CALL FOR PAPERS

The Middleware conference is a forum for the discussion of innovations and recent advances in the design, implementation, deployment, and usage of middleware systems. Middleware is the software that resides between applications and the underlying architecture. The goal of middleware is to facilitate the development of applications by providing higher-level abstractions for better programmability, performance, scalability, security, and a variety of essential features. It is a rapidly evolving and growing field.

Following the success of past conferences in this series, the 12th International Middleware Conference will be the premier event for middleware research and technology in 2011. The scope of the conference is the design, implementation, deployment, and evaluation of distributed system platforms and architectures for current and future computing, storage, and communication environments. Highlights of the conference will include a high quality technical program, invited speakers, an industrial track, poster and demo presentations, a doctoral symposium, and workshops.

Submissions on a diversity of topics are sought, particularly those identifying new research directions. The topics of the conference include, but are not limited to:

**Middleware platforms:**
- Middleware for emerging cloud computing, datacenters, and server farms
- Middleware for traditional clusters and grid computing
- Middleware for mobile devices, ubiquitous, and mobile computing
- Middleware for sensor and embedded systems
- Middleware for Internet applications and social networks
- Middleware for Web services, Web service composition, and SOA
- Middleware for data-intensive computing
- Event-based, publish/subscribe, and message-oriented middleware
- Middleware support for multimedia and tele-immersion
- Reconfigurable, adaptable, and reflective middleware approaches
- Middleware solutions for distributed databases
- Peer-to-peer middleware solutions

**Systems issues for Middleware:**
- Reliability and fault-tolerance
- Scalability and performance
- Energy- and power-aware techniques
- Virtualization, auto-scaling, provisioning, and scheduling
- Security, Privacy, and Information assurance
- Storage and file systems
- Parallelized execution and techniques
- Dynamic configuration and self- or autonomic- management of middleware
Real-time solutions and quality of service
Evaluation and deployment: challenges, techniques, and lessons learned

**Design principles and tools:**
- Programming frameworks, parallel programming, and design methodologies for middleware
- Empirical and deployment studies for middleware solutions
- Debugging and distributed debugging of middleware
- Probabilistic techniques and approaches for middleware
- Methodologies and tools for middleware design, implementation, verification, and evaluation
- Formal methods, verification, and software engineering for middleware
- Security and Privacy
- Old Wine: Revisiting classical middleware paradigms, e.g., object models, aspect orientation, etc.

**Industry Papers**
The conference strongly encourages submission of industry-focused papers and use case studies; full papers should be submitted to the main program, where they will be reviewed using appropriate criteria (e.g., emphasizing experience and system evolution), and accepted papers will be published in the main conference proceedings.

Additionally, short industry-focused papers (5-6 pages, ACM style) may be submitted to a special industrial track; accepted short papers will be presented at the conference and published in the ACM Digital library. Note that submissions to the main program may indicate a willingness to be referred to the Industrial Track if a paper is not accepted to the main program.

**Big Ideas Papers**
We particularly encourage "big ideas papers"; that is papers that have the potential for opening up new research directions. For such papers, the potential to motivate new research is more important than full experimental evaluation, though some preliminary evidence of the effectiveness of the approach or idea is important. Authors should indicate in the introduction that their paper is a vision of a big idea, rather than more mature work. Such papers should clearly indicate why the idea is revolutionary and not evolutionary; what the major questions still to be answered are; and possible avenues of attack for the community to pursue towards the development of the idea.

**Submission Guidelines**
The Middleware 2011 proceedings will be published in Lecture Notes in Computer Science (LNCS) both in print and in electronic form. Papers must not exceed 20 pages including abstract, all figures, all tables, and references. Papers should include a short abstract and up to 6 keywords. Submitted papers should follow the formatting instructions of the Springer LNCS Style. The papers will also be published as part of the ACM Digital Library.

**IMPORTANT DATES**
May 23, 2011 - Abstract Submission (HARD DEADLINE)  
May 30, 2011 - Paper Submission HARD DEADLINE  
August 5, 2011 - Notification of acceptance  
September 7, 2011 - Camera ready due

There will be a separate call for workshops, for tutorials, and for the Doctoral Symposium. Please check the website for dates.
GENERAL CHAIRS
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