

# 30th Annual European Symposium on Algorithms

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

Edited by

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## ■ Contents

Preface	
<i>Shiri Chechik, Gonzalo Navarro, Eva Rotenberg, and Grzegorz Herman</i> .....	0:xiii
Program Committees	
.....	0:xv–0:xvi
List of External Reviewers	
.....	0:xvii–0:xxi

## Regular Papers

Enumerating Minimal Connected Dominating Sets	
<i>Faisal N. Abu-Khzam, Henning Fernau, Benjamin Gras, Mathieu Liedloff, and Kevin Mann</i> .....	1:1–1:15
Non-Adaptive Edge Counting and Sampling via Bipartite Independent Set Queries	
<i>Raghavendra Addanki, Andrew McGregor, and Cameron Musco</i> .....	2:1–2:16
Hardness of Token Swapping on Trees	
<i>Oswin Aichholzer, Erik D. Demaine, Matias Korman, Anna Lubiw, Jayson Lynch, Zuzana Masárová, Mikhail Rudoy, Virginia Vassilevska Williams, and Nicole Wein</i> .....	3:1–3:15
Tight Bounds for Online Matching in Bounded-Degree Graphs with Vertex Capacities	
<i>Susanne Albers and Sebastian Schubert</i> .....	4:1–4:16
TSP in a Simple Polygon	
<i>Henk Alkema, Mark de Berg, Morteza Monemizadeh, and Leonidas Theocharous</i> .	5:1–5:14
Classical and Quantum Algorithms for Variants of Subset-Sum via Dynamic Programming	
<i>Jonathan Allcock, Yassine Hamoudi, Antoine Joux, Felix Klingelhöfer, and Miklos Santha</i> .....	6:1–6:18
Techniques for Generalized Colorful $k$ -Center Problems	
<i>Georg Anegg, Laura Vargas Koch, and Rico Zenklusen</i> .....	7:1–7:14
Simple Streaming Algorithms for Edge Coloring	
<i>Mohammad Ansari, Mohammad Saneian, and Hamid Zarrabi-Zadeh</i> .....	8:1–8:4
Computing Smallest Convex Intersecting Polygons	
<i>Antonios Antoniadis, Mark de Berg, Sándor Kisfaludi-Bak, and Antonis Skarlatos</i> .....	9:1–9:13
The Price of Hierarchical Clustering	
<i>Anna Arutyunova and Heiko Röglin</i> .....	10:1–10:14
Bounding and Computing Obstacle Numbers Of Graphs	
<i>Martin Balko, Steven Chaplick, Robert Ganian, Siddharth Gupta, Michael Hoffmann, Pavel Valtr, and Alexander Wolff</i> .....	11:1–11:13

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Computing NP-Hard Repetitiveness Measures via MAX-SAT <i>Hideo Bannai, Keisuke Goto, Masakazu Ishihata, Shunsuke Kanda, Dominik Köppl, and Takaaki Nishimoto</i> .....	12:1–12:16
Online Metric Allocation and Time-Varying Regularization <i>Nikhil Bansal and Christian Coester</i> .....	13:1–13:13
An Upper Bound on the Number of Extreme Shortest Paths in Arbitrary Dimensions <i>Florian Barth, Stefan Funke, and Claudius Proissl</i> .....	14:1–14:12
Galactic Token Sliding <i>Valentin Bartier, Nicolas Bousquet, and Amer E. Mouawad</i> .....	15:1–15:14
When Are Cache-Oblivious Algorithms Cache Adaptive? A Case Study of Matrix Multiplication and Sorting <i>Arghya Bhattacharya, Abiyaz Chowdhury, Helen Xu, Rathish Das, Rezaul A. Chowdhury, Rob Johnson, Rishab Nithyanand, and Michael A. Bender</i>	16:1–16:17
Simple Dynamic Spanners with Near-Optimal Recourse Against an Adaptive Adversary <i>Sayan Bhattacharya, Thatchaphol Saranurak, and Pattara Sukprasert</i> .....	17:1–17:19
Online Spanners in Metric Spaces <i>Sujoy Bhore, Arnold Filtser, Hadi Khodabandeh, and Csaba D. Tóth</i> .....	18:1–18:20
Sparse Temporal Spanners with Low Stretch <i>Davide Bilò, Gianlorenzo D’Angelo, Luciano Gualà, Stefano Leucci, and Mirko Rossi</i> .....	19:1–19:16
Resource Sharing Revisited: Local Weak Duality and Optimal Convergence <i>Daniel Blankenburg</i> .....	20:1–20:14
On the External Validity of Average-Case Analyses of Graph Algorithms <i>Thomas Bläsius and Philipp Fischbeck</i> .....	21:1–21:14
On Polynomial Kernels for Traveling Salesperson Problem and Its Generalizations <i>Václav Blažej, Pratibha Choudhary, Dušan Knop, Šimon Schierreich, Ondřej Suchý, and Tomáš Valla</i> .....	22:1–22:16
Maximizing Sums of Non-Monotone Submodular and Linear Functions: Understanding the Unconstrained Case <i>Kobi Bodek and Moran Feldman</i> .....	23:1–23:17
List Colouring Trees in Logarithmic Space <i>Hans L. Bodlaender, Carla Groenland, and Hugo Jacob</i> .....	24:1–24:15
Dynamic Coloring of Unit Interval Graphs with Limited Recourse Budget <i>Bartłomiej Bosek and Anna Zych-Pawlewicz</i> .....	25:1–25:14
Polynomial Kernel for Immersion Hitting in Tournaments <i>Łukasz Bożyk and Michał Pilipczuk</i> .....	26:1–26:17
A Systematic Study of Isomorphism Invariants of Finite Groups via the Weisfeiler-Leman Dimension <i>Jendrik Brachter and Pascal Schweitzer</i> .....	27:1–27:14



