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Jean-Pierre Jouannaud (Ed.)

Constraints in Computational Logics

First International Conference, CCL '94
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Preface

This volume contains the proceedings of the Conference “Constraints in Computational Logics” organized in Munich, Germany, September 7-9, 1994, by the ESPRIT Basic Research Action “Construction of Computational Logics”.

The past two decades have seen a proliferation of different programming styles: functional, logical, constraints based, object-oriented, and others. More recently, it has been recognized that these styles complement rather than exclude each other by being suitable for particular problem domains. As a consequence, combining programming paradigms has emerged as a significant research direction of its own, and constraints have often been used as a glue for these combinations.

CCL'94 aimed at attracting high quality original papers covering theoretical and practical issues in this direction of combining and extending programming paradigms, preferably (but not exclusively) by using constraints. Suggested, but not exclusive, topics of interest included: symbolic constraints, set constraints, numerical constraints, constraints for knowledge representation and processing, use of constraints for type checking and program analysis, multi-paradigm programming, abstract properties of combined calculi, combinations of computational logics, constraints in rewriting, deduction, and symbolic computations, and working systems.

CCL'94 attracted 52 papers authored by researchers from various countries all over the world. Each submission was reviewed by at least three referees. The members of the program committee met in May 1994 in Orsay and selected 21 contributions.

Besides these 21 contributions, CCL'94 invited 5 senior researchers to present some of their recent work, spanning altogether much of the domain of constraint programming. Max Dauchet explained the use of tree automata for solving some forms of constraint satisfaction problems. Dexter Kozen presented a constraint logic programming language of his own using set constraints. Helmut Simonis gave an overview of real-life applications developed with CHIP. Wayne Snyder discussed the possible uses of constraints in automated deduction. Last but not least, Gert Smolka proposed foundations for higher-order concurrent constraint programming.

I am very grateful to the committee members for their efforts and cooperation; to the referees for their excellent work; to Tobias Nipkow for taking care of local matters; to Hélène Kirchner for publicizing the conference; to the invited speakers for delivering high quality original presentations; to Hubert Comon and Evelyne Contejean for their help in organizing the work of the committee.

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Orsay, June 1994

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