

Foreword

This volume contains the revised versions of papers presented at the fourth international Workshop on Implementing Automata (WIA), held 17–19 July, 1999, at Potsdam University, Germany.

As for its predecessors, the theme of WIA99 was the implementation of automata and grammars of all types and their application in other fields. The papers contributed to this volume address, among others, algorithmic issues regarding automata, image and dictionary storage by automata, and natural language processing.

In addition to the papers presented in these proceedings, the workshop included a paper on quantum computing by C. Calude, E. Calude, and K. Svozil (published elsewhere), an invited lecture by W. Thomas on *Algorithmic Problems in the Theory of ω -Automata*, a tutorial by M. Silberztein on the INTEX linguistic development environment, and several demonstrations of systems.

The local arrangements for WIA99 were conducted by Helmut Jürgensen, Suna Aydin, Oliver Boldt, Carsten Haustein, Beatrice Mix, and Lynda Robbins. The meeting was held in the *Communs* building, now the main university building, of the New Palace in the park of Sanssouci, Potsdam.

The program committee for WIA99 was:

A. Brüggemann-Klein	Technische Universität München
J.-M. Champarnaud	Université de Rouen
F. Günthner	Universität München
H. Jürgensen	Universität Potsdam and University of Western Ontario
D. Maurel	Université de Tours
D. Raymond	Gateway Group Inc.
K. Salomaa	University of Western Ontario
W. Thomas	Rheinisch-Westfälische Technische Hochschule Aachen
B. Watson	Ribbit Software Systems Inc.
D. Wood	Hong Kong University of Science and Technology
S. Yu	University of Western Ontario

The work of the program committee, the reviewers, and the local arrangements team is gratefully acknowledged.

At the general WIA meeting it was decided to rename WIA into *International Conference on the Implementation and Application of Automata* (CIAA) and to hold the first CIAA, that is, the fifth WIA, in London, Ontario, Canada, in the summer of 2000 in conjunction with the *Workshop on Descriptive Complexity of Automata, Grammars, and Related Structures* (DCAGRS) and a special day devoted to the 50th anniversary of automaton theory. The complete event would be called *Half a Century of Automaton Theory*.