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Rule-Based Reasoning, Programming, and Applications

5th International Symposium, RuleML 2011 – Europe
Barcelona, Spain, July 19-21, 2011
Proceedings

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Preface

The 5th International Symposium on Rules: Research Based and Industry Focused (RuleML-2011@IJCAI), collocated in Barcelona, Spain, with the 22nd International Joint Conference on Artificial Intelligence, was the premier place to meet and to exchange ideas from all fields of rule technology. The aim of RuleML-2011 was to build a bridge between academia and industry in the field of rules and semantic technology, and so to stimulate the cooperation and interoperability between business and research, by bringing together rule system providers, participants in rule standardization efforts, open source communities, practitioners, and researchers. This annual symposium is the flagship event of the Rule Markup and Modeling Initiative (RuleML).

The RuleML Initiative (www.ruleml.org) is a non-profit umbrella organization of several technical groups organized by representatives from academia, industry and government working on rule technology and its applications. Its aim is to promote the study, research and application of rules in heterogeneous distributed environments such as the Web. RuleML maintains effective links with other major international societies and acts as intermediary between various ‘specialized’ rule vendors, applications, industrial and academic research groups, as well as standardization efforts from, for example, W3C, OMG, and OASIS.

The International Symposium on Rules, RuleML, has evolved from an annual series of international workshops since 2002, international conferences in 2005 and 2006, and international symposia since 2007. In 2011 two instalments of the RuleML Symposium took place. The first one was held in conjunction with IJCAI 2011 (International Joint Conference on Artificial Intelligence) in Barcelona in July, and the second was collocated with the Business Rule Forum in November in Fort Lauderdale, Florida, USA. For RuleML-2011@IJCAI, a selection of the best papers was presented during a joint session with IJCAI, called “Large Track of Best Papers from Sister Conferences.” The authors of these papers also submitted a revised version of their papers for inclusion in the IJCAI proceedings.

The technical program showed a carefully selected presentation of current rule research and development in 18 full papers, 8 short papers, 3 invited track papers, and 2 keynote talks (abstracts included) detailed in this book. Accepted papers covered several aspects of rules, such as rule-based distributed/multi-agent systems, rules, agents and norms, rule-based event processing and reaction rules, fuzzy rules and uncertainty, rules and the Semantic Web, rule learning and extraction, rules and reasoning, and finally, rule-based applications. The papers were selected from 58 submissions received from 22 countries. Four of the submissions were selected from some worthy papers on topics related to RuleML originally submitted at IJCAI that marginally missed the acceptance cut-off. In order to increase the quality of the papers, this year a two-round

reviewing scheme was adopted to assess the revised papers from IJCAI and revised papers originally submitted to RuleML but not immediately accepted in the first reviewing round.

Due to the above efforts, RuleML-2011, like its predecessors, offered a high-quality technical and applications program, which was the result of the joint effort of the members of the RuleML-2011 Program Committee.

As the future of rule technology lies in the hands of today's students and young researchers, this year RuleML-2011 initiated a doctoral consortium to attract and promote PhD research in this field. The doctoral symposium offers students a close contact with leading experts in the field, as well as the opportunity to present and discuss their ideas in a dynamic and friendly setting. The accepted thesis descriptions span the full range of RuleML topics and were presented to an interested audience and subject to discussion with a panel of senior researchers.

A special thanks is due to the excellent Program Committee for their hard work in reviewing the submitted papers. Their criticism and very useful comments and suggestions were instrumental in achieving a high-quality publication. We also thank the symposium authors for submitting good papers, responding to the reviewers' comments, and abiding by our production schedule. We further wish to thank the keynote speakers for contributing their interesting talks. We are very grateful to the organizers of the 22nd International Joint Conference on Artificial Intelligence for enabling this fruitful collocation with RuleML-2011. Especially, we thank Toby Walsh for his support.

The RuleML-2011 Symposium was financially supported by industrial companies, research institutes and universities and was technically supported by several professional societies. We wish to thank our sponsors, whose financial support helped us to offer this event, and whose technical support allowed us to attract many high-quality submissions.

May 2011

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