

ARQNL 2018

Automated Reasoning in Quantified Non-Classical Logics

3rd International Workshop (associated with FLoC and IJCAR 2018)
18 July 2018, Oxford, United Kingdom

Motivation

Non-classical logics – such as modal logics, conditional logics, intuitionistic logic, description logics, temporal logics, linear logic, dynamic logic, deontic logics, fuzzy logic, paraconsistent logic, relevance logic – have many applications in AI, Computer Science, Philosophy, Linguistics, and Mathematics. Hence, the automation of proof search in these logics is a crucial task.

Aims and Scope

The ARQNL workshop aims at fostering the development of proof calculi, automated theorem proving systems and model finders for all sorts of quantified non-classical logics. The workshop will provide a forum for researchers to present and discuss recent developments in this area. The contributions may range from theory to system descriptions and implementations. Contributions may also outline relevant applications, describe problem formalizations, example problems, and benchmarks. We welcome contributions from computer scientists, linguists, philosophers, and mathematicians.

Topics of the ARQNL workshop will cover all aspects related to the automation of quantified non-classical logics, including but not limited to:

- Proof theory, semantics, meta theory, and cut-elimination
- Proof search calculi, including sequent calculi, tableau calculi, connection calculi, resolution calculi, and instance-based calculi
- Modal logic, conditional logic, intuitionistic logic, description logic, temporal logic, linear logic, multivalued logic, dynamic logic, deontic logic, fuzzy logic, paraconsistent logic, relevance logic, free logic, and natural logic
- Techniques, strategies and heuristics to deal with first-order or higher-order quantification
- Implementation of theorem provers and experimental evaluations
- Problem libraries and benchmarking for theorem provers
- Applications, formalizations, and example problems
- User interfaces, proof representation, and syntax issues

ARQNL 2018 is associated with IJCAR 2018, the International Joint Conference on Automated Reasoning, which is part of FLoC.

Invited Speakers

- Larry Moss (Indiana University)
- Giles Reger (University of Manchester)

Paper Submissions

Submissions of papers are solicited in two categories:

- Full papers (up to 15 pages)
- Short papers, talk abstracts, system demonstrations (up to 8 pages)

Submission is electronically, through EasyChair (see the ARQNL website for further details). Submissions will be refereed by the programme committee, and evaluated with respect to relevance, originality, and correctness. Proceedings will be published in the CEUR Workshop Proceedings (CEUR-WS) or the EasyChair Proceedings in Computing (EPiC) series. They will also be included on the FLoC USB flash drive distributed to all participants. We will also consider producing a special issue of a recognized journal on the topic of the workshop.

Important Dates

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| Abstract submission: | 8 April 2018 |
| Paper submission: | 15 April 2018 |
| Author notification: | 15 May 2018 |
| Final paper version: | 25 May 2018 |
| Workshop: | 18 July 2018 |

Programme Committee

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| Christoph Benzmüller (co-chair) (Freie Universität Berlin) |
| José Luiz Fiadeiro (Royal Holloway Univ. of London) |
| Marcelo Finger (University of São Paulo) |
| Didier Galmiche (LORIA – Université de Lorraine) |
| Rajeev Goré (The Australian National University) |
| Andreas Herzig (IRIT-CNRS) |
| Sven Linker (University of Liverpool) |
| Aniello Murano (University of Naples Federico II) |
| Hans De Nivelle (Nazarbayev University) |
| Jens Otten (co-chair) (University of Oslo) |
| Valeria De Paiva (Nuance Communications) |
| Xavier Parent (University of Luxembourg) |
| Revantha Ramanayak (Vienna University of Technology) |
| Giselle Reis (Carnegie Mellon University) |
| Leila Ribeiro (Univ. Fed. do Rio Grande do Sul) |
| Bruno Woltzenlogel Paleo (Vienna University of Technology) |

Organizers

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More Information

Web: <http://iltp.de/ARQNL-2018/>