

# PROGRAM GUIDE



## CISIS-2012

The 6th International Conference on  
Complex, Intelligent and Software Intensive Systems

and



## IMIS-2012

The 6th International Conference on  
Innovative Mobile and Internet Services in Ubiquitous Computing



July 4th - July 6th, 2012  
San Paolo Palace Hotel  
Palermo, ITALY

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## CISIS-2012 and IMIS-2012 Acknowledgement

The Organization Committees of the 6-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2012) and the 6-th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2012) would like to thank the following institutions for the technical support.

- University of Palermo, Italy
- Inter-Department Center for Knowledge Technologies (CITC), University of Palermo, Italy
- Fukuoka Institute of Technology (FIT), Japan
- Korean Bible University (KBU), Korea
- Technical University of Catalonia, Spain
- Seikei University, Japan.

We would like to thank the Honorary Chairs of CISIS/IMIS-2012 International Conferences: Prof. Salvatore Gaglio and Prof. Filippo Sorbello, University of Palermo, Italy and Prof. Makoto Takizawa, Seikei University, Japan, for their support and encouragement during the organization phase. We have special thanks to the Rector of University of Palermo: Prof. Roberto Lagalla, for his support, encouragement and technical sponsorship of CISIS/IMIS-2012. We appreciate support of the Director of the Inter-Department Center for Knowledge Technologies (CITC), Prof. Giuseppe Crescimanno for technical sponsorships of CISIS/IMIS-2012.

## Welcome Message from the CISIS-2012 General Co-Chairs

Welcome to the 6th International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS 2012). The conference will be held at the San Paolo Palace Hotel, Palermo, Italy, on July 46, 2012. The aim of the conference is to deliver a platform of scientific interaction between the three interwoven challenging areas of research and development of future ICT-enabled applications: software intensive systems, complex systems, and intelligent systems.

Software intensive systems are systems that heavily interact with other systems, sensors, actuators, devices, other software systems, and users. More and more domains are involved with software intensive systems, for example, automotive, telecommunication systems, embedded systems in general, industrial automation systems, and business applications. Moreover, the outcome of Web services delivers a new platform for enabling software intensive systems. The conference is thus focused on practically relevant tools and theoretical foundations for engineering software intensive systems.

Complex systems research is focused on the overall understanding of systems rather than their components. Complex systems are very much characterized by the changing environments in which they act and by their multiple internal and external interactions. They evolve and adapt through internal and external dynamic interactions.

The development of intelligent systems and agents, which is characterized by the use of ontologies and their logical foundations, has built a fruitful impulse for both software intensive systems and complex systems. Recent research advances in the field of intelligent systems, robotics, neuroscience, artificial intelligence, and cognitive sciences are very important factors for the future development and innovation of software intensive and complex systems.

CISIS 2012 is aimed at delivering a forum for in-depth scientific discussions among the three communities. The papers included in the proceedings cover all aspects of theory, design, and application of complex systems, intelligent systems, and software intensive systems. The conference received 215 papers and accepted 54 papers (about a 25% acceptance rate), which were selected after a careful review process.

The organization of an international conference requires the support and help of many people. A lot of people have helped and worked hard to produce a successful CISIS 2012 technical program and conference proceedings. First, we would like to thank all of the authors for submitting their papers, the Program Committee Members, and the reviewers who carried out the most difficult work of carefully evaluating the submitted papers.

We are grateful to Honorary Co-Chairs Prof. Salvatore Gaglio, University of Palermo, Italy, and Prof. Makoto Takizawa, Seikei University, Japan. We would like to thank Dr. Salvatore Vitabile, University of Palermo, Italy, and Prof. Minoru Uehara, Toyo University, Japan, who are the CISIS 2012 Program Committee Co-Chairs, for their efficient and timely work.

This year in conjunction with CISIS 2012 we have 13 international workshops that complement the CISIS 2012 program with contributions about specific topics. We would like to thank the workshop co-chairs: Prof. Beniamino Di Martino, Seconda Universita di Napoli, Italy; Prof. Hui-Huang Hsu, Tamkang University, Taiwan; Dr. Arjan Durresi, Indiana University Purdue University at Indianapolis (IUPUI), USA; and all of the workshop organizers for organizing these workshops.

We also thank Dr. Makoto Ikeda, Fukuoka Institute of Technology, for his excellent work and support as Web Administrator who handled the conference's Web Submission and Management System. Finally, we would like to thank the Local Arrangements Team of the University of Palermo for their support and good local arrangements for the conference.

We hope you will enjoy the conference and have a great time in Palermo, Italy.

**CISIS 2012 General Co-Chairs**

Leonard Barolli, Fukuoka Institute of Technology (FIT), Japan  
Fatos Xhafa, Technical University of Catalonia, Spain



## Welcome Message from the CISIS-2012 Program Committee Co-Chairs

Welcome to the 6th International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS 2012). The conference will be held July 46, 2012, at the San Paolo Palace Hotel, Palermo, Italy, in conjunction with the IMIS 2012 international conference.

This is the 6th edition of the CISIS international conference, which has consolidated the conference as an important international event in the interconnected fields of complex systems, intelligent systems, and software intensive systems. The goal of the CISIS conference is to bring together researchers from the different fields whose work is related to the above three challenging areas of ICT-enabled applications.

The 2012 CISIS conference was organized into 15 research tracks. The objective was to address and cover each main theme of the topics of software intensive systems, complex systems, and intelligent systems with a specific research track. The program for this conference is the result of the hard and excellent work of many people, including authors, external reviewers, Program Committee members, track chairs, and conference officers. This year, we selected 54 quality contributions from among the 215 papers received (about a 25% acceptance rate). We believe that all of these papers not only provide novel ideas, new results, work in progress, and state-of-the-art techniques in this field, but also stimulate future research activities in the areas of complex systems, intelligent systems, and software intensive systems.

A lot of people have helped and worked hard to produce a successful CISIS 2012 event. We would like to express our sincere appreciation to all of them for their cooperation in completing the conference program under a very tight schedule. First, we would like to thank the CISIS 2012 General Co-Chairs Prof. Leonard Barolli and Dr. Fatos Xhafa for bringing together this important event. We are grateful to Honorary Co-Chairs Prof. Salvatore Gaglio, University of Palermo, Italy, and Prof. Makoto Takizawa, Seikei University, Japan. We would like to give special thanks to all of the track co-chairs for their time, energy, and expertise to make CISIS 2012 very successful. Also, we thank the Program Committee members and reviewers for their hard work and their valuable comments, which improved the quality of the presented papers. Last but not least, we would like also to thank Dr. Makoto Ikeda, Fukuoka Institute of Technology, for his excellent work with the conferences Web Submission and Management System. Finally, we would like to thank the Local Arrangements Team of the University of Palermo for their support and good local arrangements for the conference.

We hope you will enjoy the conference and have a great time in Palermo.

**CISIS 2012 Program Committee Co-Chairs**  
Salvatore Vitabile, University of Palermo, Italy  
Minoru Uehara, Toyo University, Japan

## Welcome Message from the CISIS-2012 Workshop Co-Chairs

Welcome to the Workshops of the 6th International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS 2012), which will be held at the San Paolo Palace Hotel, Palermo, Italy, on July 46, 2012.

We are pleased that we have 13 international workshops to accompany CISIS 2012. Some of these workshops are in their third, fourth, fifth, and sixth years. The objective was to complement as much as possible the main theme of CISIS 2012 with the specific topics of the various workshops covering topics from the three challenging areas of ICT-enabled applications: software intensive systems, complex systems, and intelligent systems.

The list of workshops is as follows.

1. Sixth International Workshop on Engineering Complex Distributed Systems (ECDS 2012)
2. Fifth International Workshop on Engineering Parallel and Multi-Core Systems (ePaMus 2012)
3. Fifth International Workshop on Intelligent Interfaces for HumanComputer Interaction (IIHCI 2012)
4. Fifth International Workshop on Intelligent Informatics in Biology and Medicine (IIBM 2012)
5. Fifth International Workshop on Frontiers in Complex, Intelligent, and Software Intensive Systems (FCISIS 2012)
6. Fourth International Workshop on Virtual Environments and Network-Oriented Applications (VENOA 2012)
7. Third International Workshop on Autonomic Distributed Systems (ADiS 2012)
8. Third International Workshop on Semantic Web/Cloud Information and Services Discovery and Management (SWISM 2012)
9. Second International Workshop on Intelligent Computing in Large-Scale Systems (ICLS 2012)
10. Second International Workshop on Adaptive Learning via Interactive, Collaborative, and Emotional Approaches (ALICE 2012)
11. Second International Workshop on Intelligent Context-Aware Systems (ICAS 2012)
12. First International Workshop on Hybrid/Cloud Computing Infrastructure for E-Science Applications (HCCIEA 2012)
13. First International Workshop on New Trends in Service-Oriented Architecture for Massive Knowledge Processing in Modern Enterprises (SOA-KME 2012)

These workshops bring to the researchers conducting research in specific themes the opportunity to learn from this rich multidisciplinary experience.

The workshop co-chairs would like to thank the CISIS 2012 international conference organizers for their help and support. We are grateful to the workshops organizers for their great efforts and hard work in proposing the workshops, selecting the papers, and creating interesting programs and for the arrangements of the workshops during the conference days. We are grateful to Dr. Makoto Ikeda, Fukuoka Institute of Technology, Japan, for his excellent work and support as Web Administrator. We would like to also give special thanks to the Local Arrangements Team of the University of Palermo, Italy.

We hope you enjoy the workshops programs and proceedings.

**CISIS 2012 Workshop Co-Chairs**

Beniamino Di Martino, Seconda Universita di Napoli, Italy

Hui-Huang Hsu, Tamkang University, Taiwan

Arjan Durrezi, Indiana University Purdue University at Indianapolis (IUPUI), USA

**CISIS-2012 Conference Organizing Committee****Honorary Co-Chairs**

Salvatore Gaglio, University of Palermo, Italy

Makoto Takizawa, Seikei University, Japan

**General Co-Chairs**

Leonard Barolli, Fukuoka Institute of Technology, Japan

Fatos Xhafa, Technical University of Catalonia, Spain

**Program Committee Co-Chairs**

Salvatore Vitabile, University of Palermo, Italy

Minoru Uehara, Toyo University, Japan

**Workshops Co-Chairs**

Beniamino Di Martino, Seconda Università di Napoli, Italy

Hui-Huang Hsu, Tamkang University, Taiwan

Arjan Durresi, Indiana University Purdue University at Indianapolis (IUPUI), USA

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Markus Aleksy, ABB Corporate Research Center, Germany

Takahiro Hara, Osaka University, Japan

Francesco Carlo Morabito, University of Reggio Calabria, Italy

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Wenny Rahayu, La Trobe University, Australia

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David Taniar, Monash University, Australia

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**Local Arrangements Chair**

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Rosario Sorbello, University of Palermo, Italy

**Special Issues Co-Chairs**

Il-sun You, Korean Bible University, Korea

Nik Bessis, University of Derby, UK

**Web Administrator Chair**

Makoto Ikeda, Fukuoka Institute of Technology, Japan

## CISIS-2012 Conference Track Chairs

### **Track 1: Parallel Computing**

Horacio Gonzalez-Velez, The Robert Gordon University, UK  
Masato Oguchi, Ochanomizu University, Japan

### **Track 2: Database and Data Mining Applications**

David Taniar, Monash University, Australia  
Hong Cheng, Chinese University of Hong Kong, China

### **Track 3: Artificial Intelligence and Agent Technology**

Massimo Cossentino, ICAR-CRN, Italian National Research Council, Italy  
Takuo Suganuma, Tohoku University, Japan

### **Track 4: Multimedia Systems and Virtual Reality**

Marco La Cascia, University of Palermo, Italy  
Yuka Kato, Advanced Institute of Industrial Technology, Japan

### **Track 5: Systems for Biological and Medical Applications**

Andrei Doncescu, LAAS CNRS Toulouse France  
Takuya Yoshihiro, Wakayama University, Japan

### **Track 6: E-Learning and Groupware Systems**

Roberto Pirrone, University of Palermo, Italy  
Yoshinari Nomura, Okayama University, Japan

### **Track 7: Wireless Sensor, Ad Hoc, and Mesh Networks**

Hwee-Pink Tan, Institute for Infocomm Research, Singapore  
Nobuyoshi Sato, Iwate Prefectural University, Japan

### **Track 8: Semantic Web, Web Services, and Data Integration**

Giovanni Pilato, ICAR-CRN, Italian National Research Council, Italy  
Natalia Kryvinska, University of Vienna, Austria

### **Track 9: Autonomic Computing and Communication**

Muhammad Younas, Oxford Brookes University, UK  
Akimitsu Kanzaki, Osaka University, Japan

### **Track 10: Socially Inspired Computing and Computational Intelligence**

Simone Bassis, University of Milano, Italy  
Timothy Shih, Tamkang University, Taiwan

**Track 11: Security and Trusted Computing**

Umberto Villano, Universit degli Studi del Sannio, Italy  
Tetsuya Izu, Fujitsu Laboratories Ltd., Japan

**Track 12: Energy Aware Information Systems**

Richard Hill, University of Derby, UK  
Kuei-Ping Shih, Tamkang University, Taiwan

**Track 13: Complex Systems and Software Modeling and Analytics**

Joanna Kolodziej, University of Bielsko-Biala, Poland  
Kazuhito Ohmaki, Toyo University, Japan

**Track 14: P2P and Grid Data Technologies**

Robert C. Hsu, Chung Hua University, Taiwan  
Fumiaki Sato, Toho University, Japan

**Track 15: Adaptive and Evolvable HumanComputer Interaction Interfaces**

Cristina Gena, University of Turin, Italy  
Hiroaki Nishino, Oita University, Japan

## Welcome Message from the IMIS-2012 General Co-Chairs

Welcome to the Sixth International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2012), which will be held from July 4 to July 6, 2012 at San Paolo Palace Hotel, Palermo Italy in conjunction with Sixth International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2012).

