PROGRAM GUIDE



NBiS-2014

The 17^{th} International Conference on Network-Based Information Systems

and



INCoS-2014

The 6^{th} International Conference on Intelligent Networking and Collaborative Systems

Technically Supported by IEEE SMC

September 10^{th} - September 12^{th} , 2014 Salerno, Italy

Endorsed by:









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Leonard Barolli, Fukuoka Institute of Technology (FIT), Japan Makoto Takizawa, Hosei University, Japan

Message from NBiS-2014 Steering Committee Co-Chairs

Welcome to the 17-th International Conference on Network-Based Information Systems (NBiS 2014), which will be held at University of Salerno, Salerno, Italy from September 10 to September 12, 2014.

The main objective of NBiS is to bring together scientists, engineers, and researchers from both network systems and information systems with the aim of encouraging the exchange of ideas, opinions, and experiences between these two communities.

NBiS started as a workshop and was held for 12 years together with DEXA International Conference as one of the oldest among DEXA Workshops. The workshop was very successful. In 2009 the NBiS was held at Indianapolis, USA as an independent International Conference supported by many international volunteers. In following years, the NBiSs was held in Takayama, Gifu, Japan (2010), Tirana, Albania (2011) Melbourne, Australia (2012), and Gwangju, Korea (2013).

In this edition of NBiS, many papers were submitted from all over the world. They were carefully reviewed and only high quality papers will be presented during conference days. In conjunction with NBiS 2014 are held also 8 International Workshops where specific and hot topics are deeply discussed.

Many volunteer people have kindly helped us to prepare and organize NBiS 2014. First of all, we would like to thank General Co-Chairs, Program Co-Chairs and Workshops Co-Chairs for their great efforts to make NBiS-2014 a very successful event. We would like to thank all NBiS 2014 Organizing Committee Members, Program Committee Members and other volunteers for their great help and support. We have special thanks to Dr. Makoto Ikeda, Dr. Evjola Spaho, Dr. Elis Kulla and Mr. Shinji Sakamoto as Web Administrator Co-Chairs .

Finlay, we thank the Local Organization Team at University of Salerno for their good arrangements. We do hope that you will enjoy the conference and have a good time in Salerno, Italy.

NBiS-2014 Steering Committee Co-Chairs

Leonard Barolli, Fukuoka Institute of Technology (FIT), Japan Makoto Takizawa, Hosei University, Japan

Message from NBiS-2014 General Co-Chairs

We would like to welcome you to the 17-th International Conference on Network-Based Information Systems (NBiS 2014), which will be held at University of Salerno, Salerno, Italy from September 10 to September 12, 2014.

It is our honour to chair this prestigious conference, as one of the important conferences in the field. Extensive international participation, coupled with rigorous peer reviews, has made this an exceptional technical conference. The Technical Program and Workshops add important dimensions to this event. We hope that you will enjoy each and every component of this event and benefit from interactions with other attendees.

Since its inception, NBiS has attempted to bring together people interested in information and networking, in areas that range from the theoretical aspects to the practical design of new network systems, distributed systems, multimedia systems, Internet/web technologies, mobile computing, intelligent computing, pervasive/ubiquitous networks, dependable systems, semantic services, Grid, P2P, and scalable computing. For NBiS 2014, we have continued these efforts as novel networking concepts emerge and new applications flourish. NBiS 2014 consists of the main conference and 8 workshops. We received 181 papers, and out of them 53 were accepted (about 29% acceptance ratio), which will be presented during three days of the conference.

The organization of an international conference requires the support and help of many people. A lot of people have helped and worked hard for a successful NBiS 2014 technical program and conference proceedings. First, we would like to thank all the authors for submitting their papers. We are indebted to Program Area chairs, Program Committee members and reviewers who carried out the most difficult work of carefully evaluating the submitted papers.

We would like to give our special thanks to Prof. Leonard Barolli and Prof. Makoto Takizawa the chairs of the Steering Committee for giving us the opportunity to hold this conference and for their guidance on organizing the conference. We would like to thank Program Co-Chairs and Workshops Co-Chairs for their excellent work.

We would like to express our great appreciation to our keynote speakers: Prof. Vincenzo Piuri, Universita degli Studi di Milano, Italy; Prof. Carlo Cecati, University of L'Aquila, Italy; Prof. Janusz Kacprzyk, Polish Academy of Sciences, Warsaw, Poland; Prof. Paul P. Maglio, UC Merced and IBM Research, USA for accepting our invitation as keynote speakers of NBiS 2014.

We would like to thank the Local Arrangements Chairs and Local Organization Team at University of Salerno for making good local arrangements for the conference.

We hope that you have an enjoyable and productive time during this conference, and have a great time in Salerno, Italy.

NBiS-2014 General Co-Chairs

Alfredo De Santis, University of Salerno, Italy Minoru Uehara, Toyo University, Japan

Message from NBiS-2014 Program Committee Co-Chairs

Welcome to the 17-th International Conference on Network-Based Information Systems (NBiS 2014), which will be held at University of Salerno, Salerno, Italy from September 10 to September 12, 2014.

The purpose of NBiS conference is to bring together developers and researchers to share ideas and research work in the emerging areas of network and information systems.

The contributions included in the proceedings of NBiS 2014 cover all aspects of theory, design and application of computer networks and information systems. There are many topics of information networking such as cloud computing, wireless sensor networks, ad-hoc networks, peer-to-peer systems, grid computing, social networking, multimedia systems and applications, security, distributed and parallel systems and mobile computing.

In this edition, 181 submissions were received from all over the world. Each submitted paper was peer-reviewed by Program Committee members and external reviewers who are experts in the subject area of the paper. Then Program Committee accepted 53 papers (about 29% acceptance ratio). In the conference program are included also the distinguished keynote addresses by Prof. Vincenzo Piuri, Universita degli Studi di Milano, Italy; Prof. Carlo Cecati, University of L'Aquila, Italy; Prof. Janusz Kacprzyk, Polish Academy of Sciences, Warsaw, Poland; Prof. Paul P. Maglio, UC Merced and IBM Research, USA

The organization of an International Conference requires the support and help of many people. First, we would like to thank all authors for submitting their papers. We would like to thank all Track Chairs and Program Committee Members, who carried out the most difficult work of carefully evaluating the submitted papers. We also would like to thank NBiS 2014 Workshops Chairs for organizing excellent workshops with NBiS 2014 conference.

We would like to give special thanks to Prof. Leonard Barolli and Prof. Makoto Takizawa the Chairs of the Steering Committee of NBiS for their strong encouragement, guidance, insights, and for their effective coordination of conference organization. We would like to greatly thank General Co-Chairs: Prof. Alfredo De Santis, University of Salerno, Italy and Prof. Minoru Uehara, Toyo University, Japan for their great support and invaluable suggestions to make the conference a very successful event. We would like to express our great appreciation to Dr. Makoto Ikeda, Dr. Evjola Spaho, Dr. Elis Kulla and Mr. Shinji Sakamoto for their great efforts and efficient work to deal with many conference matters.

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

NBiS-2014 Program Committee Co-Chairs

Aniello Castiglione, University of Salerno, Italy Tomoya Enokido, Rissho University, Japan

Message from NBiS-2014 Workshops Co-Chairs

Welcome to the NBiS 2014 workshops to be held in conjunction with the 17-th International Conference on Network-Based Information Systems (NBiS 2014), which will be held at University of Salerno, Salerno, Italy from September 10 to September 12, 2014.

The goal of NBiS 2014 workshops is to provide a forum for international researchers and practitioners to exchange and share their new ideas, research results, and ongoing work on leading-edge topics in the different fields of network-based information systems and their applications. Some of the accepted workshops deal with topics that open up perspectives beyond the ordinary, thus, enriching the topics usually addressed by the NBiS 2014 conference.

For this edition, the following workshops will be held with NBiS 2014.

- 1. The 9-th International Workshop on Network-based Virtual Reality and Tele-existence (INVITE 2014)
- 2. The 8-th International Workshop on Advanced Distributed and Parallel Network Applications (ADPNA 2014)
- 3. The 5-th International Workshop on Intelligent Sensors and Smart Environments (ISSE 2014)
- 4. The 5-th International Workshop on Trustworthy Computing (TwC 2014)
- 5. The 5-th International Workshop on Heterogeneous Networking Environments and Technologies (HETNET 2014)
- The 4-th International Workshop on Information Networking and Wireless Communications (INWC 2014)
- 7. The 3-rd International Workshop on Web Services and Social Media (WSSM 2014)
- 8. The 3-rd International Workshop on Advances in Data Engineering and Mobile Computing (DEMoC 2014)

We would like to thank the research community for their great response to NBiS 2014 workshops. The excellent technical program of the workshops was the result of a professional work from workshop chairs, workshop program committees, reviewers, and authors.

We would like to give our special thanks to Prof. Leonard Barolli and Prof. Makoto Takizawa the Steering Committee Chairs of NBiS conference for their strong encouragement and guidance to organize the NBiS 2014 workshops. We would like to thank NBiS 2014 General Co-Chairs: Prof. Alfredo De Santis, University of Salerno, Italy and Prof. Minoru Uehara, Toyo University, Japan for their advices to make possible organization of NBiS 2014 workshops. We are thankful to NBiS 2014 Program Co-Chairs: Dr. Aniello Castiglione, University of Salerno, Italy and Prof. Tomoya Enokido, Rissho University, Japan for their support and help to prepare the technical program of NBiS 2014 workshops.

