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Foreword

This volume contains the Proceedings of the Fourth International Conference on Algebraic and Logic Programming (ALP), held in Madrid (Spain) on September 14-16, 1994.

Following the intention of the three previous ALP meetings in Gaussig (1988), Nancy (1990) and Volterra (1992), the conference aims at strengthening the connections between algebraic techniques and logic programming. Logic programming has been very successful during the last decades. Many efforts have been made to enhance its expressive power and efficiency, including in particular the emergence of constraint logic programming. On the other hand, the algebraic approach is very well suited to deal with such key notions as functions, types, equational theories, and modularity. As on previous occasions, ALP offers a unique opportunity to promote the application of algebraic tools within logic programming and the cross-fertilizing exchange of ideas among researchers from the algebraic and logic communities.

On this occasion, ALP is held concurrently with the Sixth International Symposium on Programming Language Implementation and Logic Programming (PLILP), which aims at stimulating research on new declarative concepts, methods, and techniques relevant for the implementation of programming languages, with particular emphasis on declarative ones.

The ALP Program Committee met in Madrid on May 6, 1994, and selected 17 papers from 41 submissions, coming from 17 countries. The selected contributions mainly cover the following topics:

- algebraic specification, theorem proving
- term rewriting, narrowing, resolution
- program semantics, analysis, transformations
- equational logic programming
- concurrent logic programming
- higher-order features

In addition to the selected papers, the scientific program includes three invited lectures (shared with PLILP) by Dale Miller (Univ. of Pennsylvania, USA), Catuscia Palamidessi (Univ. of Genova, Italy), and Robert Paige (Univ. of New York, USA). Abstracts of the invited talks are included both in this volume and in the proceedings volume of PLILP '94. A full version of Paige's invited paper can be found in the proceedings of PLILP '94

We would like to thank all members of the Program Committee and all the referees for their careful work in the reviewing and selection process.

Last but not least, we express our gratitude to all members of the local organizing committees, both of ALP and PLILP, for the effort they have invested.

July 1994

Giorgio Levi, Mario Rodríguez-Artalejo
Co-chairmen

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