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Preface

This volume contains papers presented at the third international workshop on extensions of logic programming, which was held at the Dipartimento di Elettronica, Informatica e Sistemistica of the University of Bologna, February 26–28, 1992.

The two previous workshops were held at the University of Tübingen, Germany, in December 1989 and at the Swedish Institute of Computer Science (SICS) in Kista, Sweden, in January 1991. Proceedings of these previous meetings have been published as Vol. 475 (P. Schroeder-Heister, ed.) and Vol. 596 (L.-H. Eriksson, L. Hallnäs, P. Schroeder-Heister, eds.) respectively, in the Lecture Notes in Artificial Intelligence series.

The main goal of the workshop was to discuss extensions of logic programming towards the artificial intelligence and software engineering areas, providing an opportunity to demonstrate implemented systems.

The papers presented here cover both theoretical and practical aspects. Some papers investigate topics such as abductive reasoning and negation. Some works discuss how to enhance the expressive power of logic programming by introducing constraints, sets and integration with functional programming. Other papers deal with the structuring of knowledge into modules, taxonomies and objects with the aim of extending logic programming towards software engineering applications. A section is devoted to papers concentrating on proof theory and inspired by Gentzen-style sequent or natural deduction systems. Moreover, topics such as concurrency are considered to enhance the expressive power of logic languages. Finally, some papers mainly concern techniques for implementing some of these logic programming extensions.

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DEIS (Dipartimento di Elettronica, Informatica e Sistemistica);
AI*IA (Associazione Italiana per l'Intelligenza Artificiale);
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GULP (Gruppo Utenti e Ricercatori Logic Programming).

We extend special thanks to the people in Bologna, working at the Dipartimento di Elettronica, Informatica e Sistemistica whose help made the workshop possible. Finally, we would like to thank Jörg Siekmann and Springer-Verlag for publishing these proceedings in their Lecture Notes series.

Contents

Negation

SLWV – A Theorem Prover for Logic Programming	1
<i>L.M. Pereira, L. Caires, J. Alferes</i>	
A Correct Goal-Directed Proof Procedure for a General Logic Program with Integrity Constraints	24
<i>K. Satoh, N. Iwayama</i>	
Declarative Semantics of Hypothetical Logic Programming with Negation as Failure	45
<i>P.M. Dung</i>	
Conditional Narrowing with Constructive Negation	59
<i>M.J. Ramírez, M. Falaschi</i>	

Constraints, Functions and Sets

CLP(λD) as a Deductive Database Language with Updates	80
<i>E. Bertino, M. Martelli, D. Montesi</i>	
Logic Programming with Functions over Order-Sorted Feature Terms	100
<i>H. Aï-Kaci, A. Podelski</i>	
A Direct Semantic Characterization of RELFUN	120
<i>H. Boley</i>	
Embedding Finite Sets in a Logic Programming Language	150
<i>A. Dovier, E.G. Omodeo, E. Pontelli, G. Rossi</i>	

Modules, Objects and Inheritance

A Modal Framework for Structured Logic Programs	168
<i>L. Giordano, A. Martelli</i>	
Metalogic for State Oriented Programming	187
<i>A. Brogi, F. Turini</i>	
On the Semantics of Inheritance in Logic Programming: Compositionality and Full Abstraction	205
<i>M. Bugliesi</i>	

Concurrency

The AbstrAct Scheme for Concurrent Programming	216
<i>A. Porto, P. Rosado</i>	
The π -Calculus as a Theory in Linear Logic: Preliminary Results	242
<i>D. Miller</i>	

Proof Theory

Natural Deduction Proof Theory for Logic Programming	265
<i>S. Keronen</i>	
A Typed Foundation for Directional Logic Programming	282
<i>U.S. Reddy</i>	

Implementation Issues

An Architecture for Prolog Extensions	319
<i>M. Meier, J. Schimpf</i>	
Techniques for Implementing Contexts in Logic Programming	339
<i>E. Denti, E. Lamma, P. Mello, A. Natali, A. Omicini</i>	
Implementing a Notion of Modules in the Logic Programming Language λ Prolog	359
<i>K. Kwon, G. Nadathur, D.S. Wilson</i>	
Implementational Issues in GCLA: A-Sufficiency and the Definiens Operation	394
<i>M. Aronsson</i>	