as a consultant for several corporations and organizations worldwide.

Mohammad is the Editor-in-Chief of 3 scholarly journals and is also an editor, advisory editor of numerous international journals and transactions including IEEE journals/transactions. He has chaired numerous international conferences and given numerous keynote speeches all over the world. He has guest edited numerous special issues of scholarly journals such as IEEE Transactions on Systems, Man and Cybernetics, SMC, IEEE Wireless Communications, IEEE Systems Journal, SIMULATION: Transactions of SCS, Elsevier Computer Communications Journal, Journal of C & EE, Wiley Security and Communication Networks, Journal of Networks, and International Journal of Communication Systems, among others. Obaidat has served as the steering committee chair, advisory Committee Chair and program chair of numerous international conferences.

He is the founder of two well-known international conferences: The International Conference on Computer, Information and Telecommunication Systems (CITS) and the International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS). He is also the co-founder of the International Conference on Data Communication Networking, DCNET.

Between 1994-1997, Obaidat has served as distinguished speaker/visitor of IEEE Computer Society. Since 1995 he has been serving as an ACM Distinguished Lecturer. He is also an SCS Distinguished Lecturer. Between 1996-1999, Dr. Obaidat served as an IEEE/ACM program evaluator of the Computing Sciences Accreditation Board/Commission, CSAB/CSAC. He has served as the Scientific Advisor for the World Bank/UN Digital Inclusion Workshop- The Role of Information and Communication Technology in

Development. Between 1995-2002, he has served as a member of the board of directors of the Society for Computer Simulation International. Between 2002-2004, he has served as Vice President of Conferences of the Society for Modeling and Simulation International SCS. Between 2004-2006, Prof. Obaidat has served as Vice President of Membership of the Society for Modeling and Simulation International SCS. Between 2006-2009, he has served as the Senior Vice President of SCS. Between 2009-2011, he served as the President of SCS.

Prof. Obaidat received several best papers awards for his papers selected as best papers in IEEE International Conferences including best paper awards in IEEE AICCSA 2009, IEEE GLOBECOM 2009, and DCNET 2011 international conferences. Prof. Obaidat has been awarded a Nokia Research Fellowship and the distinguished Fulbright Scholar Award. He received the SCS Outstanding Service Award for his excellent leadership, services and technical contributions. Dr. Obaidat received very recently the Society for Modeling and Simulation International (SCS) prestigious McLeod Founder's Award in recognition of his outstanding technical and professional contributions to modeling and simulation. He received in Dec 2010, the IEEE ComSoc- GLOBECOM 2010 Outstanding Leadership Award for his outstanding leadership of Communication Software Services and Multimedia Applications Symposium, CSSMA 2010. He received very recently the Society for Modeling and Simulation International's (SCS) prestigious Presidential Service Award for his outstanding unique, long-term technical contributions and services to the profession and society.

He has been invited to lecture and give keynote speeches worldwide. His research interests are: wireless communications and networks, security of communication networks, information and computer systems, security of e-based systems, telecommunications and Networking systems, performance evaluation of computer systems, algorithms and networks, green ICT, high performance and parallel computing/computers, applied neural networks and pattern recognition, adaptive learning and speech processing. During the 2004/2005, he was on sabbatical leave as Fulbright Distinguished Professor and Advisor to the President of Philadelphia University in Jordan, Dr. Adnan Badran. The latter became the Prime Minister of Jordan in April 2005 and served earlier as Deputy Director General of UNESCO. Prof. Obaidat is a Fellow of the Society for Modeling and Simulation International SCS, and a Fellow of the Institute of Electrical and Electronics Engineers (IEEE). For more information: <http://bluehawk.monmouth.edu/mobaidat/>.

## iThings/CPSCoM Keynote II

### ***Smart City: Large-Scale Cyber-Physical Systems in Action***

**Dr. Zhen Liu**

IEEE Fellow

Director, ATC, Microsoft ARD

Beijing, China

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#### **Abstract:**

The world has experienced unprecedented urban growth in recent decades. In 2008, for the first time in history, the world's population was evenly split between urban and rural areas. And, according to the United Nations, nearly 70% of the population will live in cities by the year 2050. This urban immigration generates tremendous opportunities for cities by increasing production, commerce, and human capital. It also generates the challenges in transportation systems, environment, water and energy consumption and more. While these issues are not new, their scale and intensity are unprecedented. For cities to continue to be a viable centers of civilization, commerce and culture, we must find ways to overcome these challenges.

In this talk we shall discuss how IT could help overcome such problems. More specifically, how IT can help build smart cities which are supposed to be much more efficient in energy consumption and in productivity. Smart cities are, in essence, cyber-physical systems with extremely large scale. Building such systems will be nontrivial. We shall discuss various technological challenges and present some initial thoughts and solutions.

#### **Biography:**



**Zhen Liu** joined Microsoft Asia R&D Center in 2012 as the Head of China Innovation Group, based in Beijing. Before joining Microsoft, Zhen was with Nokia as the Head of Nokia Research Center (NRC) Beijing, and then became the Head of NRC Growth Economies Lab, which has research teams in Beijing, Shenzhen, Bangalore and Nairobi. Prior to this experience, Zhen was with IBM T. J. Watson Research Center and served as the manager of System Analysis and Optimization group, and the senior manager of the Next Generation Distributed Systems department. Zhen also worked in Orange Labs

(France Telecom R&D) as a Research Associate, and in INRIA (the French national research center on information and automation), first as a Researcher, then became a Research Director.

Zhen has been passionate about both scientific explorations and innovations with industrial impact. He has obtained over 80 patents granted and published over 200 scientific papers in prestigious journals and conferences and got the best paper award at the 37th ICPP. He was master inventor at IBM.

Under Zhen's leadership, his teams transferred a number of technologies to product groups in IBM and in Nokia with significant business impact. The Nokia Research Center lab he led was awarded the Best Research Lab in 2010 in China by World Entrepreneur, and was ranked a few times by ITBrand the Number One of Corporate Research Labs in Asia.

Zhen is a fellow of IEEE. He has served NSF Panels a number of times. He was a member of over 60 conference program committees. Zhen Liu was the general chair of the ACM Sigmetrics 2008 Conference, co-chair of ACM HotMetrics 2008, program co-chair of the Joint Conference of ACM Sigmetrics and IFIP Performance 2004, technical program co-chair of SensorComm 2009, and area technical program committee chair for INFOCOM 2008 and INFOCOM 2009. Zhen is on the editorial boards of several journals including IEEE Transactions on Service Computing and the Journal of Performance Evaluation.

Zhen has given keynotes and distinguished lectures in various conferences and universities. He was an adjunct professor at University of Science and Technology of China and Beijing University of Post and Telecommunications. While he was in France, Zhen was also an adjunct professor of the University of Paris VI (University of Pierre & Marie Curie) and the University of Nice - Sophia Antipolis, France.

His areas of expertise include mobile computing, mobile services, cloud computing, stream processing, real-time analytics, performance modeling, stochastic optimization, service oriented architecture and semantic Web.

## iThings/CPSCoM Keynote III

### *IoT/CPS: M2M Communication, Actuation and Coordination Challenges*

**Professor Ivan Stojmenovic**

IEEE Fellow

University of Ottawa, Canada

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#### **Abstract:**

Existing machine-to-machine (M2M) communications incorporate a central point for gathering information, making decision, and acting. Large scale cyber-physical systems (CPS) beyond M2M concept are envisioned with the distributed actuation and in-network processing. Machine-to-machine communication aspects include data dissemination, data aggregation, reporting mechanisms for monitoring, cooperative access. Other related issues that would be explored are modeling, inter-dependency and topology control, and security and privacy. This lecture emphasizes actuation as one of important tools in the future applications of Internet of Things and Cyber Physical Systems architectures. Various existing models for wireless sensor and actuator networks are elaborated. It then concentrates on the network layer issues in wireless sensor and sensor-actuator networks. Coordination between sensors and robots, and robot to robot coordination are then covered with some concrete problem formulations. These include robot dispersion, communication aspects of robot coordination, robot task allocation, and sensor placement and relocation to improve sensing area coverage.

#### **Biography:**



**Ivan Stojmenovic** received his Ph.D. degree in mathematics. He is Full Professor at the University of Ottawa, Canada. He held regular and visiting positions in Serbia, Japan, USA, Canada, France, Mexico, Spain, UK (as Chair in Applied Computing at the University of Birmingham), Hong Kong, Brazil, Taiwan, China and Australia. He published over 300 different papers, and edited seven books on wireless, ad hoc, sensor and actuator networks and applied algorithms with Wiley. He is editor-in-chief of IEEE Transactions on Parallel and Distributed Systems (2010-3), and founder and editor-in-chief of three journals. He is Associate Editor-in-Chief of Tsinghua Journal of Science and Technology, steering committee member of IEEE Transactions on Emergent Topics in Computing, and editor of IEEE Network, IEEE Transactions on Cloud Computing, IEEE Transactions on Computers, ACM Wireless Networks and some other journals. Stojmenovic is on Thomson Reuters list of Highly Cited Researchers (from 2013; <300 computer scientist), has h-index

59, top h-index in Canada for mathematics and statistics, and >13000 citations. He received five best paper awards and the Fast Breaking Paper for October 2003, by Thomson ISI ESI. He received the Royal Society Research Merit Award, UK (2006), and Humboldt Research Award, Germany (2012). He is Tsinghua 1000 Plan Distinguished Professor (2012-5). He is Fellow of the IEEE (Communications Society, class 2008), and Canadian Academy of Engineering (since 2012), and Member of the Academia Europaea (The Academy of Europe), from 2012 (section: Informatics). He was IEEE CS Distinguished Visitor 2010-11 and received 2012 Distinguished Service award from IEEE ComSoc Communications Software TC. He received Excellence in Research Award of the University of Ottawa 2009. Stojmenovic chaired and/or organized >60 workshops and conferences, and served in >200 program committees. He was program co-chair at IEEE PIMRC 2008, IEEE AINA-07, IEEE MASS-04&07, founded several workshop series, and is/was Workshop Chair at IEEE ICDCS 2013, IEEE INFOCOM 2011, IEEE MASS-09, ACM Mobihoc-07&08.

## **iThings/CPSCoM Keynote IV**

### ***Intelligent Transportation Systems with Infrastructure and Vehicle Sensors***

**Professor Xindong Wu**

Department of Computer Science,  
University of Vermont, USA.  
E-mail: xwu@uvm.edu

#### **Abstract:**

This talk will discuss the great opportunities provided by the rich real-time and historical data collected by both infrastructure sensors (such as in-road reflectors) and vehicle sensors in intelligent transportation systems. With the data from infrastructure sensors, traffic prediction can reduce travel delays by facilitating better utilization of available traffic capacity. With the data from vehicle sensors, a driver's driving habit can be modeled, the driver can be identified from the sensor data collected during driving, and personalized driving advice may be provided.

#### **Biography:**



**Xindong Wu** is a Professor of Computer Science at the University of Vermont (USA), a Yangtze River Scholar in the School of Computer Science and Information Engineering at the Hefei University of Technology (China), and a Fellow of the IEEE and the AAAS. He holds a PhD in Artificial Intelligence from the University of Edinburgh, Britain. His research interests include data mining, knowledge-based systems, and Web information exploration. He has published over 280 refereed papers in these areas in various journals and conferences, including IEEE TPAMI, TKDE, ACM TOIS, DMKD, KAIS, IJCAI, AAAI, ICML, KDD, ICDM, and WWW, as well as 33 books and conference proceedings. His research has been supported by the U.S. National Science Foundation (NSF), the U.S. Department of Defense (DOD), the National Natural Science Foundation of China (NSFC), and the Ministry of Science and Technology of China, as well as industrial companies including Microsoft Research, U.S. West Advanced Technologies and Empact Solutions.

Dr. Wu is the founder and current Steering Committee Chair of the IEEE International Conference on Data Mining (ICDM), the founder and current Editor-in-Chief of Knowledge and Information Systems (KAIS, by Springer), the Founding Chair (2002-2006) of the IEEE Computer Society Technical Committee on Intelligent Informatics (TCII), and a Series



Editor of the Springer Book Series on Advanced Information and Knowledge Processing (AI&KP). He was the Editor-in-Chief of the IEEE Transactions on Knowledge and Data Engineering (TKDE, by the IEEE Computer Society) between January 1, 2005 and December 31, 2008. He served as Program Committee Chair/Co-Chair for ICDM '03 (the 2003 IEEE International Conference on Data Mining), KDD-07 (the 13th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining), and CIKM 2010 (the 19th ACM Conference on Information and Knowledge Management).

Professor Wu is the 2004 ACM SIGKDD Service Award winner, the 2006 IEEE ICDM Outstanding Service Award winner, and a 2012 IEEE Computer Society Technical Achievement Award recipient "for pioneering contributions to data mining and applications". He won the Best Paper Award from the 2005 and 2011 IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2005 & 2007) and the 2012 IEEE/WIC/ACM International Conference on Web Intelligence (WI 2012). He has been an invited/keynote speaker at over 30 international conferences including IEEE GrC 2012, IEEE ICDM 2010, PAKDD 2007, IEEE EDOC 2006, IEEE ICTAI 2004, IEEE/WIC/ACM WI-2004/IAT-2004, SEKE 2002, and PADD 1997.

## **iThings/CPSCoM Keynote V**

### ***The Internet of Things (IoT) Big Data Analytics***

**Professor Mahmoud Daneshmand**

Business Intelligence & Analytics  
Howe School of Technology Management

Computer Science  
School of Engineering & Science  
Stevens Institute of Technology  
Hoboken, NJ, USA  
mahmoud.daneshmand@stevens.edu

Emeritus Distinguished Member of Technical Staff  
Assistant Chief Scientist  
AT&T Shannon Labs – Research  
Florham Park, NJ, USA

#### **Abstract:**

The Big Data of the future is generated by billions of “things” connected to the Internet. The term Internet of Things (IoT), born 2009, may be simplified as “Sensors/RFID devices + Communications”. It is estimated that by 2020, 50 billion sensors/RFID devices will be generating data on all aspects of the human life: health, environment, transportations, security, shopping, home, etc. The Biggest Challenge of the Big Data is management and mining of ever-increasing streams of data generated by these devices.

This talk will focus on management and mining of IoT Big Data. Emphasis will be on data accuracy, data mining techniques, and future research direction of real time large scale stream data mining.

#### **Biography:**

**Mahmoud Daneshmand** is Professor of Business Intelligence & Analytics at Howe School of Technology Management as well as Computer Science at School of Engineering and Sciences, Stevens Institute of Technology. He has more than 35 years of teaching, research & publications, consultation, and management experience in academia & industry including: Bell Laboratories, AT&T Shannon Labs – Research, University of California at Berkeley, University of Texas at Austin, Sharif University of Technology, University of Tehran, New York University, and Stevens Institute of



Technology.

He has served as Distinguished Member of Technical Staff (DMTS) at Bell Labs as well as AT&T Shannon Labs -Research; Assistant Chief Scientist of AT&T Labs; Founder and Executive Director of the AT&T Labs university collaborations program. He is an Industry Professor at Howe School of Technology Management and Department of Computer Science, Co-Founder of the Business Intelligence & Analytics MS program at Stevens Institute of Technology. He is an expert in Big Data Analytics, Internet of Things (IoT)/Sensor & RFID Data Streams, Data Mining Algorithms, Machine Learning, Probability & Stochastic Processes, and Statistics.

He has been active with IEEE Journals editorships & publications including Guest Editor as well as IEEE conferences: Guest Editor of several IEEE journals; Chair of Steering Committee of New IEEE Internet of Things Journal; keynote speaker of many IEEE conferences; Executive Committee of Globecom as well as ICC; Chair of Steering Committee of IEEE ISCC; and General Chair and Technical Chair of many IEEE conferences.

## iThings/CPSCoM Keynote VI

### *Primate-inspired Heterogeneous Mobile and Static Sensor Networks*

#### **Professor Yang Xiao**

Department of Computer Science,  
The University of Alabama,  
Tuscaloosa, AL 35487-0290 USA  
E-mail: yangxiao@cs.ua.edu

#### **Abstract:**

Although previous bio-inspired models have concentrated on invertebrates (such as ants), mammals such as primates with higher cognitive function are valuable for modeling the increasingly complex problems in engineering. Understanding primates' social and communication systems, and applying what is learned from them to engineering domains is likely to inspire solutions to a number of problems.

This talk introduces studying and modeling modes of group behavior and communication of coppery titi monkeys, rhesus macaques, and other primate models, and applying what the investigators learn to the distributed control of heterogeneous mobile and static sensor networks including assessment of the effectiveness of small and large group formations in heterogeneous mobile and static sensor networks, development of bio-inspired message-based communications, and development of bio-inspired behavior-based communications.

#### **Biography:**



**Yang Xiao** worked in industry as a MAC (Medium Access Control) architect involving the IEEE 802.11 standard enhancement work before he joined academia. He currently is a full professor of Department of Computer Science at The University of Alabama. He was a voting member of IEEE 802.11 Working Group from 2001 to 2004. His research areas are security and communications/networks. He has published more than 200 refereed journal papers (including 50 IEEE/ACM Transactions papers) and over 200 refereed conference papers and book chapters related to these research areas. He currently

serves as Editor-in-Chief for International Journal of Sensor Networks (IJSNet) (SCI-index with impact factor 1.386 for 2011) and International Journal of Security and Networks (IJSN).

