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Preface

Reducing the likelihood of human error in the use of interactive systems is increasingly important: the use of such systems is becoming widespread in applications that demand high reliability due to safety, security, financial or similar considerations. Consequently, the use of formal methods in verifying the correctness of interactive systems should also include analysis of human behaviour in interacting with the interface.

This Post-proceedings includes the reviewed and revised versions of 6 papers, which are a selection of the 8 papers accepted for presentation at the *1st International Workshop on Formal Methods for Interactive Systems (FMIS 2006)* held on 31 October 2006 in Macau SAR China, as a satellite event of ICFEM 2006. FMIS 2006 was organized by UNU-IIST in collaboration with the Human Error Modeling (HUM) project at Queen Mary, University of London and University College London Interaction Centre. The HUM project is sponsored by EPSRC on research grants GR/S67494 and GR/S67500.

The aim of FMIS 2006 was to bring together researchers in computer science and cognitive psychology, from both academia and industry, who are interested in developing formal and semi-formal methodologies and tools for the evaluation and verification of interactive systems. The outcome is to establish a worldwide network of researchers interested in applying formal methods to HCI. The workshop focused on general design and verification methodologies based on cognitive psychology as well as application areas such as mobile devices, embedded systems, safety-critical systems, high-reliability systems, shared control systems, digital libraries, eGovernment, pervasive systems, augmented reality.

All papers submitted to the workshop were reviewed by 3 referees followed by a meta-review process. From the 18 submissions the Program Committee selected 6 papers for long presentation (40 minutes), whose revised versions are included in this volume, and 2 papers for short presentation (20 minutes). The authors of the most relevant papers presented at the workshop have been invited to submit extended versions of their papers to be considered for publication in a special issue of the journal *Innovations in System and Software Engineering*.

In addition to contributed papers, the workshop programme also included a keynote talk by Harold Thimbleby from the University of Wales, Swansea. His

presentation was entitled "Building dependable interactive systems" and used medical devices as a case study to discuss the problems of making interactive systems dependable. It introduced suggestions for improving them, particularly by using formal methods.

The Program Committee of FMIS 2006 consisted of

- Ann Blandford, *UCL Interaction Centre, UK*
- Ralph Back, *Åbo Akademi, Finland*
- Howard Bowman, *University of Kent, UK*
- George Buchanan, *Swansea University, UK*
- Antonio Cerone (Co-chair), *UNU-IIST, Macau SAR China*
- Paul Cairns, *UCL Interaction Centre, UK*
- José Creissac Campos, *University of Minho, Portugal*
- Paul Curzon (Co-chair), *Queen Mary, University of London, UK*
- Gavin Doherty, *Trinity College, University of Dublin, Ireland*
- Michael Harrison, *University of Newcastle upon Tyne, UK*
- C. Michael Holloway, *NASA Langley Research Centre, USA*
- Chris Johnson, *University of Glasgow, UK*
- Alan Dix, *Lancaster University, UK*
- Li Siu Pan, *Macao Polytechnic Institute, Macau SAR China*
- Adegboyega Ojo, *UNU-IIST, Macau SAR China*
- Philippe Palanque, *University of Toulouse III, France*
- Fabio Paternò, *CNR-ISTI, Italy*
- Rimvydas Rukšėnas, *Queen Mary, University of London, UK*

The Program Co-chairs would like to thank all members of the Program Committee and all External Referees for their timely and professional work, the Keynote Speaker Harold Thimbleby and all authors and workshop participants. Many thanks also to the UNU-IIST staff and fellows, and members of the ICFEM 2006 Organising Committee who helped with the logistic, administrative and technical support before and during the workshop: Dian Andriana, Kitty Chan, Michelle Ho, Wendy Hoi, Brian Iu, Xiaoshan Li, Zhiming Liu, Alice Pun, Violet Pun and Shaikh Siraj.

*Antonio Cerone
Paul Curzon
Program Co-chairs*