

# Preface

This volume contains the proceedings of the 11th International Conference on Concurrency Theory (CONCUR 2000) held in State College, Pennsylvania, USA, during 22-25 August 2000.

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 covers all areas of semantics, logics, and verification techniques for concurrent systems. Topics include concurrency related aspects of: models of computation, 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 first two CONCUR conferences were held in Amsterdam (NL) in 1990 and 1991. The following ones in Stony Brook (USA), Hildesheim (D), Uppsala (S), Philadelphia (USA), Pisa (I), Warsaw (PL), Nice (F), and Eindhoven (NL). The proceedings have appeared in Springer LNCS, as Volumes 458, 527, 630, 715, 836, 962, 1119, 1243, 1466, and 1664.

Of the 72 regular papers submitted this year, 34 were accepted for presentation and are included in the present volume. The conference included also talks by four invited speakers: Ed Brinksma (Universiteit Twente, NL), Alberto Sangiovanni-Vincentelli (UC at Berkeley, USA), Natarajan Shankar (SRI International, USA), and Eugene Stark (SUNY at Stony Brook, USA). Additionally, there were four invited tutorials by Rajeev Alur (University of Pennsylvania, USA), Rocco De Nicola (Università di Firenze, I), Philippa Gardner (University of Cambridge, UK), and C. R. Ramakrishnan (SUNY at Stony Brook, USA).

The conference had four satellite events:

- EXPRESS'00 (7th International Workshop on Expressiveness in Concurrency), organized by Luca Aceto and Björn Victor, held on 21 August 2000.
- GETCO 2000 (2nd Workshop on Geometric and Topological Methods in Concurrency Theory), organized by Eric Goubault, Maurice Herlihy, and Martin Raussen, held on 21 August 2000.
- YOO (Why Object-Orientation) organized by Arend Rensink, held on 26 August 2000.
- MTCS 2000 (First Workshop on Models for Time-Critical Systems) organized by Flavio Corradini and Paola Inverardi, held on 26 August 2000.

I would like to thank my conference co-chair, Dale Miller, the members of the program committee and their subreferees, the workshop chair, Uwe Nestmann, and the workshop organizers. I also would like to thank the invited speakers and

invited tutorial speakers, the authors of submitted papers, and all the participants of the conference. Special thanks go to Vladimiro Sassone for providing the software that helped to handle the submissions and the electronic PC meeting. Finally, I would like to thank the Department of Computer Science and Engineering of the Pennsylvania State University for sponsoring the event and providing many facilities.

I also would like to express all my gratitude and love to my husband Dale Miller and to our baby daughter, Nadia Alexandra Miller, for their patience with a wife and mom who was even busier than usual.

June 2000

Catuscia Palamidessi

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## Referees

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Luca Aceto	David de Frutos-Escrig	Dale Miller
Luca de Alfaro	Fabio Gadducci	Robin Milner
Rajeev Alur	Paul Gastin	Marius Minea
Roberto Amadio	Simon Gay	Madhavan Mukund
Suzana Andova	Stefania Gnesi	Uwe Nestmann
André Arnold	Jan Friso Groote	Rocco De Nicola
Thomas Arts	Vineet Gupta	Mogens Nielsen
Eric Badouel	Dilian Gurov	Thomas Noll
Jos Baeten	Keijo Heljanko	Gethin Norman
Paolo Baldan	Matthew Hennessy	Catuscia Palamidessi
Marek A. Bednarczyk	Jesper G. Henriksen	Prakash Panangaden
Giampaolo Bella	Thomas Henzinger	Dave Parker
Eike Best	Holger Hermanns	Joachim Parrow
Chiara Bodei	Thomas T. Hildebrandt	Doron Peled
Frank de Boer	Leszek Holenderski	Wojciech Penczek
Roland Bol	Kohei Honda	Antoine Petit
Michele Boreale	Benjamin Horowitz	Paul Pettersson
Michel Le Borgne	Hans Hüttel	Anna Philippou
Dragan Bošnački	Anna Ingólfssdóttir	Sophie Pinchinat
Ahmed Bouajjani	Purushothaman Iyer	Alban Ponse
Amar Bouali	Radha Jagadeesan	Rosario Pugliese
Gérard Boudol	Bengt Jonsson	Michel A. Reniers
Olivier Bournez	Jan Jürjens	Arend Rensink
Stephen Brookes	Joost-Pieter Katoen	John Reppy
Roberto Bruni	Josva Kleist	Elvinia Riccobene
Glenn Bruns	Maciej Koutny	Mark Ryan
Benoît Caillaud	K. Jelling Kristoffersen	Andrei Sabelfeld
Luca Cardelli	Marta Kwiatkowska	Steve Schneider
Ilaria Castellani	Barbara König	Phil Scott
Rance Cleaveland	Anna Labella	Roberto Segala
Andrea Corradini	Patrick Lam	Robert de Simone
Flavio Corradini	Rom Langerak	Eugene Stark
Jean-Michel Couvreur	Diego Latella	Gheorghe Ștefănescu
Pedro R. D'Argenio	Björn Lisper	Maciej Szreter
Philippe Darondeau	Michele Loreti	Jean-Pierre Talpin
Pierpaolo Degano	Gavin Lowe	P. S. Thiagarajan
Raymond Devillers	Bas Luttik	Emilio Tuosto
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André Engels	Freddy Y. C. Mang	Moshe Vardi
Javier Esparza	Will Marrero	Björn Victor
Gianluigi Ferrari	Narciso Marti-Oliet	Marc Voorhoeve
Hans Fleischhack	Richard Mayr	Michał Walicki
Riccardo Focardi	Massimo Merro	Heike Wehrheim

VIII Referees

Harro Wimmel  
Wang Yi

Nobuko Yoshida

Wieslaw Zielonka  
Pascal Zimmer