

**Lecture Notes in Artificial Intelligence**  
Subseries of Lecture Notes in Computer Science  
Edited by J. Siekmann

**Lecture Notes in Computer Science**  
Edited by G. Goos and J. Hartmanis

## **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**

# Lecture Notes in Artificial Intelligence

Edited by J. Siekmann

Subseries of Lecture Notes in Computer Science

475

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P. Schroeder-Heister (Ed.)

## Extensions of Logic Programming

International Workshop  
Tübingen, FRG, December 8–10, 1989  
Proceedings

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**Volume Editor**

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## 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 natürlich-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 Guenther 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

# Contents

|   |     |
|---|-----|
| Logic Programming with Sequent Systems:<br>A Linear Logic Approach.....                                   | 1   |
| <i>Jean-Marc Andreoli; Remo Pareschi</i>  |     |
| Predicates as Parameters in Logic Programming:<br>A Set-Theoretic Basis.....                              | 31  |
| <i>James H. Andrews</i>   |     |
| A Survey of GCLA:<br>A Definitional Approach to Logic Programming .....                                   | 49  |
| <i>Martin Aronsson; Lars-Henrik Eriksson; Lars Hallnäs; Per Kreuger</i>                                   |     |
| Some Applications of Gentzen’s Proof Theory in<br>Automated Deduction.....                                | 101 |
| <i>Michael Beeson</i>   |     |
| A Logic Program for Transforming Sequent Proofs to<br>Natural Deduction Proofs.....                       | 157 |
| <i>Amy Felty</i>  |     |
| Modal Provability Foundations for Negation by Failure.....  | 179 |
| <i>Dov M. Gabbay</i>  |     |
| Extensions to Logic Programming Motivated by<br>the Construction of a Generic Theorem Prover.....         | 223 |
| <i>Elsa L. Gunter</i>   |     |
| A Decision Procedure for Propositional N-Prolog .....   | 245 |
| <i>Jörg Hudelmaier</i>  |     |
| A Logic Programming Language with Lambda-Abstraction,<br>Function Variables, and Simple Unification ..... | 253 |
| <i>Dale Miller</i>  |     |
| Logic Programming, Functional Programming,<br>and Inductive Definitions.....                              | 283 |
| <i>Lawrence C. Paulson; Andrew W. Smith</i>   |     |

|   |     |
|---|-----|
| Logic Programming with Strong Negation .....                                    | 311 |
| <i>David Pearce; Gerd Wagner</i>  |     |
| Hypothetical Reasoning and Definitional Reflection<br>in Logic Programming..... | 327 |
| <i>Peter Schroeder-Heister</i>  |     |
| Non-Monotonicity and Conditionals in Dialogue Logic .....                       | 341 |
| <i>Toine van Hoof; Jaap Hoepelman</i>   |     |