We would like to express special thanks to NBiS 2014 Web Administrator Chairs: Dr. Makoto Ikeda, Dr. Evjola Spaho, Dr. Elis Kulla, and Mr. Shinji Sakamoto for their timely unlimited support for managing the conference systems.

We also would like to thank NBiS 2014 Local Arrangement Co-Chairs and Local Organization Team at University of Salerno for making the local arrangement for the conference and workshops.

We wish all of you entertaining and rewarding experience in all workshops and NBiS 2014 conference.

NBiS-2014 Workshops Co-Chairs

Massimo De Santo, University of Salerno, Italy Fumiaki Sato, Toho University, Japan

INCoS-2014 Conference Organizing Committee

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Makoto Takizawa, Hosei University, Japan

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Message from the 6th INCoS-2014 Conference Chairs

Welcome to the 6^{th} International Conference on Intelligent Networking and Collaborative Systems (INCoS-2014), which is held from 10^{th} September to 12^{th} September 2014 at University of Salerno, Salerno, Italy. As in all previous editions, the INCoS-2014 conference is technically sponsored by IEEE Systems, Man & Cybernetics (IEEE SMC Society).

INCoS is a multidisciplinary conference that covers latest advances in intelligent social networks and collaborative systems, intelligent networking systems, mobile collaborative systems, etc. Additionally, security, authentication, privacy, data trust and user trustworthiness behaviour has become crosscutting features of intelligent collaborative systems. With the fast development of the Internet, we are experiencing a shift from the traditional sharing of information and applications as the main purpose of the Web to an emergent paradigm, which locates people at the very centre of networks and exploits the value of people's connections, relations and collaboration. Social networks are also playing a major role in the dynamics and structure of intelligent Web-based networking and collaborative systems.

Virtual campuses, virtual communities and organizations strongly leverage intelligent networking and collaborative systems by a great variety of formal and informal electronic relations, such as business-to-business, peer-to-peer and many types of online collaborative learning interactions, including the emerging MOOCs systems. This has resulted in entangled systems that need to be managed efficiently and in an autonomous way. In addition, latest and powerful technologies based on Grid and wireless infrastructure as well as Cloud computing are currently enhancing collaborative and networking applications a great deal but also facing new issues and challenges. Well-known social networks lack of knowledge management and adaptive solutions and the information shared among peers is rather static. INCoS-2014 conference paid a special attention to security, privacy and trust in Social networking, Cloud Computing Services and Storage, Organization, Management and Autonomic Computing.

The principal aim of this conference is to stimulate research that will lead to the creation of responsive environments for networking and, at longer-term, the development of adaptive, secure, mobile, and intuitive intelligent systems for collaborative work and learning. INCoS-2014 addresses a large number of themes and focuses on the following research tracks.

- Cloud Computing: Services, Storage, Security and Privacy
- Data Mining Machine Learning and Collective Intelligence
- Fuzzy Systems and Knowledge Management
- Grid and P2P Distributed Infrastructure for Intelligent Networking and Collaborative Systems
- Intelligent Collaborative Systems for Work and Learning, Virtual Organization and Campuses
- Nature's Inspired and Multi-Agent Collaborative Systems
- Next Generation Networks Protocols and Components
- Security, Organization, Management and Autonomic Computing for Intelligent Networking and Collaborative Systems
- Software Engineering, Semantics and Ontologies for Intelligent Networking and Collaborative Systems
- Wireless and Sensor Systems for Intelligent Networking and Collaborative Systems
- Social Networking and Collaborative Systems
- Big Data Analytics for Networking and Collaborative Systems
- Mobile and enterprise Collaborative Systems

- Service-based Systems for Enterprise Activities Planning and Management

As in all previous editions, INCoS-2014 counted on with the support and collaboration of a large and internationally recognized TPC covering all main themes of the conference. After a careful peer review process, in which each paper was reviewed by at least two referees (in average three reviews per submission), there were accepted 54 regular papers (29% acceptance rate). Additionally, a number of workshops were organized in conjunction with the conference, in which 62 workshop papers were accepted.

The successful organization of the conference is achieved thanks to the great collaboration and hard work of many people and conference supporters. First and foremost, we would like to thank all the authors for their continued support to the conference by submitting their research work to the conference, for their presentations and discussions during the conference days. We would like to thank TPC members and external reviewers for their work by carefully evaluating the submissions and providing constructive feedback to authors. We would like to thank the track chairs for their work on setting up the tracks and the respective TPCs and also for actively promoting the conference and their tracks. The Workshops Co-Chairs Matteo Gaeta (University of Salerno, Italy) and Duncan S. Wong (City University of Hong Kong, Hong Kong) are appreciated for the successful organization of eight workshops in conjunction with main conference. We would like to acknowledge the excellent work and support by the International Advisory Committee and its chairs Witold Pedrycz (University of Alberta, Canada), Masato Tsuru (Kyushu Institute of Technology) and Xiaofeng Chen (Xidian University, China).

We greatly appreciate the support by Web Administrators Evjola Spaho, Polytechnic University of Tirana, Albania, Elis Kulla, Okayama University of Science, Japan and Shinji Sakamoto, Fukuoka Institute of Technology (FIT), Japan and Finance Chair Makoto Ikeda, Fukuoka Institute of Technology (FIT), Japan.

We would like to give special thanks to the members of the local organizing committee from University of Salerno who under the leadership of Aniello Castiglione, Francesco Palmieri, Ugo Fiore and Alfredo de Santis made excellent arrangements for the conference.

We are very grateful to IEEE SMC as well as several academic institutions for their technical sponsorship, endorsement and assistance.

Finally, we hope that you will find these proceedings to be a valuable resource in your professional, research and educational activities!

We wish you will enjoy your stay in Salerno, Italy and look forward to seeing you again in forthcoming edition of INCoS conference!

INCoS-2014 General Co-Chairs

Vincenzo Loia, University of Salerno, Italy Fatos Xhafa, Technical University of Catalonia, Spain

INCoS-2014 Programme Co-Chairs

Francesco Palmieri, Second University of Naples, Italy Mario Koeppen, Kyushu Institute of Technology, Japan

Message from the 6th INCoS-2014 Workshops Co-Chairs

Welcome to Workshops of the 6^{th} International Conference on Intelligent Networking and Collaborative Systems (INCoS-2014), which is held from 10th September to 12th September 2014 at University of Salerno, Salerno, Italy. INCoS-2014 conference is technically sponsored by IEEE Systems, Man & Cybernetics (IEEE SMC Society).

Workshops are considered an important part of the conference and offer to authors the possibility to present and discuss latest research finding, ideas and work on progress. In this edition of the conference, there are held eight workshops, which complemented the INCOS main themes with specific themes and research issues and challenges, as follows.

- 1. The 6^{th} International Workshop on Information Network Design (WIND 2014)
- 2. The 5^{th} International Workshop on Computational Intelligence for Disaster Management (CIDM 2014)
- 3. The 4^{th} International Workshop on Adaptive Learning via Interactive, Collaborative and Emotional Approaches (ALICE 2014)
- 4. The 2^{nd} International Workshop for Collaborative e-Business Systems (IWCBS 2014)
- The 2nd International Workshop on Energy-Aware Systems, Communications and Security (EASy-CoSe 2014)
- 6. The 2^{nd} International Workshop on Cloud Computing: Project and Initiatives (CCPI 2014)
- 7. The 1st International Workshop on Technologies for Scripted Collaboration (TeSC 2014)
- 8. The 1st International Workshop on Semantic Technologies in Ubiquitous, Massive and Smart Learning (STUMS 2014)

We would like to thank the workshop organizers for their great efforts and hard work in proposing the workshop, selecting the papers, the interesting programs and for the arrangements of the workshop during the conference days. We are grateful to the INCoS-2014 Conference Chairs for inviting us to be the workshops co-chairs of the conference.

We hope you will enjoy the workshops programs and discussions during the conference days and enjoy your stay in Salerno, Italy!

INCoS-2014 Workshops Co-Chairs

Matteo Gaeta, University of Salerno, Italy

Duncan S. Wong, City University of Hong Kong, Hong Kong

NBiS-2014 & INCoS-2014 Keynote I



Prof. Vincenzo Piuri, Universita degli Studi di Milano, Italy

Biometric Technologies for Ambient Intelligence in Internet-of-Things Environments

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

Biometric technologies allow in fact for analyzing human traits (e.g., face, fingerprint, palm) for identity management without requiring individuals to carry tokens or remembering information. These technologies allow also for classifying the persons by observing some soft-biometric traits (e.g., gait, height, weight, emotions), thus associating the needs typical of the detected class. Besides, some other soft-biometric traits (e.g., gestures, gait) allow for specifying actions desired by the person. This talk will analyze the opportunities offered by biometric technologies and applications to support the realization of adaptable operations and intelligent services in the internet of things for ambient intelligence, based on a user-centric philosophy. Attention will be also given to a comprehensive system design methodology to take into account all application requirements, including the need for privacy protection.