IMIS-2012 International Conference will focus on the challenges and solutions for Ubiquitous and Pervasive Computing (UPC) with an emphasis on innovative, mobile and internet services. With the proliferation of wireless technologies and electronic devices, there is a fast growing interest in UPC. UPC enables to create a human-oriented computing environment where computer chips are embedded in everyday objects and interact with physical world. Through UPC, people can get online even while moving around, thus having almost permanent access to their preferred services. With a great potential to revolutionize our lives, UPC also poses new research challenges. The conference will provide an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of UPC.

IMIS-2012 received many paper submissions from all over the world. The papers included in the proceedings cover all aspects of UPC. This year, we received 198 submissions and after a careful review process of 3 independent reviews per submission, 46 papers were accepted (about 23% acceptance rate).

It is impossible to organize such a successful program without the help of many individuals. We would like to express our appreciation to the authors of the submitted papers, the program committee members, who provided timely and significant reviews, and special session chairs for their great efforts.

We are grateful to Honorary Co-Chairs: Prof. Filippo Sorbello, University of Palermo, Italy and Prof. Makoto Takizawa, Seikei University, Japan for their advices and support. We would like to thank Dr. Antonio Gentile, University of Palermo, Italy, Dr. Hae-Duck Joshua Jeong, Korean Bible University, Korea and Dr. Marek Ogiela, AGH University of Science and Technology, Poland as IMIS-2012 PC Co-Chairs for their efficient and timely work.

This year in conjunction with IMIS-2012 we have 9 International Workshops that complemented IMIS-2012 program with contributions for specific topics. We would like to thank the Workshop Co-Chairs Dr. Feilong Tang, Shanghai Jiao Tong University, China, Dr. Fatos Xhafa, Technical University of Catalonia, Spain, Prof. Fang-Yie Leu, Tunghai University, Taiwan and all workshop organizers for organizing these workshops.

We thank Dr. Makoto Ikeda, Fukuoka Institute of Technology, Japan for his excellent work and support as Web Administrator.

Finally, we would like to thank the Local Arrangement Team of University of Palermo for their support and good local arrangement for the conference.

We hope that all of you enjoy IMIS-2012 and find this a productive opportunity to learn, exchange idea and make new contacts.

### IMIS 2012 General Co-Chairs

Ilsun You, Korean Bible University (KBU), Korea  
Leonard Barolli, Fukuoka Institute of Technology (FIT), Japan

## Welcome Message from the IMIS-2012 Program Committee Co-Chairs

As PC Co-Chairs, we would like to welcome you to the Sixth International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2012), which will be held from July 4 to July 6, 2012 at San Paolo Palace Hotel, Palermo Italy in conjunction with the 6-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2012).

This is the Sixth edition of the IMIS International Conference, which is growing every year in quality and quantity. The goal of the conference is to bring together researchers from the different fields whose work is related to Ubiquitous and Pervasive Computing (UPC). IMIS-2012 International Conference is organized in 13 research tracks, which address and cover each main theme of UPC with a specific set of research topics. The program for this conference is the result of hard and excellent work of many people, including authors, external reviewers, program committee members, track chairs, and conference officers. This year, we have selected 46 quality contributions among 198 papers received (about 23% acceptance rate). We believe that all of the papers selected not only provide novel ideas, new results, work in progress, and state-of-the-art techniques in this field, but also stimulate future research activities in the area of UPC.

As PC Co-Chairs, we would like to thank the many people that helped and worked hard to produce a successful IMIS-2012 event this year. We would like to express our sincere appreciation to all of them for their cooperation. Firstly, we would like to thank IMIS-2012 General Co-Chairs: Dr. Ilsun You and Prof. Leonard Barolli for bringing together this important event. We are grateful to Honorary Co-Chairs: Prof. Filippo Sorbello, University of Palermo, Italy and Prof. Makoto Takizawa, Seikei University, Japan for their advices and support. We would like to give special thanks to all Track Co-Chairs for their time, energy, and expertise to make IMIS-2012 very successful. Also, we thank the Program Committee Members and Reviewers for their hard work and valuable comments that improved the quality of the presented papers. We would like to give special thanks to Dr. Makoto Ikeda, Fukuoka Institute of Technology for his excellent work as Web Administrator. Finally, we would like to thank the Local Arrangement Team of University of Palermo for their support and good local arrangement for the conference.

We hope you will enjoy the conference and hope to see you in forthcoming editions

### **IMIS 2012 Program Committee Co-Chairs**

Antonio Gentile, University of Palermo, Italy

Hae-Duck Joshua Jeong, Korean Bible University, Korea

Marek Ogiela, AGH University of Science and Technology, Poland



## Welcome Message from the IMIS-2012 Workshop Co-Chairs

Welcome to the Workshops of the Sixth International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2012), which will be held from July 4 to July 6, 2012 at San Paolo Palace Hotel, Palermo Italy in conjunction with the Sixth International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2012).

This year we are proud to present 9 workshops, which will be held together with IMIS-2012. The objective was to complement as much as possible the main themes of IMIS-2012 with the specific topics of the different workshops to cover many topics of Ubiquitous and Pervasive Computing (UPC).

The list of workshops follows below:

1. Sixth International Workshop on Advances in Information Security (WAIS-2012)
2. Third International Workshop on Mobility Modeling and Performance Evaluation (MoMoPE-2012)
3. Second International Workshop on Mobile Commerce, Cloud Computing, Network and Communication Security 2011 (MCNCS-2012)
4. Second International Workshop on Frontiers of Secure Networks (IFSN-2012)
5. Second International Workshop on Future Internet and Next Generation Networks (FINGNet-2012)
6. Second International Workshop on Intelligent Techniques and Algorithms for Ubiquitous Computing (ITAUC-2012)
7. Second International Workshop on Frontiers in Innovative Mobile and Internet Services (FIMIS-2012)
8. First International Workshop on Sustainability Management of e-Business and Ubiquitous Commerce Engineering (SMEUCE-2012)
9. First International Workshop on Extending Seamlessly to the Internet of Things (esIoT-2012)

We would like to thank IMIS-2012 International Conference Organizers for their help and support. We are grateful to the workshop organizers for their great efforts and hard work in proposing the workshops, selecting the papers, organizing interesting programs, and for the arrangements of the workshops during the conference days.

We are grateful to Dr. Makoto Ikeda, Fukuoka Institute of Technology, Japan for his excellent work and support as Web Administrator. We would also like to give special thanks to the Local Organization Team of Palermo University, Italy.

We hope you enjoy the workshops programs and proceedings.

### IMIS 2012 Workshop Co-Chairs

Feilong Tang, Shanghai Jiao Tong University, China  
Fatos Xhafa, Technical University of Catalonia, Spain  
Fang-Yie Leu, Tunghai University, Taiwan

**IMIS-2012 Conference Organizing Committee****Honorary Co-Chairs**

Filippo Sorbello, University of Palermo, Italy  
Makoto Takizawa, Seikei University, Japan

**General Co-Chairs**

Ilsun You, Korean Bible University, Korea  
Leonard Barolli, Fukuoka Institute of Technology, Japan

**Program Committee Co-Chairs**

Antonio Gentile, University of Palermo, Italy  
Hae-Duck Joshua Jeong, Korean Bible University, Korea  
Marek Ogiela, AGH University of Science and Technology, Poland

**Workshops Co-Chairs**

Feilong Tang, Shanghai Jiao Tong University, China  
Fatos Xhafa, Technical University of Catalonia, Spain  
Fang-Yie Leu, Tunghai University, Taiwan

**Advisory Committee Members**

Bonam Kim, Chungnam National University, Korea  
Witold Pedrycz, University of Alberta, Canada  
Kouichi Sakurai, Kyushu University, Japan

**International Liaison Co-Chairs**

Antonio Chella, University of Palermo, Italy  
Tomoya Enokido, Rissho University, Japan  
Chunqing Wu, National University of Defense Technology, China

**Publicity Co-Chairs**

Chu-Hsing Lin, Tunghai University, Taiwan  
Orazio Mirabella, Università di Catania, Italy  
Jinshu Su, National University of Defense Technology, China

**Local Arrangement Co-Chairs**

Antonella Santangelo, InformAmuse S.r.l., Italy  
Salvatore Sorce, InformAmuse S.r.l., Italy

**Web Administrator Chair**

Makoto Ikeda, Fukuoka Institute of Technology, Japan

## IMIS-2012 Conference Track Chairs

### **Track 1: Smart Spaces and Intelligent Environments**

Mauro Migliardi, University of Padova, Italy  
Luigi Benedicenti, University of Regina, Canada

### **Track 2: Embedded Systems and Wearable Computers**

Scott Wills, Georgia Institute of Technology, USA  
Linda Wills, Georgia Institute of Technology, USA  
Sek Chai, Sarnoff, USA

### **Track 3: Context and Location-aware Computing**

Mye M. Sohn, Sungkyunkwan University, Korea  
Jung-Min Kim, Daejin University, Korea

### **Track 4: Data Management in Pervasive systems**

Yongwei Wu, Tsinghua University, China  
Lidia Ogiela, AGH University of Science and Technology, Poland

### **Track 5: Security, Trust and Privacy**

Alfredo De Santis, Universit degli Studi di Salerno, Italy  
Kangbin Yim, Soonchunhyang University, Korea

### **Track 6: Energy Aware Pervasive Systems**

Yan Yang, University of Maryland, USA  
Zhengwei Qi, Shanghai Jiao Tong University, China

### **Track 7: Knowledge Cities and Disaster Recovery**

Nik Bessis, University of Derby, UK  
Tim French, University of Bedfordshire, UK

### **Track 8: Smartphone Applications for UPC**

Tobias Hossfeld, University of Wuerzburg, Germany  
Shih-Hao Hung, National Taiwan University, Taiwan

### **Track 9: Modeling, Simulation and Performance in UPC**

Kin Fun Li, University of Victoria, Canada

### **Track 10: Internet, Wireless and Mobile Networks for UPC**

Maria Calderon, Universidad Carlos III de Madrid, Spain  
Jian Yuan, Tsinghua University, China

**Track 11: Distributed System and Cloud Computing**

Linpeng Huang, Shanghai Jiao Tong University, China  
Zhuzhong Qian, Nanjing University, China

**Track 12: Social Network Services**

Goreti Marreiros, GECAD/ISEP/IPP, Portugal  
Hoon Ko, GECAD/ISEP/IPP, Portugal

**Track 13: Selected Areas in UPC**

Massimo Cafaro, Universita del Salento, Italy  
Costantino Gran, Universita di Modena e Reggio Emilia, Italy

## CISIS-2012 Keynote

Prof. Vincenzo Loia, University of Salerno, Italy

### Knowledge Building with Semantic Schema in Enterprise: the ARISTOTELE Approach

**Abstract:** The wealth of European companies has progressively shifted from tangible assets (capital, resources) into intangible ones like knowledge, competency, reputation, innovation processes, motivation. Intangibles are closely related the natural interactions occurring normally in work practices. This is where ideas, innovation, learning, knowledge (in all its various forms), relationships, social cohesion, synergistically contribute to performance, competition differentiators and value creation. Creativity and innovation inside organisations are directly related to the way people learn (informally and/or formally), collaborate, share ideas and experience. The support of these activities within the Enterprise it is provided by several tools and environments. This does not help to capture and elicitate the possible intangible assets. Even in the case where some pieces of knowledge could be extracted and captured we have the problem to provide them with a useful meaning through formalization with respect to working context (i.e. correlate them to organizational processes, objectives, tasks). The aim of this invited speech is to present the methodologies for knowledge building developed in the context of ARISTOTELE, a European Integrated Project. The methodologies for knowledge building are used for extracting tacit knowledge and using ontology matching and merging approaches to conceptualise it, with respect to models that exploit semantic web schemas (SIOC, SKOS, FOAF, MOAT, etc.) for representing different enterprise aspects like competency, worker profile, learning experience, enterprise assets..

**Biography:** Vincenzo Loia is Full Professor of Computer Science. He received his BS from Univ. of Salerno Italy in 1985, and his MS and Ph. D from Univ. of Paris 6, France in 1987 and 1989. His research interests include Intelligent Agents, Ambient intelligence, Hybrid intelligent systems, Collective Knowledge. Currently he is Founder & Editor-in-chief of “Ambient Intelligence and Humanized Computing”, and Co-Editor-in-Chief of “Softcomputing”, both from Springer-Verlag. He is Chair of the Task Force “Intelligent Agents”, and of the Task Force “Ambient Intelligence” both from IEEE CIS ETTC, and Vice-Chair of IEEE CIS Intelligent Systems Application Technical Committee. He has been Editor/co-editor of 4 Books, 55 journal papers, 25 book chapters, and 93 conference papers (most in IEEE conference).

## IMIS-2012 Keynote

**Prof. Elisa Bertino, Purdue University, USA**

### **Location-aware Authentication and Authorization - Concepts and Issues**

**Abstract:** In the talk we first discuss motivations why taking into account location information in authentication and access control is important. We then survey current approaches to location-aware authentication with focus on the Auth-SL system that supports context-based flexible authentication policies. We then discuss location-aware access control and present the GEO-RBAC system and the FENCE system that use location for different purposes. Throughout the discussion, we will identify open research directions.

