Preface

This volume contains the papers presented at Bridging-15: Bridging the Gap between Human and Automated Reasoning held on August 1st, 2015 in Berlin in conjunction with CADE-25.

Human reasoning or the psychology of deduction is well researched in cognitive psychology and in cognitive science. There are a lot of findings which are based on experimental data about reasoning tasks, among others models for the Wason selection task or the suppression task discussed by Byrne and others. This research is supported also by brain researchers, who aim at localizing reasoning processes within the brain. Automated deduction, on the other hand, is mainly focusing on the automated proof search in logical calculi. And indeed there is tremendous success during the last decades. Recently a coupling of the areas of cognitive science and automated reasoning is addressed in several approaches. For example, there is increasing interest in modeling human reasoning within automated reasoning systems including modeling with answer set programming, deontic logic or abductive logic programming. There are also various approaches within AI research.

This workshop is intended to get an overview of existing approaches and makes a step towards a cooperation between computational logic and cognitive science.

In total, seven papers were submitted to the workshop. From these, five have been accepted for presentation. The papers present the following strands: logic programming approaches to model human reasoning; formalization of syllogisms in human reasoning; computational models for human reasoning; benchmarks for commonsense reasoning; interactive theorem proving.

Apart from the accepted papers, the workshop program includes one keynote presentation by Marco Ragni. He can be seen as a representative of interdisciplinary research – holding two PhDs, one in computer science and one in cognitive science. His talk on *Three-levels of Analysis: Connecting cognitive theories of reasoning with empirical results and cognitive modeling* certainly can be understood as a bridge connecting various disciplines.

Finally, the Bridging-15 organizers seize the opportunity to thank the Program Committee members for their most valuable comments on the submissions, the authors for inspiring papers, the audience for their interest in this workshop, the local organizers from the CADE-25 team, and the Workshops Chair.

We hope that in the years to come, Bridging will become a platform for dialogue and interaction for researchers in both cognitive science and automated reasoning and will effectively help to bridge the gap between human and automated reasoning.

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Koblenz

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