

## PREFACE

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The 19th International Conference on Relational and Algebraic Methods in Computer Science, RAMiCS 2021, took place at CIRM, Marseille, on 2 - 5 November 2021.

This event featured 43 lectures in selected areas:

- Theory:
  - algebras such as semigroups, residuated lattices, semirings, Kleene algebras, relation algebras and quantales,
  - their connections with program logics and other logics,
  - their use in the theories of automata, concurrency, formal languages, games, networks and programming languages,
  - the development of algebraic, algorithmic, category-theoretic, coalgebraic and proof-theoretic methods for these theories,
  - their formalisation with theorem provers.
- Applications:
  - tools and techniques for program correctness, specification and verification,
  - quantitative and qualitative models and semantics of computing systems and processes,
  - algorithm design, automated reasoning, network protocol analysis, social choice, optimisation and control,
  - industrial applications.

The current issue of the journal Logical Methods in Computer Science features 5 articles which are based on selected contributions that appeared in the RAMiCS 2021 conference proceedings. The authors of these papers have been invited to contribute to this issue on the base of the scientific quality of their contributions, assessed during the refereeing process of the conference and during the conference itself.

Since 1994, the RAMiCS conference series has been the main venue for research on relation algebras, Kleene algebras and similar algebraic formalisms, and their applications as conceptual and methodological tools in computer science and beyond.

### **RAMiCS 2021 Invited Speakers**

- Marcelo Frias (Argentina)
- Barbara König (Germany)
- Dmitriy Zhuk (Russia)

### **RAMiCS Steering Committee**

- Uli Fahrenberg (France)
- Roland Glück (Germany)
- Walter Guttmann (New Zealand)

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All articles have already been published in the regular issues of Logical Methods in Computer Science.

- Peter Höfner (Australia)
- Ali Jaoua (Qatar)
- Peter Jipsen (USA)
- Damien Pous (France)
- Luigi Santocanale (France)
- Michael Winter (Canada)

The volume was edited by the guest editors Luigi Santocanale (Aix-Marseille University, France) and Uli Fahrenberg (EPITA, Rennes, France). The editors wish to thank all authors and reviewers for their collaboration.

Relational and Algebraic Methods in Computer Science  
RAMiCS 2021 Guest Editors: Luigi Santocanale, Uli Fahrenberg.