Faster Approximate Covering of Subcurves Under the Fréchet Distance <i>Frederik Brünig, Jacobus Conradi, and Anne Driemel</i> .....	28:1–28:16
Efficient Fréchet Distance Queries for Segments <i>Maïke Buchin, Ivor van der Hoog, Tim Ophelders, Lena Schlipf, Rodrigo I. Silveira, and Frank Staals</i> .....	29:1–29:14
Search-Space Reduction via Essential Vertices <i>Benjamin Merlin Bumpus, Bart M. P. Jansen, and Jari J. H. de Kroon</i> .....	30:1–30:15
Width Helps and Hinders Splitting Flows <i>Manuel Cáceres, Massimo Cairo, Andreas Grigorjew, Shahbaz Khan, Brendan Mumey, Romeo Rizzi, Alexandru I. Tomescu, and Lucia Williams</i> .....	31:1–31:14
Counting Simplices in Hypergraph Streams <i>Amit Chakrabarti and Themistoklis Haris</i> .....	32:1–32:19
Approximation Algorithms for Continuous Clustering and Facility Location Problems <i>Deeparnab Chakrabarty, Maryam Negahbani, and Ankita Sarkar</i> .....	33:1–33:15
Distinct Elements in Streams: An Algorithm for the (Text) Book <i>Sourav Chakraborty, N. V. Vinodchandran, and Kuldeep S. Meel</i> .....	34:1–34:6
Approximate Circular Pattern Matching <i>Panagiotis Charalampopoulos, Tomasz Kociumaka, Jakub Radoszewski, Solon P. Pissis, Wojciech Rytter, Tomasz Waleń, and Wiktor Zuba</i> .....	35:1–35:19
Multi-Dimensional Stable Roommates in 2-Dimensional Euclidean Space <i>Jiehua Chen and Sanjukta Roy</i> .....	36:1–36:16
Spanner Approximations in Practice <i>Markus Chimani and Finn Stutzenstein</i> .....	37:1–37:15
Determinants from Homomorphisms <i>Radu Curticapean</i> .....	38:1–38:7
Conditional Lower Bounds for Dynamic Geometric Measure Problems <i>Justin Dallant and John Iacono</i> .....	39:1–39:17
A Simpler QPTAS for Scheduling Jobs with Precedence Constraints <i>Syamantak Das and Andreas Wiese</i> .....	40:1–40:11
A Polynomial-Time Algorithm for 1/3-Approximate Nash Equilibria in Bimatrix Games <i>Argyrios Deligkas, Michail Fasoulakis, and Evangelos Markakis</i> .....	41:1–41:14
Near Optimal Algorithm for Fault Tolerant Distance Oracle and Single Source Replacement Path Problem <i>Dipan Dey and Manoj Gupta</i> .....	42:1–42:18
Fast Computation of Zigzag Persistence <i>Tamal K. Dey and Tao Hou</i> .....	43:1–43:15
Turbocharging Heuristics for Weak Coloring Numbers <i>Alexander Dobler, Manuel Sorge, and Anaïs Villedieu</i> .....	44:1–44:18

