

# Preface

Logic programming originates from the discovery that a subset of predicate logic could be given a procedural interpretation which was first embodied in the programming language Prolog. The unique features of logic programming make it appealing for numerous applications in artificial intelligence, computer-aided design and verification, databases, and operations research as well as to explore parallel and concurrent computing. The last two decades have witnessed substantial developments in this field from its foundations to implementation, applications, and the exploration of new language designs.

ICLP'94 was the eleventh international conference on logic programming and one of the two major annual international conferences reporting recent research results in logic programming. The technical program for the conference included tutorials, invited lectures, and presentations of refereed papers and posters. This volume contains the papers presented at the conference, the abstracts of the tutorials, and some of the invited talks. The conference was sponsored by the Association of Logic Programming, the Prolog Vendors Group, and CNR (Consiglio Nazionale delle Ricerche).

The papers were selected out of 142 submissions received in response to the call for papers. Each paper was sent to 5 reviewers (in general three from the program committee and two outside). Almost all papers were reviewed by at least four reviewers and the average number of reviewers was above 4.77. The review process was followed by a 15-day email discussion period to resolve as many technical disagreements as possible before the meeting. The program committee met at Brown University to select the 43 papers included in this volume.

In addition to the contributed papers, ICLP'94 featured superb invited talks and tutorials. Zohar Manna, Alan Mackworth, Simon Peyton Jones, and Jeannette Wing were kind enough to accept our invitation to give invited talks. Sverker Janson, Antonis C. Kakas and Paolo Mancarella, Kung-Kiu Lau and Geraint Wiggins, and Paola Mello agreed to give tutorials on the implementation of Andorra-based languages, abduction and abductive logic programming, synthesis of logic programs, and modularity in logic programming.

Finally, to foster the link between academia and industry, ICLP'94 featured an industrial section to demonstrate industrial applications of logic programming. Barry Crabtree and Brian Tester (British Telecom), Mehmet Dinçbas (Cosytec), Hans Nilsson (Ellemtel R\&D Inc), and Leon Sterling (Case Western) all accepted our invitation to talk about practical uses of logic programming technology.

Being program chair of ICLP is an unusual experience, because one needs to rely on so many people to manage the complexity of the task. I would like to spend the

rest of this preface to express my gratitude to some of them, apologizing in advance for any omission; first to the authors of the papers (accepted or rejected) who sent their work to ICLP '94; there were too many high-quality papers and choosing among them was a difficult task; to the program committee members of ICLP '94 who worked very hard to produce high-quality reviews in the imposed deadlines, allowing the discussion period to be productive; they are the best set of people to have on your side when running such a meeting; to all other reviewers who also worked hard to ensure a fair selection of the papers; to Susan Platt who helped me beyond the call of duty before, during, and after the meeting; I am glad she joined the department last year; to Mike Benjamin and Viswanath Ramachandran who helped prepare and run the meeting; to Maurice Bruynooghe, Manuel Hermenegildo, and D. H. D Warren for wise advice and suggestions; to Maurizio Martelli, the conference chair, and his organizing committee with whom it was a real pleasure to work; to Lee Naish for taking care of the poster sessions efficiently; to Catuscia Palamidessi for organizing the workshops in a perfect way; to Yves Deville for his numerous invaluable suggestions and his help in preparing and concluding the meeting; to Beth LaFortune Gies and Bob Prior from The MIT Press who made the editing process so smooth that I almost forgot about them; and finally, to close the loop, to Alain Colmerauer and Robert Kowalski for inventing Prolog and logic programming; Prolog is the best language to write the software needed to automate the organization of the program for such a conference.

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