NBiS-2014 & INCoS-2014 Keynote II



Prof. Carlo Cecati, University of L'Aquila, Italy

Recent Research in Power Electronics, Renewables and Smart Grids

Abstract: In this talk, an overview of our recent research of ICT for Energy Group at DISIM-UAQ, University of L'Aquila, Italy, in power electronics, renewables and smart grids will be presented. Firstly, we will introduce some analytical procedures for Selective Harmonic Elimination (SHE) and Selective Harmonic Mitigation (SHM) that have been developed at DISIM-UAQ to remove a single harmonic (SHE) or a group of harmonics (SHM) of multi-level converters to reduce computational burden so that the SHE/SHM strategy can implemented in real time. Secondly, we will talk about applying Extended Describing Functions (EDF) to the control of LLC DC/DC resonanat converters under wide input voltage and load variations. A nonlinear observer-based controller is proposed to stabilize the output of LLC DC/DC resonanat converters effectively. Thirdly, a grid-connected multi-string photovoltaic system with a three-level voltage source converter will be discussed, with a cascaded control structure involving a voltage controller and a current controller. Finally, a Simulink model of Silicon Carbide devices will be presented to facilitate the precise simulation of next generation power converters.

NBiS-2014 & INCoS-2014 Keynote III



Prof. Janusz Kacprzyk, Polish Academy of Sciences, Warsaw, Poland

A crucial role of coordination, cooperation and collaboration in distributed human centric IT/ICT systems based on information and knowledge sharing

Abstract: We are concerned with broadly perceived distributed information systems, networks, etc. the very essence of which is reflected in, for instance, many modern technological and social phenomena like social networks, the internet of things, etc. We assume that such systems can involve technical devices (e.g. robots, computer systems), human beings (individuals, groups and maybe even organizations), software agents, etc. They constitute a (possibly) synergistic combination of technology, people and organization aimed at facilitating the communication, cooperation, collaboration, coordination, etc. They should possibly contribute to a more effectively and efficiently functioning to attain some common/shared goal, with mutual benefits for the participating parties.

First of all, we discuss the three crucial issues that are related to the functioning of such human centric systems: (1) coordination that boils down to how to making different constituents of the systems work together for fulfilling desired overall goals, (2) collaboration that boils down to a joint functioning of the constituents with each other to attain shared goals, and (3) cooperation that boils down to a joint acting of the constituents for their common/mutual benefit. Basically, we will consider these three (and mention some other, less important types of joint behavior) from various viewpoint, notably a decision theoretic, systems theoretic, information theoretic, cognitive, psychological, etc. We will indicate how some inspirations from social behavior can be very useful for the type of systems relevant to the conference topic.

As a key element for all the above forms of goal oriented types of functioning and behavior (coordination, collaboration and cooperation) we present, first, information sharing, as it is common in distributed systems considered, and is supported by already established IT/ICT technology. Then, we stress that information sharing, as important as it is, is not enough and should ultimately be complemented by knowledge sharing. We present first some modern views on knowledge sharing in the context of management, knowledge based economy, human affects, judgments and biases, etc. Then, we show how new developments in IT/ICT, notably in broadly perceived ontologies, can help solve an immensely relevant yet very difficult problem of knowledge sharing.

We finish with a message that what has been so far considered as a collaborative or cooperative system approach, sometimes depending on the author's preference. should be meant in fact as a coordinative-collaborative-cooperative systems approach to be able to grasp more aspects and issues related to a crucial role of human beings in the system, who is however working with inanimate beings like robots, software agents, etc., in a complex setting of common, shared, competitive, conflicting, etc. preferences, goals, etc., and a variety of selfish, and fair, or even altruistic, types of attitudes and behaviors.

NBiS-2014 & INCoS-2014 Keynote IV



Prof. Paul P. Maglio, UC Merced and IBM Research, USA

A Service Science Perspective on Big Data and Business Model Evolution

Abstract: The performance of developed economies is increasingly driven by vast quantities of digital data. Though data emerged as the single fastest growing factor of production today, research is only slowly catching up with the "big data revolution". Yet the individual technologies driving big data are less important than the business models used to commercialize them. I will present results from several studies aimed at developing empirical insights into how organizations use big data analytics to improve existing business models or to develop new business models. The analysis is driven by a service science perspective, and findings suggest that big data has the potential to affect all parts of a business model.



NBiS-2014 Main Conference and Workshops Program

Wednesday, September 10, 2014

08:00 Registration

Registration will be taken a place near by plenary room in the morning. Registration will be taken a place near by session rooms in the afternoon.

09:00-09:30 Single Session: Opening Ceremony

09:30-10:30 Single Session: NBiS-2014 & INCoS-2014 Keynote I

NBiS-2014 & INCoS-2014 Keynote Talk I (PLENARY ROOM)

Prof. Vincenzo Piuri: Biometric Technologies for Ambient Intelligence in Internet-of-Things Environments

10:30-11:00 Coffee Break

11:00-12:00 Single Session: NBiS-2014 & INCoS-2014 Keynote II

NBiS-2014 & INCoS-2014 Keynote Talk II (PLENARY ROOM)

Prof. Carlo Cecati: Recent Research in Power Electronics, Renewables and Smart Grids

12:00-13:00 Lunch Break

13:00-14:30 Parallel Sessions

NBiS-S1: Parallel and Distributed Computing - Room 1

Chair: Makoto Takizawa, Hosei University, Japan

- 1. An Exercise in Concurrency: From Non-blocking Objects to Fair Objects Carole Delporte, Hugues Fauconnier, Michel Raynal
- 2. A Comparison of Graphics Processor Architectures for RFID Simulation

 Renato Ferrero, Bartolomeo Montrucchio, Lorenzo David, Kargar Ebrahim, Luca Graglia, Giovanni di Dio
 Iovino, Marco Ribero
- 3. Power Consumption Models for Migrating Processes in a Server Cluster Dilawaer Duolikun, Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa
- Parallel Algorithms for Edge Detection in an Image C. Mala. M. Sridevi
- 5. The Improved Delay Time-Based (IDTB) Algorithm to Perform Computation Type Application Processes Tomoya Enokido, Makoto Takizawa

NBiS-S2: Wireless Mesh Networks - Room 2

Chair: Akio Koyama, Yamagata University, Japan

- Analysis of Mesh Router Node Placement Using WMN-GA System Considering Different Architectures of WMNs
 - Tetsuya Oda, Shinji Sakamoto, Admir Barolli, Makoto Ikeda, Fatos Xhafa, Leonard Barolli
- 2. Analysis of WMN-SA and WMN-GA Simulation Results: A Comparison Performance for Wireless Mesh Networks
 - Makoto Ikeda, Tetsuya Oda, Shinji Sakamoto, Taiki Honda, Leonard Barolli
- 3. Mesh Net Viewer II: An Extended Visualization System for Wireless Mesh Networks *Yuki Kumata, Akio Koyama*
- 4. Implementation and Evaluation of Adaptive Multi-gateway Mesh Network Takaaki Kawai, Naoki Yusa, Hiroshi Mineno
- 5. Performance Analysis of WMN-SA: Node Placement Problem Using Simulated Annealing Algorithm for Different Replacement Methods
 - Shinji Sakamoto, Tetsuya Oda, Makoto Ikeda, Fatos Xhafa, Leonard Barolli, Kazunori Uchida

INVITE-S1: Tiled Display - Room 3

Chair: Yoshitaka Shibata, Iwate Prefectural University, Japan

- A GIS Based Disaster Status Sharing and Representation System Using Ultra Definition Display Environment Akira Sakuraba, Goshi Sato, Tomoyuki Ishida, Yasuo Ebara, Noriki Uchida, Yoshitaka Shibata
- 2. High-Presence Informal Communication on Tiled Display Environment *Yoshitaka Shibata, Toshio Noda, Yu Ebisawa, Koji Hashimoto*
- Experimental Evaluation on Transmission and Display of Ultra-Resolution Video on Tiled Display Wall in JGN-X Testbed

Yasuo Ebara, Satoshi Noda, Akira Sakuraba, Yoshitaka Shibata

TwC-S1: Trustworthiness and Authentication - Room 4

Chair: Leonard Barolli, Fukuoka Institute of Technology (FIT), Japan

- A Fuzzy-Based Reliability System for P2P Communication Considering Number of Interactions, Local Score and Security Parameters
 - Yi Liu, Leonard Barolli, Evjola Spaho, Makoto Ikeda, Santi Caballé, Fatos Xhafa
- 2. Trustworthiness-Based Group Communication Protocols

 Kazuaki Kouno, Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa
- 3. Proposal of a Puzzle Authentication Method with Shoulder-Surfing Attack Resistance Mirang Park, Yoshihiro Kita, Kentaro Aburada, Naonobu Okazaki

14:30-14:50 Coffee Break

14:50-16:20 Parallel Sessions

NBiS-S3: Multimedia Applications - Room 1

Chair: Irfan Awan, University of Bradford, UK

- A Lifelog System Specialized to Record Timestamp of Daily Works Nobuyoshi Sato
- 2. A Patient-Centric Distributed Architecture for Electronic Health Record Systems Giorgio Mario Grasso, Alfredo Cuzzocrea, Andrea Nucita
- 3. Parallel Low-Complexity Lossless Coding of Three-Dimensional Medical Images Raffaele Pizzolante, Arcangelo Castiglione, Bruno Carpentieri, Alfredo De Santis
- 4. Modelling QoS in IoT Applications *Irfan Awan, Muhammad Younas, Wajia Naveed*
- 5. Ranked Matching of OWL-S Process Model for Distributed Discovery of SWs in P2P Systems *Adel Boukhadra, Karima Benatchba, Amar Balla*

