Editorial

Eerke Boiten, Michael Butler, John Derrick, Graeme Smith

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Editorial

We are proud to present a Special Issue on Refinement, originating from the 12th BCS-FACS Refinement Workshop, held at Oxford in July 2007.

The BCS-FACS Refinement Workshop has been running since 1988: in the UK for the first seven editions; as part of the International Refinement Workshop in Canberra in 1998; and then in Copenhagen in 2002, Surrey in 2005, and Macao in 2006. This edition was organised by the EPSRC RefineNet network (http://www.refinenet.org.uk) and co-located with IFM. The workshop proceedings have appeared in Electronic Notes in Theoretical Computer Science vol. 201(1). After the workshop, presenters were invited to submit significantly extended papers for inclusion in this special issue; three of these were accepted and have been included here.

"Refinement algebra for probabilistic programs" by Meinicke and Solin defines an algebra for reasoning about probabilistic program transformations in a total correctness setting, which is applied to probabilistic action systems.

"Atomic actions, and their refinements to isolated protocols" by Banach and Schellhorn explores issues arising from the Mondex case study, showing the relationship between synchronisations of abstract and concrete transitions, and forward and backward simulations.

"Invariant-based reasoning about parameterized security protocols" by Mooij considers the application of the programming method of Feijen and van Gasteren to security protocols. In particular, it derives the authentication protocol by Needham, Schroeder and Lowe from an abstract specification.

We are grateful to 'Formal Aspects of Computing' for allowing us to publish this collection of papers in the journal, and for an ongoing pleasant collaboration; to the participants of the workshop, and to the reviewers involved in selecting the papers.

Eerke Boiten
Michael Butler
John Derrick
Graeme Smith

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Correspondence and offprint requests to: E. Boiten, School of Computing, University of Kent, Canterbury, UK.
E-mail: E.A.Boiten@kent.ac.uk