**Biography:** **Elisa Bertino** is professor of Computer Science at Purdue University and serves as Research Director of the Center for Education and Research in Information Assurance and Security (CERIAS) and as Interim Director of Cyber Center (Discovery Park). Previously she was a faculty member at Department of Computer Science and Communication of the University of Milan where she was the Department Head and Director of the DB&SEC laboratory. She has been a visiting researcher at the IBM Research Laboratory (now Almaden) in San Jose, at the Microelectronics and Computer Technology Corporation, at Rutgers University, at Telcordia Technologies. Her main research interests include security, privacy, digital identity management systems, database systems, distributed systems, multimedia systems. She serves, or has served, on the editorial boards of several scientific journals, including IEEE Internet Computing, IEEE Security & Privacy, ACM Transactions on Information and System Security, ACM Transactions on Web, Acta Informatica, the Parallel and Distributed Database Journal.

She is currently serving as chair of the ACM SIGSAC.

Elisa Bertino is a Fellow member of IEEE and a Fellow member of ACM. She received the 2002 IEEE Computer Society Technical Achievement Award for “For outstanding contributions to database systems and database security and advanced data management systems” and the 2005 IEEE Computer Society Tsutomu Kanai Award “For pioneering and innovative research contributions to secure distributed systems”.

## ALICE-2012 Keynote

**Prof. Saverio Salerno, University of Salerno, Italy**

### **Adaptive Learning Via Intuitive/Interactive, Collaborative And Emotional Systems**

**Abstract:** In this talk I will present ALICE, which is a research project co-funded by the European Commission under the 7th Framework Program. It aims to build an innovative and adaptive environment for e-learning by combining research in the innovative areas of Collaborative Learning, Simulation and Serious Games, Storytelling, Affective and Emotional Approaches, New Forms of Assessment, and Adaptive e-Learning. Such a learning environment is interactive, challenging and context aware, and provides users with empowerment, social identity and authentic learning experience. ALICE strongly contributes to the overcoming of the current e-learning systems and contents' limitations. ALICE developed software components are integrated in IWT (Intelligent Web Teacher). IWT will be also presented during the talk as a complete e-learning and knowledge management platform that delivers personalized courses based on learner's previous knowledge and preferences, allowing learners to learn only required concepts through the most feasible learning resources.

**Biography:** **Saverio Salerno** is graduated cum laude in Mathematics at the Scuola Normale Superiore of Pisa at the age of 21, is Full Professor of Mathematics at the Faculty of Engineering of the University of Salerno. He is Foundation Member and Director, up to October 2002, of the Consortium "Centre of Research in Pure and Applied Mathematics" and Responsible for many European and Italian Research Projects. He is author of more than 100 papers published on International Journals and Proceedings regarding Mathematical Analysis, Operations Research, Simulation, Learning & Knowledge, Computer Science. He has been Italian Delegate for the IST programme of the EU VFP; he participated to many Consultation Meetings about Technological Enhanced Learning and Expert of the European Commission for Education and Training. He has been Member of the Advisory Committee of the MIUR (Ministry of Education, Universities and Research) for Applied and Industrial Research. He is Coordinator of the Polo of Excellence on Learning & Knowledge and President of the Scientific Committee of the Province of Salerno.



# CISIS-2012 Main Conference and Workshops Program

Wednesday, July 4, 2012

08:00 Registration

09:00-10:30 Single Session: Opening and CISIS-2012 Keynote

CISIS Keynote Talk

**Prof. Vincenzo Loia:** Knowledge Building with Semantic Schema in Enterprise: the ARISTOTELE Approach

10:30-11:00 Coffee Break

11:00-12:30 Parallel Sessions

**CISIS-S1: Artificial Intelligence and Agent Technology - CISIS 1**

**Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

1. Experience Generation in Tic-Tac-Toe for General Game Learning  
*Xiaojian Song*
2. An Interaction Protocol for Mutual Assistance in Agent Teamwork  
*Jernej Polajnar, Narek Nalbandyan, Omid Alemi, Desanka Polajnar*
3. A Notation for Modeling Jason-Like BDI Agents  
*Massimo Cossentino, Antonio Chella, Carmelo Lodato, Salvatore Lopes, Patrizia Ribino, Valeria Seidita*

**CISIS-S2: Support Systems and Services - CISIS 2**

**Chair: Fatos Xhafa, Technical University of Catalonia, Spain**

1. Benchmarking and Evaluation Support for Self-Adaptive Distributed Systems  
*Ante Vilenica, Winfried Lamersdorf*



2. Experimental Evaluation of a Waste Management Robot System  
*Keita Matsuo, Kouhei Umezaki, Evjola Spaho, Leonard Barolli, Jiro Iwashige, Makoto Takizawa*
3. Using Serious Games to Motivate Children with Cystic Fibrosis to Engage with Mucus Clearance Physiotherapy  
*Andreas Oikonomou, David Day*
4. A Universal Push Service for Mobile Devices  
*Jonas Brustel, Thomas Preuss*

**W-IIHCI-S1: Intelligent environments - CISIS 3****Chair: Antonio Gentile, University of Palermo, Italy**

1. Guidelines to Design Inclusive Ambient Intelligence Solutions for Human Activity Sharing  
*Nadia Catenazzi, Vanessa De Luca, Lorenzo Sommaruga, Massimo Botta*
2. Towards a Model for Recognising the Social Attitude in Natural Interaction with Embodied Agents  
*Berardina De Carolis, Stefano Ferilli, Nicole Novielli*
3. Monitoring Interior Wall Maintenance in a Virtual Environment  
*A. Zita Sampaio, Daniel P. Rosario*
4. Intelligent Interface Architectures for Folksonomy Driven Structure Network  
*Massimiliano Dal Mas*

**W-VENOA-S1: Innovative Applications - CISIS 4****Chair: Hiroaki Nishino, Oita University, Japan**

1. A Life Log Collecting System Supported by Smartphone to Model Higher-Level Human Behaviors  
*Masanobu Abe, Daisuke Fujioka, Hisashi Handa*
2. Automatic Generation of Usage Manuals for Open-Source Software  
*Yukikazu Murakami, Yuki Hori*
3. A Proposal of Access-Point Aggregation Approach for Multiple Wireless Local Area Networks  
*Nobuo Funabiki, Md. Ezharul Islam, Toru Nakanishi, Kan Watanabe*
4. Development of Geographical Location Estimation System for WiFi Users in Campus  
*Kenzi Watanabe, Hisaharu Tanaka, Makoto Otani*

**12:30-13:30 Lunch Break****13:30-15:00 Parallel Sessions****CISIS-S3: Vehicular Networks - CISIS 1****Chair: Bhed Bista, Iwate Prefectural University, Japan**

1. Performance Analysis of DSR and DYMO Routing Protocols for VANETs  
*Evjola Spaho, Makoto Ikeda, Leonard Barolli, Fatos Xhafa, Vladi Kolici, Makoto Takizawa*
2. Towards Secure Vehicular Clouds  
*Gongjun Yan, Danda B. Rawat, Bhed B. Bista*
3. A Novel Road Monitoring Approach Using Wireless Sensor Networks  
*Mario Collotta, Giovanni Pau, Valerio Mario Salerno, Gianfranco Scata*

**CISIS-S4: Complex Systems, Software Modeling, and Analytics - CISIS 2****Chair: Markus Aleksy, ABB Research, Germany**

1. Customizing Rational Unified Process in a Systems Integration Scenario  
*Erida Lice, Marenglen Biba*
2. Clifford Algebra Based Edge Detector for Color Images  
*Silvia Franchini, Antonio Gentile, Filippo Sorbello, Giorgio Vassallo, Salvatore Vitabile*
3. Mission Operations Scheduling: Complexity and Resolution Methods  
*Fatos Xhafa, Junzi Sun, Admir Barolli, Makoto Takizawa*
4. Coverage of Design for Service Principles in Software Engineering  
*Markus Aleksy*

**W-IIHCI-S2: Input Technologies and Techniques - CISIS 3****Chair: Massimo Cafaro, University of Salento, Italy**

1. Toward a Framework for Rapid Prototyping of Touchless User Interfaces  
*Alessio Pierluigi Placitelli, Luigi Gallo*
2. Creating Interaction Scenarios with a New Graphical User Interface  
*Celine Jost, Brigitte Le Pevedic, Dominique Duhaut*
3. Comparing User Performance on an iPad to a 17-inch BackPad  
*Fateme Rajabiyazdi, Tom Gedeon*
4. Hand Grip Strength on a Large PDA: Holding While Reading Is Different from a Functional Task  
*Fateme Rajabiyazdi, Tom Gedeon*
5. Pingu: A New Miniature Wearable Device for Ubiquitous Computing Environments  
*Hamed Ketabdar, Peyman Moghadam, Mehran Roshandel*

**W-VENOA-S2: Virtual Reality and Multimedia I - CISIS 4****Chair: Yoshihiro Okada, Kyushu University, Japan**

1. 3D Visual Component Based Development System for Medical Training Systems Supporting Haptic Devices and Their Collaborative Environments  
*Yuuta Kosuki, Yoshihiro Okada*
2. Study on Seam Carving for Image Fingerprint  
*Makoto Fujimura, Hideo Kuroda, Kousuke Imamura*
3. A Supporting Method of Medical Imaging Diagnosis with Sonification  
*Tsuneo Kagawa, Hideki Kudo, Shuichi Tanoue, Hiro Kiyosue, Hiromu Mori, Hiroaki Nishino, Kouichi Utsumiya*
4. Study on Knowledge Management Platform about the Field of Agricultural Infomatization  
*Eiji Aoki, Ken Kudo, Akira Fukuda, Tsuneo Nakanishi, Shigeaki Tagashira, Takashi Okayasu, Naoyuki Tsuruda, Satoru Yamasaki, Yasuhito Imura*
5. Development of Hands-On IP Network Construction Practice System Used in Campus Cloud Computing  
*Nobukazu Iguchi, Yuki Kitazawa*

**15:00-15:30 Coffee Break****15:30-17:00 Parallel Sessions**

**CISIS-S5: Database and Data Mining Applications - CISIS 1****Chair: Alfredo Cuzzocrea, Italian National Research Council, Italy**

1. Monitoring and Control of Machining Process by Data Mining and Pattern Recognition  
*Soumaya Yacout, Mouhab Meshreki, Helmi Attia*
2. A Methodology and Its Experimental Validation on a Real-Life Parallel Processing Database System  
*Ladjet Bellatreche, Soumia Benkrid, Alain Crolotte, Alfredo Cuzzocrea, Ahmad Ghazal*
3. Simultaneous Resolution of Buffer Allocation and Query Scheduling Problems  
*Amira Kerkad, Ladjet Bellatreche, Dominique Geniet*

**CISIS-S6: Multimedia Systems and Virtual Reality - CISIS 2****Chair: Makoto Takizawa, Seikei University, Japan**

1. An Explorable Immersive Panorama  
*Marzio Guarnaccia, Orazio Gambino, Roberto Pirrone, Edoardo Ardizzone*
2. Combined Opportunity Cost and Image Classification for Non-Linear Image Enhancement  
*Lung-Jen Wang, Ya-Chun Huang*
3. Multimedia Transmissions over a MANET Testbed: Problems and Issues  
*Elis Kulla, Makoto Ikeda, Tetsuya Oda, Leonard Barolli, Fatos Xhafa, Makoto Takizawa*
4. Quorums for Replication of Multimedia Objects in P2P Overlay Networks  
*Tadateru Ohkawara, Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa*

**W-IIHCI-S3: Medical Applications - CISIS 3****Chair: Luigi Gallo, ICAR-CNR, Italy**

1. Serious Game for Laparoscopic Suturing Training  
*Lucio Tommaso De Paolis*
2. Evaluation of Human Robot Interaction Factors of a Socially Assistive Robot Together with Older People  
*Katharina Werner, Johannes Oberzaucher, Franz Werner*
3. Developing a Gesture-Based Game for Deaf/Mute People Using Microsoft Kinect  
*Fakhteh Soltani, Fatemeh Eskandari, Shadan Golestan*
4. Intraoperative Navigation System for Image Guided Surgery  
*Alessandro De Mauro, Julien Mazars, Luigi Manco, Taulent Mataj, Alberto Hernandez Fernandez, Camilo Cortes, Lucio Tommaso De Paolis*

**W-VENOA-S3: Virtual Reality and Multimedia II - CISIS 4****Chair: Hiroaki Nishino, Oita University, Japan**

1. Rich Context Representation for Situation Aware System  
*Yoshitaka Sakurai, Kouhei Takada, Paolo Ceravolo, Ernesto Damiani, Setsuo Tsuruta*
2. A Tangible Medical Image Processing Assistant with Haptic Modality  
*Jiaqing Lin, Hiroaki Nishino, Tsuneo Kagawa, Kouichi Utsumiya*
3. Assessing the Impact of E-Government on Users: A Case Study of Indonesia  
*Dahlan Nariman*
4. A Case Study on Consulting Services and Their Development in a Regional Network Security Center  
*Maiko Shichijo, Ritsuko Watanabe, Eiji Aoki, Kouichi Utsumiya*
5. An Avatar Motion Generation Method Based on Inverse Kinematics and Interactive Evolutionary Computation  
*Ryuya Akase, Hiroaki Nishino, Tsuneo Kagawa, Kouichi Utsumiya, Yoshihiro Okada*

