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Integrated Formal Methods

Third International Conference, IFM 2002
Turku, Finland, May 15-18, 2002
Proceedings

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Preface

The third in a series of international conferences on Integrated Formal Methods, IFM 2002, was held in Turku, Finland, May 15–17, 2002. Turku, situated in the south western corner of the country, is the former capital of Finland. The conference was organized jointly by Åbo Akademi University and Turku Centre for Computer Science.

The theme of IFM 1999 was the integration of state and behavioral based formalisms. For IFM 2000 this was widened to include all aspects pertaining to the integration of formal methods and formal notations. One of the goals of IFM 2002 was to further investigate these themes. Moreover, IFM 2002 explored the relations between formal methods and graphical notations, especially the industrial standard language for software design, the Unified Modeling Language (UML).

The themes of IFM 2002 reflect what we believe is a growing trend in the Formal Methods and Software Engineering research communities. Over the last three decades, computer scientists have developed a range of formalisms focusing on particular aspects of behavior or analysis, such as sequential program structures, concurrent program structures, data and information structures, temporal reasoning, deductive proof, and model checking. Much effort is now being devoted to integrating these methods in order to combine their advantages and ensure they scale up to industrial needs. Graphical notations are now widely used in software engineering and there is growing recognition of the importance of providing these with the formal underpinnings and formal analysis capabilities found in formal methods.

The invited speakers for the conference represent a range of academic and industrial research experience. Eran Gery is Vice President for Rhapsody product development at I-Logix Inc. He is involved in the UML 2.0 consortium, and was a member of the UML founding team. Shmuel Katz is Professor of Computer Science at the Technion in Israel and leads research into the integration of specification notations and verification tools. Stuart Kent is Senior Lecturer in Computer Science at the University of Kent, UK and also works with IBM UK Research Laboratories on model-driven development of e-business systems.

In total there were 46 submissions for IFM 2002. Of these, 18 were selected for publication in the proceedings and presentation at the conference. Each paper was independently reviewed by several members of the Program Committee or their colleagues. The selection of the final 18 papers was based on the reviews followed by electronic discussion between the reviewers. In these proceedings, the papers are grouped into the following themes:

- Integration, Simulation, Animation
- From Specification to Verification
- Statecharts and B: Integration and Translation
- Model Checkers and Theorem Provers

- Links between Object-Z and CSP
- Combining Graphical and Formal Approaches
- Refinement and Proof

We hope that these proceedings will be of benefit both to the conference participants and to the wider community of researchers and practitioners in the field. The production of these proceedings would not have been possible without the invaluable help of the program committee members as well as their external referees, and of all the contributors who submitted papers to the conference.

March 2002

Michael Butler
Luigia Petre
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Kaisa Sere, Åbo Akademi University, Turku, Finland (PC Co-chair)

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