

===== Call for Papers =====

11th International  
**Workshop on Rewriting Logic and its Applications**

An ETAPS 2016 satellite event  
Eindhoven, The Netherlands, April 2-3, 2016

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**IMPORTANT DATES**

- \* EXTENDED Submission deadline: January 15th 2016
- \* Author notification: February 14th 2016
- \* Workshop: Saturday April 2nd and Sunday April 3rd, 2016

**AIMS AND SCOPE**

Rewriting is a natural model of computation and an expressive semantic framework for concurrency, parallelism, communication, and interaction. It can be used for specifying a wide range of systems and languages in various application domains. It also has good properties as a metalogical framework for representing logics. Several successful languages based on rewriting (ASF+SDF, CafeOBJ, ELAN, Maude) have been designed and implemented. The aim of WRLA is to bring together researchers with a common interest in rewriting and its applications, and to give them the opportunity to present their recent work, discuss future research directions, and exchange ideas. The 2016 edition of WRLA will mark its 20th anniversary since its first edition in Asilomar, California, in 1996.

The topics of the workshop include, but are not limited to:

A. Foundations

- \* foundations and models of rewriting and rewriting logic, including termination, confluence, coherence and complexity
- \* unification, generalisation, narrowing, and partial evaluation
- \* constrained rewriting and symbolic algebra
- \* graph rewriting
- \* tree automata
- \* rewriting strategies
- \* rewriting-based calculi and explicit substitutions

B. Rewriting as a Logical and Semantic Framework

- \* uses of rewriting and rewriting logic as a logical framework, including deduction modulo
- \* uses of rewriting as a semantic framework for programming language semantics
- \* rewriting semantics of concurrency models, distributed systems, and network protocols
- \* rewriting semantics of real-time, hybrid, and probabilistic systems
- \* uses of rewriting for compilation and language transformation

C. Rewriting Languages

- \* rewriting-based declarative languages
- \* type systems for rewriting
- \* implementation techniques
- \* tools supporting rewriting languages

D. Verification Techniques

- \* verification of confluence, termination, coherence, sufficient completeness, and related properties
- \* temporal, modal and reachability logics for verifying dynamic properties of rewrite theories
- \* explicit-state and symbolic model-checking techniques for verification of rewrite theories
- \* rewriting-based theorem proving, including (co)inductive theorem proving
- \* rewriting-based constraint solving and satisfiability
- \* rewriting-semantics-based verification and analysis of programs

#### E. Applications

- \* applications to logic, mathematics and physics
- \* rewriting models of biology, chemistry, and membrane systems
- \* security specification and verification
- \* applications to distributed, network, mobile, and cloud computing
- \* specification and verification of real-time, probabilistic, and cyber-physical systems
- \* specifications and verification of critical systems
- \* applications to model-based software engineering
- \* applications to engineering and planning

#### INVITED SPEAKERS

Nikolaj Bjorner (Microsoft Research)  
 Helene Kirchner (INRIA, France)

#### SUBMISSION

We solicit submissions of regular papers, tool papers, and work-in-progress papers.

Regular papers must contain original contributions, be clearly written, include appropriate references, and comparison with related work. They must be unpublished and not submitted simultaneously for publication elsewhere.

Tool papers have to present a new tool, a new tool component, or novel extensions to an existing tool. They should provide a short description of the theoretical foundations with relevant citations, emphasise the design and implementation, and give a clear account of the tool's functionality. The described tools must be publicly available via the web.

Work-in-progress papers present early-stage work or other types of innovative or thought-provoking work related to the topics of the workshop. The difference between work-in-progress and regular papers is that work-in-progress submissions represent work that has not reached yet a level of completion that would warrant the full-refereed selection process. We encourage researchers and practitioners to submit work-in-progress papers as this provides a unique opportunity for sharing valuable ideas, eliciting useful feedback on ongoing work, and fostering discussions and collaborations among colleagues.

All submissions should be formatted according to the guidelines for Springer LNCS papers, and should be submitted electronically using EasyChair at

<https://easychair.org/conferences/?conf=wrla2016>

Regular and work-in-progress papers should not exceed 15 pages including references. Tool papers can have a maximum of 6 pages including references

and may have an appendix of up to 4 additional pages with usage details and tool demonstration.

#### PUBLICATION

All submissions will be evaluated by the program committee. Regular papers, tool papers, and work-in-progress papers that are accepted will be presented at the workshop and included in the pre-proceedings, which will be available during the workshop. Following the tradition of the last editions, the regular papers, tool papers, and invited presentations will be published as a volume in Springer's Lecture Notes in Computer Science (LNCS) series to be distributed after the workshop.

A special issue of the Journal of Logical and Algebraic Methods in Programming (JLAMP) will be devoted to extended versions of selected papers from WRLA 2016.

#### PROGRAM COMMITTEE

Kyungmin Bae, SRI International, USA  
Mark van den Brand, Eindhoven University of Technology, The Netherlands  
Roberto Bruni, University of Pisa, Italy  
Stefan Ciobaca, Alexandru Ioan Cuza University, Romania  
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#### CONTACT INFORMATION

For more information, please contact the organizers  
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or visit the workshop web page  
<http://fmse.info.uaic.ro/events/WRLA2016/>