**17:00-17:15 Coffee Break****17:15-19:00 Parallel Sessions****CISIS-S7: Security and Trusted Computing - CISIS 1****Chair: Minoru Uehara, Toyo University, Japan**

1. Split Message-Based Anonymity for JXTA Applications  
*Joan Arnedo-Moreno, Noemi Perez-Gilabert*
2. Multiple Filters of Spam Using Sobel Operators and OCR  
*Peng Wan, Minoru Uehara*
3. Intrusion Tolerance in Cloud Applications: The mOSAIC Approach  
*Massimo Ficco, Massimiliano Rak*
4. Secure Inter Vehicle Communications  
*Mimoza Durresi, Arjan Durresi, Leonard Barolli*

**CISIS-S8: Semantic Web, Web Services, and Data Integration - CISIS 2****Chair: Beniamino Di Martino, Second University of Naples, Italy**

1. On-Demand Web Search Using Browser-Based Volunteer Computing  
*Tomasz Krupa, Przemyslaw Majewski, Bartosz Kowalczyk, Wojciech Turek*
2. Supporting Value Chain Integration through Ontology-Based Modeling  
*Corinna Engelhardt-Nowitzki, Klaus Arthofer, Natalia Kryvinska, Christine Strauss*
3. Towards a Semantic Engine for Cloud Applications Development  
*Giuseppina Cretella, Beniamino Di Martino*
4. Tuning of Operators in Memetic Algorithms for Independent Batch Scheduling in Computational Grids  
*Fatos Xhafa, Bernat Duran, Leonard Barolli, Vladi Kolici, Rozeta Miho, Makoto Takizawa*

**W-IIHCI-S4: Models and Algorithms - CISIS 3****Chair: Salvatore Vitabile, University of Palermo, Italy**

1. An Evaluation Framework for Assessing and Optimizing Multimodal Fusion Engines Performance  
*Pedro Feiteira, Carlos Duarte*
2. Vision-Based Fire Detection Algorithm Using Optical Flow  
*Changwoo Ha, Ung Hwang, Gwanggil Jeon, Joonguhee Cho, Jechang Jeong*
3. Towards Designing Users and Intuitive Web Interface  
*Muhammad Nazrul Islam*
4. Human-Robot Interaction Based on Introspective Capability  
*Giovanni Pilato, Riccardo Rizzo, Filippo Vella, Ignazio Infantino*
5. Gesture Segmentation and Recognition with an EMG-Based Intimate Approach - An Accuracy and Usability Study  
*Francesco Carrino, Antonio Ridi, Elena Mugellini, Omar Abou Khaled, Rolf Ingold*

**W-HCCIEA-S1: Hybrid/Cloud Computing Infrastructure for E-Science Applications  
- CISIS 4****Chair: Terzo Olivier, Istituto Superiore Mario Boella, Italy**

1. Execution of Compute Intensive Applications on Hybrid Clouds (Case Study with mpiBLAST)  
Michael Brock, Andrzej Goscinski
2. Analysis of Gromacs MPI Using the Opportunistic Cloud Infrastructure UnaCloud  
*Nathalia Garces, Harold Castro, Paula Delgado, Andres Gonzalez, Carlos A. Jaramillo, Natalia Penaranda, Maria del Pilar Delgado*
3. A Hybrid Cloud Infrastructure for the Optimization of VANET Simulations  
*Giuseppe Caragnano, Klodiana Goga, Daniele Brevi, Hector Agustin Cozzetti, Olivier Terzo, Riccardo Scopigno*
4. Architecture for Integrating Computational Tools Based on Grid Services for System Monitoring and Alerting  
*Marcos Rodrigo Momo, Julio Cesar Refosco, Helio dos Santos Silva, Mario Tachini, Dirceu Luis Severo, Ademar Cordero*

**20:00-22:00 Welcome Reception Party**

**Thursday, July 5, 2012**

**08:00 Registration**

**09:00-10:00 Single Session: IMIS-2012 Keynote**

**IMIS-2012 Keynote Talk**

**Prof. Elisa Bertino:** Location-aware Authentication and Authorization - Concepts and Issues

**10:00-10:30 Coffee Break**

**10:30-12:00 Parallel Sessions**

**CISIS-S9: Intelligent Systems and Algorithms - CISIS 1**

**Chair: Fatos Xhafa, Technical University of Catalonia, Spain**

1. User-Centered Evaluation of Recommender Systems with Comparison between Short and Long Profile  
*Francesco Epifania, Paolo Cremonesi*
2. An Intelligent System for Building Bioinformatics Workflows  
*Antonino Fiannaca, Salvatore Gaglio, Massimo La Rosa, Riccardo Rizzo, Alfonso Urso*
3. Object Tracking Based on Fuzzy Information Employing a Particle Filter Algorithm  
*Ehsan Jafari, Saeed Tossizadeh, Saeed Ahoon Manesh*
4. Leader Election: From Higham-Przytycka's Algorithm to a Gracefully Degrading Algorithm  
*Itziar Arrieta, Federico Farina, Jose Ramon G. de Mendivil, Michel Raynal*

**W-SWISM-S1: Semantic Cloud - CISIS 2**

**Chair: Beniamino Di Martino, Second University of Naples, Italy**

1. Extracting Information from Scientific Papers in the Cloud  
*Petr Skoda, Svatopluk Sperka, Pavel Smrz*
2. CloSe: A Cloud SaaS for Semantic Document Composition  
*Flora Amato, Antonino Mazzeo, Nicola Mazzocca, Sara Romano*
3. Towards an Ontology for Cloud Services  
*Teodor-Florin Fortis, Victor Ion Munteanu, Viorel Negru*

**W-ECDS-S1: Distributed Systems and Applications - CISIS 3**

**Chair: Markus Aleksy, DECRC, Germany**

1. Trustworthiness-based Group Communication Protocols  
*Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa*
2. A Transparent Service Replication Mechanism for Clouds  
*Manu Vardhan, D.K. Yadav, Dharmender Singh Kushwaha*
3. An Architecture for E-Government Social Web Applications  
*Jonas Brustel, Thomas Preuss, Carsten Schwenke, Dirk Wiczorek*
4. Model Driven Architecture for Industrial Applications  
*Maciej Zygmunt, Marek Budyn*

**W-IIBM-S1: Intelligent Informatics in Biology and Medicine I - CISIS 4****Chair: Tun-Wen Pai, National Taiwan Ocean University, Taiwan**

1. Exploration of Cellular Relationships from Characteristically Expressed Genes by Partial Canonical Correlation Analysis  
*Akiko Toshimori, Kunio Shimizu, Tingting Yu, Zhining Fan, Xingrong Zhou, Shigeru Saito, Katsuhisa Horimoto, Xia Jinrong, Huarong Zhou*
2. Simpute: A Simple Genotype Imputation Method  
*Yen Jen Lin, Chun Tien Chang, Chuan Yi Tang, Wen-Ping Hsieh*
3. Time Course RNA-seq: A Potential Avenue with Somewhat Different Approach in Tandem of Differential Analysis  
*Sunghee Oh, Hongyu Zhao, James P. Noonan*
4. Digging in the RNA-seq Garbage: Evaluating the Characteristics of Unmapped RNA-seq Reads in Normal Tissues  
*Matteo Carrara, Federica Cavallo, Maddalena Arigoni, Raffaele A. Calogero*

**12:00-13:30 Lunch Break****13:30-15:00 Parallel Sessions****CISIS-S10: Cloud Computing - CISIS 1****Chair: Nik Bessis, University of Derby, UK**

1. Cloud Virtual Machine Scheduling: Modelling the Cloud Virtual Machine Instantiation  
*Stelios Sotiriadis, Nik Bessis, Fatos Xhafa, Nick Antonopoulos*
2. Large-Scale Context Provisioning: A Use-Case for Homogenous Cloud Federation  
*Saad Liaquat Kiani, Ashiq Anjum, Nik Bessis, Richard Hill*
3. Agents Based Cloud Computing Interface for Resource Provisioning and Management  
*Salvatore Venticinquè, Luca Tasquier, Beniamino Di Martino*
4. A Framework for User Feedback Based Cloud Service Monitoring  
*Zia ur Rehman, Omar K. Hussain, Sazia Parvin, Farookh K. Hussain*

**W-SWISM-S2: Intelligent and Autonomic Agents - CISIS 2****Chair: Beniamino Di Martino, Second University of Naples, Italy**

1. Describing Cloud Use Case in MetaMORP(h)OSY  
*Francesco Moscato, Rocco Aversa, Alba Amato*
2. Mobile Tutoring for Situated Learning and Collaborative Learning in AIML Application Using QR-Code  
*Orlando De Pietro, Giovanni Frontera*
3. A Semantic Web Browser for Novice Users  
*Younghwan Kim, Sujin Yoo, Seongbin Park*

**W-ECDS-S2: Software Intensive Systems - CISIS 3****Chair: Markus Aleksy, DECRC, Germany**

1. An Approach Based on Software Components and Mobile Agents for Developing Distributed Applications with Verification of Validity Criterion  
*Siam Abderrahim, Maamri Ramdane, Sahnoun Zaidi*

2. An Automated Approach for Software Bug Classification  
*Neelofar, Muhammad Younus Javed, Hufsa Mohsin*
3. Secure File Sharing in JXTA Using Digital Signatures  
*Erita Skendaj, Marenglen Biba*
4. Performance Evaluation of WMN-GA System for Dense Networks Considering Different Distributions  
*Admir Barolli, Tetsuya Oda, Leonard Barolli, Fatos Xhafa, Makoto Takizawa, Kazunori Uchida*

**W-IIBM-S2: Intelligent Informatics in Biology and Medicine II - CISIS 4****Chair: Raffaele A. Calogero, Torino University, Italy**

1. Prediction of Protein Catalytic Residues by Local Structural Rigidity  
*Yu-Tung Chien, Shao-Wei Huang*
2. Protein Structure Alignment: Is There Room for Improvement?  
*Mauricio Arriagada, Aleksandar Poleksic*
3. Molecular Identification of a Unique Heparin Binding Motif Derived from Human RNase3  
*Ping-Hsueh Kuo, Chien-Jung Chen, Pei-Chun Lien, Hsiu-Hui Chang, Shun-lung Fang, Margaret Dah-Tsyng Chang, Tun-Wen Pai*
4. In Silico Prediction and In Vitro Characterization of Unique Function of Human RNase3  
*Pei-Chun Lien, Chien-Jung Chen, Ping-Hsueh Kuo, Tun-Wen Pai, Hsiu-Hui Chang, Yiu-Kay Lai, Wei-Shuo Wu, Margaret Dah-Tsyng Chang*

**15:00-15:30 Coffee Break****15:30-17:00 Parallel Sessions****CISIS-S11: Energy Aware Information Systems - CISIS 1****Chair: Tomoya Enokido, Risho University, Japan**

1. A Proposal for Development of Cloud Platform Using Solar Power Generation  
*Motoi Yamagiwa, Minoru Uehara*
2. Energy-Aware Distributed Systems for Computation and Storage-Based Applications  
*Takuro Inoue, Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa*
3. Energy-Efficient Server Selection Algorithm Based on the Extended Simple Power Consumption Model  
*Tomoya Enokido, Makoto Takizawa*

**W-SWISM-S3: Information Classification, Indexing, and Retrieval - CISIS 2****Chair: Beniamino Di Martino, Second University of Naples, Italy**

1. Towards Adaptive and Semantic Database Model for RDF Data Stores  
*Svatopluk Sperka, Pavel Smrz*
2. Building and Retrieval of 3D Objects in Cultural Heritage Domain  
*Flora Amato, Antonino Mazzeo, Vincenzo Moscato, Antonio Picariello*
3. A Semantic Model for Utility Driven Discovery of Cloud Resources  
*Giuseppe Di Modica, Orazio Tomarchio*
4. An Approach to Document Warehousing System Lifecycle from Textual ETL to Multidimensional Queries: A Proof-of-Concept Prototype  
*Assuntina Cembalo, Francesca M. Pisano, Gianpaolo Romano*



**W-ePaMus-S1: Engineering Parallel and Multi-Core Systems - CISIS 3****Chair: Denisa Rodila, Technical University of Cluj-Napoca, Romania**

1. Synthesis of NoC Interconnects for Multi-core Architectures  
*Gul N. Khan, Anita Tino*
2. Modelling the Behaviour of an Adaptive Scheduling Controller  
*G.B. Barone, V. Boccia, D. Bottalico, L. Carracciuolo, A. Doria, G. Laccetti*
3. Mapping Geospatial Applications onto Parallel and Distributed Environments  
*Denisa Rodila, Dorian Gorgan*
4. Simulation of Biological Neural Microcircuits on Multi-core Systems  
*Ioan Lucian Muntean, Marius Joldos*

**W-IIBM-S3: Intelligent Informatics in Biology and Medicine III - CISIS 4****Chair: Santo Motta, University of Catania, Italy**

1. Modeling Cancer Vaccines  
*Francesco Pappalardo, Santo Motta*
2. Voice Quality Assessment and Visualization  
*S.K. Ueng, C.M. Luo, T.Y. Tsai, H. Chang*
3. Ultrasonography Image Analysis for Detection and Classification of Chronic Kidney Disease  
*Chih-Yin Ho, Tun-Wen Pai, Yuan-Chi Peng, Chien-Hung Lee, Yung-Chih Chen, Yang-Ting Chen, Kuo-Su Chen*

**20:00-22:00 Banquet Party**

**Friday, July 6, 2012****08:00 Registration****09:00-10:00 Single Session: ALICE-2012 Keynote****ALICE-2012 Keynote Talk**

