Fabio Kon  Anne-Marie Kermarrec (Eds.)

Middleware 2011

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Proceedings

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Welcome to the 12th edition of the ACM/IFIP/USENIX International Middleware Conference.

The importance of middleware software and systems keeps growing in a world where distribution and heterogeneity are the norm. Middleware abstractions are present everywhere, e.g., from data centers to networks of mobile devices, from multi-core architectures to social networks, bridging the gap between many areas including programming languages, distributed algorithms, networks, and databases.

Among the 125 initial submissions (from 28 countries) to Middleware 2011, 22 research papers and 2 industry papers were selected for inclusion in the technical program and the proceedings of the conference, resulting in an acceptance rate of 19%. All papers were reviewed by at least three reviewers and some of them had four or six reviews. After a discussion period and a rigid selection process, in which some good papers had to be cut out, we selected the 24 papers that appear now in the proceedings. Five of those papers passed through a shepherding process to make sure that minor problems detected by some reviewers were resolved before the papers were published. The papers were judged according to their originality, presentation quality, and relevance to the conference. The accepted papers cover a wide range of topics with a slight bias toward papers related to cloud computing and reliability, which are obviously hot topics at the moment. Many submissions were related to emerging cloud computing, data centers and server farms, as well as scalability and performance for system issues. We thank the Industry Track Chairs Dilma da Silva and Jan de Meer for their help with the selection of industry papers.

We are grateful to Rachid Guerraoui from EPFL for being the keynote speaker of Middleware 2011. He related one of the most successful middleware stories, namely, software transactional memory (STM) systems. An invited paper, included in the proceedings, co-authored by Vincent Gramoli and Rachid Guerraoui, conveys the message that STM systems should not only simplify a programmer’s life but also be flexible enough to enable skilled programmers to take the most from this abstraction to ensure STM a promising future.

We were also delighted to grant the 10-Year Best Paper Award to Peter Druschel and Antony Rowstron for their Middleware 2001 paper “Pastry: Scalable, Decentralized Object Location and Routing for Large-Scale Peer-to-Peer Systems.” The 10-Year Best Paper Award seeks to reward those papers from the Middleware conference that was held exactly 10 years ago based on their impact on the academy and industry in the past 10 years. This tradition started with the 10th Middleware in 2009 in Urbana-Champaign, USA, and had its second edition in 2010 in Bangalore, India; Middleware 2011 in Lisbon, Portugal, hosted the third edition. This paper, published in 2001, is cited more than 4,000 times.
according to Google Scholar and describes probably the most well-known structured peer-to-peer overlay platform. This represents one of the most influential papers in the past decade in distributed systems and we are honored that the Middleware conference was the one to give the authors this award.

We would like to express our deepest thanks to the authors of submitted papers, to the Program Committee members for their work in reviewing the papers and their enthusiasm in the discussions, to Paulo Ferreira and Luís Veiga the General Chairs and their team and, finally, to the members of the Steering Committee for their efforts toward making Middleware one of the major venues in distributed systems.

We hope you enjoy the papers in this volume of Lecture Notes in Computer Science.

December 2011

Anne-Marie Kermarrec
Fabio Kon
Middleware 2011 was organized under the joint sponsorship of the Association for Computing Machinery (ACM), the International Federation for Information Processing (IFIP), and USENIX.

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