WRLA 2018, the 12th International Workshop on Rewriting Logic and its Applications
An ETAPS 2018 satellite event - Thessaloniki, Greece, April 14-15 2018

IMPORTANT DATES
Submission deadline: January 5th 2018
Author notification: February 16th 2018

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 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, generalization, narrowing, and partial evaluation
  constrained rewriting and symbolic algebra
  graph rewriting
  tree automata
  rewriting strategies
  rewriting-based calculi and explicit substitution

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 in logic, mathematics, physics, and biology
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, hybrid, probabilistic, and cyber-physical systems
specification and verification of critical systems
applications to model-based software engineering
applications to engineering and planning.

INVITED SPEAKERS
(to be defined)

SUBMISSION
The final program of the workshop will include regular papers, tool papers, and work-in-progress presentations. The program will also contain invited talks, invited papers, and tutorials to be determined by the program committee.

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, emphasize 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. Papers should be submitted electronically as a PDF file via the EasyChair system at https://easychair.org/conferences/?conf=wrla2018

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 2018.
PROGRAM COMMITTEE

Kyungmin Bae, POSTECH, Korea
Roberto Bruni, University of Pisa, Italy
Stefan Ciobaca, Alexandru Ioan Cuza University, Romania
Francisco Durán, Universidad de Málaga, Spain
Santiago Escobar, Universidad Politécnica de Valencia, Spain
Maribel Fernández, King’s College London, UK
Thomas Genet, IRISA/Université de Rennes 1, France
Jürgen Giesl, RWTH Aachen, Germany
Deepak Kapur, University of New Mexico, USA
Helene Kirchner, INRIA, France
Alexander Knapp, Universitat Augsburg, Germany
Alberto Lluch Lafuente, Technical University of Denmark, Denmark
Dorel Lucanu, Alexandru Ioan Cuza University, Romania
Salvador Lucas, Universidad Politécnica de Valencia, Spain
Narciso Martí-Oliet, Universidad Complutense de Madrid, Spain
Ugo Montanari, University of Pisa, Italy
Pierre-Etienne Moreau, Université de Lorraine, France
Vivek Nigam, Federal University of Paraíba, Brasil
Kazuhiro Ogata, JAIST, Japan
Peter Ölveczky, University of Oslo, Norway
Christophe Ringeissen, INRIA-Lorraine Nancy, France
Grigore Rosu, University of Illinois at Urbana-Champaign, USA
Vlad Rusu, INRIA Lille Nord-Europe, France (chair)
Ralf Sasse, ETH Zurich, Switzerland
Traian-Florin Serbanuta, University of Bucharest, Romania
Mark-Oliver Stehr, SRI International, USA
Carolyn Talcott, SRI International, USA
Martin Wirsing, Ludwig-Maximilians-Universität München, Germany

CONTACT INFORMATION
For more information, please contact the organizers
Vlad.Rusu@inria.fr
or visit the workshop’s web page
https://project.inria.fr/wrla18/