NBiS-S4: Network Protocols and Algorithms - Room 2

Chair: Kazunori Uchida, Fukuoka Institute of Technology, Japan

- Tsunami Simulation Based on Dijkstra Algorithm
 Kazunori Uchida, Shinsuke Nogami, Masafumi Takematsu, Junichi Honda
- 2. Read-Write Abortion (RWA) Based Synchronization Protocols to Prevent Illegal Information Flow Shigenari Nakamura, Dilewaer Duolikun, Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa
- Explicit Routing in Software-Defined Networking (ERSDN): Addressing Controller Scalability Harold Owens II, Arjan Durresi

 Controlled Quantum Secure Direct Communication Protocol Based on Five-Particle Cluster State and EPR Pair Entanglement Swapping
 Tao Fang

INVITE-S2: Multimedia - Room 3

Chair: Noriki Uchida, Saitama Institute of Technology, Japan

- 1. HyperInfo: Interactive Large Display for Informal Visual Communication Nobuyuki Kukimoto, Yosuke Onoue, Kazuo Aoki, Kinya Fujita, Koji Koyamada
- 2. Proposal of New Disaster Support System for Large-Scale Natural Disaster Tomoyuki Ishida, Kazuhiro Takahagi, Akira Sakuraba, Noriki Uchida, Yoshitaka Shibata
- 3. Push Type Digital Signage System that Displays Personalized Information Tetsuro Ogi, Yoshisuke Tateyama, Yuuki Matsuda
- 4. Applying Fusion Visualization to Unstructured Data Hideo Miyachi, Naohisa Sakamoto, Koji Koyamada

TwC-S2: Security and Privacy - Room 4

Chair: Hiroaki Kikuchi, Meiji University, Japan

- SSL/TLS Servers Status Survey about Enabling Forward Secrecy Yuji Suga
- Privacy-Preserving Dose-Response Relationship Test Hiroaki Kikuchi, Tomoki Sato, Jun Sakuma
- 3. A Multi-purpose Group Signature for Vehicular Network Security Mohammad Saiful Islam Mamun, Atsuko Miyaji, Hiroaki Takada
- Text-Based CAPTCHA Using Phonemic Restoration Effect and Similar Pronunciation with an Asian Accent Misako Gotoh, Toru Shirato, Ryuya Uda

16:20-16:30 Break

16:30-18:00 Parallel Sessions

NBiS-S5: Intelligent Computing - Room 1

Chair: Elis Kulla, Okayama University of Science, Japan

- New Kick Operators in Iterated Local Search Based Metaheuristic for Solving the Node Placement Problem in Multihop Networks
 - Kengo Katayama, Yuto Akagi, Elis Kulla, Hideo Minamihara, Noritaka Nishihara
- 2. Optimized Multilevel Threshold Selection Using Evolutionary Computing M. Sridevi, C. Mala, E. Sivasankar, Ilsun You
- 3. A Tabu Search Approach for the Circle Packing Problem Carrabs Francesco, Carmine Cerrone, Raffaele Cerulli
- 4. A Comparison Study on Meta-Heuristics for Ground Station Scheduling Problem Fatos Xhafa, Xavier Herrero, Admir Barolli, Makoto Takizawa

NBiS-S6: Wireless and Mobile Computing - Room 2

Chair: Noriki Uchida, Saitama Institute of Technology, Japan

- 1. Evaluation of Wireless Network Communication by Autonomous Flight Wireless Nodes for Resilient Networks Noriki Uchida, Mizue Kimura, Tomoyuki Ishida, Yoshitaka Shibata, Norio Shiratori
- 2. Dynamic Sliding Contention Window Adjustment in Saturated Wireless Networks *C. Mala, B. Nithya*
- 3. CCR-MAC: A Communication Channel Recommendation MAC for Multi-channel WLANs Tetsuya Shigeyasu, Junko Nagamine
- 4. A Performance Study of ZigBee Network under Wi-Fi Interference *Keigo Nomura, Fumiaki Sato*

ADPNA-S1: Advanced Distributed Networking and Applications - Room 3

Chair: Tomoya Enokido, Rissho University, Japan

- 1. Cooperation P2P Web Proxy to Reduce Resource Usage Kazuki Matsushita, Masashi Nishimine, Kazunori Ueda
- 2. A Study of Risk Assessment Quantification in Cloud Computing
 Shigeaki Tanimoto, Ryota Sato, Kazuhiko Kato, Motoi Iwashita, Yoshiaki Seki, Hiroyuki Sato, Atsushi Kanai
- 3. Data Management Approach for Multiple Clouds Using Secret Sharing Scheme *Atsushi Kanai, Naoya Kikuchi, Shigeaki S. Tanimoto, Hiroyuki Sato*
- 4. An Effectiveness Evaluation of PLC/WLAN Cooperative Transmission Scheme under Practical Network Environment
 - Adriano Muniz, Kazuya Tsukamoto, Kenji Kawahara, Yuji Oie
- 5. Causal Order of Application Events is P2P Publish/Subscribe Systems

 Hiroki Nakayama, Dilawaer Duolikun, Ailixier Aikebaier, Tomoya Enokido, Makoto Takizawa
- Controlled Quantum Secure Direct Communication Protocol Based on Extended Three-Particle GHZ State Decoy

Tao Fang, Min Li

ISSE-S1: ISSE-2014 - Room 4

Chair: Hui-Huang Hsu, Tamkang University, Taiwan

- 1. A Sensor Data Processing and Access Platform Based on Hadoop for Smart Environments Chi-Yi Lin, Chia-Chen Li, Wei-Hsun Huang, Wei-Che Liao, Wei-Ming Chen
- 2. Application of Automotive Sensor Information Server Platform to Ubiquitous Sensing System Go Hirakawa, Phyu Phyu Kywe, Kenta Ito, Yoshitaka Shibata
- 3. Smartphone Indoor Localization with Accelerometer and Gyroscope Hui-Huang Hsu, Wei-Jan Peng, Timothy K. Shih, Tun-Wen Pai, Ka Lok Man
- 4. A QoS-Based Fairness-Aware Downlink Scheduling in LTE-Advanced *Ying-Hong Wang, Hao-Yi Huang*
- 5. A Group File Encryption Method using Dynamic System Environment Key Kun-Lin Tsai, Jiu-Soon Tan, Fang-Yie Leu, Yi-Li Huang

19:00-22:00 Welcome Reception Party

Villa Avenia
Via Torquato Tasso, 83, 84100, Salerno
http://www.villaavenia.com



Villa Avenia - Welcome Partv

Thursday, September 11, 2014

08:00 Registration

Registration will be taken a place near by plenary room in the morning. Registration will be taken a place near by session rooms in the afternoon.

09:30-10:30 Single Session: NBiS-2014 & INCoS-2014 Keynote III

NBiS-2014 & INCoS-2014 Keynote Talk III

Prof. Janusz Kacprzyk: A crucial role of coordination, cooperation and collaboration in distributed human centric IT/ICT systems based on information and knowledge sharing

10:30-11:00 Coffee Break

11:00-12:00 Single Session: NBiS-2014 & INCoS-2014 Keynote IV

NBiS-2014 & INCoS-2014 Keynote Talk IV

Prof. Paul P. Maglio: A Service Science Perspective on Big Data and Business Model Evolution

12:00-13:00 Lunch Break

13:00-14:30 Parallel Sessions

NBiS-S7: Cloud Computing - Room 1

Chair: Florin Pop, University Politehnica of Bucharest, Romania

- 1. Functional Experiment of Virtual Policy Based Network Management Scheme in Cloud Environment Kazuya Odagiri, Shogo Shimizu, Naohiro Ishii, Makoto Takizawa
- Resource Allocation Method for Cloud Computing Environments with Different Service Quality to Users at Multiple Access Points

Yutaro Magome, Shin-Ichi Kuribayashi

- 3. Hybrid Algorithm for Workflow Scheduling in Cloud-Based Cyberinfrastructures

 Andrei Alexandru Nicolae, Catalin Negru, Florin Pop, Mariana Mocanu, Valentin Cristea
- 4. Energy Saving by Ambient Intelligence Techniques Matteo Cristani, Erisa Karafili, Claudio Tomazzoli

NBiS-S8: Ad-Hoc and Sensor Networks - Room 2

Chair: Fumiaki Sato, Toho University, Japan

- 1. A Novel Cross Layer Approach to Enhance QoS Performance in Multihop Adhoc Networks B. Nithya, C. Mala, E. Sivasankar
- 2. A New Multi-channel Protocol Destined for Effective Broadcast on Ad Hoc WLANs Tetsuya Shigeyasu, Rina Matsuda
- 3. A Fuzzy Approach to Actor Selection in Wireless Sensor and Actor Networks *Elis Kulla, Makoto Ikeda, Leonard Barolli*
- 4. Performance Evaluation of a Synchronization Protocol for Rechargeable Sensor Networks Fumiaki Sato
- 5. Prediction-Based Localization for Mobile Wireless Sensor Networks

