



Preface

This volume contains the proceedings of the Fourth Workshop on Logical and Semantic Frameworks, with Applications (LSFA 2009). The workshop was held in Brasília, Brazil on August 28, 2009, as an affiliated event of the Federated Conference on Rewriting, Deduction and Programming (RDP 2009). Previous workshops have been organized in Natal (2006), Ouro Preto (2007) and Salvador (2008).

The aim of LSFA is to bring together researchers and students interested in theoretical and practical aspects of logical and semantic frameworks and their applications. This includes topics such as proof, type and rewriting theory, specification and deduction languages, formal semantics of languages and systems, among others.

For LSFA 2009, 7 regular papers were accepted for presentation out of 9 complete submissions. Each submission was reviewed by at least three reviewers, and an electronic Program Committee (PC) meeting was held using Voronkov's *EasyChair* system. The reviews were written by the 30 PC members and 9 additional reviewers. We would like to thank the PC members and the additional reviewers for doing such a great job in writing high-quality reviews in time and participating in the electronic PC discussion.

The LSFA 2009 program also included three invited talks by Delia Kesner (Pattern Calculi), Jonathan Seldin (A Reduction in Combinatory Logic Equivalent to $\lambda\beta$ -Reduction) and Luis Fariñas del Cerro (Deduction and Abduction of Information about an Entity), from which a technical contribution of the latter was reviewed and included in the proceedings.

In addition to the PC members, the authors and the invited speakers, many people helped to make LSFA 2009 a success. In particular, we would like to thank the LSFA Local Chair, Cláudia Nalon, who worked hard and was highly instrumental in guaranteeing this success.

Finally, we would like to thank the sponsors of LSFA 2009: the District Federal Research Support Foundation (FAPDF) and the Coordination of Personnel Training in Higher Education of the Brazilian Education Ministry (CAPES), the Brazilian Computer Science Society (SBC) and the *Universidade de Brasília* (UnB).

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