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■ Preface

This volume contains the extended abstracts selected for presentation at ESA 2026, the 34th European Symposium on Algorithms. The event was organized by the University of L'Aquila, the Gran Sasso Science Institute and the University of Rome "Tor Vergata" as a part of ALGO 2026, on August 31–September 4, 2026.

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), with a strong emphasis on the theoretical analysis of algorithms, and the Engineering and Applications Track (Track E, formerly Track B through ESA 2025), devoted to extensive experimental evaluations and original contributions to the engineering of algorithms for practical applications. In 2022, a Simplicity Track (Track S) was added, inviting submissions that prove or explain results, possibly already known, in a particularly clear, simple or elegant way.

In response to the call for papers for ESA 2026, 487 papers were submitted, 332 for Track A, 79 for Track E, and 76 for Track S. Paper selection was based on originality, technical quality, exposition quality, and relevance. Each paper received at least three reviews (except for those violating the submission guidelines).

There was a substantial increase in the number of submissions (+30% compared to last year). The program committees selected 158 papers for inclusion in the program: 114 from Track A, 21 from Track E, and 23 from Track S, yielding an overall acceptance rate of about 32%. The presentations of the accepted papers, together with two invited talks by Omri Weinstein (Hebrew University) and William Kuszmaul (Carnegie Mellon University) promise to make up an exciting program.

The European Association for Theoretical Computer Science (EATCS) sponsored best paper awards:

- For Track A, the best paper award was given to Robert Krauthgamer, Asaf Petruschka and Nir Petruschka for the paper *Fast Metric Decompositions in High Dimension*.
- For Track E, the best paper award was given to Johannes Breitling, Ragnar Groot Koerkamp, and Marvin Williams for the paper *SimdQuickHeap: The QuickHeap Reconsidered*.
- For Track S, the best paper award was given to Prantar Ghosh, Sahil Kuchlous, Shravan Mehra, and Sagnik Mukhopadhyay for the paper *The Power of the Score Sequence of a Tournament*.
- The best student paper award was given to Elad Tzalik for the paper *Greedy Completion for Weighted (α, β) -Spanners*.

The ESA Test-of-Time Award was given to Flavio Bonomi, Michael Mitzenmacher, Rina Panigrahy, Sushil Singh, and George Varghese for the paper *An Improved Construction for Counting Bloom Filters* published at ESA 2006.

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 759 external reviewers who assisted the program committees in the evaluation process. Special thanks go to the organizing committee.

Information on past ESA symposia, including locations and proceedings, is maintained at <https://algo-conference.org/>.

Philip Bille, Seth Pettie, and Sabine Storandt

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