

TRAVIS GAGIE
Associate Professor
Faculty of Computer Science
Dalhousie University, Halifax, Canada
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Personal information

Full name: Travis Alan Gagie
Citizenships: Canadian and British
Languages: native English, functional Italian and Spanish

Employment

2019–present	associate professor	Dalhousie University, Canada
2021–present	member	Institute for Comparative Genomics, Canada
Nov. 2023	visiting researcher	Ca' Foscari University of Venice, Italy
Oct. 2023	visiting researcher	Comenius University, Slovakia
Feb. 2020	visiting researcher	Czech Technical University, Czech Republic
2016–2019	associate professor	Diego Portales University, Chile
2016–2019	collaborator	Centre for Biotechnology and Bioengineering, Chile
July 2018	visiting instructor	University of A Coruña, Spain
2013–16	post-doctoral researcher	University of Helsinki, Finland
winter 2015	visiting researcher	University of A Coruña, Spain
June 2015	visiting researcher	Illumina Inc., UK
2010–12	post-doctoral researcher	Aalto University, Finland
2009–10	post-doctoral researcher	University of Chile, Chile
2007–08	research assistant	University of Eastern Piedmont, Italy
2001–05	teaching assistant	University of Toronto, Canada
summer 2000	research assistant	University of Waterloo, Canada
summer 1999	research assistant	Queen's University, Canada
spring 1999	teaching assistant	Queen's University, Canada

Education

2018–24	habilitation (09/H1, fascia I)	Italy
2018–24	habilitation (01/B1, fascia II)	Italy
2015	docentship	University of Helsinki, Finland
2014	docentship	Aalto University, Finland
2014–20	habilitation (01/B1, fascia II)	Italy
2009	Dr rer. nat. in Bioinformatics (PhD equivalent)	Bielefeld University, Germany
2005–06	exchange student	National Research Council, Italy
2003–06	PhD student	University of Toronto, Canada
2000–03	MSc in Computer Science	University of Toronto, Canada
1996–00	BSc in Cognitive Science	Queen's University, Canada

Funding and awards

- NSERC Discovery Grant
\$182 500 CAD total, 2020–25.
 - co-investigator on NIH R01 to Ben Langmead,
\$138 703 USD subaward, 2020–25.
 - co-investigator on NSF IIBR to Christina Boucher,
\$44 013 USD subaward, 2020–23.
 - Fondecyt Regular grant
\$51 600 000 CLP, 2017–20.
 - Marie Skłodowska-Curie RISE project BIRDS
(initial University of Helsinki local coordinator)
€189 000 (€648 000 total between 8 organizations), 2016–19.
 - Academy of Finland Post-Doctoral grant
€254 450 total, 2013–16.
 - Miscellaneous scholarships and research assistantships
approximately \$130 000 CAD total, 1996–2009.
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- Keynote at ITAT 2023.
 - Highlight talk at WABI 2023.
 - Invited talk at BelBi 2023.
 - Keynote at DCC 2023.
 - Highlight talk at CPM 2021.
 - Award for Teaching Excellence, Dalhousie Faculty of Computer Science, 2019.
 - Renato Capocelli Award (best paper with student principal coauthor), DCC 2018 and 2019.
 - Alberto Apostolico Award (best paper), CPM 2017.
 - Best student paper award, IWOCA 2009.

Editing, committees and reviewing

- Editor of special issues of the *Journal of Discrete Algorithms* (Elsevier; volume 43, March 2017), *Algorithmica* (Springer; volume 80, number 7, July 2017, with Gonzalo Navarro) and *Information and Computation* (Elsevier; volume 273, August 2020, with Gonzalo Navarro; volume 285, May 2022; in progress, with Nicola Prezza).
- Co-chair of special sessions on compressed data structures at the IEEE Data Compression Conference (DCC) 2016, 2018, 2020 and 2022; Dagstuhl seminar 19241, “25 Years of the Burrows-Wheeler Transform”, 2019; the program committee of the 25th Symposium on String Processing and Information Retrieval (SPIRE) 2018 in Lima, LNCS volume 11147.
- Member of the program or organizing committees of the IEEE Data Compression Conference (DCC) 2014–24; International Workshop on Combinatorial Algorithms (IWOCA) 2016, 2018, 2019, 2021, 2024; Satellite Workshop on Massively Parallel

