

Preface

This volume contains the papers presented at the 1999 International Conference on Principles and Practice of Declarative Programming (PPDP'99) held in Paris from September 29 through October 1, 1999. PPDP'99 participated, together with the International Conference on Functional Programming (ICFP) and several related workshops, in a federation of colloquia known as Principles, Logics and Implementations of high-level programming languages (PLI'99). The overall event was organized by the Institut National de Recherche en Informatique et en Automatique (INRIA) and the ACM Special Interest Group for Programming Languages (ACM/SIGPLAN).

PPDP represents the union of two conferences that had been in existence for about a decade: Programming Languages, Implementations, Logics and Programs (PLILP) and Algebraic and Logic Programming (ALP). These conferences were held as one for the first time under the name PLILP/ALP in their tenth and seventh respective incarnations last year. The present rendition follows a decision by the combined steering committees to adopt a simpler name for the conference that also reflected the union. Continuing the tradition of PLILP/ALP, PPDP aims to stimulate research in the use of declarative methods in programming and on the design, application, and implementation of programming languages that support such methods. Topics of interest include the use of type theory, logics, and logical methods in understanding, defining, integrating, and extending programming paradigms such as those for functional, logic, object-oriented, constraint, and concurrent programming; support for modularity; the use of logics in the design of program development tools; development of implementation methods; and the application of the relevant paradigms and associated methods in industry and education. Many of these themes are reflected in the papers appearing in the present collection. Of particular note in these proceedings is the broad interpretation of declarative programming and the emphasis on both principles and practice in this area of research.

A few words about the selection of papers. Fifty-one full-length papers were received in response to the call for submissions. Each of these papers was reviewed by at least four individuals. The program committee met electronically in the last two weeks of April 1999 and, based on the reviews, selected 22 papers for presentation at the conference. A decision was also made during this meeting to include invited talks by Georges Gonthier (INRIA-Rocquencourt, France), Simon Peyton Jones (Microsoft Research, UK) and Pascal van Hentenryck (Catholic University of Louvain, Belgium), and tutorials by Chris Okasaki (Columbia University, USA) and Frank Pfenning (Carnegie Mellon University, USA) in the scientific program. These proceedings include all 22 contributed papers that were accepted, revised in accordance with the suggestions of the reviewers. Also included are papers that complement the presentations of Simon Peyton Jones and Pascal van Hentenryck and an abstract of the tutorial by

Frank Pfenning. Papers accompanying the remaining invited talk and tutorial were not received by the time of going to press.

Many people and institutions are to be acknowledged for their contributions to PPDP'99. The organization of this conference and PLI'99 would not have been possible but for the efforts of François Fages and Didier Rémy, the chairs of PPDP'99 and ICFP'99, and Annick Theis-Viemont and the INRIA staff. The quality of the technical program owes much to the diligence of the program committee members and the several referees whose help they enlisted. In addition to providing careful reviews of submitted papers, many of these individuals participated in extended discussions at the PC meeting towards ensuring consistency and accuracy in the selection process. At a financial level, PPDP'99 benefitted from a grant from the European Commission program for Training and Mobility of Researchers; this grant was mediated by the European Association for Programming Languages and Systems (EAPLS). Additional financial support was provided by the Centre National de la Recherche Scientifique (CNRS), Compu-logNet, Microsoft Research, Ministère de l'Education Nationale, de la Recherche et de la Technologie (Gouv. France), Trusted Logic, and France Telecom. Finally, the meeting received an endorsement from the Association for Logic Program-

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List of Referees

The following individuals and a few others who wished to remain anonymous have participated in the assessment of the manuscripts submitted to the conference:

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