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CALL FOR PAPERS

5th INT. WORKSHOP ON ADAPTIVE SERVICES FOR THE FUTURE
INTERNET

WAS4FI 2015

Held in conjunction with ESOCC 2015
September 15, 2015, Taormina (Messina), Italy
<http://was4fi.lcc.uma.es>

Paper Submission Due: July 7th, 2015

GOALS

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The Future Internet has emerged as a new initiative to pave a novel infrastructure linked to objects (things) of the real world to meet the changing global needs of business and society. It offers internet users a standardized, secure, efficient and trustable environment, which allows open and distributed access to global networks, services and information.

To be consistently adopted, the Future Internet will be enabled through standards-based notations for messaging, semantics, process and state (such as those RDF, OWL, SOAP, REST and WS-BPEL), enabling distributed systems and entities to be described in a scalable and flexible robust dynamic environment. Multi-tenancy will enable their remote access as Software as a Service (SaaS), by performing the integration into larger networks of communicating software (e.g., a mashup or a plug-in to a Cloud platform). Future Internet applications will have to support the interoperability between many diverse stakeholders by governing the convergence and life-cycle of Internet of Contents (IoC), Services (IoS), Things (IoT), and Networks (IoN). These applications should handle dynamic and continuous change: for example, in the provisioning of services, availability of things and contents, connectivity of networks, diversity of user devices etc. They should also bear in mind that the Future Internet should provide a better experience for the user journey, with personalized and context-aware contents, adapted to their preferences, and where users also play an active part in creating or sharing services.

There is a need for both researchers and practitioners to develop platforms made up of adaptive Future Internet applications. In this sense, the emergence and consolidation of Service-Oriented Architectures (SOA), Cloud Computing Wireless Sensor Networks (WSN), and the new paradigm Fog Computing, give benefits, such as flexibility, scalability, security, interoperability and adaptability, for building these applications. Although there already are emerging solutions to host software services and data on remote computers and create public sensor networks by using these technologies; the mentioned solutions employ simple technical approaches related to replication strategies to ensure availability and to achieve a load-balancing scalability. Future Internet systems, however, will also need to sense and respond to a huge amount of signals sourced from different entities in real-time, and also to manage and exploit the data coming from different resources and devices. In this context, for example, an event could be detected if there is non-existence of a signal which normally occurs, affecting the execution of other services. These events would be produced by IoT and processed in the IoS. In order to build business level events Complex Event Processing (CEP) may be used. CEP allows detecting complex and meaningful events and inferring valuable knowledge for end users. The main advantage of using CEP to process complex events is that the latter can be identified and reported in real time, reducing the latency in decision making, unlike the methods used in traditional software for event analysis. Event-Driven Service-Oriented Architectures (ED-SOA or SOA 2.0) are also being used to respond to events that occur as a result of business processes. Furthermore, including Big Data Analytics in the IoT world is also interesting, to support autonomous behavior and self-adaptation of IoT applications and systems, since these analytics methodologies could be used to exploit the open data exposed by the smart connected objects existing in domains such as, smart cities, smart homes, smart trades (commercial environment), e-health monitoring, or intelligent transportation systems. The results of these analytics techniques could be used for recommendations or predictions in multiple domains.

The first edition of WAS4FI was held in conjunction with ServiceWave 2011, in Poznan, Poland, on October 28th 2011. The second edition was held in conjunction with ES OCC 2012, in Bertinoro, Italy, on September 19th 2012. The third edition was held in conjunction with ES OCC 2013, in M.laga, Spain, on September 11th 2013. The fourth edition was also held in conjunction with ES OCC 2014, in Manchester, United Kingdom, on September 2nd 2014. In this fifth edition, WAS4FI again aims to bring together the community at ES OCC and addresses different aspects of adaptive Future Internet applications, emphasizing the importance of governing the convergence of contents, services, things and networks in order to achieve building platforms for efficiency, scalability, security and flexible adaptation. Also, WAS4FI 2015 comes with the intention of discussing about the real-time exploitation of the data exposed by the heterogeneous devices, by means of adaptive mechanisms to develop and interoperate services and applications using those data. In this workshop, we cover the foundations of the aforementioned technologies as well as new

emerging proposals for their potential in Future Internet services. To promote collaboration, WAS4FI has a highly interactive format with short technical sessions complemented by discussions on Adaptive Services in the Future Internet Applications.

TOPICS

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WAS4FI encourages a multidisciplinary perspective and welcomes papers that address challenges of Future Internet applications. Participation of researchers and practitioners from academia and industry are encouraged in order to promote cross-community interactions and thus avoiding disconnection between these groups. Topics of the workshop include, but are not limited to:

- Service-Oriented Architectures (SOA)
- Cloud Computing Environments (IaaS, PaaS and SaaS)
- Services Mashups Development
- Service Discovery, Semantic Web and Ontology, Linked Open Data, Data-as-a-services
- Secure Data Management and Adaptation, Privacy and Trust
- Self-Adaptive Services and Applications and Autonomic Computing
- Context-Aware, Mobile and Pervasive Adaptive Services on the Cloud
- Emerging Internet of Things Business Models
- Business Models for Quality of Services (QoS) and Cost of Services (CoS)
- Adaptation Contract and Service Level Agreements (SLA)
- Service Adaptive Composition, Orchestration and Choreography
- Dynamic Adaptation of Services on the Cloud
- Dynamic Internet Content Delivery
- Run-Time Monitoring, Services Evolution and Maintenance
- Model-Driven SOA and Service Systems Deployment
- Sensor Web Enablement and Web-Connected Devices (Sensor Web, smartphone, RFID)
- Services Computing in Wireless Sensor Networks (WSN) and Mobile Ad-hoc Networks (MANET)
- Service-Oriented Middleware Deployment for Sensor as a Service
- Software Engineering for Sensors in the Internet of Things (IoT)
- Formal Methods in Services Computing
- SOA Reference Models and Frameworks to Adaptive Services
- Event-Driven Service-Oriented Architectures (ED-SOA or SOA 2.0)
- Complex Event Processing
- Big Data Analytics Services
- Fog Computing and Internet of Everything (IoE)
- Software Service Engineering (SSE) Practices, Case Studies and Experience Reports
- Novel Applications based on Content Networks
- Application Scenarios as eHealth (AAL), Transport and Logistics (ITS), Smart Cities, Smart Homes, Energy

IMPORTANT DATES

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- Paper submission deadline: July 7th, 2015
- Acceptance notification: July 24th, 2015
- Camera-ready papers: July 31st, 2015
- Workshop date: September 15th, 2015

SUBMISSION INSTRUCTIONS

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Authors are invited to submit original, previously unpublished research papers in two categories. Both regular papers (12 to 15 pages) and short papers (must not exceed 8 pages) should be written in English and following LNCS format. Please, submit papers via the WAS4FI conference management tool (EasyChair submission system, <https://easychair.org/conferences/?conf=was4fi2015>) in PDF format. For formatting instructions and templates see the Information for LNCS authors in Springer website <http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0>

All submissions will be peer-reviewed by members of the international program committee. Paper acceptance will be based on originality, significance, technical soundness, and clarity of presentation. Post-workshop proceedings publication will be published in Springer Communications in Computer and Information Science (Springer CCIS). As in previous editions, we are also intending to consider the best papers to be extended for their publication in a Special Issue of a related International Journal or in a prestigious book.

At least one author of an accepted paper must register and participate in the workshop. Registration is subject to the terms, conditions and procedure of the main ESOC conference <http://esocc2015.unime.it/>

ORGANIZING COMMITTEE

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If you have further queries please email to the workshop chairs on:
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