Sequencing (RECOMB-Seq) 2019–21, 2023–24; International Computing and Combinatorics Conference (COCOON) 2021 and 2023; Symposium on Combinatorial Pattern Matching (CPM) 2011–13, 2015, 2018 and 2023; International Conference on Research in Computational Molecular Biology (RECOMB) 2022–23; Symposium on String Processing and Information Retrieval (SPIRE) 2015–23 (steering committee 2019–22); Workshop on Algorithms in Bioinformatics (WABI) 2022; Symposium on Algorithm Engineering and Experiments (ALENEX) 2021; International Symposium on Algorithms and Computation (ISAAC) 2021; Symposium on Algorithms and Data Structures (WADS) 2017 and 2021; European Symposium on Algorithms (ESA) 2020; Scandinavian Symposium and Workshops on Algorithm Theory (SWAT) 2018 and 2020; Symposium on Experimental Algorithms (SEA) 2020; etc.

- Reviewer for many journals and conferences (e.g., *Journal of the ACM*, *ACM Transactions on Algorithms*, *Bioinformatics*, *Journal of Computer and System Sciences*, FOCS, STOC, SODA, ICALP, ESA), the Canada Foundation for Innovation, the Chilean National Fund for Scientific and Technological Development (FONDECYT), the German Research Foundation (DFG), the Israel Science Foundation (ISF), the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Polish National Science Center (NCN).

Teaching and supervising

- Introductory Algorithms
Dalhousie University, 2019–2023; Diego Portales University, 2017 (twice), 2018 (twice), 2019.
- Compact Data Structures
Dalhousie University, 2022; University of A Coruña, 2015, 2018.
- Introductory Data Structures
Dalhousie University, 2022; Diego Portales University, 2016, 2017, 2019.
- Bioinformatics
Diego Portales University, 2017.
- Data Compression
Diego Portales University, 2016; University of Helsinki, 2015 (with Simon Puglisi); Aalto University, 2011.
- Data Compression Project
University of Helsinki, 2015 (with Simon Puglisi).
- String Algorithms
Aalto University, 2012 (with Jorma Tarhio), 2014.
- Seminar on Advanced Data Structures
University of Helsinki, 2013 (with Juha Kärkkäinen and Simon Puglisi); Aalto University, 2012.

- Completed courses on Teaching in Universities
University of Helsinki, 2015; Aalto University, 2011.
- Supervised MCS students Nathaniel Brown and Sana Kashgouli (Dalhousie, both 2023); BCS students Igor Tatarnikov, Nathaniel Brown and Yansong Li (Dalhousie, 2023, 2021 and 2021); undergraduate summer research assistants Christian Simoneau and Shivam Mahajan (Dalhousie, 2023 and 2021).
- Co-supervised PhD student Nicola Cotumaccio (Dalhousie / GSSI, 2024) with Nicola Prezza and Catia Trubiani; MCS student Yansong Li (Dalhousie, 2023) with Norbert Zeh; post-doctoral researcher Jarno Alanko (Dalhousie / University of Helsinki, 2020–22) with Veli Mäkinen, Keijo Heljanko and Simon Puglisi; PhD student Diego Díaz (University of Chile, 2021) with Gonzalo Navarro; MSc student Sophie Sverdlöv (University of Helsinki, 2018) with Leena Salmela and Esko Ukkonen.
- PhD committees of Andrej Baláž and Adrián Goga (Comenius University), Younan Gao (Dalhousie, 2023), Luca Versari (University of Pisa, 2021), Uwe Baier (Ulm University, 2020), Michał Gańczorz (University of Wrocław, 2020), Serikzhan Kazi (Dalhousie University, 2020), Carlos Ochoa (University of Chile, 2019) and Michal Vasinek (Technical University of Ostrava, 2019); MSc committees of Michael St. Denis (Dalhousie, 2023), Younan Gao (Dalhousie, 2020), Tukka Norri (University of Helsinki, 2016) and Rodrigo Rivera (University of Concepción, 2018); BSc committee of Chenxin Shu (Dalhousie University, 2019).
- Co-supervised research visits by students Jarno Alanko (University of Helsinki), Andrea Farruggia (University of Pisa), Héctor Ferrada (University of Chile), Garance Gourdel (ENS Paris-Saclay), Tsung-Han Ku (National Tsing Hua University, Taiwan), Shahlla Naseri (University of Tehran), Alberto Ordóñez (University of A Coruña), Marco Previtali (University of Milano-Bicocca) and Louisa Seelbach Benkner (University of Seigen).

