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Reversible Computation

14th International Conference, RC 2022
Urbino, Italy, July 5–6, 2022
Proceedings

Springer

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Preface

This volume contains the papers presented at the 14th Conference on Reversible Computation (RC 2022), held during July 5–6, 2022, and hosted by University of Urbino, in Italy. For the past two years, the RC conference has been held online, due to the COVID-19 pandemic situation. This year, we attempted to get back to normality by holding the event in person in Urbino.

The RC conference brings together researchers from computer science, mathematics, engineering, and physics to discuss new developments and directions for future research in the emerging area of Reversible Computation. This includes, for example, reversible formal models, reversible programming languages, reversible circuits, and quantum computing.

This year, the conference received 20 submissions, and we would like to thank everyone who submitted. Each submission was reviewed by at least three reviewers, who provided detailed evaluations as well as constructive comments and recommendations. After careful reviewing and extensive discussions, the Program Committee (PC) accepted 11 full papers and five short papers for presentation at the conference. We would like to thank the PC members and all the additional reviewers for their truly professional work and strong commitment to the success of RC 2022. We are also grateful to the authors for taking into account the comments and suggestions provided by the referees during the preparation of the final versions of their papers.

Reversibility is catering to a lot of interest from industry. To mark this aspect, the conference program included two invited talks from industry. Robert O'Callahan discussed "Reverse Execution In The rr Debugger" and Vincent van Wingerden gave a talk on "An introduction to Azure Quantum and the Microsoft QDK".

Finally, we want to thank the University of Urbino for supporting the conference and the Department of Pure and Applied Sciences (DiSPeA) for providing the facilities and various other support for the success of the conference. Also, we would like to thank Rodolfo Rossini and his company Vaire for having partially supported RC 2022.

May 2022

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