Keynote Presentations

Keynote: Semantic Grid and Sensor Grid
Professor David De Roure
European e-Science and e-Social Science
University of Southampton UK

Keynote: Cloud Service
Dr. Joachim Schaper
Director
SAP Research, Germany

Keynote: Business Ecology in the Digital Ecosystem
Dr. Richard Mark Soley
OMG Inc, USA

Keynote: e-Government in Digital Ecosystems
Professor Frank-Dieter Doroß
University of Duisburg-Essen, Germany

Keynote: Digital Ecosystems – Co-Innovation towards Sustainable Societies
Dr. Sinan Turner, Head of International Research Policy, SAP Research, SAP AG

Keynote: Ecological system meets ‘digital ecosystem’: Can ICT benefit from understanding biology?
Professor Rob Whelan
President, UOWD, Dubai

Keynote: Hybrid Ontologies
Professor Robert Meeusman
VUB STARLAB, Belgium

Keynote: Virtual Community: A Sustainable Digital Ecosystem
Professor Christian Wagner
City University of Hong Kong
Hong Kong

Keynote: A P2P Platform as a Digital Ecosystem Approach for Collaborative and Ubiquitous Computing
Professor Leonard Barolli
Fukuoka Institute of Technology, Japan
Professor David De Roure

Semantic Grid and Sensor Grid

Biography:
David De Roure is a Professor of Computer Science in the School of Electronics and Computer Science at the University of Southampton, UK. A founding member of the School's Intelligence, Agents, Multimedia Group, he leads the e-Research activities and is Director of the Pervasive Systems Centre. David's work focuses on creating new research methods in and between multiple disciplines, particularly through the codesign of new tools. His projects draw on Web 2.0, Semantic Web, workflow and scripting technologies; he pioneered the Semantic Grid initiative and is an advocate of Science 2.0.

He is closely involved in UK e-Science and e-Social Science programmes in projects including myExperiment, CombeChem, myGrid, LifeGuide, e-Research South and the Open Middleware Infrastructure Institute.

David has worked for many years with distributed information systems and distributed programming languages, with leading roles in the Web, hypertext and Grid communities. He is a Scientific Advisory Council member of the Web Science Research Initiative and a Fellow of the British Computer Society.

Dr. Joachim Schaper

Cloud Service Ecosystems

Biography:
Dr. Joachim Schaper is vice president EMEA at SAP Research. He oversees Research sites throughout Europe (Darmstadt, Dresden, Belfast, Karlsruhe, Pretoria, St. Gallen/Zurich and Sophia Antipolis) and has overall responsibility for six research programs. His current focus is on aligning the SAP Research strategy with the European Research strategy of DG Informatics and Media regarding FP6 (2003-2006) and FP7 (2007-2010).

Joachim Schaper is a member of the advisory board of DFKI and FZI, as well as a member of the advisory group for IST and of various small and midsized businesses. He is also Mini-Track chair of the HICSS conference regarding “Next Generation Learning Platforms”. Schaper holds a diploma in Computer Science and a PhD in Natural Sciences from the Technical University in Karlsruhe.

Dr Richard Mark Soley

Business Ecology in the Digital Ecosystem

For far too long, the function of the Information Technology group has been to track down wild, manual processes and tame them with automation. While the hunting may have been fun, and the whips and chains associated with taming interesting, most IT organizations now spend 70% to 90% of their time updating the whips and chains—maintenance is the primary function of IT these days.

Why is it then that ideas like “Business Technology” and “Business Process Management” are now popping up from the management side? Simple: because automation is only one part of the process optimisation picture. The CIO and the IT organisation know more about the business processes of the entire enterprise than anyone else, but they will be extinct in the near future if they don’t add new optimisation tools to their hunting arsenal. Business ecology is about recognizing, precisely defining, capturing, categorising, reusing and optimising processes, and making the IT organisation focus on information rather than automation. Digital ecosystems are about building open, distributed, loosely-coupled systems of processes, some digital and some human. If we can bring together these ideals, we can build more agile organisations, more flexible systems and more adaptable societies.

