Proceedings of the
Third International Workshop on
Formal Methods for Interactive Systems
(FMIS 2009)

Preface

This volume of the Electronic Communications of EASST contains the proceedings of the third edition of the International Workshop on Formal Methods for Interactive Systems (FMIS 2009). FMIS is a forum for the presentation and discussion of research in the interface between formal methods and interactive system design. This subfield, within applied formal methods, provides interesting challenges to the specification and analysis of systems: what features of interactive systems can be specified that contribute to an understanding of their usability? what analytic techniques are appropriate to assessing whether the design represented by the specification has appropriate properties relating to its use? The theme of the workshop has been admirably scoped by the keynote address: "Who wants a model and why?" in which Muffy Calder reflects on the role of models in recent analyses relating to pervasive and uniquitous systems.

This year there were 12 submissions of which 5 have been selected for this volume. All papers were evaluated by at least three reviewers who addressed originality and contribution, technical quality, readability, organisation, presentation and references to related work. The selected papers combine traditional concerns of formal methods in HCI with novel concerns associated with more recent software applications. Bowen and Reeves' paper focuses on the model based development problem and considers the role of testing in relation to the specification of interactive systems addressing traditional concerns. It is encouraging to see continuing development of these themes. Several of the papers deal with emerging mainstream application areas including ubiquitous systems in general and techniques for their analysis (Arapinis and others, Calder and others). These applications require novel analysis from the perspective of human computer interaction. They require focus on interoperability (Arapinis and others) and context awareness (Calder and others). Further papers in this volume focus on particular frameworks and analytic techniques that are required to model and analyse trust-related emotion (Bonnefon and others) and the stochastic properties of software based systems (Anderson and others).

Previous workshops in this series were held in Macau (October 2006) and Lancaster (September 2007). This year FMIS was co-located with the 16th International Symposium on Formal Methods and was held on November 2, 2009 in Eindhoven, the Netherlands. It has been a privilege to be co-located with this international forum for researchers, practitioners and educators in the field of formal methods.

We would like to thank all the members of the Programme Committee and the additional referees for their careful and timely evaluation and discussion of the submitted papers. We are also grateful to the FM2009 Conference for hosting FMIS 2009 this year and taking care of many organisational aspects, and to FM Europe for its financial support. Finally, we thank all authors for their submissions without which this workshop could not have taken place, and EASST (European Association of Software Science Technology) and our home institutions Newcastle University and CNR-ISTI for their support.

We hope that you will find this volume interesting and thought-provoking and that it will stimulate further research in this interesting and multi-disciplinary field.

December, 2009

Michael Harrison
Newcastle University
FMIS09 Co-Chair

Mieke Massink
CNR-ISTI
FMIS09 Co-Chair

Organisation

Programme Committee Chairs

Michael Harrison	Newcastle University, UK
Mieke Massink	National Research Council, CNR-ISTI, Italy

Programme Committee

Ann Blandford	UCL Interaction Center, UK
Judy Bowen	University of Waikato, New Zealand
Paul Cairns	University of York, UK
José Creissac Campos	University of Minho, Portugal
Antonio Cerone	UNI-IIST, Macau SAR China
Paul Curzon	Queen Mary, University of London, UK
Alan Dix	Lancaster University, UK
Gavin Doherty	Trinity College, University of Dublin, Ireland
David Duce	Oxford Brookes University, Oxford, UK
Stefania Gnesi	CNR-ISTI, Pisa, Italy
Michael Harrison	Newcastle University, UK
C. Michael Holloway	NASA Langley Research Center, USA
Chris Johnson	University of Glasgow, UK
Mieke Massink	CNR-ISTI, Pisa, Italy
Philippe Palanque	University of Toulouse III, France
Luca Simoncini	University of Pisa, Italy
Daniel Sinnig	Concordia University, Canada
Harold Thimbleby	University of Wales Swansea, Wales

External Referees

Alessandro Fantechi	University of Florence, Italy

Contents