**Prof. Saverio Salerno** Adaptive Learning Via Intuitive/Interactive, Collaborative And Emotional Systems

**10:00-10:30 Coffee Break****10:30-12:00 Parallel Sessions****CISIS-S12: Ad Hoc Networks - CISIS 1****Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

1. Performance Investigation of a MANET Testbed in Outdoor Stairs Environment for Different Scenarios  
*Masahiro Hiyama, Elis Kulla, Tetsuya Oda, Makoto Ikeda, Leonard Barolli, Makoto Takizawa*
2. Congestion Control for Multi-flow Traffic in Wireless Mobile Ad-Hoc Networks  
*Makoto Ikeda, Elis Kulla, Masahiro Hiyama, Leonard Barolli, Rozeta Miho, Makoto Takizawa*
3. Ad Hoc Wireless Communications for Marketing Purposes  
*Mimoza Durresi, Illiana Shukallari, Arjan Durresi*
4. Evaluation of Never Die Network for a Rural Area in an Ultra Large Scale Disaster  
*Noriki Uchida, Kazuo Takahata, Yoshitaka Shibata, Norio Shiratori*

**W-ALICE-S1: Managing Emotions in Collaborative Learning Systems - CISIS 2****Chair: Santi Caballe, Open University of Catalonia, Spain**

1. Combining Individualization and Intuitive Guided Learning through Compound Learning Resources  
*Nicola Capuano, Anna Pierri, Saverio Salerno, Giuseppina Rita Mangione*
2. A Computational Model for Managing Emotions and Affections in Emotional Learning Platforms and Learning Experience in Emotional Computing Context  
*Gerardo Iovane, Saverio Salerno, Paola Giordano, Germano Ingenito, Giuseppina Rita Mangione*
3. A Multi-fold Time Approach to Address Emotions in Live and Virtualized Collaborative Learning  
*Michalis Feidakis, Thanasis Daradoumis, Santi Caballè*
4. Extracting Emotions from Texts in E-Learning Environments  
*Pilar Rodriguez, Alvaro Ortigosa, Rosa M. Carro*

**W-ICAS-S1: The Application of Intelligent Context - CISIS 3****Chair: Phillip Moore, Birmingham City University, UK**

1. E-Education 3.0: Challenges and Opportunities for the Future of iCampuses  
*A.M. Thomas, H. Shah, P. Moore, P. Rayson, A.J. Wilcox, K. Osman, C. Evans, C. Chapman, C. Athwal, D. While, H.V. Pham, S. Mount*

2. An Intelligent Mobile Advertising System (iMAS): Location-Based Advertising to Individuals and Business  
*Cain Evans, Philip Moore, Andrew Thomas*
3. Personalized Intelligent Context-Aware E-Learning on Demand  
*Philip Moore, Hai V. Pham*
4. Context-Aware Video Analysis for Infomobility  
*Luca Iocchi, Andrea Pennisi*

**W-SOA-KME-S1: Invited Talk - CISIS 4****Chair: Pierluigi Ritrovato, University of Salerno/CRMPA, Italy**

1. The Social Semantic Enterprise  
*John Breslin, National University of Ireland, Ireland*

**12:00-13:00 Lunch Break****13:00-14:30 Parallel Sessions****CISIS-S13: Sensor and Mesh Networks - CISIS 1****Chair: Salvatore Vitabile, University of Palermo, Italy**

1. Performance Evaluation of WMN-GA System for Low Densities of Clients and Different Settings of Population Size  
*Tetsuya Oda, Admir Barolli, Evjola Spaho, Leonard Barolli, Fatos Xhafa, Makoto Takizawa*
2. Performance Evaluation of WSNs for Different MAC Protocols Considering TwoRayGround Radio Model and AODV Routing Protocol  
*Tao Yang, Tetsuya Oda, Leonard Barolli, Fatos Xhafa, Arjan Durrresi, Makoto Takizawa*
3. Domain Independent Architecture and Behavior Modeling for Pervasive Computing Environments  
*Martin Peters, Christopher Brink, Sabine Sachweh*

**W-ALICE-S2: Intuitive Guided Learning, Replication, and Knowledge Representation - CISIS 2****Chair: Nicola Capuano, University of Salerno, Italy**

1. Spatial Presence in Virtual Worlds as a Perceptual Emotion: An Expansion on Cognitive Feeling?  
*Thomas Willans*
2. Using Emotions to Improve Role Taking in Storytelling Complex Learning Objects  
*Giuseppina Rita Mangione, Anna Pierrì, Gerardo Iovane*
3. Towards the Representation of Emotional Information from On-Line Collaborative Learning Sessions  
*Jordi Conesa, Santi Caballè, David Ganan, Josep Prieto*
4. Towards a Multi-fold Assessment Approach to Enrich the Virtualization of Collaborative Learning  
*Nestor Mora, Santi Caballè, Thanasis Daradoumis, David Ganan*

**W-ICAS-S2: Advances in the Design and Application of Context-Aware Systems - CISIS 3****Chair: Cain Evans, Birmingham City University, UK**

1. Intelligent Context with Decision Support under Uncertainty  
*Philip Moore, Hai V. Pham*
2. Characterization, Comparison and Systematization of Context Ontologies  
*Helio Martins, Nuno Silva*
3. Predicting Intelligence Using Hybrid Artificial Neural Networks in Context-Aware Tunneling Systems under Risk and Uncertain Geological Environment  
*Philip Moore, Hai V. Pham*

**W-SOA-KME-S2: Semantic and Text Classification - CISIS 4****Chair: Pierluigi Ritrovato, University of Salerno/CRMPA, Italy**

1. Where SOA Meets the Semantic Reasoning  
*Alexey Cheptsov, Stefan Wesner*
2. Managing Semantic Models for Representing Intangible Enterprise Assets: The ARISTOTELE Project Software Architecture  
*Angelo Gaeta, Matteo Gaeta, Francesco Orciuoli, Pierluigi Ritrovato*
3. Text Classification Using a Graph of Terms  
*Paolo Napoletano, Francesco Colace, Massimo De Santo, Luca Greco*

**14:30-15:00 Coffee Break****15:00-16:30 Parallel Sessions****CISIS-S14: Algorithms and Techniques - CISIS 1****Chair: Michel Raynal, Universit de Rennes, France**

1. Evolutionary Mechanism for Disaggregated Computing  
*Ichiro Satoh*
2. Fingerprint Traits and RSA Algorithm Fusion Technique  
*Vincenzo Conti, Salvatore Vitabile, Filippo Sorbello*
3. A Simple Asynchronous Shared Memory Consensus Algorithm Based on Omega and Closing Sets  
*Michel Raynal, Julien Stainer*

**W-ALICE-S3: Supporting Online Coordination & Assessment for Learning - CISIS 2****Chair: Giuseppina Rita Mangione, University of Salerno, Italy**

1. Guiding Intuitive Learning in Serious Games: An Achievement-Based Approach to Externalized Feedback and Assessment  
*Ian Dunwell, Panagiotis Petridis, Maurice Hendrix, Sylvester Arnab, Mohammad AL-Smadi, Christian Guetl*
2. Assessment for/as Learning: Integrated Automatic Assessment in Complex Learning Resources for Self-Directed Learning  
*Mohammad AL-Smadi, Gudrun Wesiak, Christian Guetl, Andreas Holzinger*
3. Supporting Online Coordination of Learning Teams through Mobile Devices  
*Jose Roig-Torres, Fatos Xhafa, Santi Caballè*

4. An Event-Based Approach to Support A3: Anytime, Anywhere, Awareness in Online Learning Teams  
*Xavier Rivadulla, Fatos Xhafa, Santi Caballè*
5. A P2P Replication-Aware Approach for Content Distribution in E-Learning Systems  
*Angel Navarro-Esteva, Fatos Xhafa, Santi Caballè*

**W-ICLS-S1: Scheduling, Query, and Identification - CISIS 3****Chair: Giovanni Morana, Catania University, Italy**

1. Structure Identification for Complex System and Inference Interpretable Rules  
*Cherif Remache, Ramdane Maamri, Zaidi Sahnoun*
2. Performance and Scalability of XML Query Processing  
*Gaetan Hains, Muath Alrammal*
3. Project Portfolio: A Job Scheduling Approach  
*Dimitrios Tselios, Ilias K. Savvas, M-Tahar Kechadi*

**W-SOA-KME-S3: Services and Applications - CISIS 4****Chair: Pierluigi Ritrovato, University of Salerno/CRMPA, Italy**

1. Fault-Tolerant Distributed Knowledge Discovery Services for Grids  
*Eugenio Cesario, Domenico Talia*
2. ElaaS: An Innovative Elasticity as a Service Framework for Dynamic Management across the Cloud Stack Layers  
*Pavlos Kranas, Vasileios Anagnostopoulos, Andreas Menychtas, Theodora Varvarigou*
3. A High Level Service-Based Approach to Software Component Integration  
*Y. Arafa, C. Boldyreff, Abdel-Rahman H. Tawil, Hao Liu*

**W-FCISIS-S1: Intelligent Systems and Algorithms - IMIS 2****Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

1. Semantic Interoperability on the Web of Things: The Semantic Smart Gateway Framework  
*Konstantinos Kotis, Artem Katasonov*
2. A Fast Algorithm for Contrast Restoration of Weather Degraded Images  
*Indrit Enesi, Rozeta Miho*
3. Patterns for Cognitive Systems  
*Michael S.P. Miller*

**16:30-16:45 Coffee Break****16:45-18:30 Parallel Sessions****CISIS-S15: Intelligent and Adaptive Systems - CISIS 1****Chair: Kin Fun Li, University of Victoria, Canada**

1. Forces That Drive Organizational Change in an Adaptive Virtual Organization  
*Sergio Esparcia, E. Argente*
2. A Comparison Study between Two Fuzzy-Based Trustworthiness Systems for P2P Networks  
*Kouhei Umezaki, Evjola Spaho, Leonard Barolli, Fatos Xhafa, Keita Matsuo, Jiro Iwashige*

3. Towards Automatic Analysis of Cloud Vendors APIs for Supporting Cloud Application Portability  
*Giuseppina Cretella, Beniamino Di Martino*
4. Real-Time Classification of Sports Movement Using Adaptive Clustering  
*Kin Fun Li, Ana-Maria Sevcenco, Kosuke Takano*

**W-ADIS-S1: Adaptive Distributed Systems - CISIS 2****Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

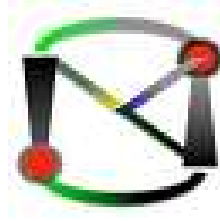
1. ILRS: Intelligent Lane Reservation System for Highway(s)  
*Ciprian Dobre, Valentin Cristea, Liviu Iftode*
2. Applications Monitoring for Self-Optimization in GridGain  
*Florin Pop, Maria-Alexandra Lovin, Valentin Cristea, Nik Bessis, Stelios Sotiriadis*
3. Adaptive Traffic Optimization  
*Ciprian Dobre, Andrei Ichimescu, Valentin Cristea*
4. Scalable Failure Management for Peer-to-Peer Networks  
*Catalin Leordeanu, Vlad Calina, Valentin Cristea*

**W-ICLS-S2: Simulations and Architectures - CISIS 3****Chair: Giovanni Morana, Catania University, Italy**

1. mJADES: Concurrent Simulation in the Cloud  
*Massimiliano Rak, Antonio Cuomo, Umberto Villano*
2. ComplexSim: An SMP-Aware Complex Network Simulation Framework  
*Fabrizio Messina, Giuseppe Pappalardo, Corrado Santoro*
3. Injecting the Architectural Resiliency into Distributed Autonomic Systems Using DIME Network Architecture  
*Rao Mikkilineni, Giovanni Morana*

**W-FCISIS-S2: Wireless Communications and Systems - IMIS 2****Chair: Fatos Xhafa, Technical University of Catalonia, Spain**

1. Diffracted Fields on a Building Rooftop Considering Reflection by Ground and Building Rooftop  
*Jiro Iwashige, Leonard Barolli, Katsuki Hayashi, Ryo Nagao, Yuki Isayama*
2. An Adaptive Algorithm Based on PSO for Generating Inhomogeneous Triangular Cells  
*Kazunori Uchida, Masafumi Takematsu, Jun-Hyuck Lee, Junichi Honda*
3. An Experimental Study on X-Shaped Branching Waveguide in Two-Dimensional Photonic Crystal Structure  
*Hiroshi Maeda, Yongmei Zhang, Hiroyuki Terashima*



# IMIS-2012 Main Conference and Workshops Program

Thursday, July 4, 2012

08:00 Registration

09:00-10:30 Single Session: Opening and CISIS-2012 Keynote

CISIS-2012 Keynote Talk

**Prof. Vincenzo Loia:** Knowledge Building with Semantic Schema in Enterprise: the ARISTOTELE Approach

10:30-11:00 Coffee Break

11:00-12:30 Parallel Sessions

**IMIS-S1: Smart Spaces and Intelligent Environments - IMIS 1**

**Chair: Ilsun You, Korean Bible University, Korea**

1. The 4W (What-Where-When-Who) Project Goes Social  
*Mauro Migliardi, Marco Gaudina*
2. Exploring Urban Dynamics Based on Pervasive Sensing: Correlation Analysis of Traffic Density and Air Quality  
*Wenzhu Zhang, Bing Zhu, Lin Zhang, Jian Yuan, Ilsun You*
3. A Privacy Preserving Model for Personal Information in Search Engine  
*Eun-Ae Cho, Kyungroul Lee, Kangbin Yim*
4. A Novel Search System for Protecting Search Word  
*Kyungroul Lee, Eun-Ae Cho, Kangbin Yim*