A Local Search Algorithm for Large Maximum Weight Independent Set Problems <i>Yuanyuan Dong, Andrew V. Goldberg, Alexander Noe, Nikos Parotsidis, Mauricio G.C. Resende, and Quico Spaen</i> .....	45:1–45:16
SAT Backdoors: Depth Beats Size <i>Jan Dreier, Sebastian Ordyniak, and Stefan Szeider</i> .....	46:1–46:18
Finding a Cluster in Incomplete Data <i>Eduard Eiben, Robert Ganian, Iyad Kanj, Sebastian Ordyniak, and Stefan Szeider</i>	47:1–47:14
Lyndon Arrays Simplified <i>Jonas Ellert</i> .....	48:1–48:14
Learning-Augmented Query Policies for Minimum Spanning Tree with Uncertainty <i>Thomas Erlebach, Murilo Santos de Lima, Nicole Megow, and Jens Schlöter</i> .....	49:1–49:18
Faster Exponential-Time Approximation Algorithms Using Approximate Monotone Local Search <i>Bariş Can Esmer, Ariel Kulik, Dániel Marx, Daniel Neuen, and Roohani Sharma</i>	50:1–50:19
Intersection Searching Amid Tetrahedra in 4-Space and Efficient Continuous Collision Detection <i>Esther Ezra and Micha Sharir</i> .....	51:1–51:17
Submodular Maximization Subject to Matroid Intersection on the Fly <i>Moran Feldman, Ashkan Norouzi-Fard, Ola Svensson, and Rico Zenklusen</i> .....	52:1–52:14
There and Back Again: On Applying Data Reduction Rules by Undoing Others <i>Aleksander Figiel, Vincent Froese, André Nichterlein, and Rolf Niedermeier</i> .....	53:1–53:15
Improved Search of Relevant Points for Nearest-Neighbor Classification <i>Alejandro Flores-Velazco</i> .....	54:1–54:10
Longest Cycle Above Erdős–Gallai Bound <i>Fedor V. Fomin, Petr A. Golovach, Danil Sagunov, and Kirill Simonov</i> .....	55:1–55:15
Improved Polynomial-Time Approximations for Clustering with Minimum Sum of Radii or Diameters <i>Zachary Friggstad and Mahya Jamshidian</i> .....	56:1–56:14
Simple Worst-Case Optimal Adaptive Prefix-Free Coding <i>Travis Gagie</i> .....	57:1–57:5
Taming Graphs with No Large Creatures and Skinny Ladders <i>Jakub Gajarský, Lars Jaffke, Paloma T. Lima, Jana Novotná, Marcin Pilipczuk, Paweł Rzażewski, and Uéverton S. Souza</i> .....	58:1–58:8
Faster Path Queries in Colored Trees via Sparse Matrix Multiplication and Min-Plus Product <i>Younan Gao and Meng He</i> .....	59:1–59:15
Computing the 4-Edge-Connected Components of a Graph: An Experimental Study <i>Loukas Georgiadis, Giuseppe F. Italiano, and Evangelos Kosinas</i> .....	60:1–60:16
Algorithmic Meta-Theorems for Combinatorial Reconfiguration Revisited <i>Tatsuya Gima, Takehiro Ito, Yasuaki Kobayashi, and Yota Otachi</i> .....	61:1–61:15