Publications

Proceedings and special issues

- [1] T. Gagie (ed.). Special issue of *Information and Computation* on Computation over Compressed Data, 285, 2022.
- [2] T. Gagie and G. Navarro (eds.). Special issue of *Information and Computation* on Computation over Compressed Data, 273, 2020.
- [3] T. Gagie, A. Moffat, G. Navarro and E. Cuadros-Vargas (eds.). *Proceedings of the 25th International Symposium on String Processing and Information Retrieval (SPIRE)*, volume 11147 of *LNCS*, 2018.
- [4] T. Gagie and G. Navarro (eds.). Special issue of *Algorithmica* on Compact Data Structures, 80(7), 2018.

- [5] T. Gagie (ed.). Special issue of *Journal of Discrete Algorithms* on Compact Data Structures, 43, 2017.

Peer-reviewed journal articles

- [6] A. Gómez-Brandón, G. Navarro, J. R. Paramá, N. R. Brisaboa and T. Gagie. Stronger compact representations of object trajectories. *Geo-Spatial Information Science*, to appear.
- [7] A. Hong, M. Oliva, D. Köppl, H. Bannai, C. Boucher and T. Gagie. PFP-FM: an accelerated FM-index. *Algorithms for Molecular Biology*, 19(1), 15, 2024.
- [8] N. Brisaboa, T. Gagie, A. Gómez-Brandón and G. Navarro. Two-dimensional block trees. *The Computer Journal*, 67(1):391-406, 2024.
- [9] D. Cozzi, M. Rossi, S. Rubinacci, T. Gagie, D. Köppl, C. Boucher, P. Bonizzoni. μ -PBWT: a lightweight r-indexing of the PBWT for storing and querying UK Biobank data. *Bioinformatics*, 39:(9), btad552, 2023.
- [10] O. Ahmed, M. Rossi, T. Gagie, C. Boucher and B. Langmead. SPUMONI 2: improved classification using a pangenome index of minimizer digests. *Genome Biology*, 24(1):122, 2023.
- [11] T. Gagie, M. Saeidi and A. Sapucaia. Ruler wrapping. *International Journal of Computational Geometry and Applications*, 33(01n02):3–12, 2023.
- [12] G. de Bernardo, T. Gagie, S. Ladra, G. Navarro and D. Seco. Faster compressed quadtrees. *Journal of Computer and System Sciences*, 131:86–104, 2023.
- [13] J. N. Alanko, I. B. Slizovskiy, D. Lokshtanov, T. Gagie, N. R. Noyes and C. Boucher. Syotti: Scalable bait design for DNA enrichment. *Bioinformatics*, 38 (Supplement_1), i177-i184, 2022. Special issue for ISMB 2022.
- [14] M. Rossi, M. Oliva, B. Langmead, T. Gagie and C. Boucher. MONI: A pangenomic index for finding maximal exact matches. *Journal of Computational Biology*, 29(2):169–187, 2022. Special issue for RECOMB 2022.
- [15] M. Rossi, M. Oliva, P. Bonizzoni, B. Langmead, T. Gagie and C. Boucher. Finding maximal exact matches using the r-index. *Journal of Computational Biology*, 29(2):188–0194, 2022. Special issue for RECOMB 2022.
- [16] A. P. Francisco, T. Gagie, D. Köppl, S. Ladra and G. Navarro. Graph compression for adjacency-matrix multiplication. *SN Computer Science*, 3(3):193, 2022.

