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# Automata Implementation

Third International Workshop
on Implementing Automata, WIA'98
Rouen, France, September 17-19, 1998
Revised Papers

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# Foreword

The papers contained in this volume were presented at the third international Workshop on Implementing Automata, held September 17–19, 1998, at the University of Rouen, France.

Automata theory is the cornerstone of computer science theory. While there is much practical experience with using automata, this work covers diverse areas, including parsing, computational linguistics, speech recognition, text searching, device controllers, distributed systems, and protocol analysis. Consequently, techniques that have been discovered in one area may not be known in another. In addition, there is a growing number of symbolic manipulation environments designed to assist researchers in experimenting with and teaching on automata and their implementation; examples include FLAP, FADELA, AMORE, FireLite, Automate, AGL, Turing's World, FinITE, INR, and Grail. Developers of such systems have not had a forum in which to expose and compare their work. The purpose of this workshop was to bring together members of the academic, research, and industrial communities with an interest in implementing automata, to demonstrate their work and to explain the problems they have been solving.

These workshops started in 1996 and 1997 at the University of Western Ontario, London, Ontario, Canada, prompted by Derick Wood and Sheng Yu. The major motivation for starting these workshops was that there had been no single forum in which automata-implementation issues had been discussed. The interest shown in the first and second workshops demonstrated that there was a need for such a forum. The participation at the third workshop was very interesting: we counted sixty-three registrations, four continents, ten countries, twenty-three universities, and three companies.

The general organization and orientation of WIA conferences is governed by a steering committee composed of Jean-Marc Champarnaud, Stuart Margolis, Denis Maurel, and Sheng Yu, with Derick Wood as chair. The WIA 1999 meeting will be held at the University of Potsdam, Germany, and the 2000 meeting in London, Ontario.

June 1999 Jean-Marc Champarnaud Denis Maurel Djelloul Ziadi

# Organization

WIA'98 was organized in France by Jean-Marc Champarnaud and Djelloul Ziadi, LIFAR, University of Rouen, and Denis Maurel, LI/E3i, University of Tours.

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## Invited Talk

We thank Professors Georges Hansel and Maurice Nivat for their very interesting talks (that are not included in this book):

| | |
|---|---|
| Georges Hansel | *Automata and Logic* |
| Maurice Nivat | *Equivalences of NDFA's and Monoidal Morphisms* |

## Sponsoring Institutions

We would like to warmly thank all the sponsors who agreed to support WIA'98

Our administrative authorities were particularly generous:

- The Faculty of Science and Technology at Rouen
- The Scientific Council of the University
- The Ministry of National Education Research and Technology
- The Research Program PRC/GDR AMI (which involves the Ministry and the C.N.R.S.)

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- EDF Division Recherche
- Matra Systèmes et Information
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- Cap Gemini

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