

NINTH INTERNATIONAL CONFERENCE ON
LOGIC PROGRAMMING AND NONMONOTONIC REASONING (LPNMR 2007)

**Workshop on Correspondence and Equivalence
for Nonmonotonic Theories (CENT 2007)**

Working Notes

David Pearce, Axel Polleres, Agustín Valverde, Stefan Woltran (editors)

© Copyright 2007 for the individual papers by the individual authors. Copying permitted for private and scientific purposes.
Re-publication of material in this volume requires permission of the copyright owners.

Preface

This volume consists of the contributions presented at the Workshop Correspondence and Equivalence for Nonmonotonic Theories, CENT 2007, colocated with LPNMR 2007 in Tempe, Arizona, USA on May 14 2007.

The systematic study of intertheory relations such as strong and uniform equivalence has recently become an active sub-area of research in the field of LPNMR. Various kinds of correspondence relations that may hold between logic programs or between nonmonotonic theories have been analysed and shown to be of practical relevance for theory or program transformation, optimisation and modularity. Several systems for verifying such relations have already been implemented. The papers in this volume explore this topic further and take it in several new directions.

We would like to express our warm thanks to the LPNMR programme chairs, Gerhard Brewka and John Schlipf, for agreeing to host this event in Tempe. A special thanks also to Chitta Baral, the local organiser of LPNMR, for his help in accommodating the workshop and printing these proceedings. Finally, we thank the contributors for their efforts to improve our understanding of this developing area and the programme committee members for their efforts to help improve the quality of our research.

April 2007

David Pearce
Axel Polleres
Agustín Valverde
Stefan Woltran

Workshop Organization

Steering committee

David Pearce (*Universidad Rey Juan Carlos, Spain*)
Axel Polleres (*Universidad Rey Juan Carlos, Spain*)
Agustín Valverde (*Universidad de Málaga, Spain*)
Stefan Woltran (*Vienna University of Technology, Austria*)

Program Committee

Wolfgang Faber (*University of Calabria, Italy*)
Katsumi Inoue (*National Institute of Informatics, Japan*)
Vladimir Lifschitz (*University of Texas at Austin, USA*)
Fangzhen Lin (*Hong Kong University of Science and Technology, China*)
Emilia Oikarinen (*Helsinki University of Technology, Finland*)
Riccardo Rosati (*Universita di Roma "La Sapienza", Italy*)
Hans Tompits (*Vienna University of Technology*)

Additional Referees

Pedro Cabalar
Johannes Oetsch

Table of Contents

| | |
|--|----|
| Yet Another Proof of the Strong Equivalence Between Propositional Theories and Logic Programs <i>Joohyung Lee, Ravi Palla</i> | 1 |
| A Common View on Strong, Uniform, and Other Notions of Equivalence in Answer-Set Programming <i>Stefan Woltran</i> | 13 |
| Alternative Characterizations for Program Equivalence under Answer-Set Semantics: Preliminary Report <i>Martin Gebser, Torsten Schaub, Hans Tompits, Stefan Woltran</i> | 25 |
| Relativised Equivalence in Equilibrium Logic and its Applications to Prediction and Explanation: Preliminary Report <i>David Pearce, Hans Tompits, Stefan Woltran</i> | 37 |
| Interpretability and Equivalence in Quantified Equilibrium Logic <i>David Pearce, Agustín Valverde</i> | 49 |