Dr Soley’s Bio
Dr Richard Mark Soley is Chairman and Chief Executive Officer of the Object Management Group, Inc. (OMG®) and Executive Director of the SOA Consortium. Dr Soley joined the nascent OMG as Technical Director in 1989, leading the development of OMG’s world-leading standardisation process and the original CORBA® specification. In 1996, he led the effort to move into vertical market standards (starting with healthcare, finance, telecommunications and manufacturing) and modelling, leading first to the Unified Modelling Language (UML®) and later the Model Driven Architecture (MDA®). He also led the effort to establish the SOA Consortium in January 2007. Previously, Dr Soley was a cofounder and former Chairman/CEO of A. I. Architects, Inc., maker of the 386 HummingBoard and other PC and workstation hardware and software. Prior to that, he consulted for various technology companies and venture firms on matters pertaining to software investment opportunities. Dr Soley has also consulted for IBM, Motorola, PictureTel, Texas Instruments, Gold Hill Computer and others. He began his professional life at Honeywell Computer Systems working on the Multics operating system.
**Professor Frank-Dieter Dorloff**  
*e-Government in Digital Ecosystems*

**Biography:** Frank-Dieter Dorloff is a leading expert on eBusiness catalogues / networks and the scientific brain behind the current, ontology-driven realization of the German national D115 initiative. D115 structures complex data from German local authority of various sizes, harvested directly from their web sites, in a national network, using ontology-learning and text-mining approaches. This data is then used by central call centres to open questions to citizens enquiring about services in a given location.

**Dr O. Sinan Tumer**  
*Digital Ecosystems – Co-innovation towards Sustainable Societies*

Service industries have become the biggest and fastest-growing business sector in the world over the last decade. They now employ more people, by far, than any other sector. For this growth to continue, companies of all sizes, large, small, micro enterprises and also government institutions are faced with unprecedented pressure to make services more widely and easily available, to yield higher productivity and provide services to customers and citizens.

This follows restructuring of national economies through deregulation and globalization, forcing companies to focus on core competencies and continuous innovation while lowering total-cost-of-ownership through Public Private Public Partnerships (PPP) and outsourcing. These developments are setting the stage for the next service-oriented revolution – the Internet of Services. As open service partnerships and service ecosystems have quickly grown, however their limitations are clear.

The rapid development of the Internet, both in speed and in capabilities, will enable this re-engineering of the service economy. Relying on very sophisticated IT architectures and supporting tools (Internet of Services), and intelligent devices (Internet of Things) that create a whole new and innovative market for new services for sensing and reacting to the physical world; health, aging population, climate change, energy, public safety, agriculture, economic crisis etc.

The keynote will outline the directions of SAP Research, and then focus on the long term research in the area of "Service Ecosystems". Hereby, real world application adoption examples from private and public sectors will be discussed. The presentation will be related to rapid dissemination and exploitation of innovation in terms of how communities are adopting to the new service economy enabled by co-innovative concepts through cooperation between Public Sector, Academia and Industry.

**Professor Rob Whelan**  
*Ecological system meets ‘digital ecosystem’: Can ICT benefit from understanding biology?*

**Biography:** Professor Rob Whelan took up the position of President at the University of Wollongong in Dubai at the end of August 2008. He was previously the Dean of Science at the University of Wollongong in Australia (2002-08), and Head of the School of Biological Sciences (1993-2002), in which he had been a member of the academic staff from 1982.

During his career at the University of Wollongong, Professor Whelan established the University as one of the leading centres for research, internationally, for fire ecology and for the ecology and genetics of threatened plant and animal species.

He is the author of a major research monograph The Ecology of Fire, published by Cambridge University Press in 1995. He has published over 100 scientific papers and attracted over A$2.8 million in competitive research grant funding. He has supervised over 40 Masters and PhD research students. He has been Vice President of the Ecological Society of Australia and editor of its professional journal, The Australian Journal of Ecology (now called Austral Ecology).