Efficient Recognition of Subgraphs of Planar Cubic Bridgeless Graphs <i>Miriam Goetze, Paul Jungeblut, and Torsten Ueckerdt</i> .....	62:1–62:14
Adaptive-Adversary-Robust Algorithms via Small Copy Tree Embeddings <i>Bernhard Haepler, D. Ellis Hershkowitz, and Goran Zuzic</i> .....	63:1–63:14
Hedonic Games and Treewidth Revisited <i>Tesshu Hanaka and Michael Lampis</i> .....	64:1–64:16
Fine-Grained Complexity Lower Bounds for Families of Dynamic Graphs <i>Monika Henzinger, Ami Paz, and A. R. Sricharan</i> .....	65:1–65:14
$O(1)$ Steiner Point Removal in Series-Parallel Graphs <i>D. Ellis Hershkowitz and Jason Li</i> .....	66:1–66:17
Chromatic $k$ -Nearest Neighbor Queries <i>Thijs van der Horst, Maarten Löffler, and Frank Staals</i> .....	67:1–67:14
Maximum Weight $b$ -Matchings in Random-Order Streams <i>Chien-Chung Huang and François Sellier</i> .....	68:1–68:14
Embedding Phylogenetic Trees in Networks of Low Treewidth <i>Leo van Iersel, Mark Jones, and Mathias Weller</i> .....	69:1–69:14
Vertex Sparsifiers for Hyperedge Connectivity <i>Han Jiang, Shang-En Huang, Thatchaphol Saranurak, and Tian Zhang</i> .....	70:1–70:13
Approximation Algorithms for Round-UFP and Round-SAP <i>Debajyoti Kar, Arindam Khan, and Andreas Wiese</i> .....	71:1–71:19
Optimizing Safe Flow Decompositions in DAGs <i>Shahbaz Khan and Alexandru I. Tomescu</i> .....	72:1–72:17
Scheduling Kernels via Configuration LP <i>Dušan Knop and Martin Koutecký</i> .....	73:1–73:15
Abstract Morphing Using the Hausdorff Distance and Voronoi Diagrams <i>Lex de Kogel, Marc van Kreveld, and Jordi L. Vermeulen</i> .....	74:1–74:16
Average Sensitivity of the Knapsack Problem <i>Soh Kumabe and Yuichi Yoshida</i> .....	75:1–75:14
Cardinality Estimation Using Gumbel Distribution <i>Aleksander Łukasiewicz and Przemysław Uznański</i> .....	76:1–76:13
(In-)Approximability Results for Interval, Resource Restricted, and Low Rank Scheduling <i>Marten Maack, Simon Pukrop, and Anna Rodriguez Rasmussen</i> .....	77:1–77:13
Localized Geometric Moves to Compute Hyperbolic Structures on Triangulated 3-Manifolds <i>Clément Maria and Owen Rouillé</i> .....	78:1–78:13
Computing Treedepth in Polynomial Space and Linear FPT Time <i>Wojciech Nadara, Michał Pilipeczuk, and Marcin Smulewicz</i> .....	79:1–79:14
The Pareto Cover Problem <i>Bento Natura, Meike Neuwöhner, and Stefan Weltge</i> .....	80:1–80:12

A Unified Framework for Hopsets <i>Ofer Neiman and Idan Shabat</i> .....	81:1–81:13
Data Structures for Node Connectivity Queries <i>Zeev Nutov</i> .....	82:1–82:12
Improved Bounds for Online Balanced Graph Re-Partitioning <i>Rajmohan Rajaraman and Omer Wasim</i> .....	83:1–83:15
An Empirical Evaluation of $k$ -Means Coresets <i>Chris Schwegelshohn and Omar Ali Sheikh-Omar</i> .....	84:1–84:17
An Improved Algorithm for Finding the Shortest Synchronizing Words <i>Marek Szykula and Adam Zyzik</i> .....	85:1–85:15
Fast RSK Correspondence by Doubling Search <i>Alexander Tiskin</i> .....	86:1–86:10
Insertion Time of Random Walk Cuckoo Hashing below the Peeling Threshold <i>Stefan Walzer</i> .....	87:1–87:11
ParGeo: A Library for Parallel Computational Geometry <i>Yiqiu Wang, Rahul Yesantherao, Shangdi Yu, Laxman Dhulipala, Yan Gu, and Julian Shun</i> .....	88:1–88:19
Combining Predicted and Live Traffic with Time-Dependent $A^*$ Potentials <i>Nils Werner and Tim Zeitz</i> .....	89:1–89:15
Approximating Dynamic Time Warping Distance Between Run-Length Encoded Strings <i>Zoe Xi and William Kuszmaul</i> .....	90:1–90:19
Correlated Stochastic Knapsack with a Submodular Objective <i>Sheng Yang, Samir Khuller, Sunav Choudhary, Subrata Mitra, and Kanak Mahadik</i>	91:1–91:14
Faster Algorithm for Unique $(k, 2)$ -CSP <i>Or Zamir</i> .....	92:1–92:13

## ■ 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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