

CALL FOR PAPERS

4th INTERNATIONAL CONFERENCE ON SERVICE ORIENTED COMPUTING

Chicago, USA, December 4-7, 2006

Themes and Objectives

Service oriented computing is an emerging cross-disciplinary paradigm for distributed computing that is changing the way software applications are designed, architected, delivered and consumed. Services are autonomous, platform-independent computational elements that can be described, published, discovered, orchestrated and programmed using standard protocols to build networks of collaborating applications distributed within and across organizational boundaries. Web Services are the current most promising technology based on the idea of service oriented computing. Web services provide the basis for the development and execution of business processes that are distributed over the network and available via standard interfaces and protocols.

The 4th International Conference of Service Oriented Computing (ICSOC'06) follows on the success of three previous editions in Amsterdam, The Netherlands (2005), New York City, USA (2004) and Trento, Italy (2003). ICSOC is recognized as the main conference for service oriented computing research, by covering the entire spectrum from theoretical and foundational results to empirical evaluations as well as practical and industrial experiences. ICSOC'06 proposes several innovations to achieve this goal.

The ICSOC '06 Challenge: building new bridges to relevant communities and fostering “cross-communities” scientific excellence: Service oriented computing brings together ideas and technologies from many different fields in an evolutionary manner to address research challenges such as service composition, discovery, integration, monitoring and management of services, service quality and security, methodologies for supporting service development, governances in their evolution, as well as their overall life-cycle management. ICSOC'06 is strengthening the linkages to two important communities, **Software Engineering** and **Grid Computing**, with well known thought leaders from these communities serving in important organizing roles such as general chairs in shaping the conference. For many years, Software Engineering has developed methodologies and technologies for managing life-cycle of software components: requirement analysis, development, discovery, version control, testing and deployment. These methodologies are now being adopted in service life-cycle management.

Similarly, Grid Computing is a vibrant community addressing management of infrastructural resources by using a set of “Grid Services” following the principles of service oriented computing. Many of these services are being standardized in the Global Grid Forum (GGF). ICSOC06 will serve as a forum to exchange ideas and experiences with the Grid Community and the SOA community at large in using service oriented computing.

Providing a more Comprehensive Coverage of the research topics across the entire Service Life-Cycle: With the maturity of this conference, ICSOC06 will attempt to provide a broader coverage of the research issues across the entire service life-cycle. In order to provide a balanced coverage and equal emphasis on all SOC topics, the topics are divided into six major areas. The area coordinators have the key role of defining topics, reaching out to the scientific communities and supporting the evaluation and selection of papers related to the diverse communities

The four primary service life-cycle phases, modeling, assembly, deployment, and management are represented by the following three areas: *Business Service Modeling*, *Service Assembly*, *Service Deployment and Management*. Additionally, the runtime architectural issues will be covered by *SOA*

Runtime, and *Quality of Service* issues spanning all life-cycle stages, i.e., specification to autonomic management will be covered by the Quality of Service area. Finally, the *Grid Services* area covers application of service oriented computing in managing infrastructural resources.

An Enhanced and Independent Industrial Track with Participation from Key Industry Leaders:

Service Oriented Computing is very much a cross-disciplinary and applied science. Therefore, one of the main goals of ICSOC is to bring the academic and industrial research communities closer. This year we introduce an independent track for industrial papers sharing valuable hands-on experiences gathered by the industrial community. The papers will highlight lessons learned, analysis of technology gaps and outstanding technical issues, methodology used in practice, noteworthy and innovative application scenarios, need for new standardization and approaches to governance, and major improvements to the state-of-practice.

Submissions

ICSOC'06 seeks original papers in the field of service oriented computing, from theoretical and foundational results to empirical evaluations as well as practical and industrial experiences, with the emphasis on results that contribute to solve the many still open research problems that are of significant impact to the field of service oriented applications. Topics include but are not limited to the following:

- *Business Service Modeling*: Methods and tools for capturing business goals and requirements, Decomposition into business services, Business processes, Business policies, Modeling, analysis, and simulation, Specification of functional and non-functional quality requirements;
- *Service Assembly*: Development and Discovery: Model-driven development, Service composition architectures, Service registries, Service discovery mechanisms, Semantic matching, Methods and tools for service development, Governance, Verification and validation, Deployment strategies;
- *Service Management*: Instrumentation and service related data aggregation, *end-to-end* Measurement, Analysis, Modeling and Capacity planning, Definition of deployment topology, Infrastructure configuration, Problem determination for SOAs, ITIL processes, Change management in live systems.
- *SOA Runtime*: Service Bus for mediation, transformation and routing, Runtime registry, Integration of legacy applications, Information services for data access and data integration, Scalability, Topology and Optimization, Service oriented middleware, Policy based configuration & Workload management
- *Quality of Service*: Reliable Service-Oriented Computing, Security and Privacy in Service-Oriented Computing, SLA and Policy specification, QoS Negotiation, Autonomic management of service levels, Empirical Studies and Benchmarking of QoS, Performance and Dependability prediction in SOA;
- *Grid Services*: Services and architecture for management of infrastructural resources, Data and Compute intensive applications, Execution and resource allocation services for job scheduling, Protocols for coordination across multiple resource managers, Business value based allocation, Innovative Strategies for Creation and Management of Virtual Enterprises and Organizations, Prototype systems and Toolkits.