 Imane Benkhelifa, Chakib Lamini, Hichem Azouz, Samira Moussaoui, Ashfaq Khokhar

INWC-S1: Performance Analysis of Communication Systems - Room 3

Chair: Junichi Honda, Electronic Navigation Research Institute, Japan

1. Performance Analysis of Advertisement Delivery Scenario for Vehicle-Infrastructure Cooperative Communica-

Taiki Honda, Seiichiro Ishikawa, Makoto Ikeda, Leonard Barolli

2. Propagation Estimation by Using Building Coverage and Floor Area Ratios Based on 1-Ray Model Combined with Okumura-Hata Mode

Kazunori Uchida, Naoto Hadano, Masafumi Takematsu, Junichi Honda

- 3. Estimation of Target Detection Rate in Aircraft Surveillance System Junichi Honda, Takuya Otsuyama
- 4. Statistics of Electromagnetic Wave Propagation Along Random Rough Surface *Kazunori Uchida, Takuma Hashimoto, Masafumi Takematsu, Junichi Honda*
- Propagation of Intense Electromagnetic Field in a Gas-Media Tatsufumi Nakamura
- 6. Experimental Study on Crank-Shaped Waveguide in 2D Photonic Crystal *Hiroshi Maeda, Kiyotoshi Yasumoto*

WSSM-S1: Experiences and Understanding - Room 4

Chair: Shusuke Okamoto, Seikei University, Japan

- Relationship between Reviews at App Store and the Categories for Software Megumi Wano, Jun Iio
- A Study of the Simulation Technology Application to a Parking Lot Layout Design: An Evaluation of the Convenience of the Large-Scale Retail Store Redecoration Norio Akatsu, Maiko Shimizu, Tatsuhiro Yonekura
- Technology Trends Indicated in "The IT Study Meeting Calendar" Jun Iio

14:30-14:50 Coffee Break

14:50-16:20 Parallel Sessions

NBiS-S9: Security and Privacy - Room 1

Chair: Arcangelo Castiglione, University of Salerno, Italy

- 1. Hierarchical and Shared Key Assignment

 Arcangelo Castiglione, Alfredo De Santis, Barbara Masucci
- 2. Evaluating a Dynamic Internet Threat Monitoring Method for Preventing PN Code-Based Localization Attack *Masaki Narita, Kanayo Ogura, Bhed Bahadur Bista, Toyoo Takata*
- 3. A Possible Pitfall in the Experimental Analysis of Tampering Detection Algorithms Giuseppe Cattaneo, Gianluca Roscigno
- 4. Provably Secure and Efficient ID-Based Strong Designated Verifier Signature Scheme with Message Recovery *Min Li, Tao Fang*

NBiS-S10: Database and Data Mining - Room 2

Chair: Alfredo Cuzzocrea, ICAR-CNR and University of Calabria, Italy

- 1. Flexible Querying in Linked Data Sources *Gilles Nachouki*
- 2. Data Replication Strategies in P2P Systems: A Survey Evjola Spaho, Leonard Barolli, Fatos Xhafa
- 3. StreamOp: An Innovative Middleware for Supporting Data Management and Query Functionalities over Sensor Network Streams Efficiently

Alfredo Cuzzocrea, Jose Cecilio, Pedro Furtado

- 4. Frequent-Pattern Based Facet Extraction from Graph Data Takahiro Komamizu, Toshiyuki Amagasa, Hiroyuki Kitagawa
- 5. Sentiment Mining through Mixed Graph of Terms Francesco Colace, Massimo De Santo, Luca Greco

DEMoC-S1: Data Engineering amd Mobile Computing - Room 3

Chair: Yusuke Gotoh, Okayama University, Japan

- 1. A Simple Routing Method for Reverse k-Nearest Neighbor Queries in Spatial Networks Yusuke Gotoh
- Dynamic Data Delivery for Video Interruption Time Reduction in Hybrid Broadcasting Environments Tomoki Yoshihisa

- 3. GPU Acceleration of Similarity Search for Uncertain Time Series Jun Hwang, Yusuke Kozawa, Toshiyuki Amagasa, Hiroyuki Kitagawa
- 4. Dilemma of Service Engineering in the Era of Social Services: Understanding the Ongoing Challenges of Service Engineering

Toshihiko Yamakami

WSSM-S2: Development - Room 4

Chair: Shusuke Okamoto, Seikei University, Japan

- 1. Interactive Animation Authoring Platform Based on State-Transition Diagrams that Runs on Android Devices Erjing Zhou, Shusuke Okamoto, Michitoshi Niibori, Masaru Kamada, Tatsuhiro Yonekura
- 2. Reconstruction of Self-Actualization Support Service Based on The 7 Habits *Yoshihiro Kawano, Yuka Obu*
- 3. Sphero Control System Using a Web Browser Masaki Kohana, Shusuke Okamoto
- 4. File Manager that Shows off Notes Out of the Files Satoshi Kozawa, Michitoshi Niibori, Yasuhiro Ohtaki, Masaru Kamada

16:20-16:30 Break

16:30-18:00 Parallel Sessions

NBiS-S11: Social Networks - Room 1

Chair: Arjan Durresi, Indiana University-Purdue University Indianapolis, USA

- NeighborNote: An Evernote Application with Capability of Suggesting Related Notes Based on User Operation
 History
 - Yuki Takahashi, Michitoshi Niibori, Masaru Kamada
- 2. Techniques for Collecting data in Social Networks Lina Alfantoukh, Arjan Durresi
- A Non-Zero-Sum Social Experience Approach: Building Blocks of Social Experience Design Toshihiko Yamakami
- 4. Sampling from Large Graphs with a Reservoir *Kai Cheng*

NBiS-S12: Secure and Trustworthy Systems - Room 2

Chair: Leonard Barolli, Fukuoka Institute of Technology (FIT), Japan

- 1. Countering Browser Fingerprinting Techniques: Constructing a Fake Profile with Google Chrome Ugo Fiore, Aniello Castiglione, Alfredo De Santis, Francesco Palmieri
- 2. Exploring Trust Propagation Behaviors in Online Communities *Yefeng Ruan, Lina Alfantoukh, Anna Fang, Arjan Durresi*
- 3. A Fuzzy-Based CAC Scheme for Cellular Networks Considering Security Vladi Kolici, Takaaki Inaba, Algenti Lala, Gjergji Mino, Shinji Sakamoto, Leonard Barolli
- 4. Industrial Control System Cyber Threats Indicators in Smart Grid Technology Antonio Colella, Aniello Castiglione, Clara Maria Colombini

HETNET-S1: Heterogeneous Networking and Environments - Room 3

Chair: Juggapong Natwichai, Chiang Mai University, Thailand

- 1. Transaction Management in WSAN Cloud Environment Chatti Syrine, Ounelli Habib
- 2. New Distributed Approach for an Autonomous Dynamic Management of Interdependent Virtual Machines Salah-Eddine Benbrahim, Alejandro Quintero, Martine Bellaiche
- 3. Centrality-Burst Detection in Social Networks: An Efficient Approach for Data Stream Waranya Mahanan, Juggapong Natwichai, Kazuo Mori
- 4. Impact of Network Quality Deterioration on User ! © Perceived Operability in Remote Desktop Environments *Ryohei Komatsu, Shin-Ichi Kuribayashi*
- 5. A Business Log System to Display Related Logs Based on Past Cyclic Events of Business *Yuto Yoshida, Michitoshi Niibori, Masaru Kamada*

19:00-22:00 Banquet Party

Cetus Hotel

Strada Statale 163 Amalfitana, 84010, Cetara (SA)

http://www.hotelcetus.com/



Hotel Cetus - Conference Banquet

Friday, September 12, 2014

NBiS-2014 Steering Committee Meeting and Discussion



INCoS-2014 Main Conference and Workshops Program

Wednesday, September 10, 2014

08:00 Registration

Registration will be taken a place near by plenary room in the morning. Registration will be taken a place near by session rooms in the afternoon.

09:00-09:30 Single Session: Opening Ceremony

09:30-10:30 Single Session: NBiS-2014 & INCoS-2014 Keynote I

NBiS-2014 & INCoS-2014 Keynote Talk I (PLENARY ROOM)

Prof. Vincenzo Piuri: Biometric Technologies for Ambient Intelligence in Internet-of-Things Environments

10:30-11:00 Coffee Break

11:00-12:00 Single Session: NBiS-2014 & INCoS-2014 Keynote II

NBiS-2014 & INCoS-2014 Keynote Talk II (PLENARY ROOM)

Prof. Carlo Cecati: Recent Research in Power Electronics, Renewables and Smart Grids

12:00-13:00 Lunch Break

13:00-14:30 Parallel Sessions

INCoS-S1: Cloud Computing Systems - Room 5

Chair: Fatos Xhafa, Technical University of Catalonia (UPC), Spain

- 1. Towards Distributed Architecture for Collaborative Cloud Services in Community Networks *Amin M. Khan, Mennan Selimi, Felix Freitag*
- 2. A Portable Tool for Running MPI Applications in the Cloud Massimiliano Rak, Mauro Turtur, Umberto Villano, Luigi Pino
- 3. Workflow Deployment on Collaborative Cloud Platforms

 Antonella Di Stefano, Santino Carpinteri, Giovanni Morana, Daniele Zito
- 4. Decentralised Resource Finding and Allocation in Cloud Federations Fabrizio Messina, Giuseppe Pappalardo, Corrado Santoro

