

30th Annual European Symposium on Algorithms

ESA 2022, September 5–9, 2022, Berlin/Potsdam, Germany

Edited by

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■ Preface

This volume contains the extended abstracts selected for presentation at ESA 2022, the 30th European Symposium on Algorithms. The event was organized by the Hasso Plattner Institute, Potsdam, Germany, as a part of ALGO 2022, on September 5–7, 2022.

The scope of ESA includes original, high-quality, theoretical and applied research on algorithms and data structures. Since 2002, it has had two tracks: the Design and Analysis Track (Track A), intended for papers on the design and mathematical analysis of algorithms, and the Engineering and Applications Track (Track B), for submissions that also address real-world applications, engineering, and experimental analysis of algorithms. A new track, S for Simplicity, was added this year, inviting contributions that simplify algorithmic results. We find that simpler algorithms are easier to implement, bridging the gap between theory and practice, and we find that new simple or elegant proofs are easier to understand and to teach, and may contain interesting new insights whose relevance only the future will reveal.

In response to the call for papers for ESA 2022, 300 papers were submitted, 214 for Track A, 46 for Track B, and 40 for Track S. Paper selection was based on originality, technical quality, exposition quality, and relevance. Each paper received at least three reviews. The program committees selected 92 papers for inclusion in the program: 68 from Track A, 14 from Track B, and 10 for Track S, yielding an overall acceptance rate of about 30%. The presentations of the accepted papers, together with two invited talks by Virginia Vassilevska (MIT) and Simon Puglisi (U. Helsinki), promise to make up a very exciting program.

The European Association for Theoretical Computer Science (EATCS) sponsored best paper and best student paper awards. A submission was eligible for the best student paper award if all authors were doctoral, master, or bachelor students at the time of submission. For track A, the best paper award was given to Stefan Walzer for the paper Insertion Time of Random Walk Cuckoo Hashing below the Peeling Threshold, and the best student paper award to Zoe Xi and William Kuszmaul for the paper Approximating Dynamic Time Warping Distance Between Run-Length Encoded Strings. For track B, the best paper award was given to Chris Schwiegelshohn and Omar Ali Sheikh-Omar for the paper An Empirical Evaluation of k -Means Coresets, and the best student paper award to Tim Zeitz and Nils Werner for the paper Combining Predicted and Live Traffic with Time-Dependent A* Potentials. The best paper award for track S was given to Alejandro Flores-Velazco for the paper Improved Search of Relevant Points for Nearest-Neighbor Classification—this was also the best student paper for this track.

We wish to thank all the authors who submitted papers for consideration, the invited speakers, the members of the program committees for their hard work, and the nearly 500 external reviewers who assisted the program committees in the evaluation process. Special thanks go to the organizing committee, who helped us with the organization of the conference.

Information on past ESA symposia, including locations and proceedings, is maintained at <http://esa-symposium.org>.



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