## **GreenCom Keynote I**

### ***Rethink Shannon Towards Green***

**Dr. Chih-Lin I**

Department of Electrical Engineering,  
Stanford University,  
Chief Scientist, Wireless Technologies  
China Mobile Research Institute  
Email: icl@chinamobile.com

#### **Abstract:**

The rapid adoption of Smart Phones has triggered an explosive growth of mobile Internet applications. China Mobile has observed 81 times traffic growth over the past 5 years, and it has been the common consensus that there will be another 1000x traffic load increase by year 2020. Unfortunately, the ARPU growth curve is believed to be much flatter. As the world's largest mobile service provider, China Mobile is facing a big challenge to figure out a technical road map to increase its network capacity dramatically while keeping the TCO at a reasonable level to maintain its viability. To this end, we envision increasing importance of making our network green. The extension of classic Shannon theory from scalar domain to vector domain 20 years ago gave the birth of MIMO system, and has been supporting the sustainable development of wireless system all long. How will Shannon theory perform in the new green era? Is it out-of-date or reborn as a new "the one"? This presentation will share our vision and staged R&D effort marching toward green.

#### **Biography:**



**Chih-Lin I**, Ph.D. in Electrical Engineering from Stanford University, has almost 30 years experience in wireless communication area. She has worked in various world-class companies and research institutes, including wireless communication fundamental research department of AT&T Bell Labs; Headquarter of AT&T, as Director of Wireless Communications Infrastructure and Access Technology; ITRI of Taiwan, as Director of Wireless Communication Technology Department; Hong Kong ASTRI, as VP and GD of Communications Technology Domain.

She was an elected Board Member of IEEE ComSoc, and the Founding Chair of IEEE WCNC Steering Committee. She is currently an Executive Board Member of GreenTouch, a winner of CCCP "National 1000 talent" program, China Mobile Chief Scientist of Wireless Technologies, Head of Green Communication Research Center (GCRC) of China Mobile Research Institute (CMRI), in charge of advanced wireless communication R&D effort of CMRI.

## **GreenCom Keynote II**

### ***Towards Carrier Cloud***

**Dr. Tarik Taleb**

Senior Researcher and 3GPP Standards Expert

NEC Europe Ltd, Heidelberg, Germany

Email: [tarik.taleb@nw.neclab.eu](mailto:tarik.taleb@nw.neclab.eu)

#### **Abstract:**

Mobile operators are in need of means to cope with the ever-increasing mobile data traffic, introducing minimal additional capital expenditures on existing infrastructures, principally due to the modest Average Revenues Per User (ARPU). Network virtualization and cloud computing techniques, along with the principles of the latter in terms of service elasticity, on-demand, and pay-per-use could be important enablers for various mobile network enhancements and cost reduction. This talk discusses the recent trends the mobile telecommunications market is experiencing, showcasing some of the emerging consumer products and services that are facilitating such trends. The talk also discusses the challenges these trends are representing to mobile network operators. The talk also demonstrates the possibility of extending cloud computing beyond data centers towards the mobile end-user, providing end-to-end mobile connectivity as a cloud service. The talk introduces a set of technologies and methods for the on-demand provision of a decentralized and elastic mobile network as a cloud service over a distributed network of cloud-computing data centers; federated cloud. The concept of Follow-Me-Cloud whereby not only data but also mobile services are intelligently following their respective users is also introduced. The novel business opportunities behind the envisioned carrier cloud architecture and service are also discussed, considering various multi-stakeholder scenarios.

#### **Biography:**



**Tarik Taleb** is currently working as Senior Researcher and 3GPP Standards Expert at NEC Europe Ltd, Heidelberg, Germany. Prior to his current position and until Mar. 2009, he worked as assistant professor at the Graduate School of Information Sciences, Tohoku University, Japan, in a lab fully funded by KDDI, the second largest network operator in Japan. From Oct. 2005 till Mar. 2006, he was working as research fellow with the Intelligent Cosmos Research Institute, Sendai, Japan. He received his B. E degree in Information Engineering with distinction, M.Sc. and Ph.D. degrees in Information Sciences from GSIS, Tohoku Univ., in 2001, 2003, and 2005, respectively.

Dr. Taleb's research interests lie in the field of architectural enhancements to mobile core networks (particularly 3GPP's), mobile cloud networking, mobile multimedia streaming, congestion control protocols, handoff and mobility management, inter-vehicular communications, and social media networking. Dr. Taleb has been also directly engaged in the development and standardization of the Evolved Packet System as a member of 3GPP's System Architecture working group. Dr. Taleb is a board member of the IEEE Communications Society Standardization Program Development Board. As an attempt to bridge the gap between academia and industry, Dr. Taleb has founded and has been the general chair of the "IEEE Workshop on Telecommunications Standards: from Research to Standards", a successful event that got awarded "best workshop award" by IEEE Communication Society (ComSoC).

Dr. Taleb is/was on the editorial board of the IEEE Wireless Communications Magazine, IEEE Transactions on Vehicular Technology, IEEE Communications Surveys & Tutorials, and a number of Wiley journals. He is serving as vice-chair of the Wireless Communications Technical Committee, the largest in IEEE ComSoC. He also served as Secretary and then as Vice Chair of the Satellite and Space Communications Technical Committee of IEEE ComSoc (2006 - 2010). He has been on the technical program committee of different IEEE conferences, including Globecom, ICC, and WCNC, and chaired some of their symposia.

Dr. Taleb is the recipient of the 2009 IEEE ComSoc Asia-Pacific Best Young Researcher award (Jun. 2009), the 2008 TELECOM System Technology Award from the Telecommunications Advancement Foundation (Mar. 2008), the 2007 Funai Foundation Science Promotion Award (Apr. 2007), the 2006 IEEE Computer Society Japan Chapter Young Author Award (Dec. 2006), the NiwaYasujiro Memorial Award (Feb. 2005), and the Young Researcher's Encouragement Award from the Japan chapter of the IEEE Vehicular Technology Society (VTS) (Oct. 2003). Some of Dr. Taleb's research work has been also awarded best paper awards at prestigious conferences. Dr. Taleb is a senior IEEE member.

## **GreenCom Keynote III**

### ***How Densely Should the Data Base Stations be Deployed in Hyper-Cellular Networks?***

**Professor Zhisheng Niu**

Tsinghua National Lab for Information Science and Technology  
Tsinghua University, Beijing 100084, China  
E-mail: niuzhs@tsinghua.edu.cn

#### **Abstract:**

One of the key approaches to make the mobile communication networks more GREEN (Globally Resource-optimized and Energy-Efficient Networks) is to have the cellular architecture and radio resource allocation more adaptive to the environment and traffic variations, including making some lightly-loaded base stations (BSs) go to sleep. This is the concept of so-called TANGO (Traffic-Aware Network planning and Green Operation) and CHORUS (Collaborative and Harmonized Open Radio Ubiquitous Systems) published by the author earlier. To realize this, a new cellular framework, named hyper-cellular networks (HCN), has been proposed, in which the coverage of control signals is decoupled from the coverage of data signals so that the data coverage can be more elastic in accordance with the dynamics of traffic characteristics and QoS requirements. Specifically, the data base stations (DBSs) in HCN can be densely deployed during peak traffic time in order to satisfy the capacity requirement, while a portion of DBSs can be switched off or go to sleep mode if the traffic load is lower than a threshold in order to save energy. A fundamental question then arises: how densely should the DBSs be deployed in order to balance the QoS requirements and the energy consumption in hyper cellular networks?

In this talk, we characterize the optimal DBS density for both homogeneous and heterogeneous hyper cellular networks to minimize network cost with stochastic geometry theory. For homogeneous cases, both upper and lower bounds of the optimal DBS density are derived. For heterogeneous cases, our analysis reveals the best type of DBSs to be deployed for capacity extension or to be switched off for energy saving. Specifically, if the ratio between the micro DBS cost and the macro DBS cost is lower than a threshold, which is a function of path loss and their transmit power, then the optimal strategy is to deploy micro DBSs for capacity extension or to switch off macro DBSs (if possible) for energy saving with higher priority. Otherwise, the optimal strategy is the opposite. Based on the parameters from EARTH, numerical results show that in the dense urban scenario, compared to the traditional macro-only homogeneous cellular network with no DBS sleeping, deploying micro DBSs can reduce about 40% of the total energy cost, and further reduce about 20% with DBS sleeping capability.



## Biography:



**Zhisheng Niu** graduated from Northern Jiaotong University (currently Beijing Jiaotong University), Beijing, China, in 1985, and got his M.E. and D.E. degrees from Toyohashi University of Technology, Toyohashi, Japan, in 1989 and 1992, respectively. After spending two years at Fujitsu Laboratories Ltd., Kawasaki, Japan, he joined with Tsinghua University, Beijing, China, in 1994, where he is now a professor at the Department of Electronic Engineering and the deputy dean of the School of Information Science and Technology. His major research interests include queueing theory, traffic engineering, mobile Internet, radio resource management of wireless networks, and green communication and networks.

Dr. Niu has been an active volunteer for various academic societies, including council member of Chinese Institute of Electronics (2006-10), vice chair of the Information and Communication Network Committee of Chinese Institute of Communications (2008-12), Councilor of IEICE-Japan (2009-11), and membership development coordinator of IEEE Region 10 (2009-10). In particular, in IEEE Communication Society, he has been serving as an editor of IEEE Wireless Communication Magazine (2009-12), director of Asia-Pacific Region (2008-09), director for Conference Publications (2010-11), chair of Beijing Chapter (2001-08), and members of Award Committee (2011-13), Emerging Technologies Committee (2010-12), On-line Content Committee (2010-12), and Strategy Planning Committee. He has also been serving as general co-chairs of APCC'09/WiCOM'09, TPC co-chairs of APCC'04/ICC'08/WOCC'10/ICCC'12, panel co-chair of WCNC'10, tutorial co-chairs of VTC'10-fall/Globecom'12, and publicity co-chairs of PIMRC'10/WCNC'02.

Prof. Niu is a co-recipient of the Best Paper Awards from the 13th and 15th Asia-Pacific Conference on Communication (APCC) in 2007 and 2009, respectively, and received the Outstanding Young Researcher Award from Natural Science Foundation of China in 2009. He is now the Chief Scientist of the National Fundamental Research Program (so called "973 Project") of China "Fundamental Research on the Energy and Resource Optimized Hyper-Cellular Mobile Communication System" (2012-2016), which is the first national project green communications in China. He is the fellow of IEEE and IEICE, and a distinguished lecturer of IEEE Communication Society (2012-2013).

## IEEE GREENCOM 2013 TECHNICAL PROGRAM

### Session CN: Communications and Networking

- **Session CN #1/3**

**Session Chair:** IhSEN Ouedraogo (ihSEN.o@uec.ac.jp)

**Time:** 8:20-10:00, Thursday, August 22, 2013

**Location:** Tianhong 1, Park Plaza Beijing Science Park Hotel

Delaunay Triangulation Based Green Base Station Operation for Self Organizing Network  
*Gilsoo Lee, Hongseok Kim, Young-Tae Kim, Byoung-Hoon Kim*

e-STAB: Energy-Efficient Scheduling for Cloud Computing Applications with Traffic Load Balancing  
*Dzmitry Kliazovich, Sisay Arzo, Fabrizio Granelli, Pascal Bouvry, Samee U. Khan*

Watts2Share: Energy-Aware Traffic Consolidation  
*Ekhiotz Jon Vergara, Simin Nadjm-Tehrani*

On Fixed-Path Variable-Bandwidth Scheduling in High-performance Networks  
*Liudong Zuo, Mustafa Khaleel, Michelle Mengxia Zhu, Chase Qishi Wu*

- **Session CN #2/3**

**Session Chair:** Changqing Luo (chq\_luo@hust.edu.cn)

**Time:** 10:20-12:25, Thursday, August 22, 2013

**Location:** Tianhong 1, Park Plaza Beijing Science Park Hotel

Geographic Multipath Routing in Duty-cycled Wireless Sensor Networks with Energy Harvesting  
*Guangjie Han, Yuhui Dong, Lei Shu, Hui Guo, Jianwei Niu*

A Power Consumption Reduction Scheme in Hose-Model Networks with Bundled Links  
*Seydou Ba, IhSEN Aziz Ouédraogo, Eiji Oki*

Caching Design in Green Content Centric Networking Based on Chemical Reaction Optimization  
*Renchao Xie, Tao Huang, F. Richard Yu, Yunjie Liu*

GA-based Green SFN Planning for DTMB  
*Caiwei Li*

- **Session CN #3/3**

**Session Chair: Renchao Xie (xierc@chinaunicom.cn)**

**Time: 8:20-10:00, Thursday, August 22, 2013**

**Location: Tianhong 2, Park Plaza Beijing Science Park Hotel**

Optimization of Renewable Green Base Station Deployment

*Turgay Pamuklu, Cem Ersoy*

Study of Dynamic Topology Change for Total Energy Consumption in Green IP Networks

*Steven S. W. Lee, Kuang-Yi Li*

Energy-efficient Dynamic Network Selection in Heterogeneous Wireless Networks

*Changqing Luo, Chao Qian, Fei Hao, Laurence T. Yang, Geyong Min*

## **Session DHSMT: Devices, Hardware, Software, Methodologies, and Tools**

- **Session DHSMT #1/2**

**Session Chair: Maryline Chetto (maryline.chetto@UNIV-NANTES.FR)**

**Time: 8:20-10:00, Thursday, August 22, 2013**

**Location: Tianhong 3, Park Plaza Beijing Science Park Hotel**

Power Management for High-Performance Applications on Network-on-Chip-based Multi-processors

*Adan Kohler, Martin Radetzki*

Stability and Robustness Issues in Real-time Sustainable Wireless Sensors

*Maissa Abdallah, Maryline Chetto, Audrey Queudet, Rafic Hage Chehade*

Estimating the Energy Consumption of Executing Software Processes

*Vivek Singh, Kaushik Dutta, Debra VanderMeer*

Reactive DVFS Control for Multicore Processors

*Jean-Philippe Halimi, Benoit Pradelle, Amina Guermouche, Nicolas Triquenaux, Alexandre Laurent, Jean Christophe Beyler, William Jalby*

- **Session DHSMT #2/2**

**Session Chair: Maryline Chetto (maryline.chetto@UNIV-NANTES.FR)**

**Time: 10:20-11:10, Thursday, August 22, 2013**

**Location: Tianhong 3, Park Plaza Beijing Science Park Hotel**

A Polymorphic Green Service Approach for Data Center Energy Consumption Management

*Fawaz AL-Hazemi*

A User Friendly Phase Detection Methodology for HPC Systems' Analysis

*Ghislain Landry Tsafack Chetsa, Laurent Lefevre, Jean-Marc Pierson, Stolf Patricia, Georges Da Costa*

## **Session ESAEI: Economics, Social Networks, Applications, and Emerging Interdisciplinary**

**Session Chair: William Campbell (william.campbell@bcu.ac.uk)**

**Time: 10:20-12:25, Wednesday, August 21, 2013**

**Location: Golden 3, Park Plaza Beijing Science Park Hotel**

An Exploration of the Impact of Organizational Culture on the Adoption of Green IT

*William Campbell, Martyn Ratcliffe, Philip T Moore*

Energy Consumption and Efficiency in Mobile Applications: A User Feedback Study

*Claas Wilke, Sebastian Richly, Sebastian Götz, Christian Piechnick, Uwe Aßmann*

## **Session MMASA: Metrics, Models, Algorithms, Systems, and Architecture**

**Session Chair: Ghislain Landry Tsafack Chetsa(ghislain.landry.tsafack.chetsa@ens-lyon.fr)**

**Time: 10:20-12:25, Wednesday, August 21, 2013**

**Location: Tianhong 2, Park Plaza Beijing Science Park Hotel**

Collaborative Sleeping Scheme for Femtocell Networks

*Yun Li, Yufang Jia, Yong Wang, Qilie Liu*

Energy Aware Resource Management for Clusters of Web Servers

*Simon Kiertscher, Bettina Schnor*

Base Station Sleeping with Dynamical Clustering Strategy of CoMP in LTE-Advanced

*Yun Li, Yafei Ma, Yong Wang, Weiliang Zhao*

Energy-Efficient Scheduling for Multicore Systems with Bounded Resources

*Ziliang Zong, Rong Ge, Xin Li, Zizhong Chen*

## **Session OACCS: Optimization and/or Analysis in Communications, Computing, and Smart Grids**

- **Session OACCS #1/2**

**Session Chair: Cejo Lonappan (cejo@ucla.edu)**

**Time: 8:20-10:00, Wednesday, August 21, 2013**

**Location: Tianhong 3, Park Plaza Beijing Science Park Hotel**

Accurate and Low-Overhead Process-level Energy Estimation for Modern Hard Disk Drives  
*Jun Yan, Cejo Lonappan, Amir Vajid, Digvijay Singh, William Kaiser*

Robust Redundancy Elimination for Energy-aware Routing  
*Martin Tieves, Arie M. C. A. Koster, David Coudert, Truong Khoa Phan*

SESAMES: A Smart-Grid Based Framework for Consuming Less and Better in Extreme-Scale Infrastructures  
*Mohammed El Mehdi Diouri, Olivier Gluck, Laurent Lefevre*