INCoS-S2: Social Networking - Room 6

Chair: Vincenzo Loia, University of Salerno, Italy

- A Framework for the Efficient Collection of Big Data from Online Social Networks Stefano Consolo, Umberto Ferraro Petrillo
- 2. Friendship Recommendations in Online Social Networks Giuliana Carullo, Aniello Castiglione, Alfredo De Santis
- 3. Making Groupware Social: The Case of a Cooperative Platform for Surgeons Sebastian Franken, Wolfgang Prinz, Nils Jeners
- 4. Improving the Compactness in Social Network Thematic Groups by Exploiting a Multi-dimensional User-to-Group Matching Algorithm
 - Pasquale De Meo, Fabrizio Messina, Domenico Rosaci, Giuseppe M.L. Sarné

INCoS-S3: Security, Trust and Privacy I - Room 7

Chair: Marek R. Ogiela, AGH University of Science and Technology, Poland

- 1. Protection of Microscopy Images through Digital Watermarking Techniques Raffaele Pizzolante, Arcangelo Castiglione, Bruno Carpentieri
- 2. Security and Privacy in Distributed Information Management *Marek R. Ogiela, Lidia Ogiela, Urszula Ogiela*
- 3. Multi-key Searchable Encryption Without Random Oracle Jun Yang, Zheli Liu, Jin Li, Chunfu Jia, Baojing Cui
- 4. A Verifiable Data Deduplication Scheme in Cloud Computing

 Zhaocong Wen, Jinman Luo, Huajun Chen, Jiaxiao Meng, Xuan Li, Jin Li
- 5. On the Security of a Lattice-Based Multi-party Concurrent Signature Scheme Xianping Mao, Kefei Chen, Liangliang Wang, Yu Long

WIND-S1: Sustainable Network Design - Room 8

Chair: Mario Koeppen, Kyushu Institute of Technology, Japan

- WIND 2014 Invited Talk: Resilient Network Design Dritan Nace
- 2. Method for Finding Protected Nodes for Robust Network against Node Failures *Tomomi Matsui, Hiroyoshi Miwa*
- 3. Server Location Method for Keeping Shorter Distance from Users to Servers During Failures *Nao Meda, Hiroyoshi Miwa*

CCPI-S1: Cloud Interoperability and Federation - Room 9

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

- 1. Agent-Based Intrusion Detection for Federated Clouds

 Massimo Ficco, Luca Tasquier, Rocco Aversa
- 2. Towards a SLA for Collaborating Smart Solar-Powered Micro-Grids

 Alba Amato, Beniamino Di Martino, Marco Scialdone, Salvatore Venticinque
- 3. Big Data Processing for Pervasive Environment in Cloud Computing *Alba Amato, Beniamino Di Martino, Salvatore Venticinque*
- 4. Fast Scalable Cloud Platform for Electromagnetic Modeling

 Giuseppe Caragnano, Lorenzo Mossucca, Pietro Ruiu, Olivier Terzo, Matteo Alessandro Francavilla
- Cloud-Based Semantic Data Management for the VPH-Share Medical Research Community
 Siegfried Benkner, Chris Borckholder, Yuriy Kaniovskyi Alfredo Saglimbeni, Tomas Pariente Lobo, Piotr Nowakowski,
 Steven Wood

14:30-14:50 Coffee Break

14:50-16:20 Parallel Sessions

INCoS-S4: Semantic and Ontology Systems - Room 5

Chair: Francesco Orciuoli, DIEM - University of Salerno, Italy

- 1. SemFLATNESSES: Social and Proactive Enterprise Knowledge Management with Semantic Web Technologies Gianpio Benincasa, Ciro D'Apice, Matteo Gaeta, Valerio Maggio, Francesco Orciuoli
- 2. A Semantic-Based Architecture for Electronic Money System and Multi-channel Value-Added Services Giuseppe D'Aniello, Alfonso De Vivo, Anna Chiara De Rosa, Antonio Donatiello, Daniela Greco, Francesca Pettinati, Valeria Viserta, Ciro Bologna, Antonio de Donato, Giuseppe Di Santo
- 3. WebGIS Platform for Detecting Spatio-Temporal Hotspots of Oto-Laryngo-Pharyngeal Diseases *F. di Martino, R. Mele, S. Sessa, U.E.S. Barillari, M.R. Barillari*
- 4. Vertical Semantic Discovery: The SICH Approach on NPS

 Luigi Laura, Gianluigi Me, Bonaventura D'Alessio, Alessandro Capone, Mara Mignone

INCoS-S5: Soft Computing Methods and Applications - Room 6

Chair: Fatos Xhafa, Technical University of Catalonia (UPC), Spain

- 1. Fuzzy Linguistic Quality Assessment for Public Transport Domain Carmine Brenga, Antonio Celotto, Sabrina Senatore
- Automatic Power System Identification Using Genetic Algorithms Jana Nowakova, Jan Platos, Vaclav Snasel
- Analysis of WMN-GA Simulation Results: Optimization of Number of Mesh Routers Considering Exponential
 and Weibull Distributions of Mesh Clients
 Admir Barolli, Tetsuya Oda, Santi Caballe, Fatos Xhafa, Leonard Barolli, Makoto Takizawa
- 4. One-Class SVM Based Approach for Detecting Anomalous Audio Events

 Francesco Aurino, Mariano Folla, Francesco Gargiulo, Vincenzo Moscato, Antonio Picariello, Carlo Sansone

INCoS-S6: Intelligent Networking Systems - Room 7

Chair: Santi Caballé, Open University of Catalonia (UOC), Spain

- 1. A Study for a Geographically Distributed Tier2 over Layer-Two Network

 Cristina Bulfon, Gianpaolo Carlino, Alessandro De Salvo, Alessandra Doria, Carlo Graziosi, Silvio Pardi,

 Massimo Carboni, Paolo Bolletta, Lorenzo Puccio, Vincenzo Capone, Leonardo Merola, Guido Russo
- An Integrated System for Wireless Cellular and Ad-Hoc Networks Using Fuzzy Logic Takaaki Inaba, Shinji Sakamoto, Elis Kulla, Santi Caballe, Makoto Ikeda, Leonard Barolli
- 3. Grid-Connected Electric-Power Control Algorithm for Promoting the Introduction of Renewable Energy *Ryota Matsuo, Hiroyoshi Miwa*

WIND-S2: Network Traffic and Routing - Room 8

Chair: Masato Tsuru, Kyushu Institute of Technology, Japan

- Human Error Tolerant Anomaly Detection Using Time-Periodic Packet Sampling Masato Uchida
- 2. An NMF-Based Traffic Classification Approach towards Anomaly Detection for Massive Sensors Akira Nagata, Kohei Kotera, Katsuichi Nakamura, Yoshiaki Hori
- 3. Comparison of DTN Routing Protocols in Realistic Scenario *Agussalim, Masato Tsuru*

CCPI-S2: Large-Scale Systems and Models - Room 9

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

- 1. Hybrid Simulation of Distributed Large-Scale Critical Infrastructures

 Massimo Ficco, Giovanni Avolio, Luigi Battaglia, Vittorio Manetti
- Be Kind, Rewind: Checkpoint & Restore Capability for Improving Reliability of Large-Scale Semiconductor Design
 - Igor Ljubuncic, Ravi Giri, Andrew Goldis, Avikam Rozenfeld
- 3. A Survey and Evaluation of the Existing Tools that Support Adoption of Cloud Computing and Selection of Trustworthy and Transparent Cloud Providers
 - Mohammed Ibrahim M. Almanea
- 4. Model Driven Engineering and Verification of Composite Cloud Services in MetaMORP(h)OSY *Francesco Moscato*

16:20-16:30 Break

16:30-18:00 Parallel Sessions

INCoS-S7: Ambient Intelligence, IoT and Agent Systems - Room 5

Chair: Francesco Palmieri, Second University of Naples, Italy

- 1. Enhancing an AmI-Based Framework for U-commerce by Applying Memetic Algorithms to Plan Shopping Giuseppe D'Aniello, Francesco Orciuoli, Mimmo Parente, Autilia Vitiello
- 2. Leveraging Conversational Agents and Concept Maps to Scaffold Students' Productive Talk Stergios Tegos, Stavros Demetriadis, Anastasios Karakostas
- 3. Software Agents in Large Scale Open E-learning: A Critical Component for the Future of Massive Online Courses (MOOCs)
 - Roxana Bassi, Thanasis Daradoumis, Fatos Xhafa, Santi Caballé, Ardiana Sula

INCoS-S8: Collaborative and Learning Systems - Room 6

Chair: Fatos Xhafa, Technical University of Catalonia (UPC), Spain

- 1. A Collaborative Decision-Support System for Secure Analysis of Cranial Disorders Arcangelo Castiglione, Raffaele Pizzolante, Alfredo De Santis, Ciriaco D'Ambrosio
- 2. Towards a Platform-Independent Event Management Model for Web Collaboration Santi Caballé, Fatos Xhafa, Jordi Raya, Leonard Barolli, Kazunori Uchida
- 3. Collaboration through Patient Data Access and Sharing in the Cloud Fatos Xhafa, Tarik Qassem, Philip Moore
- 4. Necessary Condition for Self-Organized Follow-Me Evacuation Guidance Using Opportunistic Networking Akihiro Fujihara, Hiroyoshi Miwa