- [17] A. Fariña, T. Gagie, Sz. Grabowski, G. Manzini, G. Navarro and A. Ordóñez. Efficient and compact representations of some non-canonical prefix-free codes. *Theoretical Computer Science*, 907:11–25, 2022.
- [18] J. Alanko, B. Alipanahi, J. Settle, C. Boucher and T. Gagie. Buffering updates enables efficient dynamic de Bruijn graphs. *Computational and Structural Biotechnology Journal*, 19:4067-4078, 2021.
- [19] O. Ahmed, M. Rossi, S. Kovaka, M. C. Schatz, T. Gagie, C. Boucher and B. Langmead. Pan-genomic matching statistics for targeted nanopore sequencing. *iScience*, 24(6):102696, 2021. Special issue for RECOMB-Seq 2021.
- [20] D. Belazzougui, T. Gagie, J. I. Munro, G. Navarro, Y. Nekrich. Range majorities and minorities in arrays. *Algorithmica*, 83(6):1707–1733, 2021.
- [21] D. Belazzougui, M. Cáceres, T. Gagie, P. Gawrychowski, J. Kärkkäinen, G. Navarro, A. Ordóñez Pereira, S. J. Puglisi and Y. Tabei. Block trees. *Journal of Computer and System Sciences*, 117:1–22, 2021.
- [22] N. R. Brisaboa, T. Gagie, A. Gómez-Brandón, G. Navarro, J. R. Paramá. An index for moving objects with constant-time access to their compressed trajectories. *International Journal of Geographical Information Science*, 35(7):1392–1424, 2021.
- [23] P. H. Cording, T. Gagie, M. B. T. Knudsen and T. Kociumaka. Maximal unbordered factors of random strings. *Theoretical Computer Science*, 852:78–83, 2021.
- [24] T. Gagie, M. He, G. Navarro and C. Ochoa. Tree path majority data structures. *Theoretical Computer Science*, 833:107–119, 2020.
- [25] T. Gagie, M. He and G. Navarro. Compressed dynamic range majority and minority data structures. *Algorithmica*, 82(7):2063–2086, 2020.
- [26] A. Kuhnle, T. Mun, C. Boucher, T. Gagie, B. Langmead, G. Manzini. Efficient construction of a complete index for pan-genomics read alignment. *Journal of Computational Biology*, 27(4):500–513, 2020. Special issue for RECOMB 2019.
- [27] T. Mun, A. Kuhnle, C. Boucher, T. Gagie, B. Langmead, G. Manzini. Matching reads to many genomes with the r -index. *Journal of Computational Biology*, 27(4):514–518, 2020. Special issue for RECOMB 2019.
- [28] H. Bannai, T. Gagie and T. I. Refining the r -index. *Theoretical Computer Science*, 812:96–108, 2020.
- [29] H. Bannai, T. Gagie, G. Hoppenworth, S. J. Puglisi, L. M. S. Russo. More time-space tradeoffs for finding a shortest unique substring. *Algorithms*, 13(9):234, 2020.

