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Flavio Oquendo (Ed.)

Software Architecture

First European Conference, ECSA 2007
Madrid, Spain, September 24-26, 2007
Proceedings

Volume Editor

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Preface

Software architecture has emerged as an important subdiscipline of software engineering encompassing a broad set of languages, styles, models, tools, and processes. The role of software architecture in the engineering of software-intensive applications has become more and more important and widespread. Indeed, component-based and service-oriented architectures have become key to the design, development, and evolution of most software systems.

The European Conference on Software Architecture (ECSA) is the premier European conference dedicated to the field of software architecture, covering all architectural features of software and service engineering. It is the follow-up of a successful series of European workshops on software architecture held in the United Kingdom in 2004 (Springer LNCS 3047), Italy in 2005 (Springer LNCS 3527), and France in 2006 (Springer LNCS 4344). Due to its success, it has evolved into a full-fledged series of European conferences whose first edition was ECSA 2007, held in Madrid, Spain September 24–26, 2007.

ECSA 2007 provided an international forum for researchers and practitioners from academia and industry to present innovative research and to discuss a wide range of topics in the area of software architecture. It focused on formalisms, technologies, and processes for describing, verifying, validating, transforming, building, and evolving software systems, in particular founded on component-based and service-oriented architectures. Covered topics included architecture modeling, architectural aspects, architecture analysis, transformation and synthesis, quality attributes, model-driven engineering, and architecture-based support for developing, adapting, reconfiguring, and evolving component-based and service-oriented systems.

The conference attracted paper submissions from 26 countries (Algeria, Argentina, Australia, Belgium, Brazil, Canada, Chile, Denmark, Egypt, Finland, France, Germany, Ireland, Italy, Japan, Korea, Mexico, New Zealand, Poland, Portugal, Spain, The Netherlands, Tunisia, UK, Uruguay, and USA). In all, 89 abstracts were submitted of which 62 papers were actually uploaded on the conference submission Web site.

All submissions were reviewed by three members of the Program Committee. Papers were selected based on originality, quality, soundness, and relevance to the conference.

The Program Committee selected papers according to four types, for presentation in paper sessions:

- Full research papers: they describe novel contributions to software architecture research and cover work that has a sound scientific/technological basis and has been fully validated.
- Emerging research papers: they present promising results from work-in-progress in a topic of software architecture research and cover work that has a sound basis, but has not yet been validated in full.

- Experience papers: they describe significant experiences related to software architecture practice and present case studies or real-life experiences of benefit to practitioners and researchers.
- Research challenge papers: they present significant research challenges in theory or practice of software architecture or the state of the art on different topics related to software architecture.

These papers are published in the conference proceedings as long papers (16 pages), short papers (8 pages), or position papers (4 pages). Full research papers always appear as long papers; research challenge papers typically as position papers; the others as long or short papers.

In addition, papers accepted as posters to be presented in a poster session are published as extended abstracts (4 pages).

The Program Committee selected 18 papers out of 62 submissions: 12 long papers (5 as full research papers, 1 as full state-of-the-art paper, 6 as emerging research papers), 4 short papers (3 as emerging research papers, 1 as experience paper), and 2 position papers (research challenge papers). This gives an acceptance rate of 10% for full papers, +10% for emerging research (long) papers, +10% for short and position papers. In addition, 16 papers were selected to be presented as posters, i.e., +25%.

Credit for the quality of the proceedings goes to all authors of papers. In addition, the conference included three keynote talks. The opening day keynote was presented by David Garlan, from Carnegie Mellon University, USA, on "Software Architectures for Task-Oriented Computing"; the second keynote was delivered by Ron Morrison, from the University of St. Andrews, UK, on "An Active Architecture Approach to Dynamic Systems Co-evolution"; the last keynote speaker was Michael P. Papazoglou, from the University of Tilburg, Netherlands, on "What's in a Service?".

We would like to thank the members of the Program Committee for providing thoughtful and knowledgeable reviews and for their substantial effort in making ECSA 2007 a successful conference.

The ECSA 2007 submission and review process was extensively supported by the Paperdyne Conference Management System. We are indebted to Thomas Richter for his timely support.

On the organizational front, we deeply acknowledge the Conference Secretary, Verónica Andrea Bollati, for her great work beyond the call of duty, and all the members of the Organizing Committee for their excellent service.

Finally, we acknowledge the prompt and professional support from Springer which published these proceedings in printed and electronic volumes as part of the *Lecture Notes in Computer Science* series.

September 2007

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