

20th International Symposium on Experimental Algorithms

SEA 2022, July 25–27, 2022, Heidelberg, Germany

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■ Preface

We are pleased to present the collection of papers accepted for presentation at the 20th edition of the International Symposium on Experimental Algorithms (SEA 2022) which was held in Heidelberg from 25th July 2022 to 27th July 2022.

SEA, previously known as Workshop on Experimental Algorithms (WEA), is an international forum for researchers in the area of the design, analysis, and experimental evaluation and engineering of algorithms, as well as in various aspects of computational optimization and its applications (telecommunications, transport, bioinformatics, cryptography, learning methods, etc.). The symposium aims at attracting papers from both the Computer Science and the Operations Research/Mathematical Programming communities. Submissions to SEA are requested to present significant contributions supported by experimental evaluation, methodological issues in the design and interpretation of experiments, the use of heuristics and meta-heuristics, or application-driven case studies that deepen the understanding of the complexity of a problem. A main goal of SEA is also the creation of a friendly environment that can lead to and ease the establishment or strengthening of scientific collaborations and exchanges among attendees. For this reason, the symposium solicits high-quality original research papers (including significant work-in-progress) on any aspect of experimental algorithms.

Each submission that was made to SEA 2022 was reviewed by at least three Program Committee members or external reviewers. After a careful peer review and evaluation process, 24 papers were accepted for presentation and for inclusion in the LIPIcs proceedings, according to the reviewers' recommendations. The acceptance rate was 49%. The scientific program of the symposium also includes presentations by three keynote speakers: Tobias Achterberg (R&D Gurobi, Germany), Cynthia A. Phillips (Sandia National Laboratories, US) and Paul Spirakis (University of Liverpool, England and University of Patras, Greece). The conference reintroduced a best paper award. The best paper was selected by a selection committee formed by Kathrin Hanuaer, Simon Puglisi, Alex Pothén (chair of the best paper selection committee), and Julian Shun. Based on the committee's careful assessment, the best paper was selected to be "Fast Succinct Retrieval and Approximate Membership using Ribbon" by Peter C. Dillinger, Lorenz Hubschle-Schneider, Peter Sanders and Stefan Walzer. We congratulate the authors and thank the selection committee.

The 20th edition of SEA was organized by the Algorithm Engineering group at Heidelberg University. We thank Catherine Proux-Wieland, Marcelo Fonseca Faraj and Ernestine Großmann for their help with the organization of the symposium. We also thank the faculty of mathematics and computer science for providing us with the facilities for the conference. Moreover, we would like to thank the SEA steering committee for giving us the opportunity to host SEA 2022. Thanks are also due to the editors of the ACM Journal of Experimental Algorithmics for their interest in hosting a special issue of the best papers presented at SEA 2022. We would like to thank Google for providing us with financial support as well as HGS MathComp for providing travel support for young scientists. Finally, we express our gratitude to the members of the Program Committee as well as numerous subreviews for their support, collaboration, and excellent work.

Heidelberg, July 2022

Christian Schulz and Bora Uçar



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