On Cooperative Energy-Efficient P2P Live Streaming System for Mobile Hotspots  
*Ming-Hung Chen, Cheng-Fu Chou, Ke-Han Lee, Chun-Yuan Chang*

- **Session OACCS #2/2**

**Session Chair: Changqing Luo (chq\_luo@hust.edu.cn)**

**Time: 10:20-12:25, Wednesday, August 21, 2013**

**Location: Tianhong 3, Park Plaza Beijing Science Park Hotel**

Frequency-Utilization Based Power-Aware Schedule Policy for Real-Time Multi-cores System  
*Lin Zhou, Lei Yu*

Optimized Thermal-Aware Workload Distribution Considering Allocation Constraints in Data Centers  
*Hassan Shamalizadeh, Luis Almeida, Senbo Fu, Shuai Wan, K. Shashi Prabh*

## **Session SBDCC: Storage, Big Data, and Cloud Computing**

- **Session SBDCC #1/2**

**Session Chair: Chase Qishi Wu (qishiwu@memphis.edu)**

**Time: 8:20-10:00, Wednesday, August 21, 2013**

**Location: Tianhong 1, Park Plaza Beijing Science Park Hotel**

TARGO: Transition and Reallocation Based Green Optimization for Cloud VMs

*Daren Fang, Xiaodong Liu, Lin Liu, Hongji Yang*

Designing a Power-aware Replication Strategy for Storage Clusters

*Lingwei Zhang, Yuhui Deng*

Energy-aware Workflow Job Scheduling for Green Clouds

*Fei Cao, Michelle Mengxia Zhu*

Follow-Me Cloud: An OpenFlow-based Implementation

*Tarik Taleb, Peer Hasselmeyer, Faisal Mir*

- **Session SBDCC #2/2**

**Session Chair: Sau-Hsuan Wu (sauhsuan@cm.nctu.edu.tw)**

**Time: 10:20-12:25, Wednesday, August 21, 2013**

**Location: Tianhong 1, Park Plaza Beijing Science Park Hotel**

A Heuristics Approach for Reducing Power Consumption of Cloud Data Center

*Fei Zhang, Yizhou Yan, Wu Wenjun, Liang Luo*

Assessment Criteria for Trust Models in Cloud Computing

*Ayesha Kanwal*

Minimizing Latency in Fetching Virtual Machine Images Based on Multi-Point Collaborative Approach

*Binbin Huang, Rongheng Lin, Kai Peng, Hua Zou, FangChun Yang*

Estimating the Power Consumption of an Idle Virtual Machine

*Flavien Quesnel, Hemant Kumar Mehta, Jean-Marc Menaud*

Green Spectrum Sharing in a Cloud-Based Cognitive Radio Access Network

*Sau-Hsuan Wu, Hsi-Lu Chao, Chun-Hsien Ko, Shang-Ru Mo, Chiau-Feng Liang, Chung Chieh Cheng*

**Session SPTC: Security, Privacy, and Trust Computing**

**Session Chair: Yean-Fu Wen (yeafu@mail.ncyu.edu.tw)**

**Time: 8:20-10:00, Wednesday, August 21, 2013**

**Location: Tianhong 2, Park Plaza Beijing Science Park Hotel**

Dynamic Adjustment of the Chaos-based Security in Real-time Energy Harvesting Sensors

*Safwan El Assad, Mousa Farajallah, Maryline Chetto*

On the Key Revocation Schemes in Wireless Sensor Networks

*Dieynaba Mall, Karim Konate, Al-Sakib Khan Pathan*

A Social-Enhanced Data Verification Framework Against Pollution Attacks in P2P Live Streaming

*Ming-Hung Chen, Ko-Jo Lee, Cheng-Fu Chou, Chun-Yuan Chang*

Identifying Interest Flooding in Named Data Networking

*Jianqiang Tang, Zhongyue Zhang, Ying Liu, Hongke Zhang*

## **Session Short Paper Sub-Track**

**Session Chair: Ioana Pisica (ioanapisica@gmail.com)**

**Time: 10:20-12:00, Thursday, August 22, 2013**

**Location: Tianhong 2, Park Plaza Beijing Science Park Hotel**

IC Design of a Low-power Analog LDPC Decoder Employing New Stopping Iteration Method

*Wen-Ta Lee*

A Server Friendly File Synchronization Mechanism for Cloud Storage

*Chao Yang, Ye Tian, Di Ma, Wei Mao*

Temporal Power Model for Effective Usage in Data Center

*Fawaz AL-Hazemi*

Investigation of Data Communication Networks to Enable Demand Response and Dynamic Tariffs

*Ioana Pisica*

Energy-Efficient Networks with Optimal Traffic Splitting

*Ruchaneeya Leepila, Eiji Oki, Naoto Kishi*

## IEEE ITHINGS 2013 TECHNICAL PROGRAM

### Session ABSSI: Applications, Business, Standards, and Social Issues

- **Session ABSSI #1/2**

**Session Chair:** Beihong Jing (jbh@otcaix.iscas.ac.cn)

**Time:** 14:00-15:40, Wednesday, August 21, 2013

**Location:** Golden 3, Park Plaza Beijing Science Park Hotel

Smart acoustic-enabled Objects for innovative Services

*Danilo Hollosi, György Nagy, René Rodigast, Stefan Goetze, Philippe Cousin*

Design and Implement of an EPC Encoding and Decoding System for Enterprise Application

*Huiqun Zhao, Biao Shi*

A Social Web of Things Approach to a Smart Campus Model

*Yacine Atif, Sujith Mathew*

ALMA, A Logistic Mobile Application based on Internet of Things

*Didier El Baz, Julien Bourgeois, Toufik Saadi, Alessandro Bassi*

- **Session ABSSI #2/2**

**Session Chair:** Didier (elbaz@laas.fr)

**Time:** 16:00-18:20, Wednesday, August 21, 2013

**Location:** Golden 3, Park Plaza Beijing Science Park Hotel

Plantation Monitoring System Based on Internet of Things

*Yixiong Wang, Jun Song, Xiaofeng Liu, Shan Jiang, YunFei Liu*

Design of GSM-based Tele-Monitoring and Alarm System for Disposable Diaper

*Taichun Qin, Xiaogang Li, Yahui Wang, Ziwei Liu*

An Immune Theory Based Health Monitoring and Risk Evaluation of Earthen Sites with Internet of Things

*Yun Xiao, Xiaojiang Chen, Lin Wang, Wei Li, Baoying Liu, Dingyi Fang*

EGF-Tree: An Energy Efficient Index Tree for Facilitating Multi-Region Query Aggregation in the Internet of Things

*Jine Tang, ZhangBing Zhou, Jianwei Niu, Qun Wang*

Internet of Things Data Driven Storytelling for Supporting Social Connections

*Qiong Wu, Zhiqi Shen, Cyril Leung, Huiguo Zhang, Yundong Cai, Chunyan Miao*



An Interactive Approach of Online Software Customization via Conversational Web Agents  
*Xiaobu Yuan, Xieshen Zhang*

## **Session AI: Architecture and Infrastructure**

**Session Chair: Dominique Dhoutaut** ([dominique.dhoutaut@femto-st.fr](mailto:dominique.dhoutaut@femto-st.fr))

**Time: 16:00-18:20, Wednesday, August 21, 2013**

**Location: Grand Ballroom 3, Park Plaza Beijing Science Park Hotel**

Architecture Design of Internet of Things in Logistics Management for Emergency Response

*Ran Xu, Lili Yang, Shuanghua Yang*

A Scalable IoT Service Search Based on Clustering and Aggregation

*Sameh Ben Fredj, Mathieu Boussard, Daniel Kofman, Ludovic Noirie*

A Domain Model for the Internet of Things

*Stephan Haller, Alexandru Serbanati, Martin Bauer, Francois Carrez*

A Mobile Phone based WSN Infrastructure for IoT over Future Internet Architecture

*Jun Li, Yanyong Zhang, Yih\_Fam Chen, Kiran Nagaraja, Sugang Li, Dipankar Raychaudhuri*

Towards an OSGi based Pervasive Cloud Infrastructure

*Weishan Zhang, Licheng Chen, Qinghua Lu*

## **Session DSC: Distributed Sensing and Control**

**Session Chair: Pedro Maló** ([pmm@uninova.pt](mailto:pmm@uninova.pt))

**Time: 14:00-15:40, Wednesday, August 21, 2013**

**Location: Grand Ballroom 3, Park Plaza Beijing Science Park Hotel**

A RSSI Localization Algorithm based on Interval Analysis for Indoor Wireless Sensor Networks

*Ligong Li, Yinfeng Wu, Yongji Ren, Ning Yu*

Efficient Simulation of distributed Sensing and Control Environments

*Dominique Dhoutaut, Benoît Piranda, Julien Bourgeois*

A Device-Centric Policy Conflict in IoT

*Lijuan He, Xiaofeng Qiu, Teng Gao*

Self-Organised Middleware Architecture for the Internet-of-Things

*Pedro Malo, Bruno Almeida, Raquel Melo, Kostas Kalaboukas, Philippe Cousin*

## **Session IDPUC: Intelligent Data Processing and Ubiquitous Computing**

- **Session IDPUC #1/2**

**Session Chair: Changqing Luo (chq\_luo@hust.edu.cn)**

**Time: 14:00-15:40, Wednesday, August 21, 2013**

**Location: Golden 1, Park Plaza Beijing Science Park Hotel**

A Linked-data Model for Semantic Sensor Streams

*Payam Barnaghi, Wei Wang, Lijun Dong, Chonggang Wang*

Adaptive Channel-based Routing in Content-based PubSub Systems

*Sen Li, Yifeng Qian, Yuwei Yang, Beihong Jin*

Time Efficient Tag Searching in Multiple Reader RFID Systems

*Shigeng Zhang, Xiaoxian He, Hong Song*

PDA-based Application and Research for Workshop Internet of Things

*Fang Zhiliang, Wang Xin, Yan Guangrong, Ding Tao*

- **Session IDPUC #2/2**

**Session Chair: Geyong Min**

**Time: 16:00-18:20, Wednesday, August 21, 2013**

**Location: Golden 1, Park Plaza Beijing Science Park Hotel**

Fuel Consumption Estimates Based on Driving Pattern Recognition

*Xiaohua Zhou, Jian Huang, Weifeng Lv, Dapeng Li*

Analysis of Travel Time Patterns in Urban Using Taxi GPS Data

*Mengdan Gao, Tongyu Zhu, Xuejin Wan, Qi Wang*

Efficient Data Gathering in Wireless Sensor Networks Based on Low Rank Approximation

*Xinglin Piao, Yongli Hu, Yanfeng Sun, Baocai Yin*

Spatio-Temporal Feature Enhanced Semi-supervised Adaptation for Activity Recognition in IoT-based Context-aware Smart Homes

*Chao-Lin Wu, Yi-Show Tseng, Li-Chen Fu*

A Universal Storage Architecture for Big Data in Cloud Environment

*Qingchen Zhang, Zhikui Chen, Liang Zhao, Fangyi Liu*

Measuring Data Transfer in Heterogeneous IoT Environments

*Márcio Mateus, Pedro Maló, Bruno Almeida, Tiago Teixeira*

## **Session IM: Intelligent Management**

**Session Chair: Bin Guo**

**Time: 14:00-15:40, Thursday, August 22, 2013**

**Location: Golden 3, Park Plaza Beijing Science Park Hotel**

IOT-StatisticDB: A General Statistical Database Cluster Mechanism for Big Data Analysis in the Internet of Things

*Zhiming Ding, Xu Gao, Jiajie Xu, Hong Wu*

Measuring and Understanding Opportunistic Co-Presence Patterns in Smart Office Spaces

*Michel Nati, Alexander Gluhak, Flavia Martelli, Roberto Verdone*

Random Forest Classification for Detecting Android Malware

*Mohammed Alam, Son Vuong*

Resource annotation, dissemination and discovery in the Semantic Web of Things: a CoAP-based framework

*Michele Ruta, Floriano Scioscia, Agnese Pinto, Eugenio Di Sciascio,  
Filippo Gramegna, Saverio Ieva, Giuseppe Loseto*

## **Session NC: Networks and Communications**

- **Session NC #1/3**

**Session Chair: Dominique Dhoutaut ([dominique.dhoutaut@femto-st.fr](mailto:dominique.dhoutaut@femto-st.fr))**

**Time: 14:00-15:40, Thursday, August 22, 2013**

**Location: Golden 1, Park Plaza Beijing Science Park Hotel**

Streaming the Sound of Smart Cities: Experimentations on the SmartSantander Test-bed

*Congduc Pham, Philippe Cousin*

An Ad-hoc Smart Gateway Platform for the Web of Things

*Darren Carlson, Bashar Altakrouri, Andreas Schrader*

The Effect of Hexagonal Grid Topology on the Throughput Benefit of Network Coding

*Fuhua Huang, Tao Shang*

The M2M Connectivity Framework

*Shao-Wen Yang, Yen-Kuang Chen*

- **Session NC #2/3**

**Session Chair: Darren Carlson ([carlson@comp.nus.edu.sg](mailto:carlson@comp.nus.edu.sg))**

**Time: 16:00-18:20, Thursday, August 22, 2013**

**Location: Golden 1, Park Plaza Beijing Science Park Hotel**

An Extension of DTFT-based Sinusoidal Signal Time Delay Estimation Algorithm for Linear Time-Varying Situation

*Yi Huang, Aiqun Hu, Shengdong Xie*

A Progressive Population Estimation Based Binary Query Tree Protocol for Efficient RFID Tag Collision Resolution

*Xin-Qing Yan, Yi-Su Wang, Yang Liu, Xue-Mei Liu*

A Passive Conformance Testing Method for 6LoWPAN Network

*Hua Chai, Xiaohong Huang, Jing Qian, César Viho*

A FSM-Based Test Sequence Generation Method for RPL Conformance Testing

*Jun Tang, Xiaohong Huang, Jing Qian, César Viho*

A Generic SUT Adapter Framework for Protocol Conformance Testing

*Jiexi Zha, Xiaohong Huang, Jing Qian, César Viho*

Enhanced IEEE 802.11 Power Saving for Multi-Hop Toy-to-Toy Communication

*Ioannis Glaropoulos, Stefan Mangold, Vladimir Vukadinovic*

- **Session NC #3/3**

**Session Chair: Vladimir Vukadinovic (vvuk@disneyresearch.com)**

**Time: 16:00-18:20, Thursday, August 22, 2013**

**Location: Golden 3, Park Plaza Beijing Science Park Hotel**

Energy-Efficient and Low-Delay Scheduling Strategy for Low Power Wireless Sensor Network

*Zheng Zhang, Zhenbo Li, Jiapin Chen*

Efficient Simulation Environment of Wireless Radio Communications in MEMS Modular Robots

*Nicolas Boillot, Dominique Dhoutaut, Julien Bourgeois*

An Improved location Algorithm Based on CC2431

*Yinghui Kong, Qingqing Yang*

A Location Optimization Method Based on Communication Requirements to Reconnect Separated Communication Areas after a Disaster

*Junbo Wang, Kazuhiro Matsumoto, Yinghui Zhou, Zixue Cheng*

Towards the Benefit of Multi-Hop Relaying in Opportunistic Networking

*Jianbin Jia, Yingwen Chen, Ming Xu, Geming Xia*

Fast Motion Estimation Algorithm Based on H.264

*Jian Chen, Xia Mao, Li-jiang Chen*

## **Session SDME: System Design Modeling and Evaluation**

- **Session SDME #1/2**

**Session Chair: Cheng-Chung Li (cccli.mail@gmail.com)**

**Time: 14:00-15:40, Wednesday, August 21, 2013**

**Location: Grand Ballroom 1, Park Plaza Beijing Science Park Hotel**

A Passive Testing Approach for Protocols in Internet of Things

*Xiaoping Che, Stephane Maag*

Design and Implementation of a Smart IoT Gateway

*Shang Guoqiang, Chen Yanming, Zuo Chao, Zhu Yanxu*

Distributed Resolution of a Trajectory Optimization Problem on a MEMS-based Reconfigurable Modular Surface

*Serge Tembo, Didier El-Baz*

- **Session SDME #2/2**

**Session Chair: Zhiming Ding (zhiming@iscas.ac.cn)**

**Time: 16:00-18:30, Wednesday, August 21, 2013**

**Location: Grand Ballroom 1, Park Plaza Beijing Science Park Hotel**

Building a Practical Sensing System

*Robert Moore, Bernhard Firner, Chenren Xu, Richard Howard, Yanyong Zhang, Richard Martin*

Using Patterns of Social Dynamics in the Design of Social Networks of Sensors

*Marcello Tomasini, Franco Zambonelli, Ronaldo Menezes*

A Theoretical Model to Efficiently Transport YouBike

*Cheng-Chung Li, Lingyi Liu*

UAI-IOT Framework: a Method of Uniform interfaces to Acquire Information from Heterogeneous Enterprise Information Systems

*Hongyu Li, Ye Tian, Yang Liu, Tingli Li, Wei Mao*

Emotion Animation of Embodied Conversational Agents with Contextual Control Model