TeSC-S1: Technologies for Scripted Collaboration - Room 7

Chair: Stavros Demetriadis, Aristotle University of Thessaloniki, Greece

- 1. Case Studies on the Orchestration of Technology-Enhanced Collaboration Scripts through the MAPIS3 Architecture
 - Ioannis D. Magnisalis, Stavros N. Demetriadis
- Enacting Science Inqury Scripts Across Contexts and in Hybrid Spaces Ole Smørdal, Jim Slotta

- The Role of Content Support and Transactivity for Effects of Computer-Supported Collaboration Scripts on Domain-Specific Learning: A Meta-Analysis Freydis Vogel, Ingo Kollar, Christof Wecker, Frank Fischer
- 4. Andvanced Bio-Feedback and Collaborative Techniques to Support Caregivers of Alzheimer Patients Ippokratis Apostolidis, Anastasios Karakostas, Tatiana Dimitriou, Thrasyvoulos Tsiatsos, Magda Tsolaki

ALICE-S1: Collaborative and Complex e-Learning - Room 8

Chair: Santi Caballé, Open University of Catalonia (UOC), Spain

- 1. A Methodological Approach to Modelling Trustworthiness in Online Collaborative Learning Jorge Miguel, Santi Caballé, Fatos Xhafa, Josep Prieto, Leonard Barolli
- 2. Evaluation of Using Software Infrastructure and Multimedia Technologies for the Creation of Complex Learning Resources
 - David Gañán, Santi Caballé, Jordi Conesa, Tetsuya Oda, Leonard Barolli
- Providing Cognitive and Social Networking Assessment to Virtualized Collaborative Learning in Engineering Courses
 - Néstor Mora, Santi Caballé, Thanasis Daradoumis, David Gañán, Leonard Barolli
- 4. A Study of Using SmartBox to Embed Emotion Awareness through Stimulation into E-learning Environments Santi Caballé, Leonard Barolli, Michalis Feidakis, Keita Matsuo, Fatos Xhafa, Thanasis Daradoumis, Tetsuya Oda

CCPI-S3: Cloud Services - Room 9

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

- 1. From VISION Cloud to Cloudwave: Towards the Future Internet and a New Generation of Services Francesco Longo, Dario Bruneo, Massimo Villari, Antonio Puliafito, Eliot Salant, Yaron Wolfsthal
- 2. Semantic Representation of Cloud Services: A Case Study for Microsoft Windows Azure Beniamino Di Martino, Giuseppina Cretella, Antonio Esposito, Raffaele Giulio Sperandeo
- MetReS: A Metabolic Reconstruction Database for Cloud Computing Jordi Vilaplana, Francesc Solsona, Ivan Teixidó, Jordi Mateo, Anabel Usié, Nestor Torres, Jorge Comas, Rui Alves
- 4. A SOA Testing Platform on the Cloud: The MIDAS Experience

 Alberto De Francesco, Claudia Di Napoli, Maurizio Giordano, Giuseppe Ottaviano, Raffaele Perego, Nicola

 Tonellotto

19:00-22:00 Welcome Reception Party

Villa Avenia
Via Torquato Tasso, 83, 84100, Salerno
http://www.villaavenia.com



Villa Avenia - Welcome Party

Thursday, September 11, 2014

08:00 Registration

Registration will be taken a place near by plenary room in the morning. Registration will be taken a place near by session rooms in the afternoon.

09:30-10:30 Single Session: NBiS-2014 & INCoS-2014 Keynote III

NBiS-2014 & INCoS-2014 Keynote Talk III

Prof. Janusz Kacprzyk: A crucial role of coordination, cooperation and collaboration in distributed human centric IT/ICT systems based on information and knowledge sharing

10:30-10:50 Coffee Break

10:50-11:50 Single Session: NBiS-2014 & INCoS-2014 Keynote IV

NBiS-2014 & INCoS-2014 Keynote Talk IV

Prof. Paul P. Maglio: A Service Science Perspective on Big Data and Business Model Evolution

11:50-12:30 Lunch Break

12:30-14:00 Parallel Sessions

INCoS-S9: User-Centric and Enterprise Collaborative Systems - Room 5

Chair: Mario Koeppen, Kyushu Institute of Technology, Japan

- 1. A Two-Phase Clustering Analysis for B2B Customer Segmentation

 Dalia AbdelRazek Kandeil, Amani Anwar Saad, Sherin Moustafa Youssef
- 2. NSSs as a Solution to Negotiation Challenges in Enterprise Environment Marina Stoshikj, Michal Greguš
- 3. The E-business Perspective as a Solution for Inertia against Complexity Management in SME *Susanna Mandorf, Michal Greguš*
- 4. Developing a Performance-Analysis Model for a Star-Topology Data Grid from Multi-user Perspective *Ming-Chang Lee, Fang-Yie Leu, Ying-ping Chen*

INCoS-S10: Data Technologies and Mining - Room 6

Chair: Vincenzo Loia, University of Salerno, Italy

- A Dialogue-Based Approach Enhanced with Situation Awareness and Reinforcement Learning for Ubiquitous Access to Linked Data
 - Giuseppe D'Aniello, Matteo Gaeta, Vincenzo Loia, Francesco Orciuoli, Stefania Tomasiello
- 2. Data Mining and Semantic Inference in Cognitive Systems Lidia Ogiela, Marek R. Ogiela

3. The Study of the Internal Mitochondrial Movement of the Cells by Data Mining with Prototype-Based Classification

Petra Perner

4. Scalability, Memory Issues and Challenges in Mining Large Data Sets *Vladi Kolici, Fatos Xhafa, Leonard Barolli, Algenti Lala*

CIDM-S1: Intelligent Tools for Disaster Management - Room 7

Chair: Nik Bessis, University of Derby, UK

- 1. Development of Tools for Data Analysis of Earthquakes Evaldas Luksys, Eleana Asimakopoulou, Nik Bessis
- 2. An Analytical Tool to Map Big Data to Networks with Reduced Topologies Marcello Trovati, Eleana Asimakopoulou, Nik Bessis
- 3. Quick Evacuation Method for Evacuation Navigation System in Poor Communication Environment at the Time of Disaster

Yuki Takayama, Hiroyoshi Miwa

4. AutoHS: The Intelligent Hospital Search Sudarshan S., Kayathi Rohith, K.P. Sai Krishna, M.V. Panduranga Rao

ALICE-S2: e-Learning Aplications and Projects - Room 8

Chair: Santi Caballé, Open University of Catalonia (UOC), Spain

- 1. Monitoring and Analyzing Group Interaction in the DiGiCult Project *Pierri Anna, Emanuela Romano*
- 2. A Support System for Recognizing Prior Learning Joaquim Moré, David Baneres, Jordi Conesa, Montse Junyent
- 3. MADRIGALE: A Multimedia Application for Dyslexia and Reading Improvement GAmifying Learning Experience

Pio Alfredo Di Tore, Stefano Di Tore, Luca Andrea Ludovico, Giuseppina Rita Mangione

- 4. Enhancing Educational Experiences with Remediation Theory: The Case of the FIBAC Project Nicola Capuano, Angelo Gaeta, Matteo Gaeta, Giuseppina Rita Mangione, Anna Pierri
- 5. A Knowledge Based System for Guidance and Training on Legal Concepts *Nicola Capuano, Saverio Salerno, Carmen De Maio*

STUMS-S1: Personalized Learning and Assessment - Room 9

Chair: Francesco Orciuoli, DIEM - University of Salerno, Italy

- 1. Personalized Learning in Mathematics Giovannina Albano, Sergio Miranda, Anna Pierri
- 2. Educational Assessment: Semantic Representation and Ontologies Antonio Marzano, Achille M. Notti
- 3. Personalization and Adaptivity. What Relation? Pier Giuseppe Rossi, Laura Fedeli
- 4. Automatic Extraction of Metadata from Learning Objects Sergio Miranda, Pierluigi Ritrovato

14:00-14:20 Lunch Break

14:20-15:50 Parallel Sessions

INCoS-S11: Distributed Systems - Room 5

Chair: Hiroyoshi Miwa, Kwansei Gakuin University, Japan

- 1. Using DRBD in the Design of Redundant Distributed Computing System Salvatore Distefano
- 2. A Study on the Performance of Oracle Grid Engine for Computing Intensive Applications *Vladi Kolici, Albert Herrero, Fatos Xhafa, Leonard Barolli*
- 3. Store-Carry-Forward Energy Distribution Method and Routing Control Method for Use in a Disaster *Taiki Yamamura, Hiroyoshi Miwa*

INCoS-S12: Game Theory and Optimization - Room 6

Chair: Fatos Xhafa, Technical University of Catalonia (UPC), Spain

- 1. Evolving Fair Linear Regression for the Representation of Human-Drawn Regression Lines Mario Koeppen, Kaori Yoshida, Kei Ohnishi
- 2. Graph Isomorphism in Fuzzy Cognitive Maps for Monitoring of Game-Based Learning Holman Bolívar Baron, Mario Martinez Rojas, Johanna Trujillo Diaz, Andres Velasquez Contreras
- 3. Competition over Resources: A New Optimization Algorithm Based on Animals Behavioral Ecology Sina Mohseni, Reza Gholami, Niloofar Zarei, Arash Roomizade
- 4. How does Shape of Progress Bar Effect on Time Evaluation Masakazu Ohtsubo, Kaori Yoshida
- Dynamic Virtual Bats Algorithm (DVBA) for Global Numerical Optimization Ali Osman Topal, Oguz Altun