- [30] L. Ferres, J. Fuentes, T. Gagie, M. He and G. Navarro. Fast and compact planar embeddings. *Computational Geometry: Theory and Applications*, 89:101630, 2020. Special issue for WADS 2017.
- [31] T. Gagie, G. Navarro and N. Prezza. Fully functional suffix trees and optimal text searching in BWT-runs bounded space. *Journal of the ACM*, 67(1):2:1–2:54, 2020.
- [32] A. Kuhnle, T. Mun, C. Boucher, T. Gagie, B. Langmead and G. Manzini. Prefix-free parsing for building big BWTs. *Algorithms in Molecular Biology*, 14(1):13:1–13:15, 2019. Special issue for WABI 2018.
- [33] V. Mäkinen, A. Tomescu, A. Kuosmanen, T. Paavilainen, T. Gagie and R. Chikhi. Sparse dynamic programming on DAGs with small width. *ACM Transactions on Algorithms*, 15(2):29:1–29:21, 2019.
- [34] T. Gagie, M. He and G. Navarro. Path queries on functions. *Theoretical Computer Science*, 770:34–50, 2019.
- [35] G. Decaroli, T. Gagie and G. Manzini. A compact index for order-preserving pattern matching. *Software: Practice and Experience*, 49(6):1041–1051, 2019.
- [36] V. Crawford, A. Kuhnle, C. Boucher, R. Chikhi and T. Gagie. Practical dynamic de Bruijn graphs. *Bioinformatics*, 34(24):4189–4195, 2018.
- [37] P. Bille, T. Gagie, I. L. Gørtz and N. Prezza. A Separation Between RLSLPs and LZ77. *Journal of Discrete Algorithms*, 50:36–39, 2018.
- [38] D. Belazzougui, T. Gagie, V. Mäkinen, M. Previtalli and S. J. Puglisi. Bidirectional variable-order de Bruijn graphs. *International Journal of Foundations of Computer Science*, 29(8):1279–1295, 2018.
- [39] A. Farruggia, T. Gagie, G. Navarro, S. J. Puglisi and J. Sirén. Relative suffix trees. *The Computer Journal*, 61(5):773–788, 2018.
- [40] H. Bannai, T. Gagie, S. Inenaga, J. Kärkkäinen, D. Kempa, M. Piątkowski and S. Sugimoto. Diverse palindromic factorization is NP-complete. *International Journal of Foundations of Computer Science*, 29(2):143–164, 2018. Special issue for DLT 2015.
- [41] A. Amir, A. Aposolico, T. Gagie and G. M. Landau. String cadences. *Theoretical Computer Science*, 698:4–8, 2017.
- [42] T. Gagie, G. Manzini and J. Sirén. Wheeler graphs: A framework for BWT-based data structures. *Theoretical Computer Science*, 698:67–78, 2017.
- [43] T. Gagie, K. Karhu, J. Kärkkäinen, G. Navarro, S. J. Puglisi and J. Sirén. Document retrieval on repetitive string collections. *Information Retrieval Journal*, 20(3):253–291, 2017.

- [44] M. D. Muggli, A. Bowe, N. R. Noyes, P. Morely, K. Belk, R. Raymond, T. Gagie, S. J. Puglisi and C. Boucher. Succinct colored de Bruijn graphs. *Bioinformatics*, 33(20):3181–3187, 2017.
- [45] T. Gagie, G. Manzini and D. Valenzuela. Compressed spaced suffix arrays. *Mathematics in Computer Science*, 11(2):151–157, 2017. Special issue for ICABD 2014.
- [46] T. Gagie, C. Hoobin and S. J. Puglisi. Block graphs in practice. *Mathematics in Computer Science*, 11(2):191–196, 2017. Special issue for ICABD 2014.
- [47] F. A. Louza, T. Gagie and G. P. Telles. Burrows-Wheeler transform and LCP array construction in constant space. *Journal of Discrete Algorithms*, 42:14–22, 2017.
- [48] A. I. Tomescu, T. Gagie, A. Popa, R. Rizzi, A. Kuosmanen and V. Mäkinen. Explaining a weighted DAG with few paths for solving genome-guided multi-assembly. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 12(6):1345–1354, 2015.
- [49] T. Gagie, D. Hermelin, G. M. Landau and O. Weimann. Binary jumbled pattern matching on trees and tree-like structures. *Algorithmica*, 73(3):571–588, 2015. Special issue for ESA 2013.
- [50] T. Gagie, G. Navarro, Y. Nekrich and A. Ordóñez. Efficient and compact representations of prefix codes. *IEEE Transactions on Information Theory*, 61(9):4999–5011, 2015.
- [51] T. Gagie and S. J. Puglisi. Searching and indexing genomics databases via kernelization. *Frontiers in Bioengineering and Biotechnology*, 3:12, 2015.
- [52] T. Gagie, P. Gawrychowski and S. J. Puglisi. Approximate pattern matching in LZ77-compressed texts. *Journal of Discrete Algorithms*, 32:64–68, 2015.
- [53] G. Fici, T. Gagie, J. Kärkkäinen and D. Kempa. A subquadratic algorithm for minimum palindromic factorization. *Journal of Discrete Algorithms*, 28:41–48, 2014.
- [54] H. Ferrada, T. Gagie, T. Hirvola and S. J. Puglisi. Hybrid indexes for repetitive datasets. *Philosophical Transactions of the Royal Society A*, 327, 2014
- [55] A. Farzan, T. Gagie and G. Navarro. Entropy-bounded representation of point grids. *Computational Geometry: Theory and Applications*, 47(1):1–14, 2014.
- [56] J. Barbay, F. Claude, T. Gagie, G. Navarro and Y. Nekrich. Efficient fully-compressed sequence representations. *Algorithmica*, 69(1):232–268, 2014.
- [57] T. Gagie, J. Kärkkäinen, G. Navarro and S. J. Puglisi. Colored range queries and document retrieval. *Theoretical Computer Science*, 483: 36–50, 2013. Special issue for CPM 2011.