*Xiaobu Yuan, Rajkumar Vijayarangan*

## IEEE CPSCOM 2013 TECHNICAL PROGRAM

### Session AS: Applications and Services

- **Session AS #1/2**

**Session Chair:** Alvin Chin (alvin.chin@nokia.com)

**Time:** 14:00-15:40, Wednesday, August 21, 2013

**Location:** Tianhong 1, Park Plaza Beijing Science Park Hotel

ContextOS: a Context Aware Operating System for Mobile Devices

*Kanishka Ariyapala, Mauro Conti, Chamath Keppitiyagama*

Social TV EPG Interaction Design for Multi-screen Environment

*Fang You, Jian-Min Wang, Ting Xie, Han Cao, Ze-Long Tang*

Design of a Mobile Telephony System for Social Interaction

*Yuan-Chih Yu*

Smart Business Services via Consumer Purchasing Behaviour Modeling

*Runhe Huang, Atsushi Sato, Toshihiro Tamura, Jianhua Ma, Neil Y. Yen*

- **Session AS #2/2**

**Session Chair:** Mauro Conti (conti@math.unipd.it)

**Time:** 16:00-18:20, Wednesday, August 21, 2013

**Location:** Tianhong 1, Park Plaza Beijing Science Park Hotel

A Study of Offline Events and Its Influence on Online Social Connections in Douban

*Alvin Chin, Junwei Han, Jianwei Niu, Jilei Tian*

In-Situ Web Mashup and Hypermedia Support for Mobile Vision-Based AR Applications

*Yu You, Lixin Fan, Alain Boyer, Tuomas Kantonen, Ville-Veikko Mattila*

Enhancing Adherence to Cognitive Behavioral Therapy for Insomnia through Machine and Social Persuasion

*Yong-Xiang Chen, Hsi-Chung Chen, Li-Xiang Chen, Jia-Wei Hu, Chuen-Kai Shie, Yu-Shan Lin, Pradnya Borade, Chau-Che Yeh, Han-Hong Lin, Siek-Siang Chiang, Yu-Chun Chen, Wei-Zen Sun, Yi-Ping Hung*

Smart Signage: An Interactive Signage System with Multiple Displays

*James She, Jon Crowcroft, Hao Fu, Pin-Han Ho*

Inferring Barriers of Urban City Using Mobile Phone Record

*Feng Xiang, Lai Tu, Benxiong Huang*

## **Session CCN: Cloud Computing and Networking**

**Session Chair:** Kehua Guo (guokehua@csu.edu.cn)

**Time:** 16:00-18:20, Wednesday, August 21, 2013

**Location:** Tianhong 3, Park Plaza Beijing Science Park Hotel

A Review of Key Issues that Concern the Feasibility of Mobile Cloud Computing  
*Chunsheng Zhu, Victor C. M. Leung, Xiping Hu, Lei Shu, Laurence T. Yang*

Faceted Search in Business Intelligence on the Cloud  
*Hussain Al-Aqrabi, Lu Liu, Richard Hill, Lei Cui, Jianxin Li*

Visualization Toolkits for Multidisciplinary Experiments on Cloud-based Virtual Educational Platform  
*Xiaowu Chen, Guodong Jia, Faming Li, Rongjiang Pan*

A Mobile-sink based Improved Algorithm for Stable Election Protocol with Nonuniform Node Distribution  
*Jin Wang, Zhongqi Zhang, Jian Shen, Feng Xia, Sungyoung Lee*

Efficient Data Collection Algorithm Based on Multiple Mobile Sink Nodes for Wireless Sensor Networks  
*Jin Wang*

## **Session CSUN: Cyber-physical Systems and Ubiquitous Networks**

**Session Chair:** Jin Wang (wangjin@nuist.edu.cn)

**Time:** 16:00-18:20, Thursday, August 22, 2013

**Location:** Tianhong 1, Park Plaza Beijing Science Park Hotel

iCPS-Car: An Intelligent Cyber-Physical System for Smart Automobiles  
*Sha Zhao, Shijian Li, Longbiao Chen, Yang Ding, Zeming Zheng, Gang Pan*

Formal Specification of Cyber Physical Systems: Three Case Studies Based on Clock Theory  
*Bingqing xu, Lichen Zhang*

AMPS: An Adaptive Message Push Strategy for Ubiquitous Terminals  
*Kehua Guo, Yongling Liu, Jianhua Ma*

Reliability Extensions and Multi-Hop Evaluation for Distributed Protocol Stacks  
*Peter Rothenpieler*

An Implementation towards Integrated Simulation of Cyber-Physical Systems  
*Xiaoyu Li, Yuying Wang, Xingshe Zhou, Dongfang Liang, Chenglie Du*

## **Session DMSA: Data Mining and Semantic Analysis**

- **Session DMSA #1/2**

**Session Chair: Yongzhao Zhan**

**Time: 16:00-18:20, Wednesday, August 21, 2013**

**Location: Tianhong 2, Park Plaza Beijing Science Park Hotel**

Community Detection Based on Readers' Borrowing Records

*Xin Liu, Haihong E, Junde Song*

An Effective IoT Services Indexing and Query Technique

*Chu Du, Zhangbing Zhou, Lei Shu, Xiangyang Jia, Qun Wang*

Generating Discriminative Visual Vocabulary Based on Fusion of Features

*Chang-Sheng Peng*

A Semi-Supervised Incremental Learning Algorithm Based on Auto-adaptive Probabilistic Hyper-graph and Its Application for Video Semantic Detection

*Jiayao Sun, Yongzhao Zhan*

A Video Semantic Analysis Method Based on Kernel Discriminative Sparse Representation and Weighted KNN

*Shan Dai, Yongzhao Zhan, Qirong Mao, Shanshan Zhang*

- **Session DMSA #2/2**

**Session Chair: Zhangbing Zhou (zhangbing.zhou@gmail.com)**

**Time: 14:00-15:40, Thursday, August 22, 2013**

**Location: Tianhong 1, Park Plaza Beijing Science Park Hotel**

How Long a Passenger Waits for a Vacant Taxi - Large-scale Taxi Trace Mining for Smart Cities

*Guande Qi, Gang Pan, Shijian Li, Daqing Zhang, Lin Sun, Laurence Tianruo Yang*

On the Evolution of Contacts and Communities in Networks of Face-to-Face Proximity

*Mark Kibanov, Martin Atzmueller, Christoph Scholz, Gerd Stumme*

Predicting the Content Virality in Social Cascad

*Ming Cheung, James She, Lei Cao*

Distributed SVM Classification with Redundant Data Removing

*XiangJun Shen, Zhen Li, ZhongQiu Jiang, YongZhao Zhan*



## **Session STP: Security, Trustworthiness and Privacy**

- **Session STP #1/2**

**Session Chair: Lu Liu**

**Time: 14:00-15:40, Wednesday, August 21, 2013**

**Location: Tianhong 2, Park Plaza Beijing Science Park Hotel**

Implementation of an SMS Spam Control System based on Trust Management

*Liang Chen, Zheng Yan, Weidong Zhang, Raimo Kantola*

Moments in Time: A Forensic View of Twitter

*Chris Howden, Lu Liu*

Trust and Risk-based Access Control Model for Zero-Knowledge Oriented Mobile Peer-to-Peer Environments

*Zhi-yuan Li, Jun-lei Bi, Lu Liu*

Unveil the Spams in Weibo

*Kan Chen, Peidong Zhu, Liang Chen, Yueshan Xiong*

- **Session STP #2/2**

**Session Chair: Dion Goh (ashlgoh@ntu.edu.sg)**

**Time: 14:00-15:40, Wednesday, August 21, 2013**

**Location: Tianhong 3, Park Plaza Beijing Science Park Hotel**

Privacy-Preserving Point-to-Point Transportation Traffic Measurement through Bit Array Masking in Intelligent Cyber-Physical Road Systems

*Yian Zhou, Qingjun Xiao, Zhen Mo, Shigang Chen, Yafeng Yin*

Smart Grid Wireless Network Security Requirements Analysis

*Khaja Ahmed, Zeyar Aung, Davor Svetinovic*

A Query-Aware Location Privacy Protection Approach in LBS for Road Networks

*Wei Li, Jiangtao Jiang, Chunlei Liu, Guojun Li*

Privacy Disclosure Identification in Social networks

*Feng Zhang, Bin Wu, Bai Wang, Feng Gao*

A Global Dynamic Queuing Strategy on Scale-free Networks

*Xu Pengcheng, Hong Chen*

## **Session SAN: Sensor/Actuator Networks**

**Session Chair:** Zheng Yan (zheng.yan@aalto.fi)

**Time:** 16:00-18:20, Thursday, August 22, 2013

**Location:** Tianhong 2, Park Plaza Beijing Science Park Hotel

Integration of Range-Based and Range-Free Localization Algorithms in Wireless Sensor Networks for Mobile Clouds

*Yufeng Wang, Qun Jin, Jianhua Ma*

Evaluation of the Task Communication Performance in Wireless Sensor Networks: A Queue Theory Approach

*Jie Wang, Kuanjiu Zhou, Kai Cui, Gang Hou*

Understanding News Sharing in Social Media from the Diffusion of Innovations Perspective

*Long Ma, Chei Sian Lee, Dion Goh*

Modeling and Predicting the Re-Post Behavior in Sina Weibo

*Xinjiang Lu, Zhiwen Yu, Bin Guo, Xingshe Zhou*

## **Session SN: Social Networking**

**Session Chair:** Zhi-yuan Li (lizhiyuan81@126.com)

**Time:** 14:00-15:40, Thursday, August 22, 2013

**Location:** Tianhong 2, Park Plaza Beijing Science Park Hotel

Understanding Human Dynamics of Check-in Behavior in LBSNs

*Yun Feng, Zhiwen Yu, Xinjiang Lu, Jilei Tian*

Social Community-Partition Aware Replica Allocation in Ad-hoc Social Networks

*Ahmedin Mohammed Ahmed, Feng Xia, Nana Yaw Asabere, Hannan Bin Liaqat, Jie Li*

Follow You from Your Photos

*Jie Zhang, Hui Zhao, Yusheng Xie*

## **IEEE CPSCoM 2013 PANEL**

**Title:** Star Trek - The Next Frontier: The Future of Cybermatics

**Chair:** Ray Cheung, City University of Hong Kong, HK

**Time:** 10:40-11:40, Wednesday, August 21, 2013

**Location:** Grand Ballroom 1 & 2 & 3, Park Plaza Beijing Science Park Hotel

**Panelists:**

Qun Jin, Waseda University, Japan

Habib F. Rashvand, University of Warwick, UK

James She, Hong Kong University of Science and Technology, HK

Xing Xie, Microsoft Research Asia, China

## **SYMPOSIUM ON FRONTIERS OF INTERNET OF THINGS (SYMloT)**

### **SymloT #1/6 – Architecture and Infrastructure**

**Session Chair: Yanyong Zhang**

**Time: 14:00-15:40, Wednesday, August 21, 2013**

**Location: Four Seasons 5, Park Plaza Beijing Science Park Hotel**

Residential Energy Management in Smart Grid: A Markov Decision Process-Based Approach

*Sudip Misra, Ayan Mondal, Shukla Banik, Manas Khatua, Samaresh Bera, Mohammad S. Obaidat*

MOCLO: A Cloud Framework for Mobile Devices

*Akash Gangil, Sanjay K. Dhurandher, Mohammad S. Obaidat, Vijit Singh, Sushant Bhatia*

Building Smart M2M Applications Using the WuKong Profile Framework

*Kwei-Jay Lin, Niels Reijers, Yu-Chung Wang, Chi-Sheng Shih, Jane Hsu*

Research on the Framework of Internet of Things in Manufacturing for Aircraft Large Components Assembly Site

*Jihong Liu, Jie Yu*

Technical State Monitoring and Evaluation of Aerospace Product Manufacturing Workshop Based on Internet of Things

*Jihong Liu, Wenting Xu*

Interoperability Repository System for IoT

*Tiago Teixeira, Pedro Maló, Bruno Almeida, Márcio Mateus*

### **SymloT #2/6 – Reliability, Security, Privacy and Trust**

**Session Chair: Kwei-Jay Lin (klin@uci.edu) / Tao Shang (shangtao@buaa.edu.cn)**

**Time: 16:00-18:20, Wednesday, August 21, 2013**

**Location: Four Seasons 5, Park Plaza Beijing Science Park Hotel**

Pairing and Authentication Security Technologies in Low-Power Bluetooth

*Junfeng Xu, Tao Zhang, Dong Lin, Ye Mao, Xin Liu, Shiwu Chen, Shuai Shao, Bin Tian*

An Attribute-Based Encryption Scheme with Constant-Size Ciphertexts

*Yanfeng Qi, Chunming Tang, Yu Lou, Maozhi Xu, Baoan Guo*

Synthetic Evaluation of the trustworthiness of Integrated Monitoring & Controlling System for LED Display Based on Fuzzy AHP

*Li Luo, Yuanmei Wen, Xuechen Yu, Yanyu Chen*

Construction and Strategies in IoT Security System

*Gou Quandeng, Yan Lianshan, Liu Yihe, LI Yao*

Frequent Itemset Based Event Detection in Uncertain Sensor Networks

*Yongxuan Lai and Jinshan Xie*

Integrating Context-awareness and Trustworthiness in IoT Descriptions

*Kaiyu Wan, Vangalur Alagar*

## **SymIoT #3/6 – Intelligent Management**

**Session Chair:** Xin Miao (miaox@epri.sgcc.com.cn)

**Time:** 14:00-15:40, Thursday, August 22, 2013

**Location:** Four Seasons 5, Park Plaza Beijing Science Park Hotel

From Internet of Things to Internet of Agents

*Han Yu, Zhiqi Shen, Cyril Leung*

The New Intelligent Prediction for Bus Congestion Based on History Information Processing

*Guixi Xiong, Yan Zhang*

An Intelligent System for Precast Concrete Element Manufacturing Management Based on RFID Technology

*Min Hu, Junyu Lu*

A Universal Object Name Resolution Scheme for IoT

*Zhiwei Yan, Ning Kong, Ye Tian, Yong-Jin Park*

A Space-Time with Weight Algorithm for RFID Data Interpolation

*Ming Ke, Xin Wang, Xuhui Chen, Jianxin Tang*

## **SymIoT #4/6 – Applications, Business, Standards and Social Issues**

**Session Chair:** Cyril Leung / Zhangbing Zhou (zhangbing.zhou@gmail.com)

**Time:** 14:00-15:40, Thursday, August 22, 2013

**Location:** Four Seasons 6, Park Plaza Beijing Science Park Hotel

Study on Acquisition System of Diversification Heartbeat Information based on Body Sensor Network

*Junrong Bao, Jian Li*

Integration of Smart Sensor Networks into Internet of Things: Challenges and Applications

*Dan Partynski, Simon Koo*

A Development Analysis of China's Intelligent Transportation System

*Yuxiang Yan, Chenxue Xu*

Double Nested Internet of Things for Intelligent Management of Police Equipment

*Shengguang Li, Lin Tan, Junxiu Wang, Rui Yu*

Research on IPv6 Address Forecast Model of Smart Grid

*Xin Miao, Xi Chen*

## **SymIoT #5/6 – Intelligent Data Processing and Ubiquitous Computing**

**Session Chair: Xin Miao (miaox@epri.sgcc.com.cn)**

**Time: 16:00-18:20, Thursday, August 22, 2013**

**Location: Four Seasons 5, Park Plaza Beijing Science Park Hotel**

Improved RETE Algorithm in Context Reasoning for Web of Things Environments

*Teng Gao, Xiaofeng Qiu, Lijuan He*

Data Management for Internet of Things: Challenges, Approaches and Opportunities

*Meng Ma, Ping Wang, Chao-Hsien Chu*

A Human Trajectory Estimate Based on Individual Mobility Pattern Library

*Yang Yang, Bowen Du, Xiao Jiang*

Temperature Distribution Recovery Based on Compressive Sensing for Large-Scale Wireless Sensor Networks

*Xuan-Xuan Wu, Cheng-Long Chuang, Joe-Air Jiang*

Using Kasa method to Separate Target's RCS Characters from Background in Electromagnetic Sensing within Anechoic Chamber Measurement

*Jingcheng Zhao, Ming Lv*

Discussion on Key technologies in Forestry Fundamental Scientific Information Cloud Service Platform

*Mubo Zhang, Zhongming Li, Fan Li*

An Anti-collision Algorithm Using Tag Random-dispersing for RFID Systems

*Yang Qing, Li Jiancheng, Wang Hongyi, Shen Rongjun*

## **SymIoT #6/6 – Systems Design, Networks, Distributed Sensing**

**Session Chair: Ping Wang**

**Time: 16:00-18:20, Thursday, August 22, 2013**

**Location: Four Seasons 6, Park Plaza Beijing Science Park Hotel**

Ultra-low-power Neural Recording Microsystem for Implantable Brain Machine Interface

*Hongge Li, Weidong Cao*

The Research on Monitoring of Discrete Manufacturing Process Based on Internet of Things

*Liuyin Yuan, Yu Guo, Jiajun Jiang, Liyun Nian*

Improvement of Peach Platform to Support GUI-based Protocol State Modeling

*Hao Wang, Qiaoyan Wen, Zhao Zhang*

Game theoretic analysis of Workload Factoring in Federation of Clouds

*Changlei Lin, Yonggen Gu, Xiaohong Wu, Jie Tao*

Fuzzy Double-Threshold Track Association Algorithm with Adaptive Threshold in Distributed Multisensor-Multitarget Tracking Systems