As a result of the impact of his research work, Professor Whelan has been invited to serve on many State and Federal Government committees in Australia; chair of the New South Wales National Parks Advisory Council, chair of a panel conducting a statutory review of the Nature Conservation Trust Act for the NSW State Government; panel-member of the National Inquiry into Bushfire Mitigation and Management (Council of Australian Governments); member of the Biological Sciences and Biotechnology Expert Advisory Committee and of the Research, Training and Careers Committee of the Australian Research Council (ARC); and member of the Working Group on Climate Change Adaptation for the Prime Minister’s Science, Engineering and Innovation Council.

Professor Whelan lived in Northern Ireland until his family migrated to Adelaide, Australia in 1957. He completed his Bachelor of Science with Honours from Flinders University in 1974 and moved to the University of Western Australia to complete his PhD in 1978. He worked in North Wales and in Florida before returning to Australia in 1982 to take up a lectureship at the University of Wollongong. Since then, he has worked in California (Fulbright Senior Award in 1989), Brazil, and Vietnam, as well as south-eastern and south-western Australia.
Dr Leonard Barolli

A P2P Platform as a Digital Ecosystem Approach for Collaborative and Ubiquitous Computing

The Internet is growing every day and the performance of computers and networks is significantly increased enabling the development of complex, large-scale applications. We are currently witnessing an increasing need to design and deploy multi-featured networking applications instead of stand alone applications for specific needs. Such applications combine different paradigms and are developed using various technologies with the aim of achieving a multi-disciplinary view.

The digital ecosystems are emerging as a paradigm for supporting multi-disciplinary and multi-paradigmatic applications capable of being adaptive and socio-technical, having properties of self-organization inspired by natural ecosystems. Important features of such applications include the capability to be self-organized, decentralized, scalable and sustainable as well as integration of different types of resources. Supporting various forms of collaborative activities such as business, online learning and social networks in an intelligent and secure environment is also important in such systems. In fact, digital ecosystems are considered as the next generation of collaborative environments.

In this talk, I will present the JXTA-Overlay, a JXTA-based P2P platform designed as a Digital Ecosystem with the aim to leverage capabilities of Java, JXTA and P2P technologies to support distributed and collaborative systems. The platform can be used not only for efficient and reliable distributed computing but also for collaborative activities and ubiquitous computing by integrating in the platform end-devices such as SmartBox, mobile cars and mobile robots. The design of an user interface as well as security issues are also tackled. I will show also the evaluation of the implemented platform by experimental study and and present its usefulness for massive processing computations and e-learning applications.

Biography: Leonard Barolli received BE and PhD degrees from Tirana University and Yamagata University in 1989 and 1997, respectively. From April 1997 to March 1999, he was a JSPS Post Doctor Fellow Researcher at Department of Electrical and Information Engineering, Yamagata University. From April 1999 to March 2002, he worked as a Research Associate at the Department of Public Policy and Social Studies, Yamagata University. From April 2002 to March 2003, he was an Assistant Professor at Department of Computer Science, Saitama Institute of Technology (SIT). From April 2003 to March 2005, he was an Associate Professor and presently is a Full Professor, at Department of Information and Communication Engineering, Fukuoka Institute of Technology (FIT). Dr. Barolli has published about 300 papers in referred Journals, Books and International Conference proceedings. He was an Editor of the IPSJ Journal and has served as a Guest Editor for many International Journals. Dr. Barolli has been a PC Member of many International Conferences and was the PC Chair of IEEE ANA-2004 and IEEE ICPADS-2005. He was General Co-Chair of IEEE ANA-2006 and ANA-2008, Workshops Chair of iWAS-2006/MoMM-2006 and iWAS-2007/MoMM-2007, Workshop Co-Chair of ARES-2007, ARES-2008, IEEE ANA-2007 and ICPP-2009. Presently, he is General Co-Chair of CISIS-2010 and IEEE ANA-2010. Dr. Barolli is the Steering Committee Chair of CISIS International Conference Proceedings.
Dr. Barolli has served as Steering Committee Member in many International Conferences. He is the organizer of many International Workshops. Dr. Barolli has won many Awards for his scientific work and has received many research funds. He got the "Doctor Honoris Causa" Award from Polytechnic University of Tirana in 2009. His research interests include network traffic control, fuzzy control, genetic algorithms, agent-based systems, ad-hoc networks and sensor networks. He is a member of SOFT, IPSJ, and IEEE.