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Preface

This volume contains the proceedings of the Ninth International Conference on Concurrency Theory (CONCUR'98), held in Nice, France, September 8-11, 1998.

The purpose of the CONCUR conferences is to bring together researchers, developers and students in order to advance the theory of concurrency, and promote its applications. Interest in this topic is continuously growing, as a consequence of the importance and ubiquity of concurrent systems and their applications, and of the scientific relevance of their foundations. The scope of CONCUR'98 covers all areas of semantics, logics and verification techniques for concurrent systems. A list of specific topics includes (but is not limited to) concurrency related aspects of: models of computation and semantic domains, process algebras, Petri nets, event structures, real-time systems, hybrid systems, decidability, model-checking, verification techniques, refinement techniques, term and graph rewriting, distributed programming, logic constraint programming, object-oriented programming, typing systems and algorithms, case studies, tools and environments for programming and verification. The conference's steering committee comprises Jos Baeten (Chair, Eindhoven), Eike Best (Oldenburg), Kim Larsen (Aalborg), Ugo Montanari (Pisa), Scott Smolka (Stony Brook), and Pierre Wolper (Liège).

Of the 104 regular papers submitted this year, 35 were accepted for presentation at the conference.

The conference will include five invited lectures, given by Moshe Vardi (Rice University, USA) on *Sometimes and not never re-revisited: on branching versus linear time*, by Jan Rutten (CWI, Netherlands) on *Automata and coinduction (an exercise in coalgebra)*, by Jean-Bernard Stefani (CNET France-Telecom, France) on the topic of *Open distributed systems*, by Ulrich Herzog (University of Erlangen, Germany) on *Stochastic process algebras: benefits for performance evaluation and challenges*, and by Thomas Henzinger (UC Berkeley, USA) on *It's about time: real-time logics reviewed.* In addition there will be three advanced tutorials, given by Gérard Berry (Ecole des Mines de Paris, France) on the topic of *Synchronous reactive programming*, by Benjamin Pierce (University of Pennsylvania, USA) on the topic of *Types in concurrency*, and by Jan Friso Groote (CWI, Netherlands) on *Checking verifications of protocols and distributed systems by computer.*

We would like to thank all the members of the program committee, and their subreferees, for putting up the selective program of the conference. The program committee members are Martin Abadi (Digital, Systems Research Center), Andrea Asperti (University of Bologna), Julian Bradfield (University of Edinburgh), Edmund Clarke (Carnegie Mellon University) Javier Esparza (Technische Universitat Munchen), Paul Gastin (University of Paris 7), Rob van Glabbeek (Stanford University), Georges Gonthier (INRIA Rocquencourt), Matthew Hennessy (Sussex University), Oded Maler (Verimag Grenoble), Faron Moller (Upp-

sala University), Ugo Montanari (University of Pisa), Madhavan Mukund (SMI Madras), Mogens Nielsen (University of Aarhus), Prakash Panangaden (Mc Gill University), Joachim Parrow (Royal Institute of Technology), Arend Rensink (University of Hildesheim), Carolyn Talcott (Stanford University), and Joseph Winkowski (Polish Academy of Sciences).

Special thanks is due to the local organisation committee: Amar Bouali dealt patiently with electronic submission and refereeing process; Silvano Dal-Zilio supervised the assembly into proceedings in the LNCS style; Gérard Boudol, Ilaria Castellani, and Massimo Merro also gave a great deal of help; Dany Sergeant and Françoise Martin-Trucas assisted us diligently. We have used the package for electronic submissions written by Vladimiro Sassone; many thanks to him for allowing us to use it.

The following satellite workshops will take place in conjunction with CONCUR '98: COTIC'98 (second international workshop on Concurrent Constraint Programming for Time Critical Applications), EXPRESS'98 (5th international workshop on Expressiveness in Concurrency), HLCL'98 (3rd international workshop on High-Level Concurrent Languages), PAPM'98 (6th international workshop on Process Algebra and Performance Modeling), CONFER W.G. (4th workshop of the CONFER working group).

Support for CONCUR'98 has generously been provided by CNET France-Telecom, Dassault-Aviation, Simulog, the Centre de Mathématiques Appliquées from Ecole des Mines de Paris, and INRIA (which also backed us with logistics).

Sophia-Antipolis
June 1998

Davide Sangiorgi
Robert de Simone

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