- [58] P. Gawrychowski and T. Gagie. Minimax trees in linear time with applications. *European Journal of Combinatorics*, 34(1):82–90, 2013. Special issue for IWOCA 2009.
- [59] H. Bannai, T. Gagie, T. I, S. Inenaga, G. M. Landau and M. Lewenstein. An efficient algorithm to test square-freeness of strings compressed by straight-line programs. *Information Processing Letters*, 112(9):711–714, 2012.
- [60] T. Gagie, G. Navarro and S. J. Puglisi. New algorithms on wavelet trees and applications to information retrieval. *Theoretical Computer Science*, 426–427:25–41, 2012.
- [61] P. Ferragina, T. Gagie and G. Manzini. Lightweight data indexing and compression in external memory. *Algorithmica*, 63(3):707–730, 2012. Special issue for LATIN 2010.
- [62] T. Gagie. A note on sequence prediction over large alphabets. *Algorithms*, 5(1):50–55, 2012. Special issue for CCP 2011.
- [63] T. Gagie. Bounds from a card trick. *Journal of Discrete Algorithms*, 10(1):2–4, 2012. Special issue for StringMasters 2009; featured in the *MIT Technology Review*.
- [64] F. Cicalese, T. Gagie, M. Milanič and E. Laber. Competitive boolean function evaluation: Beyond monotonicity, and the symmetric case. *Discrete Applied Mathematics*, 159(11):1070–1078, 2011.
- [65] T. Gagie and Y. Nekrich. Tight bounds for online stable sorting. *Journal of Discrete Algorithms*, 9(2):176–181, 2011.
- [66] T. Gagie and G. Manzini. Move-to-front, distance coding, and inversion frequencies revisited. *Theoretical Computer Science*, 411(31-33):2925–2944, 2010.
- [67] T. Gagie. A new algorithm for building alphabetic minimax trees. *Fundamenta Informaticae*, 97(3):321–329, 2009. Special issue for StringMasters 2007.
- [68] T. Gagie. Compressed depth sequences. *Theoretical Computer Science*, 410(8–10):958–962, 2009.
- [69] T. Gagie. Sorting streamed multisets. *Information Processing Letters*, 108(6):418–421, 2008.
- [70] T. Gagie. Dynamic asymmetric communication. *Information Processing Letters*, 108(6):352–355, 2008.
- [71] T. Gagie. Dynamic Shannon coding. *Information Processing Letters*, 102(2–3):113–117, 2007.
- [72] T. Gagie. Large alphabets and incompressibility. *Information Processing Letters*, 99(6):246–251, 2006.

- [73] T. Gagie. Compressing probability distributions. *Information Processing Letters*, 97(4):133–137, 2006.
- [74] T. Gagie. Restructuring binary search trees revisited. *Information Processing Letters*, 95(3):418–421, 2005.