Research and Industry Tracks

There will be two independent tracks for Research and Industrial papers, each managed by a different program committee and with a different set of evaluation criteria. The authors must clearly indicate the track to which the paper is being submitted.

- **Research Papers:** The conference is soliciting original research papers on all aspects of web services and service-oriented computing. The submissions should contain results which advance the state of the art in service oriented systems, either through theoretical analysis or experimental analysis. They should clearly establish the research contribution, the relevance to service-oriented computing and the relation to prior research. Submitted papers will be judged according to their scientific merits and evaluated on significance, originality, technical quality, and exposition. See below for formatting requirements. Please submit your papers electronically at <http://www.conftool.net/icsoc06/>
- **Industrial and Application Papers:** ICSOC'06 places a strong emphasis on its industrial program and encourages submissions covering the application of service-oriented computing in practice, including papers describing innovative service-based implementations, novel applications of service oriented technology, and major improvements to the state-of-practice. Actual case studies from practitioners emphasizing applications, service technology, system deployment, organizational ramifications, or business impact are especially welcomed. Industrial and application papers should give sufficient details on the application domain, on the service oriented techniques that have been used, on the issues surrounding actual implementations and applications, and on the lessons learned in developing service oriented applications. The papers submitted to this track can range from a few page extended abstract to a full paper. The track will also include a small number of invited visionary papers. Please submit your papers electronically at <http://www.conftool.net/icsoc06-industrial/>

Formatting requirements: All papers should be submitted electronically in PDF and in Springer/LNCS format. Research and industrial papers are not to exceed 12 pages. Abstracts for research and application papers - not exceeding 200 words - need to be submitted one week prior to the paper submission deadline. All submissions should include title, authors, full contact information, and references. Submissions should indicate at least two main topics and the scientific area (or areas) that best fit the paper. *For selected papers, authors will be given the opportunity to submit a one-page reply, within one week, to answer to the reviewers' concerns.* This is done in the effort to improve the paper selection process and make sure that papers are not rejected based on some misunderstanding or erroneous interpretation by the reviewers that is easy to correct in preparing the final version. All accepted papers will appear in the ICSOC'06 archival proceedings, published by Springer, and must be formally presented at the conference, through oral presentations, and possibly through demonstrations.

ICSOC'06 solicits the submissions of proposals for Workshops and Tutorials:

Workshop Proposal Submissions: ICSOC'06 solicits the submission of workshop proposals on any of the conference topics. We strongly encourage workshops on key research challenges that can contribute to the main two goals of ICSOC'06: "cross the boundaries among different scientific communities and cross the boundaries among industry and research", by opening the possibility to participants to discuss and compare their approaches to problems of common interest. Workshop proposals should not exceed five pages, and should include a description of the workshop topic and the issues on which the workshop will focus, the motivation of why the workshop is of interest at this time, a description of the workshop format, the workshop duration, brief bios of the organizers, and a list of potential attendees. A one page abstract of the workshop must also be included, to be incorporated into the conference proceedings. Proposals should be submitted electronically to the Workshop Chair. Workshop proceedings will be made available to the participants attending the workshops.

Tutorial Proposal Submissions: The ICSOC conference solicits the submission of high quality tutorial proposals on any of the conference topics. Tutorial proposals should not exceed 5 pages, and should include enough material to describe the subjects being covered, the level of depth, as well as a description of the teaching methodology (lectures, hands-on sessions, etc.). Since the accepted tutorials will be part of the main conference, topics of interest to a wider audience, covering Standardization, SOA methodology

and Comprehensive application of SOA to an important problem area will be given a preference. Proposals should also indicate the required background knowledge of the intended audience, the tutorial length (1 hour 45 minutes), as well as the name, contact information, and short bios of the speakers. A one page abstract of the tutorial must also be included, to be incorporated into the conference proceedings. Proposals should be submitted electronically to the Tutorial Chair. Tutorial notes will be made available to the tutorial participants.

Important dates

Workshop proposal submission	May 30, 2006
Paper abstract submission	June 12, 11:59pm, PST
Full paper submission	June 19, 11:59pm, PST
Tutorial and panel submission	July 6, 2006
Notification of acceptance	September 12, 2006
Final manuscript due	September 25, 2006
Workshops	December 4, 2006
Main conference (includes tutorials)	December 5-7, 2006

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