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Santiago Escobar (Ed.)

# Functional and Constraint Logic Programming

18th International Workshop, WFLP 2009  
Brasilia, Brazil, June 28, 2009  
Revised Selected Papers

Volume Editor

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# Preface

This volume contains a selection of the papers presented at the 18th International Workshop on Functional and (Constraint) Logic Programming (WFLP 2009), held on June 28, 2009 in Brasília, Brazil. Previous WFLP meetings were held in Siena (2008), Paris (2007), Madrid (2006), Tallinn (2005), Aachen (2004), Valencia (2003), Grado (2002), Kiel (2001), Benicassim (2000), Grenoble (1999), Bad Honnef (1998), Schwarzenberg (1997, 1995, and 1994), Marburg (1996), Rattenberg (1993), and Karlsruhe (1992).

The aim of the WFLP series is to bring together researchers interested in functional programming, (constraint) logic programming, as well as the integration of the two paradigms. It promotes the cross-fertilizing exchange of ideas and experiences among researchers and students from the different communities interested in the foundations, applications, and combinations of high-level, declarative programming languages and related areas.

WFLP 2009 solicited papers in all areas of functional and (constraint) logic programming, including but not limited to:

- Foundations: formal semantics, rewriting and narrowing, non-monotonic reasoning, dynamics, and type theory.
- Language Design: modules and type systems, multi-paradigm languages, concurrency and distribution, and objects.
- Implementation: abstract machines, parallelism, compile-time and run-time optimizations, and interfacing with external languages.
- Transformation and Analysis: abstract interpretation, specialization, partial evaluation, program transformation, and meta-programming.
- Software Engineering: design patterns, specification, verification and validation, debugging, and test generation.
- Integration of Paradigms: integration of declarative programming with other paradigms such as imperative, object-oriented, concurrent, and real-time programming.
- Applications: declarative programming in education and industry, domain-specific languages, visual/graphical user interfaces, embedded systems, WWW applications, knowledge representation and machine learning, deductive databases, advanced programming environments and tools.

The WFLP 2009 workshop was part of the Federated Conference on Rewriting, Deduction, and Programming (RDP 2009), which grouped together different events such as the 20th International Conference on Rewriting Techniques and Applications (RTA 2009), the 9th International Conference on Typed Lambda Calculi and Applications (TLCA 2009), the 4th Workshop on Logical and Semantic Frameworks, with Applications (LFSA 2009), the 10th International Workshop on Rule-Based Programming (RULE 2009), and the 9th International Workshop on Reduction Strategies in Rewriting and Programming (WRS 2009).

There were 14 original contributions to the workshop, the Program Committee selected nine papers for publication, and revised versions of these selected papers are included in this volume. Each contribution was reviewed by at least three Program Committee members. This volume also includes two invited contributions by Claude Kirchner from the Centre de Recherche INRIA Bordeaux - Sud-Ouest, France, and Roberto Ierusalimsky from the Departamento de Informática, PUC-Rio, Brazil. I would like to thank them for having accepted our invitation for both the scientific program and this volume. I am also grateful to Andrei Voronkov for his extremely useful EasyChair system for automation of conference chairing.

I would also like to thank all the members of the Program Committee and all the referees for their careful work in the review and selection process. Many thanks to all authors who submitted papers and to all conference participants. I gratefully acknowledge the *Departamento de Sistemas Informáticos y Computación* of the *Universidad Politécnica de Valencia*, who supported this event. Finally, I express our gratitude to all members of the Local Organization of the Federated Conference on Rewriting, Deduction, and Programming (RDP 2009), whose work made the workshop possible.

December 2009

Santiago Escobar

# Organization

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# Table of Contents

## Invited Papers

|                                                               |    |
|---------------------------------------------------------------|----|
| Programming with Multiple Paradigms in Lua .....              | 1  |
| <i>Roberto Ierusalimschy</i>                                  |    |
| Constraint Based Strategies .....                             | 13 |
| <i>Claude Kirchner, Florent Kirchner, and Hélène Kirchner</i> |    |

## Contributed Papers

|                                                                                                                      |     |
|----------------------------------------------------------------------------------------------------------------------|-----|
| Integrating ILOG CP Technology into $\mathcal{TCV}$ .....                                                            | 27  |
| <i>Ignacio Castiñeiras and Fernando Sáenz-Pérez</i>                                                                  |     |
| Termination of Context-Sensitive Rewriting with Built-In Numbers and<br>Collection Data Structures .....             | 44  |
| <i>Stephan Falke and Deepak Kapur</i>                                                                                |     |
| Semantic Labelling for Proving Termination of Combinatory Reduction<br>Systems .....                                 | 62  |
| <i>Makoto Hamana</i>                                                                                                 |     |
| A Taxonomy of Some Right-to-Left String-Matching Algorithms .....                                                    | 79  |
| <i>Manuel Hernández</i>                                                                                              |     |
| Type Checking and Inference Are Equivalent in Lambda Calculi with<br>Existential Types .....                         | 96  |
| <i>Yuki Kato and Koji Nakazawa</i>                                                                                   |     |
| Fast and Accurate Strong Termination Analysis with an Application to<br>Partial Evaluation .....                     | 111 |
| <i>Michael Leuschel, Salvador Tamarit, and Germán Vidal</i>                                                          |     |
| New Results on Type Systems for Functional Logic Programming .....                                                   | 128 |
| <i>Francisco J. López-Fraguas, Enrique Martín-Martin, and<br/>Juan Rodríguez-Hortala</i>                             |     |
| A Simple Region Inference Algorithm for a First-Order Functional<br>Language .....                                   | 145 |
| <i>Manuel Montenegro, Ricardo Peña, and Clara Segura</i>                                                             |     |
| A Theoretical Framework for the Declarative Debugging of Functional<br>Logic Programs with Lambda Abstractions ..... | 162 |
| <i>Rafael del Vado Vírveda and Ignacio Castiñeiras</i>                                                               |     |
| <b>Author Index</b> .....                                                                                            | 179 |