CIDM-S2: State-of-the-art Reviews on Risks and Threats - Room 7

Chair: Nik Bessis, University of Derby, UK

- A Survey of Intrusion Detection Systems for Mobile Ad Hoc Networks Qasim M Alriyami, Eleana Asimakopoulou, Nik Bessis
- 2. A Survey on Ad Hoc Networks for Disaster Scenarios

 D.G. Reina, J.M. León Coca, M. Askalani, S.L. Toral, F. Barrero, E. Asimakopoulou, S. Sotiriadis, N. Bessis
- 3. Towards a Social Graph Approach for Modeling Risks in Big Data and Internet of Things (IoT) Olayinka Johny, Stelios Sotiriadis, Eleana Asimakopoulou, Nik Bessis
- 4. A Digital Forensics Profiling Methodology for the Cyberstalker *Alice Silde, Olga Angelopoulou*

EASyCoSe-S1: Green Distributed Organizations and Monitoring Solutions - Room 8

Chair: Francesco Palmieri, Second University of Naples, Italy

- 1. Combining IT and Network Orchestration for Green Clouds

 Pasquale Donadio, Giovanni Battista Fioccola, Roberto Canonico, Giorgio Ventre
- 2. ECCO: An Integrated Solution for Environment Compatible COmputing Systems Giovanni Battista Barone, Vania Boccia, Davide Bottalico, Luisa Carracciuolo
- 3. Thermal-Aware Verification and Monitoring of Service Providers in MetaMORP(H)OSY Francesco Moscato, Flora Amato
- 4. Infrastructure Monitoring for Distributed Tier1: The ReCaS Project Use-Case

 Vania Boccia, Domenico Del Prete, Silvio Pardi, Leonardo Merola, Salvatore Naddeo, Giuseppe Scotti, Guido
 Russo

STUMS-S2: Smart Learning Environments - Room 9

Chair: Francesco Orciuoli, DIEM - University of Salerno, Italy

- 1. IKeWYSe-I Know What You See: An Educational Ontology-Driven Simulation Game to Foster Perspective-Taking Skills
 - P.A. Di Tore, S. Di Tore, G.R. Mangione, F. Corona, Jordi Conesa Caralt
- AQUEOS: A System for Question Answering over Semantic Data Daniele Toti
- 3. RST-Based Methodology to Enrich the Design of Digital Storytelling Angelo Gaeta, Matteo Gaeta, Giuseppe Guarino
- 4. Supporting Seamless Learning with Semantic Technologies and Situation Awareness *Francesco Orciuoli*
- 5. Modelling of Experienced-Based Data in linked Data Environment Jesse Xi Chen, Marek Z. Reformat

15:50-16:10 Break

16:10-17:40 Parallel Sessions

INCoS-S13: Trust and Trustworthiness Behavior - Room 5

Chair: Santi Caballé, Open University of Catalonia (UOC), Spain

- ValID: A Trust-Based Virtual Assessment System
 Joan Arnedo-Moreno, David Baneres, Xavier Baró, Santi Caballé, Ana-Elena Guerrero, Xavier Mas, Laura
 Porta, Josep Prieto
- 2. A Secure Mobile Shopping System Based on Credit Card Transaction Yi-Li Huang, Sheng-Mao Wang, Fang-Yie Leu, Jung-Chun Liu, Chia-Yin Ko
- 3. Predicting Trustworthiness Behavior to Enhance Security in On-line Assessment *Jorge Miguel, Santi Caballé, Fatos Xhafa, Josep Prieto, Leonard Barolli*
- 4. The Role of Trust and Co-partnership in the Societal Digital Security Culture Approach *Antonio Colella, Aniello Castiglione, Alfredo De Santis*

INCoS-S14: Mobile and Intelligent Networking Systems - Room 6

Chair: Fatos Xhafa, Technical University of Catalonia (UPC), Spain

- 1. A Secure Traffic Control System with Emergency Handling for Ambulances Yi-Li Huang, Shih-Han Chen, Fang-Yie Leu, Chia-Yin Ko, Jung-Chun Liu
- 2. SeTra: A Smart Framework for GPS Trajectories' Segmentation Walter Balzano, Maria Rosaria Del Sorbo
- 3. Building a Software Service for Mobile Devices to Enhance Awareness in Web Collaboration Santi Caballé, Fatos Xhafa, Jordi Raya, Leonard Barolli, Kazunori Uchida

IWCBS-S1: Collaborative e-Business Systems - Room 7

Chair: Milos Kudelka, VSB - Technical University of Ostrava, Czech Republic

- Representativeness in Unweighted Networks Based on Local Dependency Milos Kudelka, Sarka Zehnalova, Jan Platos
- 2. Modern Mobile Technologies for Collaborative E-business Irena Ivanochko, Oksana Urikova, Michal Greguš

3. Empirical Research on Influence Factors of Service Integrator Competitiveness in Perspective of Service Supply Chain

Yongjie Wu, Meiqing Zhang

- 4. An Energy Efficient Sensor Data Convergence Model Adaptable for Cold Chain Monitoring Xiaopu Shang, Runtong Zhang, Wei Dai, Zhongliang Guan
- 5. Multi-level Agent Model in the Behavior-Intensive Road Intersection *Liming Yu, Juanqiong Gou*
- 6. Measure Characterization of a Complex System Logistics

 Andrés Velásquez, Johanna Trujillo, Carlos Franco, Holman Bolívar Baron

EASyCoSe-S2: Energy Issues in the Internet of Things and Smart Solutions - Room 8

Chair: Mauro Migliardi, University of Padua, Italy

- Energy Management in Smart Spaces through the OPlatform
 Mario Caruso, Massimo Mecella, Adriano Cerocchi, Vincenzo Forte, Leonardo Querzoni, Roberto Baldoni
- 2. Internet of Things, the Smart X enabler *Antonio Scarfò*
- 3. Reducing Energy Consumption in Prospective Memory Support System through Hierarchical Positioning Algorithm

Mauro Migliardi, Alessio Merlo, Marco Tettamanti

4. Social Internet of Things: The Potential of the Internet of Things for Defining Human Behaviours *Antonio J. Jara, Yann Bocchi, Dominique Genoud*

19:00-22:00 Banquet Party

Cetus Hotel
Strada Statale 163 Amalfitana, 84010, Cetara (SA)
http://www.hotelcetus.com/



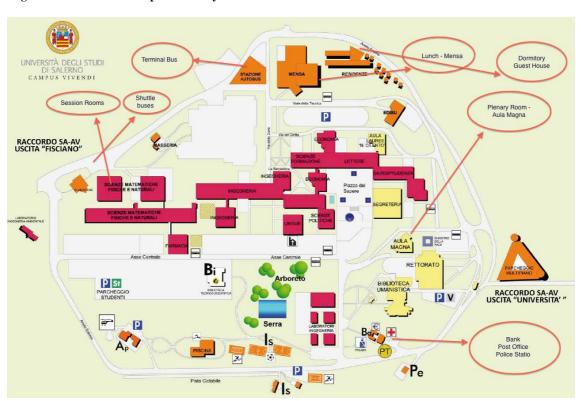
Hotel Cetus - Conference Banquet

Friday, September 12, 2014

INCoS-2014 Steering Committee Meeting and Discussion

Map of University of Salerno

Registration will be taken a place near by plenary room in the morning. Registration will be taken a place near by session rooms in the afternoon.





Plenary Room - Aula Magna



Session Rooms 1-9



Lunch - Mensa



Hotel Cetus - Conference Banquet



Grand Hotel Salerno



Salerno - Piazza Ferrovia

Shuttle Bus Services

September 10, 2014

The 1^{st} Shuttle to University of Salerno:

- 08:00 Cetus Hotel
- 08:05 Lloyd's Baia Hotel
- 08:10 Salerno Piazza Ferrovia
- 08:30 Baronissi Hotel dei Principati

The 2^{nd} Shuttle to University of Salerno:

- 08:30 Grand Hotel Salerno
- 08:35 Salerno Piazza Ferrovia
- 08:55 Baronissi Hotel dei Principati

Shuttle buses to/from Welcome Party:

- 18:20 From Salerno University to Villa Avenia
- 23:00 From Salerno Teatro Verdi to: Salerno Piazza Ferrovia, Grand Hotel Salerno, Baronissi Hotel dei Principati, Salerno University Dormitory
- 23:00 From Salerno Teatro Verdi to: Lloyd's Baia Hotel, Cetus Hotel

September 11, 2014

The 1^{st} Shuttle to University of Salerno:

- 08:30 Cetus Hotel
- 08:35 Lloyd's Baia Hotel
- 08:40 Salerno Piazza Ferrovia
- 09:00 Baronissi Hotel dei Principati

The 2^{nd} Shuttle to University of Salerno:

- 09:00 Grand Hotel Salerno
- 09:05 Salerno Piazza Ferrovia
- 09:25 Baronissi Hotel dei Principati

Shuttle Buses to/from Conference Banquet:

- 18:20 From Salerno University to Cetus Hotel
- 23:00 From Cetus Hotel to: Lloyd's Baia Hotel, Salerno Piazza Ferrovia, Grand Hotel Salerno, Baronissi Hotel dei Principati, Salerno University - Dormitory