Peer-reviewed conference papers

- [75] T. Gagie. How to find long maximal exact matches and ignore short ones. In *Proceedings of the 28th Conference on Developments in Language Theory (DLT)*, to appear, 2024.
- [76] P. Bonizzoni, C. Boucher, D. Cozzi, T. Gagie and Y. Pirola. Solving the Minimal Positional Substring Cover problem in sublinear space. In *Proceedings of the 35th Symposium on Combinatorial Pattern Matching (CPM)*, to appear, 2024.
- [77] D. Draesslerova, O. Ahmed, T. Gagie, J. Holub, B. Langmead, G. Manzini and G. Navarro. Taxonomic classification with maximal exact matches in KATKA kernels and minimizer digests. In *Proceedings of the 22nd Symposium on Experimental Algorithms (SEA)*, to appear, 2024.
- [78] M. Zakeri, N. Brown, O. Ahmed, T. Gagie and B. Langmead. Movi: a fast and cache-efficient full-text pangenome index. In *Proceedings of the 14th RECOMB Satellite Workshop on Massively Parallel Sequencing (RECOMB-Seq)*, to appear, 2024.
- [79] E. Ferro, M. Oliva, T. Gagie and C. Boucher. Building a pangenome alignment index via recursive prefix-free parsing. In *Proceedings of the 14th RECOMB Satellite Workshop on Massively Parallel Sequencing (RECOMB-Seq)*, to appear, 2024.
- [80] A. Goga, L. Depuydt, N. K. Brown, J. Fostier, T. Gagie, G. Navarro. Faster maximal exact matches with lazy LCP evaluation. In *Proceedings of the Data Compression Conference (DCC)*, to appear, 2024.
- [81] A. Goga, T. Gagie, G. Navarro and A. Jež. Space-efficient conversions from SLPs. In *Proceedings of the 15th Latin American Symposium on Theoretical Informatics (LATIN)*, 146–161, 2024.
- [82] A. Goga, A. Baláz, T. Gagie, G. Navarro, A. Petescia, S. Heumos and J. Sirén. Wheeler maps. In *Proceedings of the 15th Latin American Symposium on Theoretical Informatics (LATIN)*, 178–192, 2024.
- [83] X. Lyu, T. Gagie, M. He, Y. Nekrich and N. Zeh. Sum-of-local-effects data structures for separable graphs. In *Proceedings of the 29th Computing and Combinatorics Conference (COCOON)*, pages 195–206, 2023.

- [84] T. Gagie, S. Kashgouli and G. Navarro. A simple grammar-based index for finding approximately longest common substrings. In *Proceedings of the 30th Symposium on String Processing and Information Retrieval (SPIRE)*, pages 246–252, 2023.
- [85] P. Bonizzoni, C. Boucher, D. Cozzi, T. Gagie, D. Köppl and M. Rossi. Data Structures for SMEM-Finding in the PBWT. In *Proceedings of the 30th Symposium on String Processing and Information Retrieval (SPIRE)*, pages 89–101, 2023.
- [86] T. Gagie, M. He and M. St. Denis Dynamic compact planar embeddings. In *Proceedings of the 30th Symposium on String Processing and Information Retrieval (SPIRE)*, pages 233–245, 2023.
- [87] N. Cotumaccio, T. Gagie, D. Köppl and N. Prezza. Space-time trade-offs for the LCP array of Wheeler DFAs. In *Proceedings of the 30th Symposium on String Processing and Information Retrieval (SPIRE)*, pages 143–156, 2023.
- [88] Y. Hong, M. Oliva, D. Köppl, H. Bannai, C. Boucher and T. Gagie. Acceleration of FM-index queries through prefix-free parsing. In *Proceedings of the 23rd Workshop on Algorithms in Bioinformatics (WABI)*, pages 13:1–13:16, 2023.
- [89] I. Tatarnikov, A. Shahrabi Farahani, S. Kashgouli and T. Gagie. MONI can find k-MEMs. In *Proceedings of the 33rd Symposium on Combinatorial Pattern Matching (CPM)*, pages 26:1–26:14, 2023.
- [90] M. Oliva, T. Gagie and C. Boucher. Recursive prefix-free parsing for building big BWTs. In *Proceedings of the Data Compression Conference (DCC)*, pages 62–70, 2023.
- [91] A. Conte, N. Cotumaccio, T. Gagie, G. Manzini, N. Prezza and M. Sciortino. Computing matching statistics on Wheeler DFAs. In *Proceedings of the Data Compression Conference (DCC)*, pages 150–159, 2023.
- [92] C. Martínez-Guardiola, N. K. Brown, F. Silva-Coira, D. Köppl, T. Gagie and S. Ladra. Augmented thresholds for MONI. In *Proceedings of the Data Compression Conference (DCC)*, pages 268–277, 2023.
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