**IMIS-S2: Context and Location-Aware Computing - IMIS 2****Chair: Sung-Hwa Lim, Sungkyunkwan University, Korea**

1. A Service Oriented Analysis Environment for Neuroimaging Studies  
*Ashiq Anjum, Nik Bessis, Richard McClatchey, Kamran Munir, Irfan Habib, Andrew Branson, Jetendr Shamdasani*
2. Context-Awareness for IPTV Services Personalization  
*Marek Dabrowski, Justyna Gromada, Hassnaa Moustafa*
3. Collaborative Decision-Making Framework for Supporting Multi-mobile Decision-Makers Using Ontology  
*Hyun Jung Lee, Mye Sohn*

**W-esIoT-S1: Performing the Internet of Things - IMIS 3****Chair: Antonio J. Jara, University of Murcia, Spain**

1. A Test-Bed Internet Based Architecture Proposal for Benchmarking of Visual Servoing Techniques  
*Roger Esteller-Curto, Angel P. del Pobil, Enric Cervera, Raul Marin*
2. Convergence of Utility Computing with the Internet-of-Things  
*John Soldatos, Martin Serrano, Manfred Hauswirth*
3. Impact of Online Games and M2M Applications Traffic on Performance of HSPA Radio Access Networks  
*Dejan Dragic, Srdjan Krco, Igor Tomic, Milica Popovic, Nenad Zeljkovic, Navid Nikaein, Philipp Svoboda*
4. Fighting against Vampire Appliances through Eco-Aware Things  
*Juan Lopez-de-Armentia, Diego Casado-Mansilla, Diego Lopez-de-Ipina*

**W-IFSN-S1: Fundamental Theory - IMIS 4****Chair: Wanrong Yu, National University of Defense Technology, CHINA**

1. A Survey of Virtualization Technologies Focusing on Untrusted Code Execution  
*Yan Wen, Jinjing Zhao, Gang Zhao, Hua Chen, Dongxia Wang*
2. Edges Immunization Strategy Based on Discrete PSO in Weighted Scale-Free Network  
*Bing Lin, Wenzhong Guo, Guolong Chen*
3. Identify Sentiment-Objects from Chinese Sentences Based on Skip Chain Conditional Random Fields Model  
*Minjie Zheng, Zhicheng Lei, Yue Liu, Xiangwen Liao, Guolong Chen*
4. An Optimistic Protocol for Distributed Fair Exchange  
*Yang Zhao, Zhi-guang Qin*

**12:30-13:30 Lunch Break****13:30-15:00 Parallel Sessions****IMIS-S3: Data Management Applications and Analysis - IMIS 1****Chair: Marek R. Ogiela, AGH University of Science and Technology, Poland**

1. Neural Network Approach for Identification of Selected Brain Perfusion Abnormalities  
*Tomasz Hachaj, Marek R. Ogiela*



2. Cognitive Applications for Semantic and Cognitive Data Analysis  
*Lidia Ogiela, Dorota Srebrny*
3. Cognitive Analysis Systems for 3D Image Data Interpretation  
*Lidia Ogiela, Marek R. Ogiela*
4. Data Aggregation Techniques in Heart Vessel Modelling and Recognition of Pathological Changes  
*Miroslaw Trzupek, Marek R. Ogiela*

**IMIS-S4: Signature and Control Schemes - IMIS 2****Chair: Kangbin Yim, Soonchunhyang University, Korea**

1. A New Identity-Based Group Signature Scheme Based on Knapsack ECC  
*Sazia Parvin, Song Han, Zia Ur Rehman, Abdullah Al Faruque, Farookh Khadeer Hussain*
2. An Efficient Identity-Based Strong Designated Verifier Signature without Delegatability  
*Haibo Tian, Xiaofeng Chen, Fangguo Zhang, Baodian Wei, Zhengtao Jiang, Yi Liu*
3. A New Iterative Learning Control Scheme Based on Damped Newton Method for Nonlinear Systems  
*Yu Han, Kangbin Yim, Xiaochen Lai, Guangwei Xu, Hui Liu, Xilan Wang*
4. An Access Control Mechanism for Remote Control of Home Security System  
*Seung-Hyun Seo, Taenam Cho*

**W-esIoT-S2: Discovering the Internet of Things - IMIS 3****Chair: Matthias Kovatsch, ETH Zurich, Switzerland**

1. Facilitating Sensor Deployment, Discovery and Resource Access Using Embedded Web Services  
*Isam Ishaq, Jeroen Hoebeke, Jen Rossey, Eli De Poorter, Ingrid Moerman, Piet Demeester*
2. Smart Spaces and Smart Objects Interoperability Architecture (S3OiA)  
*Mario Vega-Barbas, Diego Casado-Mansilla, Miguel A. Valero, Diego Lopez-de-Ipina, Jose Bravo, Francisco Florez*
3. Light-Weight Multicast DNS and DNS-SD (IxDNS-SD): IPv6-Based Resource and Service Discovery for the Web of Things  
*Antonio J. Jara, Pedro Martinez-Julia, Antonio Skarmeta*
4. Implementation of the EXI Schema on Wireless Sensor Nodes Using Contiki  
*Domenico Caputo, Luca Mainetti, Luigi Patrono, Antonio Vilei*

**W-IFSN-S2: Low Level Security - IMIS 4****Chair: Wenzhong Guo, Fuzhou University, CHINA**

1. Reversing Engineering Data Structures in Binary Programs: Overview and Case Study  
*Xiao Xia Sun, Hua Chen, Yan Wen, Min Huan Huang*
2. Network Security Situation Element Extraction Based on Projection Pursuit Regression  
*Bin Wen, Wenzhong Guo, Guolong Chen*
3. Research of Network Security Situation Prediction Based on Multidimensional Cloud Model  
*Rui-Fen Wu, Guo-Long Chen*

**15:00-15:30 Coffee Break****15:30-17:00 Parallel Sessions**

**IMIS-S5: Data Management Modelling and Representation - IMIS 1****Chair: Zhuzhong Qian, Nanjing University, China**

1. Biological Modelling in Semantic Data Analysis Systems  
*Lidia Ogiela*
2. Similarity Measurement between Objects and Activities for User Intention Modeling  
*Myungwon Hwang, Sa-Kwang Song, Do-Heon Jeong, Hanmin Jung, Jinhjung Kim*
3. Random Graph Languages for Distorted and Ambiguous Patterns: Single Layer Model  
*Marek R. Ogiela, Marcin Piekarczyk*
4. Using Dynamic Probe for Deadlock Detection in Component-Based System  
*Chen Li, Linpeng Huang, Luxi Chen, Weichao Luo*

**IMIS-S6: Secure Algorithms and Systems - IMIS 2****Chair: Fang-Yie Leu, Tunghai University, Taiwan**

1. The Forensic Analysis of a False Digital Alibi  
*Aniello Castiglione, Giuseppe Cattaneo, Giancarlo De Maio, Alfredo De Santis, Gerardo Costabile, Mattia Epifani*
2. A Secure Secondary Backup Storage with an Isolated Authentication  
*Kwangjin Bae, Ilsun You, Kangbin Yim, Taeho Son*
3. Analysis on Maliciousness for Mobile Applications  
*Seung-Hyun Seo, Dong-Guen Lee, Kangbin Yim*
4. A Slow Intelligent Approach for the Improvement of Intrusion Detection and Prevention System  
*Francesco Colace, Massimo De Santo, Salvatore Ferrandino*

**W-esIoT-S3: Mobile Internet of Things - IMIS 3****Chair: Carmelo R. Garcia, University of La Palma de Gran Canaria, Spain**

1. Mixed Reality-Aware Service Architecture for Mobile Environments  
*Augusto Morales Dominguez, Tomas Robles, Ramon Alcarria, Edwin Cedeno*
2. Resolving Coordination Challenges in Cooperative Mobile Services  
*Ramon Alcarria, Tomas Robles, Augusto Morales Dominguez, Edwin Cedeno*
3. An Attitude-Based Reasoning Strategy to Enhance Interaction with Augmented Objects  
*Josue Iglesias, David Gomez, Ana M. Bernardos, Jose R. Casar*
4. Evaluation of Bluetooth Low Energy Capabilities for Continuous Data Transmission from a Wearable Electrocardiogram  
*Antonio J. Jara, David Fernandez, Pablo Lopez, Miguel A. Zamora, Benito Ubeda, Antonio G. Skarmeta*

**W-IFSN-S3: Internet Routing - IMIS 4****Chair: Xiaofeng Wang, National University of Defense Technology, CHINA**

1. The Relation on Prefix Hijacking and the Internet Hierarchy  
*Jinjing Zhao, Yan Wen, Xiang Li, Wei Peng, Feng Zhao*
2. Constructing Robust Dissemination Paths in Centralized Control Network  
*Dan Zhao, Hongjun Liu, Xiaofeng Hu, Chunqing Wu*
3. An Analytic Goodput Model for TCP Incast  
*Zhenqian Feng, Bing Bai, Baokang Zhao, Jinshu Su*
4. A Distribute and Geographic Information Based Routing Algorithm for LEO Satellite Constellation Networks  
*Yanpeng Ma, Jinshu Su, Chunqing Wu, Jinshu Su, Xiaofeng Wang, Wanrong Yu, Baokang Zhao, Xiaofeng Hu*

**17:00-17:15 Coffee Break****17:15-19:00 Parallel Sessions****IMIS-S7: Energy Aware Pervasive Systems, Knowledge Cities, and Smartphone Applications - IMIS 1****Chair: Kangbin Yim, Soonchunhyang University, Korea**

1. Threshold-Based Energy-Efficient Data Transmission Policy for Mobile Devices  
*Sung-Hwa Lim, Jungsup Oh, Byoung-Hoon Lee, Mye Sohn*
2. Delegation-Based Mutual Authentication Scheme for Multi-operator Wireless Mesh Network  
*Tianhan Gao, Nan Guo, Kangbin Yim*
3. Towards a Context-Aware and Adaptable Room System for Intelligent "Trusted" Office-Spaces in Smart Cities  
*Tim French, Nik Bessis*
4. Participatory Sensing in Environmental Monitoring - Experiences  
*Ville Kotovirta, Timo Toivanen, Renne Tergujeff, Markku Huttunen*

**IMIS-S8: Modeling, Simulation, and Performance in UPC - IMIS 2****Chair: Hae-Duck Joshua Jeong, Korean Bible University, Korea**

1. Characterization of Vision-Aided Indoor Localization and Landmark Routing  
*Aaron Ballew, Shiva Srivastava, Nikolay Valtchanov, C.C. Lee, Aleksandar Kuzmanovic*
2. Document Classification through Building Specified N-Gram  
*Byeongkyu Ko, Dongjin Choi, Chang Choi, Junho Choi, Pankoo Kim*
3. A Comparison between Single and Additive Contribution in RFID Reader-to-Reader Interference Models  
*Linchao Zhang, Renato Ferrero, Filippo Gandino, Maurizio Rebaudengo*
4. A Novel Framework of Self-Adaptive Fault-Tolerant for Pervasive Computing  
*Haibin Cai, Chao Peng, Yue Zhang*

**W-esIoT-S4: Semantic Web of Things - IMIS 3****Chair: Antonio Puliafito, University of Messina, Italy**

1. DAAF: A Device Abstraction and Aggregation Framework for Smart Environments  
*A. Paz-Lopez, G. Varela, V. Sonora, J.A. Becerra*
2. Anticipating Health Hazards through an Ontology-Based, IoT Domotic Environment  
*Vittorio Miori, Dario Russo*
3. Assessing Data Dissemination Strategies within Triple Spaces on the Web of Things  
*Aitor Gomez-Goiri, Diego Lopez-de-Ipina*
4. Heterogeneous Sensors Become Homogeneous Things in Smart Cities  
*M. Fazio, M. Paone, A. Puliafito, M. Villari*

**W-IFSN-S4: Future Networking - IMIS 4****Chair: Yan Wen, Beijing Institute of System Engineering, CHINA**

1. Locating Routing Instability Based on Path Exploration  
*Hongjun Liu, Xiaofeng Hu, Dan Zhao, Xicheng Lu*

2. Secure Service and Management for Security-Critical Wireless Sensor Network  
*Qiang Liu, Li Liu, Xiaohui Kuang, Yan Wen*
3. Research on the Universal Platform for Aerospace Craft Simulation  
*Dong Liu, Yi Li, Weiyang Xing, Bo Wang*

**20:00-22:00 Welcome Reception Party**

**Thursday, July 5, 2012****09:00-10:00 Single Session: IMIS-2012 Keynote****IMIS-2012 Keynote Talk**

**Prof. Elisa Bertino:** Location-aware Authentication and Authorization - Concepts and Issues

**10:00-10:30 Coffee Break****10:30-12:00 Parallel Sessions****IMIS-S9: Reliable Transmission and Fault Tolerance - IMIS 1**

**Chair: Kangbin Yim, Soonchunhyang University, Korea**

1. Performance Analysis of Reliable Transmission on Multiple Paths and Single Path  
*Fei Song, Huachun Zhou, Sidong Zhang, Hongke Zhang, Ilsun You*
2. Application-Aware Virtual Machine Placement in Data Centers  
*Fei Song, Daochao Huang, Huachun Zhou, Ilsun You*
3. Transient Fault Tolerance for ccNUMA Architecture  
*Xingjun Zhang, Endong Wang, Feilong Tang, Meishun Yang, Hengyi Wei, Xiaoshe Dong*
4. Fuzzy Fault Tree Based Fault Detection  
*Yuening Kang, Xingjun Zhang, Nan Wu, Weiguo Wu, Xiaoshe Dong*

