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# Formal Methods for Open Object-Based Distributed Systems

7th IFIP WG 6.1 International Conference, FMOODS 2005  
Athens, Greece, June 15-17, 2005  
Proceedings

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# Preface

This volume contains the proceedings of FMOODS 2005, the 7th IFIP WG 6.1 International Conference on *Formal Methods for Open Object-Based Distributed Systems*. The conference was held in Athens, Greece on June 15–17, 2005. The event was the seventh meeting of this conference series, which is held roughly every year and a half, with the earlier events held respectively in Paris, Canterbury, Florence, Stanford, Twente, and Paris.

The goal of the FMOODS series of conferences is to bring together researchers whose work encompasses three important and related fields:

- formal methods;
- distributed systems;
- object-based technology.

Such a convergence is representative of recent advances in the field of distributed systems, and provides links between several scientific and technological communities, as represented by the conferences FORTE, CONCUR, and ECOOP.

The objective of FMOODS is to provide an integrated forum for the presentation of research in the above-mentioned fields, and the exchange of ideas and experiences in the topics concerned with the formal methods support for open object-based distributed systems. For the call for papers, aspects of interest included, but were not limited to: formal models; formal techniques for specification, design, or analysis; verification, testing, and validation; component-based design; formal aspects of service-oriented computing; semantics and type systems for programming, coordination, or modelling languages; behavioral typing; multiple viewpoint modelling and consistency between different models; transformations of models; integration of quality-of-service requirements into formal models; formal models for security; formal approaches to distributed component frameworks; and applications and experience, carefully described. Work on these aspects of (official and de facto) standard notation and languages for service oriented design, e.g. web services orchestration languages, was explicitly welcome.

In total 49 abstracts and 42 papers were submitted to this year's conference, covering the full range of topics listed above. Out of the submissions, 19 research papers were selected by the Program Committee for presentation. We would like to express our deepest appreciation to the authors of all submitted papers and to the Program Committee members and external reviewers who did an outstanding job in selecting the best papers for presentation.

For the second time, the FMOODS conference was held as a joint event, this time in federation with the 5th IFIP WG 6.1 International Conference on *Distributed Applications and Interoperable Systems* (DAIS 2005). The co-location of the FMOODS and DAIS conferences provided an excellent opportunity to the participants for a wide and comprehensive exchange of ideas within the domain of distributed systems and applications. Both FMOODS and DAIS address this

domain, the former with its emphasis on formal approaches the latter on practical solutions. Their combination in a single event ensured that both theoretical foundations and practical issues were presented and discussed.

Special thanks to Lazaros Merakos, for acting as the General Chair of the joint conferences DAIS and FMOODS 2005; his support made this event happen. We would also like to thank Gordon Blair, Rocco de Nicola, and Andreas Reuter for agreeing to present invited talks at the conference.

We thank Costas Polychronopoulos, for acting as Local Arrangements Chair, and John Derrick for his work as Publicity Chair. We would also like to thank the FMOODS Steering Committee (John Derrick, Roberto Gorrieri, Guy Leduc, and Elie Najm) for their advice. Thanks also to Roberto Lucchi for his valuable help in managing the submission server.

June 2005

Martin Steffen  
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