*Wei Du, Huansheng Ning, Yuan Wei, Jun Wang*

Relay Node Deployment Based Small World Effect in Hierarchical Industrial Wireless Sensor Networks

*Jieyu Wu, Xinyu Shao, Haiping Zhu*

Towards an Equitable Federated Name Service for the Internet of Things

*Xinchi Li, Yang Liu, Ye Tian, Ning Kong, Yan Wang, Wei Mao*

# **SYMPOSIUM ON FRONTIERS OF CYBER-PHYSICAL-SOCIAL COMPUTING (SYMCPs)**

## **SymCPS #1/4 – Applications, Services and Solutions**

**Session Chair:** Kejun Dong (kevin@cstnet.cn)

**Time:** 14:00-15:40, Wednesday, August 21, 2013

**Location:** Four Seasons 6, Park Plaza Beijing Science Park Hotel

Leveraging Social Network APIs for Enhancing Smartphone Apps: An Example of VoIP App

*Pin-Fan Lee, Shuchih Ernest Chang*

GreenBicycling: A Smartphone-based Public Bicycle Sharing System for Healthy Life

*Yifan Zhao, Longbiao Chen, Chao Teng, Shijian Li, Gang Pan*

A Smart Cyber-Physical Systems-Based Solution for Pest Control

*Farhad Mehdipour, Krishna Chaitanya Nunna*

Just-in-Time Social Cloud: Computational Social Platform to Guide People's Just-in-Time Decisions

*Kwan Hong Lee, Andrew Lippman, Alex S. Pentland, Pattie Maes*

We Know What You Are -- A User Classification Based On Mobile Data

*Duan Hu, Fei Sun, Lai Tu, Benxiong Huang*

## **SymCPS #2/4 – Applications, Services and Solutions**

**Session Chair:** Jianwei Niu (niu Jianwei@buaa.edu.cn)

**Time:** 16:00-18:20, Wednesday, August 21, 2013

**Location:** Four Seasons 6, Park Plaza Beijing Science Park Hotel

Modeling Effects of Physical Factors on Controller Area Network in Cyber-physical Systems

*Bo Shen, Xingshe Zhou, Gang Yang, Ru Wang*

Detecting Flu Transmission by Social Sensor in China

*Jiangmiao Huang, Hui Zhao, Jie Zhang*

A Hybrid Content-based Filtering Approach Recommending Microbloggers for Web-based Communities

*Kejun Dong, Yi Shen*



Towards A Hybrid Approach of Primitive Cognitive Network Process and K-Means Clustering for Social Network Analysis

*Chun Guan, Kevin Kam Fung Yuen*

Towards Dynamic Resource Provisioning For Traffic Mining Service Cloud

*Jianjun Yu, Tongyu Zhu*

Multi-Step Sensor Scheduling for Energy-Efficient High-Accuracy Collaborative Target Tracking in Wireless Sensor Networks

*Biao Song, Wendong Xiao, Zhaohui Zhang*

## **SymCPS #3/4 –Data Mining, Algorithms and Modelling**

**Session Chair: Guorui Li (lgr@mail.neuq.edu.cn)**

**Time: 14:00-15:40, Thursday, August 22, 2013**

**Location: Tianhong 3, Park Plaza Beijing Science Park Hotel**

A Hybrid Emotion Recognition on Android Smart Phones

*Weishan Zhang, Xin Meng, Qinghua Lu, Yuan Rao, Jiehan Zhou*

Multi-View Approach for Modeling Aerospace Cyber-Physical System

*Lichen Zhang*

Extending and Recompiling AADL for CPS Modeling

*Zhonghao Sun, Xingshe Zhou*

A Novel Frequency Hopping Scheme Based on Radio for Aircraft Cognitive

*Lei Zhidong, Zhang Xiaolin*

Leading Users Detecting Model in Professional Community Question Answering Services

*Siqi Song, Ye Tian, Wenwen Han, Xirong Que, Wendong Wang*

A Moving Foreground Expansion Method Based on the Gaussian Distribution

*Yanhua Li, Wei Li, Xiang Qi*

## **SymCPS #4/4 –Security and Trust**

**Session Chair: Lichen Zhang (zhanglichen1962@163.com)**

**Time: 16:00-18:20, Thursday, August 22, 2013**

**Location: Tianhong 3, Park Plaza Beijing Science Park Hotel**

A Compressive Sensing based Secure Data Transmission Scheme

*Guorui Li, Ying Wang*

Efficient Security Solution for Information-Centric Networking

*Hasen Nicanfar, Peyman TalebiFard, Chunsheng Zhu, Victor C.M. Leung*

EigenCrime: An Algorithm for Criminal Network Mining Based on Trusted Computing

*Shujun Cai, Jiangnan Xia, Keyi Sun, Zhen Wang*

A Task-attribute-based Workflow Access Control Model

*Yi Liu, Ke Xu, Junde Song*

An IO optimized Data Access Method in Distributed KEY-VALUE Storage System

*Chao Li, Guangjun Wu, Shupeng Wang, Yixi Li*

## IEEE GREENCOM 2013 WORKSHOPS

### **GreenCom 2013 WS – VeSAN 2013: The International Workshop on Vehicular Sensor and Ad-hoc Networks**

**Workshop Chair:** DeyunGao (gaody@njtu.edu.cn)

**Time:** 8:40-10:40, Tuesday, August 20, 2013

**Location:** Room 2, Meeting Center, New Main Building, Beihang University

Toward Optimal Additive Noise Distribution for Privacy Protection in Mobile Statistics Aggregation

*Hao Zhang, Yonggang Wen, Honggang Hu, Nenghai Yu*

Performance Analysis of a Hierarchical Structured VANET

*Wanting Zhu*

Multilevel Cluster-based Information Fusion in Vehicle Ad Hoc Networks

*Weicheng Zhao*

PSFCS: Robust Emergency Communications Supporting High-Mobility based-on WiMAX MMR Networks

*Wen-Kang Jia, Chia-Yao Chen, Yaw-Chung Chen*

## **GreenCom 2013 WS – GreenCom-Next 2013: The International Workshop on Next Topics for Green Communications and Computing**

- **GreenCom-Next #1/3**

**Workshop Chair: Fabrice Saffre (fabrice.saffre@bt.com)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: Room 3, Meeting Center, New Main Building, Beihang University**

On Energy Efficiency Data Access and Backup for Cloud Computing Networks  
*Yean-Fu Wen*

A Model to Analyze the Energy Savings of Base Station Sleep Mode in LTE HetNets  
*Paolo Dini, Marco Miozzo, Nicola Bui, Nicola Baldo*

Soft Timing Synchronization Algorithm for CPM Signals  
*Xiangchao Zhou, Rui Xue, Danfeng Zhao, Fu Fang*

Secure Framework for the Return Routability Procedure in MIPv6  
*Chan Yeob Yeun, Khaled Salah, Faisal Al Hawi*

- **GreenCom-Next #2/3**

**Session Chair: Hanno Hildmann (hanno.hildmann@kustar.ac.ae)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: Room 2, Meeting Center, Beihang University**

An Energy Efficient Cache Design for Multi-core Processors  
*Cao Xiang Rong, Xiaolin Zhang*

Analysis Method of Energy for C Source Program and Its Application  
*Yuechuan Yang*

Simulating Stochastic Activation Functions  
*Hanno Hildmann, Sebastien Nicolas, Fabrice Saffre*

Power-efficient Virtual Machine Placement and Migration in Data Centers  
*Shuo Fang, Renuga Kanagavelu, Bu Sung Lee, Chuan Heng Foh, Khin Mi Mi Aung*

- **GreenCom-Next #3/3**

**Session Chair: Fabrice Saffre (fabrice.saffre@bt.com)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: Room 3, Meeting Center, Beihang University**

Probabilistic Modeling during Power Estimation for Mixed Polarity Reed-Muller Logic Circuits

*Xiang Wang, Ying Lu, Yi Zhang, Zexi Zhao, Tongsheng Xia, Jishun Cui, Limin Xiao*

Ant-colony Based Heuristics to Minimize Power and Delay in the Internet

*Shankar Raman, Gaurav Raina, Hanno Hildmann, Fabrice Saffre*

Materialization of a Comprehensive Digital City with CityMaker and ArcGIS

*Mingzhu Deng, Guangming Liu*

## IEEE ITHINGS/CPSCOM 2013 WORKSHOPS

### BR&A 2013: The International Workshop on Biometric Recognition and its Applications

**Session Chair: Junying Gan (junyinggan@163.com) /**

**Bing Luo (luobing8888@163.com)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B228, New Main Building, Beihang University**

A New Method of Designing High-power Electroplating Power Supply

*Yihong He, Shuiyong Yu*

The Study of Fusion Image Block and Sparse Representation Classification in Disguised Face Recognition

*Junying Gan, Dan Liu, Junying Zeng, Fengxia Tian*

SMT Components Model Inspection Based on Characters Image Matching and Verification

*Bing Luo, Yuehua Gao, Zhongyu Sun, Sufang Zhao*

The Manipulation of Chaotic synchronization quality Based on VCSEL with Optical Feedback

*Dongzhou Zhong*

Fast Wavelet Thresholding Algorithms for Face Image Inpainting

*Yibin Yu, Jinguo Cao, Yaofang Tang, Junying Gan*

Multispectral Palmprint Recognition Using Score-Level Fusion

*Yibin Yu, Yaofang, Tang, Jinguo Cao, Junying Gan*

Encryption Node Design in Internet of Things Based on Fingerprint Features and CC2530

*Bohan Zeng, Xu Wang, Kaili Zhou*

Facial Expression Recognition Based on Local Binary Pattern and Gradient Directional Pattern

*Wenjin Chu, Zilu Ying, Xiaoxiao Xia*

Design of Intelligent Inducing Switch

*Fengxia Tian, Yang Zhao*

## **CPSIP 2013: The International Workshop on Cyber Physical Society Information Processing**

**Workshop Chair: Weining Liu/Shangbo Zhou**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B216, New Main Building, Beihang University**

Identify Online Fraudster with Extended Cellular Automata

*Ji Li, Yueliang Xiao*

Harmonization of the Cyber-Physical Society Physical

*Alex Abramovich, Rashid Khunagov*

Influence Analyzing and Modeling of High Frequency Forwarding Microblogs

*Shangbo Zhou, Wei Wang, Jie Luo, Li Wan, Yao Zhang*

Requirement Specification for Transportation Cyber Physical Systems

*Lichen Zhang*

Integration-oriented modeling of Cyber-Physical interactive process

*Guan Tao, Yang Gang*

Web-of-things Framework for WeChat

*Yitong Huang, Xiaozheng Lai, Bingpei Dai, Qinyi Chen*

## **CS&IC 2013: The International Workshop on Cyberspace Security and Information Countermeasure**

**Workshop Chair:** Yu Zhang (erbuzhangyu@126.com)

**Time:** 8:40-10:40, Tuesday, August 20, 2013

**Location:** A209, New Main Building, Beihang University

Simulation Experiment Research of Cyberspace Confront Effectiveness Evaluation  
*Yu Zhang, Shan-song Chen, and Deping Xie*

Technology of Situation Awareness Based on Radar Network in Cyberspace  
*Xun Yang, Wei Shan, and Liu Jia*

Space Information Security and Cyberspace Defense Technology  
*Kang Su, Qiaozhong Dong, and Weiqiang Zhu*



## **CV2N 2013: The International Workshop on Connected Vehicles and Vehicular Networks**

**Workshop Chair: Daxin Tian / Dayang Sun ([www.sunday@gmail.com](mailto:www.sunday@gmail.com))**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: Room 6, Meeting Center, New Main Building, Beihang University**

Real time vehicle route guidance based on connected vehicles

*Daxin Tian, Yong Yuan, Jianshan Zhou, Yunpeng Wang and Guangquan Lu*

A Novel Two-timer-based Broadcast Routing Protocol for Vehicular Ad-hoc Networks

*Song Fang, Tao Luo*

Research of Vehicle Counting Based on DBSCAN in Video Analysis

*Dayang Sun, Binbin Li, Zhihong Qian*

A Self-adaptive V2V Communication System with DSRC

*Daxin Tian, Hao Luo, Zhou Jianshan, Yunpeng Wang and Haiyang Yu*

## **ECTE 2013: The International Workshop on Electromagnetic Characteristics of Target and Environment**

- **Session ECTE #1/2**

**Session Chair: Hong-Cheng Yin / Xiang-Yang Zhang**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: A212, New Main Building, Beihang University**

SAR segmentation and recognition based SCM

*Liping Hu, Xiaoyu Xing*

EM Scattering Analysis of Complex Target Coated with Plasma by Conformal SO-FDTD Method

*Hao-Chuan Deng, Xiao Wei, Hong-Cheng Yin*

SAR RAW Data Simulation by Electromagnetic Computation in Frequency Domain

*Xupu Geng, Chunzhu Dong, Hongcheng Yin, and Guoqing Zhu*

Precession and Structural Parameters Estimation of the Cone-shaped Target Based on the Profile Length

*Jing Huang, Chao Ning, Zhihe Xiao*

Terahertz Gaussian Beam Scattering by a Conducting Sphere

*Liangsheng Li and Hongcheng Yin*

Reshaped Window Iterative Super-Resolution Imaging Algorithm

*Sheng Li, Liangsheng Li, and Hongcheng Yin*

Study on the Influential Factors of Radar Target RCS in Resonance Region

*Liang Man, Xiao Wei, Zhihe Xiao*

- **Session ECTE #2/2**

**Session Chair: Hong-Cheng Yin / Xiang-Yang Zhang**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: A212, New Main Building, Beihang University**

A New Method for Estimating Radar Profile Length of a Cone Target

*Chao Ning, Jing Huang, Chao Gao, Yong Zhu*

The Feature Extraction of Time-Frequency Image Base on Frequency Diversity

*Jing Sheng, Zhihe Xiao, Jing Huang*

Characteristic Study of Target Micro-Motion Based on the Wavelet Analysis

*Yuguang Tian, Chao Ning, Xiangyang Zhang*

The Decorrelation Time Accumulation Restrain Method for Sea Clutter Spike

*Xujin Yuan, Yong Chen, Chao Wang, Hongcheng Yin*

The Radar Echo Simulation Method of Distributed Target at High Speed

*Tao Zhao, Hong-Mei Ren, and Hong-Cheng Yin*

A Novel Method for Generating Planar Wave Based on Dielectric Gratings

*Fei Dai, Qiping Cheng, Hui Yue*

Application of terahertz technology on RCS measurement

*Xiaobing Wang, Xin Huang, Yajun Wu, Fei Dai, Li Li*

Typical Target RCS Reduction Using Structural Radar Absorbing Material

*Yongfeng Wang, Kainan Qi*

## **EDI 2013: The International Workshop on Electromagnetic Detection and Identification**

- **Session EDI #1/2**

**Session Chair: Yongjun Xie (yjxie@buaa.edu.cn)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: A208, New Main Building, Beihang University**

Error Analysis in Calculating RCS using GRECO Method

*Zhihua Cheng*

Placement Optimization of Vehicular Antenna using Particle Swarm Optimization

*Yuru Mao*

A Novel Loss Compensated Multipath Power Divider for Frequency Synthesizer

*Tongfei Yu*

An Approach for Extrapolating Far Field Radar Cross-Section from Near Field Measurement

*Gao Chao*

Implementation of the Digital Correlation Unit for Synthetic Aperture Interferometric Radiometer

*Xianxun Yao*

Design Procedures and Considerations of FOD Detection Millimeter-Wave FMCW Radar

*Jin Zhang*

- **Session EDI #2/2**

**Session Chair: Yongjun Xie (yjxie@buaa.edu.cn)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: A208, New Main Building, Beihang University**

Exact Design of a Ka Band H-plane Inductance Diaphragm Waveguide Band-pass Filter

*Yong Fu*

The Compact Microstrip Bandstop Filter Using Equal Width OpenStub

*Baohua Yang*

The Design and Simulation of Hardware Architecture of the Fast and On-site Assessing System of Scattering Characteristics of Stealth Aircraft Based on Simulink

*Tao Hong, Dan Song*

## **EPS 2013: The 2nd International workshop on Engineering Pervasive Service Systems**

**Workshop Chair: Weishan Zhang (zhangws@upc.edu.cn)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: Room 4, Meeting Center New Main Building, Beihang University**

Food Image Recognition Using Pervasive Cloud Computing

*Weishan Zhang, Pengcheng Duan and Wenshan Wang*

An approach of semantic similarity by combining HowNet and Cilin

*Zhang Pei-Ying and Zhang Zhan-Shan*

Reconstruction of 3D Maps for 2D Satellite Images

*Zhu Lianzhang, Zheng Xuexing and Li Pengfei*

Component-based cloud computing service architecture for measurement system

*Chao Liu, Qingsong Yu, Tianao Zhang and Zhongwen Guo*

## **e-WiSe 2013: The 2nd International Workshop on Energy and Wireless Sensors**

**Workshop Chair: Marise Bafleur and Jean-Marie Dilhac (dilhac@laas.fr)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: Room 5, Meeting Center, New Main Building, Beihang University**

Towards energy autonomy of wireless sensors in aeronautics applications: SMARTER collaborative project

*Jean-Marie Dilhac, Marise Bafleur*

Modeling, Validation and Design Analyses of a Piezoelectric Cymbal Transducer for Non-Resonant Energy Harvesting

