Preface

This volume contains the proceedings of CHARME 2001, the *Eleventh Advanced Research Working Conference on Correct Hardware Design and Verification Methods.* CHARME 2001 is the 11th in a series of working conferences devoted to the development and use of leading-edge formal techniques and tools for the design and verification of hardware and hardware-like systems.

Previous events in the 'CHARME' series were held in Bad Herrenalb (1999), Montreal (1997), Frankfurt (1995), Arles (1993), and Torino (1991). This series of meetings has been organized in cooperation with IFIP WG 10.5 and WG 10.2. Prior meetings, stretching back to the earliest days of formal hardware verification, were held under various names in Miami (1990), Leuven (1989), Glasgow (1988), Grenoble (1986), Edinburgh (1985), and Darmstadt (1984). The convention is now well-established whereby the European CHARME conference alternates with its biennial counterpart, the *International Conference on Formal Methods in Computer-Aided Design* (FMCAD), which is held on even-numbered years in the USA.

The conference took place during 4–7 September 2001 at the Institute for System Level Integration in Livingston, Scotland. It was co-hosted by the Institute and the Department of Computing Science of Glasgow University and co-sponsored by the IFIP TC10/WG10.5 Working Group on Design and Engineering of Electronic Systems. CHARME 2001 also included a scientific session and social program held jointly with the *14th International Conference on Theorem Proving in Higher Order Logics* (TPHOLs), which was co-located in nearby Edinburgh.

The CHARME 2001 scientific program comprised

- two **Invited Lectures**
    - by Steven D. Johnson (joint with TPHOLs) presenting *View from the Fringe of the Fringe*, and
    - by Alan Mycroft on *Hardware Synthesis Using SAFL and Application to Processor Design*,

as well as

- **Regular Sessions**, featuring 24 papers selected out of 56 submissions, ranging from foundational contributions to tool presentations,
- **Short Presentations**, featuring 8 short contributions accompanied by a poster presentation, and
- A morning of **Tutorials** aimed at industrial and academic interchange.

The conference, of course, also included informal tool demonstrations, not announced in the official program.

The paper *Applications of Hierarchical Verification in Model Checking*, by Robert Beers, Rajnish Ghughal, and Mark Aagaard, was presented at FMCAD

2000 but omitted inadvertently from the published proceedings of that conference. It is included in the present volume, since it contains appropriate content and the two conferences share a large common audience.

September 2001   Tiziana Margaria and Tom Melham

2

Local Organizers

Steve Beaumont (ISLI)
Lorriane Fraser (ISLI)
Tracy Gaffney   (ISLI)
Fiona Hunter   (ISLI)
Ken Baird   (University of Edinburgh)
Deirdre Burke   (University of Edinburgh)
Jennie Douglas (University of Edinburgh)

TPHOLs Organizing Committee

Richard Boulton (Conference Chair)
Louise Dennis   (Local Arrangements Co-chair)
Jacques Fleuriot (Local Arrangements Co-chair)
Simon Gay   (Publicity Chair)
Paul Jackson   (Programme Chair)

Reviewers

Will Adams	Cindy Eisner	Markus Müller-Olm
Evgeni Asarin	Martin Fränzle	Paritosh Pandya
Ritwik Bhattacharya	Mike Gordon	Marie-Laure Potet
Per Bjesse	Susanne Graf	Jun Sawada
Marius Bozga	Anna Gringauze	Ali Sezgin
Annette Bunker	Alan Hartman	Irit Shitsevalov
Prosenjit Chatterjee	Ravi Hosabettu	Ken Stevens
Koen Claessen	Damir Jamsek	Emmanuel Zarpas
Emil Dumitrescu	Michael Jones	
Niklas Een	Laurent Mounier	