Editorial

Artificial Intelligence has become a major discipline under the roof of Computer Science. This is also reflected by a growing number of titles devoted to this fast developing field to be published in our Lecture Notes in Computer Science. To make these volumes immediately visible we have decided to distinguish them by a special cover as Lecture Notes in Artificial Intelligence, constituting a subseries of the Lecture Notes in Computer Science. This subseries is edited by an Editorial Board of experts from all areas of AI, chaired by Jörg Siekmann, who are looking forward to consider further AI monographs and proceedings of high scientific quality for publication.

We hope that the constitution of this subseries will be well accepted by the audience of the Lecture Notes in Computer Science, and we feel confident that the subseries will be recognized as an outstanding opportunity for publication by authors and editors of the AI community.

Editors and publisher
Preface

This volume contains papers presented at an international workshop on extensions of logic programming, which was held at the Institute for Natural-Language Systems (Seminar für naturlich-sprachliche Systeme SNS) of the University of Tübingen on December 8-10, 1989.

Several recent extensions of definite Horn clause programming, especially those with a proof-theoretic background, have much in common. One common thread is a new emphasis on hypothetical reasoning, which is typically inspired by Gentzen-style sequent or natural deduction systems. This is not only of theoretical significance, but also bears upon computational issues. It was one purpose of the workshop to bring some of these recent developments together.

In concentrating on the proof-theoretic approach, however, other extensions of logic programming (such as constraint logic programming) had regrettably to be omitted, or could only be touched upon.

The papers in this volume are mainly concerned with the theoretical foundations, implementation and/or applications of proof-theoretically motivated extensions of logic programming. Since most of them cover several or all of these areas, they have simply been arranged in alphabetical order.

I would like to thank the authors and reviewers for meeting the deadlines. Special thanks are due to Franz Guenthner for his support. Finally, I would like to thank Jörg Siekmann and Springer-Verlag for the quick decision to accept these proceedings for the Lecture Notes series.

Tübingen, October 1990

Peter Schroeder-Heister
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