*Meiling Zhu*

SPICE Modeling of Piezoelectric Energy Harvesting Device utilizing Stress Influence

*Koji Sonoda, Takayuki Fujita, Kensuke Kanda, Kazusuke Maenaka,  
Hidenori Katsumura, Masaya Tamura, Hiroshi Kagata*

Experimental study of a passive impedance matching interface based on a centimeter-size high inductance coil for practically enhanced piezoelectric energy harvester performance at low frequency

*Alessandro Giuliano, Meiling Zhu*

Design Optimization of Electromagnetic MEMS Energy Harvester with Serpentine Coil

*Yuji Tanaka, Takayuki Fujita, Tatsuya Kotoge, Kohei Yamaguchi, Koji Sonoda, Kensuke Kanda, Kazusuke Maenaka*

## **GS&GSP 2013: The International Workshop on Gas Sensors and Gas Sensing Platforms**

- **Session GS&GSP #1/2**

**Session Chair: Li-Feng Ge (lfge@ahu.edu.cn)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B204, New Main Building, Beihang University**

A Novel Surface Acoustic Wave Sensor for Optical Lens Surface Dirt Detection

*Jiuling Liu, Minghua Liu, Wen Wang and Shitang He*

Electrical Sensing Characteristics of Pseudo-LFE Sensors with Different Single Crystals

*Zhitian Zhang, Chao Zhang, Wenyan Wang, Yan Liu, Tingfeng Ma*

Investigation of Polymer-Coated Film Bulk Acoustic Wave Resonator for Acetone Vapor Detection

*Jingjing Wang, Da Chen, Weihui Liu*

Detection of benzene series by two-dimensional FAIMS technique

*Lehua Zhang, Youjiang Liu, Hongwei Wang, Chilai Chen, Huanqin Wang, Deyi Kong, Xiaotian Zhang, Mario Chavarria, Juergen Brugger*

Polyaniline-coated Surface Acoustic Wave Sensor for Humidity Detection

*Xie Xiao, Wang Wen, He Shitang, Mu Ning, Pan Yong*

- **Session GS&GSP #2/2**

**Session Chair: Li-Feng Ge (lfge@ahu.edu.cn)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: B204, New Main Building, Beihang University**

Effect of Facets of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> Nanostructures on Gas-sensing Performance

*Jing Wang, Xiaoman Zhang, Liang Chen, Weihong Xu, Xingjiu Huang, Jinhuai Liu*

Application and Development Trend of Gas Sensing Technology Based on Absorption Spectroscopy

*Zhenzhen Zhao, Fengchun Tian, Shouqiong Liu*

Detection of toxic VOC pollutants with FAIMS

*Youjiang Liu, Lehua Zhang, Hongwei Wang, Chilai Chen, Huanqin Wang, Deyi Kong, Xiaotian Zhang, Mario Chavarria, Juergen Brugger*

Fabrication of Prototypal Nanomechanical Resonator Based on a single Copper Nanowire

*Wei-Hong Xu, Li-Feng Ge*

The SAW Gas Chromatograph and Its Applications In The Public Security

*Shitang He, Jiuling Liu and Minghua Liu*

The Theory of Lamb Wave Mass Resonators and Their applications for Gas and Liquid Sensing

*Li-Feng Ge*

Study of the Space Station On-Orbit Leak Detection Based on the Differential Pressure Gas Sensor

*Wei Sun, Rongxin Yan, Lichen Sun, Donghui Meng, Zheng Li, Haitao Guo, Wenbin Li*



## **HBC&BSP 2013: The International Workshop on Human Body Communications and Biomedical Signal Processing**

- **HBC&BSP #1/4**

**Session Chair: Xiang Wang (wxiang@buaa.edu.cn)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B221, New Main Building, Beihang University**

Pulse-Output Monitor Genetic Circuit of Breast Cancer Testing

*Xiang Wang, Xun Wang, Guangqian Yuan, Zexi Zhao*

Elderly gait analysis and Assessment Based on body area network

*Y.D. Xuan, Z. Zhao, Z. Fang, F.M. Sun*

Combined motion and region-based 3D tracking in active depth image sequence

*Xingyu Wu, Xia Mao, Lijiang Chen*

Characteristic Optimization of Multilayer Dielectric for the Bloch-Surface-Wave Based Sensor

*Shuna Li, Jiansheng Liu, Zheng Zheng, Yuhang Wan, Weijing Kong, Sun Yu*

Facial Expression Recognition Based on t-SNE and AdaBoostM2

*Jizheng Yi, Xia Mao, Yuli Xue*

A Design of Security Module to Protect Program Execution in Embedded System

*Xiang Wang, Zexi Zhao, Ying Lu, Yi Zhang*

- **HBC&BSP #2/4**

**Session Chair: Zhan Zhao (zhaozhan@mail.ie.ac.cn)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: C201, New Main Building, Beihang University**

Improved P-T algorithm applied to a wearable integrated physiological parameters system

*Z. H. Xu, Z. Fang, Z. Zhao*

Iterative Threshold Selection for TOA estimation of IR-UWB System

*Bo Yin, Xiang Wang*

A Novel Alternative Exponent-weighted Fuzzy C-Means Algorithm

*Renhao Fan, Jordi Madrenas, Xiang Wang*

A wireless router with P-H-T sensing for health monitoring

*Z. Fang, F. M. Sun, J. Tan, Z. Zhao*

A Whole Integrated System for Detection of Neural Signal and Wireless Transmission  
*Dang Hua, Qu Ruoyuan, Chen Zhiming, Gui Xiaoyan, Wang Xinghua*

Research on the Monitoring and Controlling Model of SIP Network  
*Liang Zhang, Zhaoxin Zhang, Xu Cui, Dan Liu*

- **HBC&BSP #3/4**

**Session Chair: Hong Zhang**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: B221, New Main Building, Beihang University**

Saliency-based Feature Learning for NO-Reference Image Quality Assessment  
*Zhang Hong, Feng Ren, Yuan Ding*

A Compensated Technique for 2.5-GHz Ring-Oscillator-Based PLL used in Wireless Transmission  
*Dang Hua, Liu Zicheng, Gui Xiaoyan, Zhong Shunan*

Speech synthesis research based on EGG  
*Lijiang Chen, Xia Mao, Pengfei Wei, Angelo Compare*

A temperature insensitive ring oscillator for low power RF communications  
*Pilong Yang, Tongsheng Xia, Hongge Li, Xiang Wang*

Low-noise biopotential recording circuit with correlated timeshare sampling  
*Hongge Li, Weidong Cao, Xinyu Yin*

A No-Reference Quality Metric for Blur Image  
*Zhang Taojia, Zhang Hong, Yuan Ding*

- **HBC&BSP #4/4**

**Session Chair: Xiang Wang (wxiang@buaa.edu.cn) / Li Ruan (ruanli@buaa.edu.cn)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: C201, New Main Building, Beihang University**

Circuit Design of Analog Front-end for Neural Signal Detection  
*Dang Hua, Zhang Lei, Chen Zhiming, Gui Xiaoyan, Wang Xinghua*

A New Pedestrian Detect Method in Crowded Scenes  
*Hou Xin, Zhang Hong, Yuan Ding*

Design and implementation of a circuit system for Neural Signal Detection  
*Dang Hua, Li Xiao, Chen Zhiming, Gui Xiaoyan, Wang Xinghua, Zhong Shunan*

Design and implementation of a CMOS 1Gsps 5bit Flash ADC with offset calibration

*Li Shiwen, Dang Hua, Gao Peng, Gui Xiaoyan, Chen Zhiming, Wang Xinghua, Zhong Shunan*

Spike detection based on fractal dimension

*Zhou Jiyang, Xu Shengwei, Lin Nansen, Wang Mixia, Cai Xinxia*

A GPU-Accelerated Large-Scale Music Similarity Retrieval Method

*Limin Xiao, Yao Zheng, Wenqi Tang, Guangchao Yao, Li Ruan, Xiang Wang*

Power Spectral Analysis of Acupoint Bioelectricity

*Quan Zhou, Nansen Lin, Shuping Gai, Jingjing Zhang, Lu Zhang, Wentao Shi, Renhuan Yu, Xinxia Cai*

Compressive Sensing of Neural Action Potentials by Designing Overcomplete Dictionaries

*Shuai Zhou, Bowei Dai, Yin Xiang, Shengwei Xu, Bingchen Zhang, Yilin Song, Mixia Wang, Xinxia Cai*

CloudDVMM: Distributed Virtual Machine Monitor for Cloud Computing

*Li Ruan, Jinbin Peng, Limin Xiao, Xiang Wang*

Metadata-intensive I/O Performance Optimization by Merging Read/write Requests

*Li Ruan, Qimeng Wu, Limin Xiao, Ke Xie, Xiang Wang*

## **IWMMC 2013: The International Workshop on Machine to Machine Communication**

**Workshop Chair: ZhiKui Chen / Chung-Ming Huang**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: Room 4, Meeting Center, New Main Building, Beihang University**

Angle of Arrival Estimation for Passive UHF RFID Tag Backscatter Signal

*Meng-Chang Hua, Guo-Chen Peng, Yan-Jun Lai, Hsin-Chin Liu*

Mobile IMS Integration of the Internet of Things in Ecosystem

*Han-Chuan Hsieh, Jiann-Liang Chen*

Design of Gateway for Monitoring System in IoT Networks

*Ji-De Huang, Han-Chuan Hsieh*

Dependable Architecture of RFID Middleware on Network RFID Systems

*Yung-Li Hu, Wei-Bing Su, Yennun Huang, Ing-Yi Chen, Sy-Yen Kuo*

The Design and Implementation of the Front-end Software for the Telemetry and Telecontrol System of Satellite

*Zhao Qi, Ma Li*

Internet of Things for Special Materials Transportation Vehicles

*Shengguang Li, Lin Tan, Yuanshuo Zhu, Rucai Zhang*

Performance Analysis of COMPASS for the Asia-Pacific Region

*Hangyu Huo, Xiaolin Zhang, Canhui Chen*

## **LTLS 2013: The International Workshop on Localization Technology and Location-based Services**

**Workshop Chair: Xiaoyan Yin (yinxy@nwu.edu.cn) / Bin Guo**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: Room 7, Meeting Center New Main Building, Beihang University**

A KNN Indoor Positioning Algorithm that Weighted by the Membership of Fuzzy Set  
*Jiankun Yu, Jianye Liu*

Building Location-based Service Based on Social Network API: An Example of Check-in App  
*Pin-Fan Lee, Shuchih Ernest Chang*

Prioritizing the Data in the Target-Tracking Wireless Sensor Networks  
*Dan Xu, Xiaojiang Chen, Xiaoyan Yin, Lvju Wang, Hao Chen, Yuan Zhang, Dingyi Fang*

DLF Target Detection and Localization in Wireless Network  
*Tianzhang Xing, Dingyi Fang, Xiaojiang Chen, Liqiong Chang, Yuhui Ren*

Bandwidth Reservation for Target Tracking in Region-based Wireless Sensor Networks  
*Xiaoyan Yin, Dingyi Fang, Xiaojiang Chen, Hao Chen*

Fusion estimation based on UKF for indoor RFID tracking  
*Xuebo Jin*

## **NMCV4SC 2013: The International Workshop on New Media and Computer Vision for Smart City**

**Workshop Chair: Beili Qiu (Qiubeili@sina.com) /**

**Ning Wang (wangningmaya@126.com)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: Room 6, Meeting Center, New Main Building, Beihang University**

Facile Analysis of Smartphone Comics

*Beili Qiu*

Research on Production of Regional Animation Style based on Computer Graphic Rendering

*Jingjing Chen, Yi Lin, Kexuan Ma, Yue Liu*

A Blind Demodulation Algorithm for MFSK Signals using STFT-Radon-Wavelet Transform

*Caiyong Lin, Guoyi Zhang, Xuzhou Zhang, Yan Yu*

Novel Method to Remove Eye-blink Artifacts Based on Correlation Using ICA

*Hengsong Shen, Hongjun Tian*

Virtual Assembly, Maintenance and Training System Based on the Virtual–Real Fusion Technology

*Ning Wang, Yue Qi*

## **OC&A 2013: The International Workshop on Optical Characteristics and its Applications**

**Workshop Chair: Yang Zhong-Dong**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: A209, New Main Building, Beihang University**

A new infrared sensor model based on imaging system test parameters

*Zheng Liu, Hongxia Mao, Yinghong Dai, Jingli Wu*

Mixed norm-based image restoration using neural network

*Yuannan Xu, Jing Wang, Yanbing Dong, Chenfei Jin, Yuan Zhao*

Simulation and Analysis of Turbulent Optical Wavefront Based on Zernike Polynomials

*Yan Chen, Yuannan Xu, Shuhua Wang, Yanbing Dong*

Study on the interaction of optical field and transverse acoustic mode in silicon Optical fibers

*Jing Wang, Yuannan Xu*

Testing technology of infrared point source target optical axis

*Yue Peng, Hao Lu*

Human Segmentation In Infrared Videos using Markov Random Field

*Wenjia Yang, Xiaodan Xie, Zhi Chai, Yapeng Li*

## **PhoneCom 2013: The 3rd IEEE International Workshop on Sensing, Networking, and Computing with Smartphones**

**Workshop Chair: Feng Xia (f.xia@ieee.org) / James She (james.she@ust.hk)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: Room 6, Meeting Center, New Main Building, Beihang University**

SmartProbe: a Bottleneck Capacity Estimation Tool for Smartphones

*Francesco Disperati, Dario Grassini, Enrico Gregori, Alessandro Improta,  
Luciano Lenzini, Davide Pellegrino and Nilo Redini*

CANDIS: Heterogenous Mobile Cloud Framework and Energy Cost-Aware Scheduling

*Sebastian Schildt, Felix Büsching, Enrico Jörns and Lars Wolf*

An Experimental Study on Wireless Magnetic Communication With Smart Phone Using a MEMS Magnetometer

*Jiabo Wang and Xi Chen*

PhoneJoule: An Energy Management System for Android-Based Smartphones

*Xiaojing Liu, Fangwei Ding, Jie Li, Haifeng Liu, Zhuo Yang, Juan Chen and Feng Xia*

KeyGraph-based Social Network Generation for Mobile Context Sharing

*Myeong-Chun Lee, Young-Seol Lee and Sung-Bae Cho*

Cyber-Physical Directory: A Dynamic Visualization of Social Media Data

*Jean-Loup Lamothe, James She and Ming Cheung*



## **SDPI 2013: The International Workshop on Sensor Data Processing and Integration**

**Workshop Chair: Zhuofeng Zhao / Jian Yu**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: B201, New Main Building, Beihang University**

Capturing, Calculating, and Disseminating Real-Time CO<sub>2</sub> Emissions and CO<sub>2</sub> Flux Measurements via Twitter in a Smart City

*Laurie Butgereit, Alecia Nickless*

Freshness-aware Sensor Mashups based on Data Services

*Guiling Wang, Feng Zhang*

A method of sensing data services query in emergency management

*Xin Chen, Yanbo Han, Yongshan Wei, Yan Wen, Shouli Zhang*

A Sensory-Data-Hosting Oriented Scheduling Strategy on Virtual Machine

*Xiang Li, Weilong Ding, Yong Jiang*

## **SeloTA 2013: The International Workshop on Software Engineering for Internet of Things-Based Applications**

**Workshop Chair: Jin Liu and Xiaoyuan Jin**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B201, New Main Building, Beihang University**

Wireless Sensors for Next Generation Healthcare and Medical Telemetry  
*Kaushik Chowdhury, Northeastern University, USA*

Software Engineering and Pervasive Wireless Communications for Internet of Things: Challenges and Perspectives  
*Geyong Min, University of Bradford, UK*

From the Internet of Things to trusted Apps for Things  
*Christian Prehofer*

A Profile for Step Data Transmission based on Bluetooth Low Energy  
*Youcong Ni, Sun Cong, Zhao Ting, Peng Ye, Chunyan Wang, Luo Zeng*

Exception Handling in Service-oriented Software: A Survey  
*Xue Tong, Ying Shi, Wu Qing*

On the Application of the Internet of Things in the Field of Medical and Health Care  
*Fang Hu, Dan Xie, Shaowu Shen*

Hierarchical RBAC model with alpha factor in the Water Supply Pipeline Network  
*Wu Ting, Yuan Tianliang, Yu Long*

Modeling Concern of Online Auction System with SA-CDL  
*Linlin Zhang, Kai Zhao, Zhenhong Jia, Youcong Ni*

The Research on Interactive Exhibition Technology of Digital Museum Resources  
*Ning Wang, DaYan Shangguan, Bing He*

## **SNDCS 2013: The International Workshop on Sensor Networks and Data Communications Security**

- **Session SNDCS #1/2**

**Session Chair: Shanyu Tang/ Liping Zhang**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B225, New Main Building, Beihang University**

Integrity Protection and Attestation of Security Critical Executions on Virtualized Platform in Cloud Computing Environment

*Bingyu Zou, Huanguo Zhang*

A Fuzzing Framework Based on Symbolic Execution and Combinatorial Testing

*Jian Yang, Huanguo Zhang, Jianming Fu*

Dynamic Knowledge Repository-based Security Auxiliary System of User behavior

*Fan Yang, Jinxia Wu, Shanyu Tang, Huanguo Zhang*

Intrusion Detection Method Based on Data Quantity of Computer Bus

*Zhao Ma, Shanyu Tang, Liping Zhang, Linchen Yu, Sifa Zhang*

Robust and Efficient Authentication Protocol Based on Elliptic Curve Cryptography for Smart Grids