**W-esIoT-S5: Lightweight Protocols and Applications - IMIS 2**

**Chair: Domenico Rotondi, TXTGroup, Italy**

1. Constrained Application Protocol for Low Power Embedded Networks: A Survey  
*Berta Carballido Villaverde, Dirk Pesch, Rodolfo De Paz Alberola, Szymon Fedor, Menouer Boubekeur*
2. Proposal of a REST-Based Architecture Server to Control a Robot  
*Roger Esteller-Curto, Enric Cervera, Angel P. del Pobil, Raul Marin*
3. A Lightweight and Identity-Based Network Architecture for the Internet of Things  
*Pedro Martinez-Julia, Antonio F. Skarmeta*
4. Shifting Primes: Optimizing Elliptic Curve Cryptography for Smart Things  
*Leandro Marin, Antonio Jara, Antonio F. Skarmeta*

**W-esIoT-S6: Cloud of things - IMIS 3**

**Chair: Charalampos Doukas, University of the Aegean, Greece**

1. Enabling the Cloud of Things  
*Salvatore Distefano, Giovanni Merlino, Antonio Puliafito*
2. Integrating Internet of Things and Cloud Computing for Health Services Provisioning: The Virtual Cloud Carer Project  
*Diego Gachet, Manuel de Buenaga, Fernando Aparicio, Victor Padron*
3. Bringing IoT and Cloud Computing towards Pervasive Healthcare  
*Charalampos Doukas, Ilias Maglogiannis*
4. Analysis of the Cloud Computing Paradigm on Mobile Health Records Systems  
*Gonzalo Fernandez, Isabel de la Torre-Diez, Joel J.P.C. Rodrigues*

**W-ITAUC-S1: Wireless Sensor Networks - IMIS 4****Chair: Hsing-Chung Chen, Asia University, Taiwan**

1. Energy Efficient Block Division Methods for Data Aggregation in Wireless Sensor Networks  
*Chia-Hsin Cheng, Hsinying Liang, Yung-Fa Huang, Tian-Yue Wu*
2. A Fuzzy-Based Cluster-Head Selection System for WSNs: A Comparison Study for Static and Mobile Sensors  
*Leonard Barolli, Qi Wang, Elis Kulla, Fatos Xhafa, Bezheth Kamo, Makoto Takizawa*
3. A Low Complexity IR-UWB Receiver for Wireless Sensor Networks  
*Hsi-Chou Hsu, Jyh-Horng Wen*
4. Cognitive RBAC in Small Heterogeneous Networks  
*Hsing-Chung Chen, Marsha Anjanette Violetta*
5. Three-Party Authenticated Quantum Key Distribution Protocol with Time Constraint  
*Hsing-Chung Chen, Syuan-Zong Lin, Tzu-Liang Kung*

**12:00-13:30 Lunch Break****13:30-15:00 Parallel Sessions****IMIS-S10: Network Analysis and Strategies - IMIS 1****Chair: Hae-Duck Joshua Jeong, Korean Bible University, Korea**

1. An Analysis of Strategies for Preventing Selfish Behavior in Mobile Delay Tolerant Networks  
*Jingwei Miao, Omar Hasan, Sonia Ben Mokhtar, Lionel Brunie, Kangbin Yim*
2. ILSRO: Identifier/Location Split-Based Route Optimization for PMIPv6  
*Jianfeng Guan, Changqiao Xu, Kai Wang, Huachun Zhou, Hongke Zhang*
3. Extending Mesh Networks to Opportunistic Resource Sharing  
*Jeremy A. Hansen*
4. Minimizing Communication Traffic in Data Centers with Power-Aware VM Placement  
*Bolei Zhang, Zhuzhong Qian, Wei Huang, Xin Li, Sanglu Lu*

**W-esIoT-S7: Internet of Things Applications - IMIS 2****Chair: Diego Gachet, University Europea Madrid, Spain**

1. Marketing 4.0: A New Value Added to the Marketing through the Internet of Things  
*Antonio J. Jara, Maria Concepcion Parra and Antonio F. Skarmeta*
2. On Route Travel Assistant for Public Transport Based on Android Technology  
*Carmelo R. Garcia, Santiago Candela, Jonatan Ginory, Alexis Quesada-Arencibia, Francisco Alayon*
3. Web of Things as a Product Improvement tool: Furniture as Case Study  
*Andres L. BLeda, Rafael Maestre, Guadalupe Santa, Antonio J. Jara, Antonio Gomez Skarmeta*
4. An Indoor Localization Mechanism Based on RFID and IR Data in Ambient Intelligent Environments  
*Maria V. Moreno, Miguel A. Zamora, Jose Santa, Antonio F. Skarmeta*

**W-esIoT-S8: Securing and Identifying the Internet of Things - IMIS 3****Chair: Antonio F. Skarmeta, University of Murcia, Spain**

1. Secure Identifiers and Initial Credential Bootstrapping for IoT@Work  
*Kai Fischer, Jurgen Gebner, Steffen Fries*
2. IoT Access Control Issues: A Capability Based Approach  
*S. Gusmeroli, S. Piccione, D. Rotondi*
3. Internet of Things Architecture for an RFID-Based Product Tracking Business Model  
*Felix Jesus Villanueva, David Villa, Francisco Moya, Maria Jose Santofimia, Juan Carlos Lopez*
4. The Smart University Experience: An NFC-Based Ubiquitous Environment  
*M.V. Bueno-Delgado, P. Pavon-Marino, A. De-Gea-Garcia, A. Dolon-Garcia*

**W-ITAUC-S2: Wireless Systems and Applications - IMIS 4****Chair: Shu-Hong Lee, Chienkuo Technology University, Taiwan**

1. Performance of Adaptive Partial Interference Cancellation for Near-Far Environments in OFDMA Systems  
*Yung-Fa Huang, Tan-Hsu Tan, Chia-Hsing Cheng*
2. A Simplified Wiener-Based SIC ICI Cancellation Scheme for OFDM Systems over Time-Varying Channels  
*Yung-Cheng Yao, Ying-Chih Kuo, Jyh-Horng Wen*
3. Performance Study of IEEE 802.11 DCF with Optimal Contention Window  
*Chien-Erh Weng, Chun-Yin Chen*
4. Modified Dummy Sequence Generator for DSI on PAPR Reduction in OFDM Systems  
*Shu-Hong Lee, Ho-Lung Hung*
5. Identifying Restricted-Faults in Multiprocessor Meshes under the PMC Diagnostic Model  
*Tzu-Liang Kung, Cheng-Kuan Lin, Jimmy J.M. Tan, Hon-Chan Chen, Hsing-Chung Chen*
6. A Method to Improve the Accuracy of the TOA Position Location Solution in Multistatic Radar Systems  
*Jheng-Sian Li, Yung-Cheng Yao, Chun-Hung Chen, Jyh-Horng Wen*

**15:00-15:30 Coffee Break****15:30-17:00 Parallel Sessions****IMIS-S11: Mobile Ad Hoc Networks - IMIS 1****Chair: Ilsun You, Korean Bible University, Korea**

1. Impacts of Internal Network Contexts on Performance of MANET Routing Protocols: A Case Study  
*Longteng Yi, Yujia Zhai, Yue Wang, Jian Yuan, Ilsun You*
2. A Terrain-Awareness Based Mobility Model with Markov Random Disturbance for Tactical MANET  
*Bowen Deng, Yujia Zhai, Yue Wang, Jinhai Huo, Jian Yuan, Ilsun You*
3. Improved AODV Routing Protocol to Cope with High Overhead in High Mobility MANETs  
*Mohammad Ayash, Mohammad Mikki, Kangbin Yim*
4. An Efficient Distributed Mobility Management Scheme Based on PMIPv6  
*Li Yi, Huachun Zhou, Hongke Zhang*

**W-esIoT-S9: IPv6 and Internet of Things - IMIS 2****Chair: Latif Ladid, University of Luxembourg, Luxembourg**

1. Keynote: The power of IPv6 over the IoT  
*IPv6 Forum President - Latif Ladid*
2. Integrating Building Automation Systems and IPv6 in the Internet of Things  
*Markus Jung, Christian Reinisch, Wolfgang Kastner*
3. Demand Forecasting and Smart Devices as Building Blocks of Smart Micro Grids  
*Rene Schumann, Dominique Genoud*
4. Enabling Transparent Communication with Global ID for the Internet of Things  
*Suho Jeong, Seong Hoon Kim, Minkeun Ha, Taehong Kim, Jinyoung Yang, Nam Giang, Daeyoung Kim*

**W-SMEUCE-S1: The Success Case of e&u-Business Sustainability Management - IMIS 3****Chair: Lung-Sheng Lee, National United University, Taiwan**

1. Entrepreneurial Success for High-Tech Start-Ups - Case Study of Taiwan High-Tech Companies  
*Ya-Wen Yu, Yu-Shing Chang, Yu-Fu Chen, Li-Sheng Chu*
2. Performance Implications of Knowledge Management: Mediating Roles of Dynamic Capability and Competitive Strategy  
*Shu-Hui Chuang, Hong-Nan Lin*
3. The Emerging Financial Pre-warning Systems  
*Mushang Lee, Ching-Hui Shih, Tswi Chih Wu*
4. Global Trends in Workplace Learning  
*Lung-Sheng Lee, Chun-Chin Lai*

**W-SMEUCE-S2: The Interaction between e&u-Business Sustainability Management and Financial Environment - IMIS 4****Chair: Kuei-Yuan Wang, Asia University, Taiwan**

1. The Influence of Media Coverage on the Stock Returns and Momentum Profits  
*Kuei-Yuan Wang, Chien-Kuo Chen*
2. Marriage, Education and Housing Price  
*Mei-Hua Liao*
3. Intangible Assets, Financial Performance, and Market Value - An Integrative Research of Financial Services Industry  
*Ying-Li Lin, Hsiu-Feng Huang* Automatic Bibliometric Analysis of Research Literature in Adult Education  
*Yao-Hua Wang, Yuen-Hsien Tseng*

**20:00-22:00 Banquet Party**



**Friday, July 6, 2012****09:00-10:00 Single Session: ALICE-2012 Keynote****ALICE-2012 Keynote Talk**

**Prof. Saverio Salerno** Adaptive Learning Via Intuitive/Interactive, Collaborative And Emotional Systems

**10:00-10:30 Coffee Break****10:30-12:00 Parallel Sessions****IMIS-S12: Cloud Computing - IMIS 1**

**Chair: Ilsun You, Korean Bible University, Korea**

1. A Resource-Aware Pairing Device Framework for Ubiquitous Cloud Applications  
*Liang (Ben) Chen, Maria Prokopi*
2. Lazy Monitoring for Distributed Computing Environments  
*Giulio Caravagna, Gabriele Costa, Luca Wiegand, Giovanni Pardini*
3. Balancing Resource Utilization for Continuous Virtual Machine Requests in Clouds  
*Xin Li, Zhuzhong Qian, Ruiqing Chi, Bolei Zhang, Sanglu Lu*

**W-FINGNet-S1: Architectures and Platforms of FINGNet - IMIS 2**

**Chair: Jiyoung Lim, Korean Bible University, South Korea**

1. Future Internet in Taiwan: Design and Research Activities over TWAREN Network  
*Jen-Wei Hu, Wun-Yuan Huang, Hui-Min Tseng, Hui-Lan Lee, Li-Chi Ku, Shu-Cheng Lin, Te-Lung Liu, Chu-Sing Yang*
2. A Multistep Process Model for Selecting and Composing Functional Blocks in a Future Internet Architecture  
*Daniel Gnther, Nathan Kerr, Paul Mller*
3. A Requirement-Based Socket API for a Transition to Future Internet Architectures  
*Abbas Ali Siddiqui, Paul Mueller*
4. Service Orientation Paradigm in Future Network Architectures  
*Rahamatullah Khondoker, Abbas Siddiqui, Bernd Reuther, Paul Mueller*

**W-MCNCS-S1: Cloud Security and Energy Models - IMIS 3**

**Chair: Aniello Castiglione, University of Salerno, Italy**

1. Cloud Computing-Based Building Energy Management System with ZigBee Sensor Network  
*Insung Hong, Jisung Byun, Sehyun Park*
2. Energy-Efficiency and Security Issues in the Cisco Nexus Virtual Distributed Switching  
*Benjamin Peterson, Sergio Ricciardi, Jordi Nin*
3. Large-Scale Coordinated attacks: Impact on the Cloud Security  
*Damien Riquet, Gilles Grimaud, Michael Hauspie*
4. Security of a Public Cloud  
*Irina Astrova, Stella Gatzui Grivas, Marc Schaaf, Arne Koschel, Jan Bernhardt, Mark Dennis Kellermeyer, Stefan Nitz, Francisco Carriedo Scher, Michael Herr*

**W-WAIS-S1: Access Control, Data Integrity, and Vulnerability - IMIS 4****Chair: Hiroaki Kikuchi, Tokai University, Japan**

1. Proposal of the Hierarchical File Server Groups for Implementing Mandatory Access Control  
*Taketoshi Sakuraba, Kouichi Sakurai*
2. Preventing the Access of Fraudulent WEB Sites by Using a Special Two-Dimensional Code  
*Nobuyuki Teraura, Kouichi Sakurai*
3. Integrity Assurance for Real-Time Video Recording  
*Tetsuya Izu, Masahiko Takenaka, Jun Yajima, Takashi Yoshioka*
4. Countermeasures and Tactics for Transitioning against the SSL/TLS Renegotiation Vulnerability  
*Yuji Suga*

