

Preface

The algebraic approach to system specification and development, born in the 1970s as a formal method for abstract data types, encompasses today the formal design of integrated hardware and software systems, new specification frameworks and programming paradigms (such as object-oriented, logic, and higher-order functional programming) and a wide range of application areas (including information systems, concurrent and distributed systems). Workshops on Algebraic Development Techniques, initiated in 1982 as Workshops on Abstract Data Types, have become a prominent forum to present and discuss research on this important area.

The 14th International Workshop on Algebraic Development Techniques (WADT'99) took place at the Château de Bonas, near Toulouse, September 15–18, 1999, and was organized by Didier Bert and Christine Choppy. The main topics of the workshop were:

- algebraic specification
- other approaches to formal specification
- specification languages and methods
- term rewriting and proof systems
- specification development systems (concepts, tools, etc.).

The program consisted of invited talks by Michel Bidoit, Manfred Broy, Bart Jacobs, Natarajan Shankar, and 69 presentations describing ongoing research. The parallel sessions were devoted to: algebraic specifications and other specification formalisms, test and validation, concurrent processes, applications, logics and validation, combining formalisms, subsorts and partiality, structuring, rewriting, coalgebras and sketches, refinement, institutions and categories, ASM specifications. There were also sessions reflecting ongoing research achieved in the Common Framework Initiative (CoFI, see <http://www.brics.dk/Projects/CoFI/>), within its different task groups: CASL (Common Algebraic Specification Language), CASL semantics, CASL tools, methodology, and reactive systems.

The program committee invited submissions of full papers for possible publication in this WADT volume on the basis of the abstracts and the presentations at WADT'99. All the submissions were subject to careful refereeing, and the selection of papers was made following further discussion by the full program committee. The authors of the 26 selected papers were asked to take account of the suggestions of the referees when preparing their final versions for inclusion in the present volume. The selected papers include three which are authored/co-authored by invited speakers at WADT'99.

We are extremely grateful to all the workshop participants, to the invited speakers, to the (other) members of the program committee, and to the external referees for their contribution to the scientific quality of the workshop and of this volume.

The workshop was organized by IFIP WG1.3 (Foundations of System Specification). It was sponsored by CoFI (Common Framework Initiative) ESPRIT Working Group 29432, and received financial support by CNRS (Centre National de la Recherche Scientifique), Ministère des Affaires Etrangères (French Government), IMAG Institute (Informatique et Mathématiques Appliquées de Grenoble), INPG (Institut National Polytechnique de Grenoble), UJF (Université Joseph Fourier de Grenoble), and the LSR laboratory (Logiciels, Systèmes, Réseaux).

We are grateful to Springer-Verlag for their helpful collaboration and quick publication.

We would like to thank Mme Simon and M. Wozniak at Château de Bonas for hosting the workshop with dedication and care, and for greatly facilitating the innumerable local organization tasks.

Finally, we thank all workshop participants both for lively discussions and for creating a friendly and warm atmosphere!

April 2000

Didier Bert, Christine Choppy, and Peter Mosses

Organization

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