*Liping Zhang, Shanyu Tang, Yijing Jiang, Zhao Ma*

De Bruijn Graph-based Whole-genomic Sequence Assembly Algorithms and Applications

*Xiaojun Kang, Shanyu Tang, Yongge Ma, Ruixiang Liu, Yaping Wang*

- **Session SNDCS #2/2**

**Session Chair: Liping Zhang / Shanyu Tang**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: B225, New Main Building, Beihang University**

Review of Digital Watermarking for 2D-vector Map

*Jinxia Wu, Fan Yang, Chonglong Wu*

Real-time Covert VoIP Communications over Smart Grids by using AES-based Audio Steganography

*Yijing Jiang, Liping Zhang, Shanyu Tang, Zhangbing Zhou*

Improving Performance of E-government System from the User Perspective

*Hang Zhang, Sifa Zhang, MuZhou Xiong, Shanyu Tang*

ECC-based Authenticated Key Agreement Protocol with Privacy Protection for VoIP Communications

*Shaohui Zhu, Fan Yang, Liping Zhang, Shanyu Tang*

Establishment of Security Levels in Trusted Cloud Computing Platforms

*Fan Yang, Li Pan, Shanyu Tang*

Efficient Divisible E-cash in the Standard Model

*Jiangxiao Zhang, Zhoujun Li, Hua Guo and Chang Xu*

## **SSO 2013: The International Workshop on Secure Smart Objects**

**Workshop Chair: Samia Bouzefrane (samia.bouzefrane@cnam.fr)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: Room 7, Meeting Center, New Main Building, Beihang University**

Towards a Modular and Lightweight Model for Android Development Platforms

*M. Zneika, H. Loulou, F. Houacine, S. Bouzefrane*

Towards Secure Identity Management in Smartphone Environments

*Maryline Laurent, Samia Bouzefrane, Christophe Kiennert*

Analysis towards the security issue of cloud computing infrastructure

*Bo Zhao*

Trusted computing: Principles and Security Issues

*Pierre Paradinas*

## **TFWS 2013: The 3rd International Workshop on Trend and Future of Web Science**

**Workshop Chair: Hanmin Jung (jhm@kisti.re.kr) /**

**Jangwon Gim (jangwon@kisti.re.kr)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B201, New Main Building, Beihang University**

Extracting Protein Terminologies in Literatures

*Jangwon Gim, Donald J Kim, Myunggwon Hwang, Sa-Kwang Song, Do-Heon Jeong, Hanmin Jung*

Author Name Disambiguation in Technology Trend Analysis Using SVM and Random Forests and Novel Topic Based Features

*Sebastian Kastner, Sung-Pil Choi, and Hanmin Jung*

Research on Quantum-bit Error Correction Coding for Smart Grid Substation

*Xin Miao, Xi Chen*

## **UUMA 2013: The 4rd International Workshop on Universal User Modeling and Applications**

- **Session UUMA #1/4**

**Session Chair: Bofeng Zhang (bfzhang@shu.edu.cn)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B206, New Main Building, Beihang University**

The MEICSP platform Based on SaaS through a REST Web Service Interface

*Zhilei Huang, Lingyu Xu, and Yang Liu*

A Text Association Rules Mining Method Based on Concept Algebra

*Feiyue Ye, Jiannan Xiong, and Xiangfeng Luo*

Research of the SaaS-flow Based on Cloud Platform

*Yang Liu, Lingyu Xu, Liang Chen, and Fei Zhong*

Application of Hybrid MPI+TBB Parallel Programming Model for Traveling Salesman Problem

*Jinke Zhu and Qing Li*

Data Deduplication Cluster Based on Similarity-Locality Approach

*Xingyu Zhang and Jian Zhang*

- **Session UUMA #2/4**

**Session Chair: Shanpeng Wu (wsp642188049@126.com)**

**Time: 8:40-10:40, Tuesday, August 20, 2013**

**Location: B208, New Main Building, Beihang University**

The Application of the Knowledge Representation Based on Concept Algebra in the Knowledge Management System of Petroleum Enterprise

*Hongjie Duan and Shanpeng Wu*

A New Reliable Hybrid Algorithm for Shortening the Expanding Range of Interval

*Cheng Chen and Yongmei Lei*

A Novel Data Encryption in HDFS

*Thanh Cuong Nguyen, Wenfeng Shen, Jiwei Jiang, and Weimin Xu*

The Dynamically Efficient Mechanism of HDFS Data Prefetching

*Shaochun Wu, Guobing Zou, Honghao Zhu, Xiang Shuai, Liang Chen, and Bofeng Zhang*

Multi-granularity Product Recommendation Based on Ontology User Model  
*Jianxing Zheng, Bofeng Zhang and Guobing Zou*

Friend Recommendation Based on Micro-blog User Model Related Degree  
*Fan Tang, Bofeng Zhang, Jianxing Zheng, and Yajun Gu*

- **Session UUMA #3/4**

**Session Chair: Bofeng Zhang (bfzhang@shu.edu.cn)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: B206, New Main Building, Beihang University**

The Research of Image Detail Enhancement Algorithm with Laplacian Pyramid  
*Yanwen Teng, and Fuyan Liu*

Information Gain with Weight Based Decision Tree for the Employment Forecasting of Undergraduates  
*Yue Liu, Lingjie Hu, Fei Yan, and Bofeng Zhang*

User Model-based Resource Scheduling Algorithm  
*Guannan Hu, Wenhao Zhu, and Wu Zhang*

Managed parallel computing model resources by graph reduction  
*Chao Shen*

Sentiment Classification for Topical Chinese Microblog Based on Sentences' Relations  
*Kang Wu, Bofeng Zhang, Jianxing Zheng, and Haidong Yao*

- **Session UUMA #4/4**

**Session Chair: Qian Quan qqian@shu.edu.cn /**

**Shanpeng Wu (wsp642188049@126.com)**

**Time: 11:00-12:40, Tuesday, August 20, 2013**

**Location: B208, New Main Building, Beihang University**

An Anomaly Intrusion Detection Method Based on PageRank Algorithm  
*Qian Quan*

Distributed File System and Classification for Small Images  
*Shaojian Zhuo, Xing Wu, Wu Zhang, and Wanchun Dou*

The Possibility of Normal Gait Analysis Based on a Smart Phone for Healthcare  
*Susu Jiang, Bofeng Zhang, Guobing Zou, and Wei Daming*



## **IoT/CPS DEMO AND EXHIBITION**

### **Demo Chairs:**

Pin Tao, Tsinghua University, China

Kongqiao Wang, Nokia Research Center, China

**Time: 11:05-12:00 / 18:00-19:00, Wednesday, August 21, 2013**

**Location: Grand Ballroom 1 & 2 & 3 / Golden 2, Park Plaza Beijing Science Park**

Mo-Fi: Discovering Human Presence Activity with Smartphones Using Non-intrusive Wi-Fi Monitors

*Weijun Qin*

Towards a Pervasive Cloud Computing based Food Image Recognition

*Weishan Zhang*

Wireless IoT Platform Based on SDR Technology

*Qing Wang*

Join the Workshop Better with Telepresence Capturer

*Pin Tao*

InSciTe Adaptive: R&D Decision Support System for Strategic Foresight

*Jangwon Gim*

## CYBERMATICS CREATIVE VIDEO CONTEST

### **Video Chairs:**

Ning Wang, Beihang University, China

Jun Fei, Chinese Academy of Fine Arts, China

**Time: 11:05-12:00, Wednesday, August 21, 2013**

**Location: Grand Ballroom 1 & 2 & 3, Park Plaza Beijing Science Park**

Smart Wristwatch

*Wenhong Yao*

Vision System

*Zuowei Wang*

I, Human

*Haiming Hu*

# OPENCHINA-ICT THEMATIC WORKSHOP ON INTERNET OF THINGS AND THE FUTURE INTERNET

<p style="text-align: center;">The 2<sup>nd</sup> OpenChina-ICT Thematic Workshop on Internet of Things and Future Internet <b>中欧信息通讯合作-物联网和未来互联网主题研讨会</b> Friday, August 23, 2013 Park Plaza Beijing Science Park , Beijing, P.R. China 时间: 2013 年 8 月 23 日 地点: 北京丽亭华苑酒店, 中国北京</p>		
Time 时间	Program 议程	Venue 地点
<b>Opening Session 开幕</b> <b>主持人(Moderator): Camille TORRENTI</b> <b>Sigma Orionis 技术咨询公司项目负责人</b>		
08:00-09:00	<b>Registration 会议注册报到</b>	Grand Ballroom, the 2nd floor of Park Plaza Beijing Science Park (北京丽亭华苑酒店二层鸿运厅)
09:00-10:00	Introduction of VIPs and speakers by Moderator--Camille TORRENTI 与会重要嘉宾及讲者介绍	
	<b>Opening Speeches 致开幕辞</b>	
	Delegation of the European Union to China 欧盟驻华代表团代表	
	European Union Chamber of Commerce in China 中国欧盟商会代表	
	<b>Welcome Speeches 致欢迎词</b>	
	Ministry of Science and Technology of P.R. China 中华人民共和国科学技术部代表 Ministry of Industry and Information Technology of P.R. China 中华人民共和国工业和信息化部代表	
	<b>Keynote Speech 主旨演讲</b>	
	Kay MATZNER, OpenChina-ICT Project Coordinator, Fraunhofer IFF 演讲嘉宾: Kay MATZNER, 德国弗劳恩霍夫工厂运行 和自动化研究所, OpenChina-ICT 项目协调人	

<b>EU-China Developments in the Area of Resilience and Privacy</b> 中欧网络基础应变弹性和隐私保护的发展概况 <b>Moderator and presenter: Danilo HOLLOSI, Project Group Hearing, Privacy in IoT and Future Internet Applications</b> 主持人: Danilo HOLLOSI 项目小组听议员, 物联网和未来互联网应用相关隐私保护专家		
10:00-10:45	François CARREZ, University of Surrey 演讲嘉宾: François CARREZ, 英国萨里大学	Grand Ballroom, the 2nd floor of Park Plaza Bei- jing Science Park (北京丽亭华苑酒 店二层鸿运厅)
	LI Zhoujun, Professor, Beihang University (TBC) 演讲嘉宾: 李舟军教授, 北京航空航天大学 (待定)	
	DONG Qinling, Professor, School of International Re- lation, University of International Business and Eco- nomics 演讲嘉宾: 董青岭, 对外经济贸易大学国际关系学院国 际政治系	
10:45-11:00	<b>Coffee Break 茶歇</b>	
<b>EU-China Developments in the Area of Future Internet</b> 中欧未来互联网发展概况 <b>Moderator: Latif LADID, Founder and President of the IPv6 Forum, Chairman of the European IPv6 Task Force</b> 主持人: Latif LADID, IPv6 论坛主席兼创始人, 欧洲 IPv6 研究组主席		
11:00-12:00	<b>Keynote Speeches 主旨演讲</b>	Grand Ballroom, the 2nd floor of Park Plaza Bei- jing Science Park (北京丽亭华苑酒 店二层鸿运厅)
	Martin POTTS, FP7 ECIAO Project Coordinator, Coordinator of the FIRE research roadmap for H2020 演讲嘉宾: Martin POTTS, 欧盟第七框架计划 ECIAO 项目协调人, 地平线 2020 计划 FIRE 研究路线图协 调人	
	Philippe COUSIN, FP7 ECIAO European Project Manager 演讲嘉宾: Philippe COUSIN, 欧盟第七框架计划 ECIAO 项目欧方负责人	
	ZENG Yan, Vice Director, Network and Information Division of S&T Development Center, Ministry of Education and General Secretary, Internet Innovation Union 演讲嘉宾: 曾艳, 教育部科技发展中心网络信 息处副处长, 互联网应用创新开放平台联盟秘 书长	
	BI Jun, Professor, Network Information Center, Tsinghua University (TBC) 演讲嘉宾: 毕军教授, 清华大学网络中心 (待	

	定)	
12:00-12:30	<b>Panel Discussion (Panelists) 小组讨论及其成员</b> » Martin POTTS, FP7 ECIAO Project Coordinator, Coordinator of the FIRE research roadmap for H2020 Martin POTTS, 欧盟第七框架计划ECIAO项目协调人, 地平线2020计划FIRE研究路线图协调人 » XU Guibao, Chinese Project Manager, FP7 ECIAO project, CATR, MIIT 徐贵宝, 欧盟第七框架计划ECIAO项目中方负责人, 工信部电信研究院 » TANG Hao, Senior Engineer, Internet Center, CATR, MIIT 唐浩, 工信部电信研究院互联网中心高级工程师 » Frank HUANG, Coordinator & Promoter, Dragonlab Programme, Ruijie Networks 黄煜, 锐捷网络Dragonlab项目协调人兼推广负责人	Grand Ballroom, the 2nd floor of Park Plaza Beijing Science Park (北京丽亭华苑酒店二层鸿运厅)
12:30-13:30	<b>Lunch Break 午餐</b>	
<b>EU-China Developments in the Area of Internet of Things</b> 中欧物联网发展概况 <b>Moderator: Philippe COUSIN, Expert of the EU-China IoT Advisory Group, EU-China ECIAO Project, FP7 FI-STAR Project</b> 主持人: Philippe COUSIN, 中欧物联网顾问组专家, 中欧 ECIAO 项目专家, 欧盟第七框架计划 FI-STAR 项目专家		
13:30-15:00	<b>Keynote Speech 主旨演讲</b> Alex GLUHAK, Project Coordinator, FP7 SocioTal project University of Surrey 演讲嘉宾: Alex GLUHAK, 欧盟第七框架计划 SocioTal 项目协调人, 英国萨里大学 Pedro MALO, Project Coordinator, FP7 EAR-IT project, Uninova (Institute for the Development of New Technologies) 演讲嘉宾: Pedro MALO, 欧盟第七框架计划 EAR-IT 项目协调人, 葡萄牙 Uninova 研究所 LI Haihua Senior Engineer, IoT Center, CATR, MIIT 演讲嘉宾: 李海花, 工信部电信研究院物联网中心高级工程师 LI Yanbin, Senior Engineer, Huawei Technologies Co., Ltd. 演讲嘉宾: 李艳斌, 华为高级工程师	Grand Ballroom, the 2nd floor of Park Plaza Beijing Science Park (北京丽亭华苑酒店二层鸿运厅)

	<b>Panel Discussion (Panelists) 小组讨论及其成员</b>  » Alex GLUHAK, Project Coordinator, FP7 SocioTal project, University of Surrey Alex GLUHAK, 欧盟第七框架计划SocioTal项目协调人, 英国萨里大学  » Pedro MALO, Project Coordinator, FP7 EAR-IT project, Uninova (Institute for the Development of New Technologies) Pedro MALO, 欧盟第七框架计划EAR-IT项目协调人, 葡萄牙Uninova研究所  » François CARREZ, IoT-i Project Coordinator, IoT Forum François CARREZ, 物联网论坛IoT-i项目协调人  » ZHANG Xueli, EU-China IoT Advisory Group, CATR, MIIT 张雪丽, 中欧物联网顾问组, 工信部电信研究院  » ZHOU Kaiyu, Senior Engineer, China Telecom 周开宇, 中国电信高级工程师	
15:00-15:15	<b>Coffee Break 茶歇</b>	
<b>Parallel working groups on sub-topics 子话题工作组</b> The conference room will be divided into three areas for each working group. Participants will be invited to join one of the three groups (based on their expertise/interest) to discuss the potential for collaboration on those sub-topics.会场将分成三个工作组讨论区, 参会代表根据专业领域或个人兴趣选择某一工作组, 就相关子话题进行合作意向探讨。		
15:15-16:45	Group 1: Internet of Things Architecture Moderators: Philippe COUSIN & ZHANG Xueli 第一组: 物联网的结构 主持人: Philippe COUSIN 和张雪丽	Grand Ballroom, the 2nd floor of Park Plaza Beijing Science Park (北京丽亭华苑酒店二层鸿运厅)
	Group 2: Future Internet Test-Beds & IPv6 Moderators: Latif LADID & XU Guibao 第二组: 未来互联网测试床与 IPv6 主持人: Latif LADID 和徐贵宝	
	Group 3: Resilience and Privacy Moderator: Danilo HOLLOSI 第三组: 网络基础应变弹性与隐私保护 主持人: Danilo HOLLOSI	
<b>Wrap-up &amp; Roadmap: Which concrete cooperation could be developed in the short to medium term? 会议总结&amp;未来路线图: 短中期内将达成何具体合作?</b>		
16:45-17:15	<b>Working Groups Conclusions 工作组结论汇报</b>	Grand Ballroom, the 2nd floor of Park Plaza Beijing Science Park (北京丽亭华苑酒店二层鸿运厅)
	Philippe COUSIN / Latif LADID / Danilo HOLLOSI	
	<b>Roadmap &amp; Opportunities 合作路线图&amp;机遇</b>	
	Kay MATZNER, OpenChina-ICT Project Coordinator, Fraunhofer IFF	

	德国弗劳恩霍夫工厂运行和自动化研究所， OpenChina-ICT 项目协调人	店二层鸿运厅)
	<b>Concluding Words 总结发言</b>	
	Delegation of the European Union to China 欧盟驻华代表团代表	
17:15	<b>End of Workshop 闭幕</b>	

