Preface

RuleML+RR 2018 is the leading international joint conference in the field of rule-based reasoning, and focuses on theoretical advances, novel technologies, as well as innovative applications concerning knowledge representation and reasoning with rules, building bridges between academia and industry.

These proceedings present the papers presented at the Doctoral Consortium and The Rule Challenge hosted by [RuleML+RR 2018](#).

The Doctoral Consortium is an initiative of the RuleML and RR communities to attract and promote student research in rules and reasoning. It offers students a close contact with leading experts on the field, as well as the opportunity to present and discuss their ideas in a dynamic and friendly setting. The Doctoral Consortium topics range from theoretical aspects of rules and reasoning, such as pragmatic inference and ontological reasoning through machine learning, to practical applications, such as event detection and diagnosis for intelligent transport systems, temporal reasoning in the legal domain and decision-making support for Industry 4.0. Students will present their papers work through brief oral presentations during a dedicated session of the RuleML+RR main track, but also in the form of posters and will have the chance to discuss their research in detail with their assigned academic mentors during a dedicated mentoring session.

The RuleML+RR 2018 Challenge is one of the highlights of the conference, and provides competition among innovative rule-oriented applications, aimed at both the research and industrial side. Accepted demos range from language transformations, legal rules formalizations using PSOA-RuleML markup language, to goal-oriented decision systems and rule mining and classification.

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