**12:00-13:00 Lunch Break****13:00-14:30 Parallel Sessions****W-esIoT-S10: Invited Talk - IMIS 1****Chair: Antonio Jara, University of Murcia, Spain**

1. Big Data and IoT: Building a Virtual Brain  
*Co-founder viBrain Solutions - Antonio J. Jara*

**W-FINGNet-S2: Security Issues and New Applications in FINGNet - IMIS 2****Chair: Hae-Duck Joshua Jeong, Korean Bible University, South Korea**

1. Group Key Management for Secure Mobile IPTV Service  
*Inshil Doh, Jiyoung Lim, Min Young Chung*
2. Passive YouTube QoE Monitoring for ISPs  
*Raimund Schatz, Tobias Hofeld, Pedro Casas*
3. Design and Implementation of Location-Based SNS Smartphone Application for the Disabled Population  
*Arisu An, Hae-Duck J. Jeong, Jiyoung Lim, WooSeok Hyun*
4. Content-Based Image Retrieval Using Wavelet Spatial-Color and Gabor Normalized Texture in Multi-resolution Database  
*Yong-Hwan Lee, Sang-Burm Rhee, Bonam Kim*

**W-MCNCS-S2: Wireless and Mobile Security - IMIS 3****Chair: Chin-Ling Chen, Chaoyang University of Technology**

1. A Secure Communication over Wireless Environments by Using a Data Connection Core  
*Ko-Chung Wei, Yi-Li Huang, Fang-Yie Leu*
2. A Novel Key Management of Two-Tier Dissemination for Wireless Sensor Network  
*Chin-Ling Chen, Yu-Ting Tsai, Tzay-Farn Shih*
3. ConSec: Context-Aware Security Framework for Smart Spaces  
*Sumayah Al-Rabiaah, Jalal Al-Muhtadi*
4. Copyright Protection for Images on Mobile Devices  
*Raffaele Pizzolante, Bruno Carpentieri*

**W-WAIS-S2: Information Security - IMIS 4****Chair: Hiroaki Kikuchi, Tokai University, Japan**

1. Efficient Implementation of Evaluating Multivariate Quadratic System with GPUs  
*Satoshi Tanaka, Takashi Nishide, Kouichi Sakurai*
2. A Method for Embedding Secret Key Information in RSA Public Key and Its Application  
*Motoki Kitahara, Takashi Nishide, Kouichi Sakurai*
3. Privacy-Preserving Collaborative Filtering Using Randomized Response  
*Hiroaki Kikuchi, Anna Mochizuki*
4. A Proposal to Realize the Provision of Secure Android Applications - ADMS: An Application Development and Management System  
*Harunobu Agematsu, Junya Kani, Kohei Nasaka, Hideaki Kawabata, Takamasa Isohara, Keisuke Takemori, Masakatsu Nishigaki*

**14:30-15:00 Coffee Break****15:00-16:30 Parallel Sessions****W-esIoT-S11: Big Data and Internet of Things - IMIS 1****Chair: Joel Rodrigues, University Beira Interior, Portugal**

1. Big Data on the Internet of Things: An Example for the E-health  
*Martin Diaz, Gonzalo Juan, Oikawa Lucas, Alberto Ryuga*
2. An Analysis of M2M Platforms: Challenges and Opportunities for the Internet of Things  
*Miguel Castro, Antonio J. Jara, Antonio F. Skarmeta*
3. A Ubiquitous Model for Wireless Sensor Networks Monitoring  
*Andre G.F. Elias, Joel J.P.C. Rodrigues, Luis M.L. Oliveira, Bruno B. Zarpelao*
4. Moving Application Logic from the Firmware to the Cloud: Towards the Thin Server Architecture for the Internet of Things  
*Matthias Kovatsch, Simon Mayer, Benedikt Ostermaier*

**W-MCNCS-S3: Forensic and Motion Detection/Monitoring - IMIS 3****Chair: Francesco Palmieri, Second University of Naples, Italy**

1. The Digital Profiling Techniques Applied to the Analysis of a GPS Navigation Device  
*Clara Maria Colombini, Antonio Colella, Aniello Castiglione, Vincenzo Scognamiglio*
2. Freight Train monitoring: A Case-Study for the pSHIELD Project  
*Valentina Casola, Mariana Esposito, Nicola Mazzocca, Francesco Flammini*
3. Device Tracking in Private Networks via NAPT Log Analysis  
*Aniello Castiglione, Alfredo De Santis, Ugo Fiore, Francesco Palmieri*
4. Experiments on Improving Sensor Pattern Noise Extraction for Source Camera Identification  
*Giuseppe Cattaneo, Pompeo Faruolo, Umberto Ferraro Petrillo*

**W-MoMoPE-S1: Web Caching and Wireless Communication - IMIS 4****Chair: Jong-Hyouk Lee, INRIA, France**

1. A Novel Hybrid Approach for Web Caching  
*Rajeev Tiwari, Neeraj Kumar*
2. A Sparse Clustering Model of Wireless Communication Networks  
*Wei-Shuo Li, Chun-Wei Tsai, Jong-Hyouk Lee, Wen-Shyong Hsieh*
3. A Cluster-Tree-Based GTS Allocation Scheme for IEEE 802.15.4 MAC Layer  
*Der-Chen Huang, Hsiang-Wei Wu, Yi-Wei Lee*

**16:30-16:45 Coffee Break****16:45-18:30 Parallel Sessions****W-FIMIS-S1: Frontiers in Innovative Mobile and Internet Services - CISIS 4****Chair: Jiyoung Lim, Korean Bible University, Korea**

1. TCP Throughput of IPv6 and IPv4 on IEEE 802.11n Wireless Client Server LAN in Windows Vista/XP-Server 2008 Environment  
*Navneet Chand, Samad Salehi Kolahi*
2. Implementation and Test of PMIPv6 Dual Stack Protocol  
*Fei Ren, Huachun Zhou*
3. Text Interface Adaptation in Ubiquitous Applications  
*Luigi Benedicenti, Sheila Petty*
4. A Cognitive Network for Intelligent Environments  
*Qian Li, Peter Quax, Kris Luyten, Wim Lamotte*
5. Geocast Routing Protocols for VANETs: Survey and Guidelines  
*Salim Allal, Saadi Boudjit*

**W-esIoT-S12: Mobile health applications and Ambient Assisted Living - IMIS 1****Chair: Vittorio Miori, ISTI-CNR, Italy**

1. A Feasibility Study of Wrist-Worn Accelerometer Based Detection of Smoking Habits  
*Philipp M. Scholl, Kristof van Laerhoven*
2. Interaction of Patients with Breathing Problems through NFC in Ambient Assisted Living Environments  
*Antonio J. Jara, Pablo Lopez, David Fernandez, Benito Ubeda, Miguel A. Zamora, Antonio F.G. Skarmeta*
3. Self-StarMAS: A Multi-Agent System for the Self-Management of AAL Applications  
*Inmaculada Ayala, Mercedes Amor, Lidia Fuentes*
4. Home Telehealth Interventions for People with Asthma  
*Magdalena Kowalczyk, Antonio J. Jara, Antonio F. Skarmeta*

**W-MCNCS-S4: System Security and E-commerce - IMIS 3****Chair: Ugo Fiore, University of Naples, Italy**

1. A Proposal of a Mobile Payment System Based on Android  
*Alex Roehrs, Cristiano Andre da Costa, Jorge Luis Victoria Barbosa*
2. Mobile Computer System with User Friendly Environment and Security Protection  
*Chu-Hsing Lin, Jung-Chun Liu, Wen-Chen Wu, Tsau-Wei You, Ming-Hung Liu*
3. Using ANFIS and FML for Deploying Transparent Services in Smart Environments  
*Giovanni Acampora, Vincenzo Loia, Autilia Vitiello*
4. Security Paradigm in Ubiquitous Computing  
*Antonio Colella, Clara Colombini*

**W-MoMoPE-S2: Security and Protocol Analysis - IMIS 4****Chair: Jong-Hyouk Lee, INRIA, France**

1. Botnet Topology Reconstruction: A Case Study  
*Ming-Yi Liao, Jynu-Hao Li, Chu-Sing Yang, Min Chen, Chun-Wei Tsai, Ming-Cho Chang*
2. Performance Analysis of Mobile Publish-Subscribe Service Discovery on IPv6 over GeoNetworking  
*Satoru Noguchi, Satoshi Matsuura, Kazutoshi Fujikawa*
3. Survey on Route Optimization Schemes for Proxy Mobile IPv6  
*Jianfeng Guan, Ilsun You, Changqiao Xu, Huachun Zhou, Hongke Zhang*

## CISIS-2012 and IMIS-2012 Conference Venue

### About Palermo

Palermo is the regional capital of Sicily, which is the largest and most heavily populated (about 5,000,000) island in the Mediterranean.

The area has been under numerous dominators over the centuries, including Roman, Carthaginian, Byzantine, Greek, Arab, Norman, Swabian and Spanish masters. Due to this past, to the cultural exchange that for millennia has taken place in the area, the city is still an exotic mixture of many cultures. Many of the monuments still exist giving the city somewhat unique appearance.

The city of Palermo, including the province of Palermo, has around 1,300,000 inhabitants and has about 200 Km of coastline. The old town of Palermo is one of the largest in Europe, full of references to the past.

Palermo reflects the diverse history of the region in that the city contains many masterpieces from different periods, including romanesque, gothic, renaissance and baroque architecture as well as examples of modern art.

The city also hosts it's rich vegetation of palm trees, prickly pears, bananas, lemon trees and so on. The abundance of exotic species was also noticed by the world-famous German writer Goethe who in April 1787 visited the newly opened botanical gardens, describing them as "the most beautiful place on earth".

Minitour of the city and its immediate surroundings will be available for reservation at the main registration desk.

By [www.my-erasmus.net](http://www.my-erasmus.net)

**Multimedia guides by InformAmuse** InformAmuse, a spin-off of the University of Palermo, is pleased to offers to CISIS/IMIS participants a selection of multimedia guides to tour the city. Participants owning an Apple device may download, free of charge, from June 30 til July 6, all apps from InformAmuse available on the Apple Store.

The full listing is available at: <http://www.informamuse.com/en/prodotti/mobile/>

### How to reach Palermo

**BY PLANE** There are three main civil airports in Sicily, which currently connects the island with some of the most important airport hubs spread across Italy and Europe.

**Palermo International Airport - Falcone Borsellino (Palermo, Punta Raisi - PMO) - website**

The nearest airport in Palermo is located at Punta Raisi, about 32km (20 miles) from Palermo. The airport is well connected with the town center through:

- light rail service Trinacria Express (Punta Raisi stop - Ticket EUR 5.5 - about 40 min. trip), trains operating over the whole day between the airport and Central Railway Station in Palermo.
- a regular bus service connecting the airport with the center of Palermo operated by "Prestia e Comande" Bus lines - Ticket EUR 6.10 - about 50 min. trip - Prestia e Comande website.
- taxi services at the arrivals terminal <http://www.autoradiotaxi.it/?lang=en> - Rates about EUR 35

Alitalia ([www.alitalia.com](http://www.alitalia.com)) is the main italian airline connecting Palermo with the main italian hubs: Rome Fiumicino (FCO) and Milan Linate (LIN).

Below a list of some low-cost airlines connecting Falcone Borsellino Airport with main airports in Italy and Europe (please take care: the list is not complete and changes should have been made):

**AirOne**, Milan Linate, Rome Fiumicino, Turin, Venice

**Meridiana**, New York

**Windjet**, Paris Charles de Gaulle, Milan Linate

**Ryan Air**, London Stansted

**EasyJet**, London Gatwick, Milan Malpensa, Parigi Orly, Rome Fiumicino

**blue-express**, Rome Fiumicino

**Vincenzo Florio Airport (Trapani / Birgi) - website**

This airport is located between Trapani and Marsala. The airport, located at Birgi, is about 112km (70 miles) from Palermo. The airport is still adjacent to the highway A29 which connects to Palermo and is also accessible by train from Trapani.

**Airport Fontanarossa (Catania) - website** This airport is located on the outskirts of Catania in eastern Sicily, Etna Valley. It is about 210km (130 miles) from Palermo. The airport is connected to Palermo through A19, with regular bus services throughout the day (SAIS - <http://www.saisautolinee.it/>).

**BY SEA** Regular ferry services for the transport of passengers and cars connect the port of Palermo with a few major ports of the Mediterranean, including Cagliari, Civitavecchia / Rome (12 hours), Genoa (20 hours), Livorno (19 hours), Naples, Salerno, Tunis, Valencia (Spain). For more information on services available please refer to the major shipping companies: Grandi Navi Veloci, Grimaldi Ferries, Tirrenia.

**BY TRAIN** Palermo Central Station is connected to the national railway line. For information on services, costs and schedules, please visit the Trenitalia website ([www.trenitalia.com](http://www.trenitalia.com)). Several trains run throughout the day, Palermo and Rome (journey time approx 12 hours) and Palermo and Milan (17-18 hours).

**BY CAR** Palermo is the ideal junction node of the three main branches which branch off from the motorway network in Sicily: highway A29 Palermo-Trapani (see this map to obtain more indications), highway A20 Palermo-Messina (see the map available here) and the highway A19 (see the map available here) Palermo-Catania. The A20 runs along the Tyrrhenian coast, finishing at Messina, where you can cross the Straits of Messina connecting the island to the mainland by ferry services active during the day (the ferry operation in off-peak hours and in low season requires about 60 minutes).