## CHINA-EU IoT INTEROPERABILITY WORKSHOP

**Time: 13:30-17:00, Tuesday, August 22, 2013**

**Location: Grand Ballroom 3, Park Plaza Beijing Science Park**

### Agenda:

13:30-14:00	Welcome Keynote Speech	China Academy of Telecommunication Research (CATR)
14:00-14:20	Overall IoT Interoperability Issues Best Practices	Philippe Cousin, IERC, Probe-IT, Smart Action
14:20-14:40	Technical Interoperability 6lowpan-CoAP Report from Interop Event	Xiaohing Huang, Beijing University of Posts and Telecommunications (BUPT), China
14:40-15:00	Plug'n'Play Interoperability for Large-Scale Heterogeneous IoT.	Pedro Malo, Simple, X, Y Projects
15:00-15:20	The Research Progress of 6LoWPAN Protocol Test in China	Junfeng, Ma, CATR
15:20-16:00	Semantic Interoperability	Alex Gluhak, IoTest, iCore, Sociotal Projects
16:00-16:20	The Process in Research and Practice on Web of Things Related Area in China	Yang Ji, BUPT, China
16:20-17:00	EU-China Cooperation Platform	Camille Torrenti, OpenChina ICT



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#### **Track Chairs:**

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Shangping Ren, Illinois Institute of Technology, USA  
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George Varsamopoulos, Arizona State University, USA  
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Sherali Zeadally, University of the District of Columbia, USA  
Yanxiao Zhao, South Dakota School of Mines and Technology, USA

### **Track OACCS: Optimization and/or Analysis in Communications, Computing, and Smart Grids**

#### **Track Chairs:**

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Kui Ren, State University of New York at Buffalo, USA  
Sumei Sun, Institute for Infocomm Research, Singapore  
Yung Yi, Korea Advanced Institute of Science and Technology, Korea

## **Track SBDCC: Storage, Big Data, and Cloud Computing**

### **Track Chairs:**

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Cheng-Fu Chou, National Taiwan University, Taiwan

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### **Track SPTC: Security, Privacy, and Trust Computing**

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## **GENERAL INFORMATION**

### **Registration Desk**

The Registration Desk will be open to assist you at the following times:

- **Monday, August 19, 2013**

Location: Lobby, Park Plaza Beijing Science Park Hotel

- **Tuesday, August 20, 2013, 7:30-14:00**

Location: Lobby, Conference Center, New Main Building, Beihang University

Lobby, Park Plaza Beijing Science Park Hotel

- **Wednesday, August 21, 2013, 7:30-14:00**

Location: Lobby, Park Plaza Beijing Science Park Hotel

- **Thursday, August 22, 2013, 7:30-10:00**

Location: Lobby, Park Plaza Beijing Science Park Hotel

Conference materials, name badges, receipt bills will be distributed at the Registration Desk.

### **Name Badges and Tickets**

All delegates, sponsors and speakers of IEEE GreenCom/iThings/CPSCoM 2013 and associated symposia/workshops and receipts will be provided with a name badge, to be collected upon registration. This badge must be worn at all times as it is your official pass to all sessions of the conferences, workshops, reception, lunches, dinners, morning and afternoon coffee breaks.

### **Message Board**

Any program changes or urgent announcements from the secretariat and private messages will be posted on the message board in the registration area. Please check the message board occasionally.

### **Presentation Information**

#### **Language**

The presentation language of IEEE GreenCom/iThings/CPSCoM 2013 and associated symposia, and workshops is English.

#### **Checking In**

Session Chairs are requested to register at least **30 minutes** before their sessions, or as soon as the Registration Desk is open.

## **Setting Up**

You are required to arrive at the room (in which you will deliver your talk) **at least 15 minutes before the commencement of the session**. Upon arrival please confirm your attendance with the Session Chair and familiarize yourself with the venue.

Please bring with you a single paragraph summary, including your name (as you would like to be introduced), affiliation and research interests (maximum 100 words). Please present this to the Session Chair upon arrival, for use for introductory purposes, prior to your talk.

Upon arrival, please copy your slides file to the presentation computer. If you plan to use your own equipment, please ensure it is ready to go prior to the session commencing, since there is very little time between presentations. If you have requested optional equipment, ensure that is in the room. In the larger conference rooms please, make sure you familiarize yourself with the audio system. For all assistance, please speak to the Session Chair.

## **Timing**

Please ensure you check the program for the exact time of your session and where your paper falls within the session.

It is recommended that all IEEE GreenCom/iThings/CPSCoM 2013 paper presentations time is about **25 minutes** for main conference papers, or **20 minutes** for symposia/workshop papers, including 5 minutes question time. However, the Session Chairs will determine the exact presentation time for each paper, based on the number of presentations in each session. The Session Chairs will ensure that you do not over-run the time allocated.

**Please keep strictly to this time guideline.**

## **Mobile Conference Application**

A mobile conference application is available for all conference attendees to download and use during the conference for Android and iOS devices, courtesy of Yolu. You can use this application to view the program schedule, sessions, papers in each session, add attendees to your social networks and contacts, and post to your social networks. Details for downloading this application are available at the Registration Desk.

## **Drag and Save Presentations to Your Device**

The conference is pleased to have the HKUST-NIE Social Media Lab and CyPhy deliver CyPhy technology which allows you to use your Android or iOS device to use a flicker motion to pick up the presentation slide from the screen and save it to your device for later viewing. All you need is to install the CyPhy mobile application. All keynotes and selected paper sessions will have this technology available. For more details, please see

the Registration Desk.

## **Contact Information**

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## CONFERENCE VENUE

### Park Plaza Beijing Science Park Hotel

- Wednesday, August 21 – Friday, August 23, 2013

Venue: Park Plaza Beijing Science Park Hotel, Beijing, China



**Address:** Zhichun Road No.25, Haidian District, Beijing 100191, China

**Tel:** + 86-10-8235 6699

**Fax:** + 86-10-8235 6688

<http://www.parkplaza.com/beijing-hotel-cn-100083/chnbjch/>



## Beihang University

- On Tuesday, August 20, 2013

**Venue: Main Building / Music Hall, Beihang University, Beijing, China**

Address: Xueyuan Road No.37, Haidian District, Beijing 100191, China.

Tel: +86-10-8233 9470; Fax: +86-10-8233 9470





## TRAVEL GUIDE

You may arrive at conference venue (Park Plaza Beijing Science Park Hotel) from Beijing Capital International Airport, and Railway Stations.

- **From Beijing Capital International Airport to the Park Plaza Beijing Science Park Hotel.**

### 1) By Taxi

If you don't speak Chinese, please show the following sentence to the taxi driver.

司机同志，请送我到丽亭华苑酒店！（海淀区知春路25号）

**It means that “Please take me to Park Plaza Beijing Science Park Hotel (Zhichun Road No.25, Haidian District, Beijing 100191, China).”**

It's about 31.8 km from Beijing Capital International Airport Terminal 1 or Terminal 2 to Park Plaza Beijing Science Park, and It's about 33.5 km from Beijing Capital International Airport Terminal 3 to Park Plaza Beijing Science Park.

### 2) By Subway

#### **From Terminal 1 or Terminal 2:**

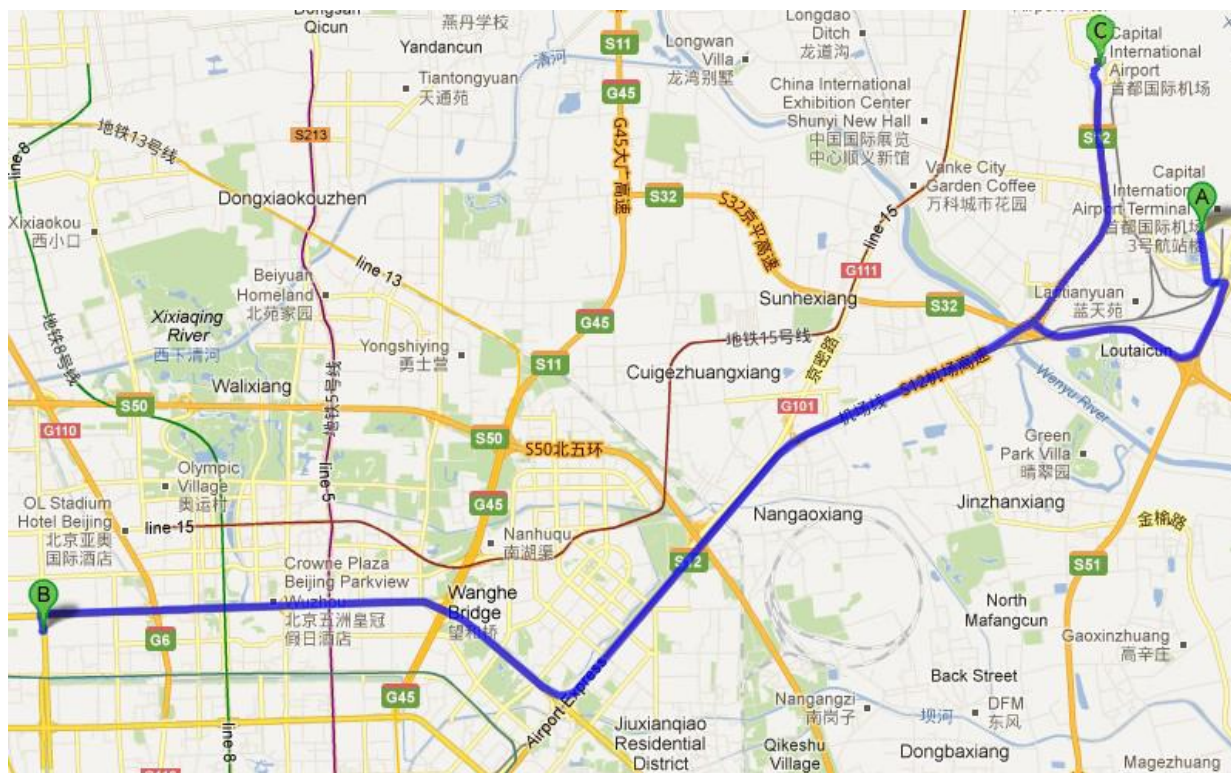
If you get off at Beijing Capital International Airport Terminal 1 or Terminal 2 Parking Lot, please take Subway Airport Express from Subway Terminal 2 Station to Sanyuanqiao Station. Then transfer to Subway Line 10 at Sanyuanqiao Station, if you want to get to Beihang University, please get off at Xitucheng Station and get out using Entrance A. If you want to get to Park Plaza Beijing Science Park, please get off at Zhichunlu Station and get out using Entrance F.

#### **From Terminal 3:**

If you get off at Beijing Capital International Airport Terminal 3, please take Subway Airport Express from Subway Terminal 3 Station to Sanyuanqiao Station. Then transfer to Subway Line 10 at Sanyuanqiao Station, if you want to get to Beihang University, please get off at Xitucheng Station and get out using Entrance A. If you want to get to Park Plaza Beijing Science Park, please get off at Zhichunlu Station and get out using Entrance F.

### 3) By Airport Shuttle Bus (it is not a good selection since the getting off station is 2 Km from the hotel)

In the map below, Place A is Capital International Airport Terminal 3, C is Terminal 1 and 2, and B is Park Plaza Beijing Science Park or Beihang University.



Coming by Airport Shuttle Route (**Line 5, i.e., BCIAZhongguancun/中关村**):

Terminal 3 -> Terminal 2 -> Terminal 1 -> Xiaoying -> Asian Games Village (Anhui Bridge) -> Xueyuan Bridge (**Get off at Xueyuan Bridge, and the North Gate of Beihang University is on the other/south side of the road**).

- **From Beijing Railway Station to the conference venue**

- 1) **Taking Taxi**

It's about 17.6 km from Beijing Railway Station to Park Plaza Beijing Science Park.

- 2) **Taking subway**

If you get off at Beijing Railway Station, please take **Subway Line 2** from Subway Beijing Railway Station to Xizhimen Station, then transfer to **Subway Line 13**, if you want to get to Park Plaza Beijing Science Park, please get off at Zhichunlu Station and get out using Entrance F. If you want to get to Beihang University, please get off at Zhichunlu Station and continue to take **Subway Line 10** from Zhichunlu Station to Xitucheng Station. Get off at Xitucheng Station and get out using Entrance A (or continue to walk on foot after your arriving at Park Plaza Beijing Science Park).

- **From Beijing West Railway Station to the conference venue.**

### 1) Taking Taxi

It's about 13.5 km from Beijing West Railway Station to Park Plaza Beijing Science Park.

### 2) Taking subway

If you get off at Beijing West Railway Station, please take **Subway Line 9** from Subway Beijing West Railway Station to National Library Station, then take **Subway Line 4** from National Library Station to Haidianhuangzhuang Station, then transfer to **Subway Line 10**, if you want to get to Beihang University, please get off at Xitucheng Station and get out using Entrance A. If you want to get to Park Plaza Beijing Science Park, please get off at Zhichunlu Station and get out using Entrance F.

- **From Beijing South Railway Station to the conference venue.**

### 1) Taking Taxi

It's about 19.1 km from Beijing South Railway Station to Park Plaza Beijing Science Park.

### 2) Taking subway

If you get off at Beijing South Railway Station, please take **Subway Line 4** from Subway Beijing South Station to Xizhimen Station, then transfer to **Subway Line 13**, if you want to get to Park Plaza Beijing Science Park, please get off at Zhichunlu Station and get out using Entrance F. If you want to get to Beihang University, please get off at Zhichunlu Station and continue to take **Subway Line 10** from Zhichunlu Station to Xitucheng Station. Get off at Xitucheng Station and get out using Entrance A (or continue to walk on foot after your arriving at Park Plaza Beijing Science Park).

- **From Beijing North Railway Station to the conference venue.**

### 1) Taking subway

If you get off at Beijing North Railway Station, please take **Subway Line 13** from Xizhimen Station, if you want to get to Park Plaza Beijing Science Park, please get off at Zhichunlu Station and get out using Entrance F. If you want to get to Beihang University, please get off at Zhichunlu Station and continue to take **Subway Line 10** from Zhichunlu Station to Xitucheng Station. Get off at Xitucheng Station and get out using Entrance A (or continue to walk on foot after your arriving at Park Plaza Beijing Science Park).

## BRIEF INTRODUCTION TO BEIHANG UNIVERSITY

**Beihang University** (formerly Beijing Institute of Aeronautics, Beijing University of Aeronautics and Astronautics) or BUAA for short, was founded in 1952, following the merger of the aeronautical departments from eight top Chinese universities including Tsinghua University, Peiyang University (now Tianjin University), Xiamen University, and Sichuan University. With this, it became the first university of aeronautical and astronautical engineering in China.

Not long after it was founded, Beihang University was recognised as one of China's 16 key universities and it has since received priority support from the Chinese government. Today, Beihang University is one of China's leading research universities with preeminent science and engineering programs and is among a few top Chinese universities supported by the National Education Excellence Initiative ("211" and "985" Projects), aimed at developing world-class universities in China.

Beihang University is situated in Beijing within the Zhongguancun Science Park. The main, 120 hectare campus is adjacent to China's National Olympic Centre, while a new campus of a similar size is located approximately 25 km to the north, in the city's suburbs.

Since its foundation, Beihang has gained nationwide acclaim for its teaching, research, and scholarly achievement. The university currently has more than 2,200 full-time faculty members, including over 500 professors. The faculty includes 17 members of the Chinese Academy of Sciences and the Chinese Academy Engineering.

The university offers 57 undergraduate programs, 144 Master's programs, and 63 doctoral programs across its 27 schools, which include engineering, sciences, medicine, economics, management, law, humanities and social sciences, education, and art. At present, Beihang University has 26,385 students, of whom 13,939 are undergraduates and 12,446 postgraduates. Over the past 60 years, the university has produced more than 120,000 graduates. A number of outstanding alumni have become members of the Chinese Academy of Sciences or the Chinese Academy of Engineering. Nearly a third of the top designers and directors in the Chinese Manned Space Program and Lunar Exploration Program studied at Beihang University.

As a leading university in science and technology innovation, Beihang has received more than 1,130 awards at the national or ministerial level for achievements in basic research, technological innovation, and engineering developments. During recent years, research funding at Beihang has been increasing at an annual rate of over 20 percent, with the research expenditures totalling 1.93 billion yuan (US\$304.3 million) in 2011. The total amount of external research funding received is among the highest of all universities in China. Beihang also has strong links with industry, with more than 50 percent of its research projects originating from the industrial sector.

Beihang University has long made international networking a priority for its development. To maintain and extend its collaborative networks, the university has developed a strong strategy of internationalization called Vision Plan UPS (U, university to university; P, professor to professor; S, student to student). The university has developed partnerships and cooperative agreements with over 185 universities, research institutions, and companies in 32 countries. These multilevel partnerships cover faculty and student exchanges, joint workshops and conferences, joint educational programs, joint research endeavors, and collaborative publication. Beihang has established a number of ambitious international educational projects, such as the Beihang Sino-French Engineer School (also known as École Centrale de Pékin), a successful, internationally recognized joint project established in 2005 by Beihang and Le Groupe des Écoles Centrales.



For more information, please access <http://www.buaa.edu.cn>