

Curriculum Vitæ



Name Gerth Stølting Brodal
Born 12 September 1969
Sønderborg, Denmark
Citizenship Danish
Married, two children
Address Department of Computer Science
Aarhus University
Åbogade 34
8200 Aarhus N
Denmark
Phone +45 50 59 54 32
Email gerth@cs.au.dk
W³ <http://www.cs.au.dk/~gerth>
Bibliographies ORCID: [0000-0001-9054-915X](https://orcid.org/0000-0001-9054-915X)
DBLP, [Google Scholar](#) (H-index: 41)

Brief Biography

Gerth Stølting Brodal is a Professor at the [Department of Computer Science, Aarhus University](#), Denmark (since January 2016). He received his PhD in computer science in 1997 from Aarhus University for the thesis “Worst Case Efficient Data Structures”. From 1997 to 1998 he was a PostDoc in the group of [Kurt Mehlhorn](#) at the [Max-Planck-Institute for Computer Science](#) in Saarbrücken, Germany. 1998–2005 he was affiliated with [BRICS](#) (Center for Basic Research in Computer Science) located at the Department of Computer Science, Aarhus University. 2004–2015 he was an Associate Professor (tenured) at the Department of Computer Science, Aarhus University. March 2007–December 2017 he was affiliated with [MADALGO](#) (Center for Massive Data Algorithmics), Aarhus University, founded by the Danish National Research Foundation.

His main research interests are the design and analysis of algorithms and data structures. He has done work on fundamental data structures, including dictionaries and priority queues, persistent data structures, computational geometry, graph algorithms, string algorithms, I/O-efficient and cache-oblivious algorithms and data structures, algorithm engineering, and computational biology.

Education

- 1993–1997 PhD in Computer Science, Aarhus University, Denmark.
Dissertation: Worst Case Efficient Data Structures.
Advisor: Erik Meineche Schmidt.
Committee: Mogens Nielsen (Aarhus), Arne Andersson (Lund), and J. Ian Munro (Waterloo).
- 1989–1994 MSc (cand.scient.) in Computer Science and Mathematics, Aarhus University, Denmark.
- 1988–1989 Military service, Jyske Telegrafregiment, Fredericia, Denmark.
- 1985–1988 “Studentereksamen”, Aabenraa Gymnasium og HF, Aabenraa, Denmark.

Positions

- 2016– Professor, Department of Computer Science, Aarhus University.
- 2009–2015 Associate Professor (tenured, Lektor MSK), Department of Computer Science, Aarhus University.
- 2004–2009 Associate Professor (tenured), Department of Computer Science, Aarhus University.
- 2001–2005 Associate Professor, BRICS, Department of Computer Science, Aarhus University.
- 1999–2001 Research Associate Professor, BRICS, Department of Computer Science, Aarhus University.

- 1998 – 1999 Research Assistant Professor, BRICS PhD School, Department of Computer Science, Aarhus University.
- 1997 – 1998 PostDoc at the Max-Planck-Institut for Computer Science, Saarbrücken, Germany.

Funding

- 2020 – 2025 Independent Research Fund Denmark, Grant no. 9131-001113B (Algorithms Supporting Big Data Analysis, co-PI Lars Arge), 5.903.016 DKK.
- 2013 – 2014 Aarhus University Research Foundation, Guest Researcher Grant, Seth Pettie (University of Michigan Ann Arbor), 250.000 DKK.
- 2011 – 2012 Slovenian Research Agency, Project: Algorithms on Massive Geographical LiDAR Data-sets – AMAGELDA (Principal investigator: Andrej Brodnik, Ljubljana Slovenia), 3.000 Euro (22.500 DKK).
- 2008 – 2009 **Nordic Network on Algorithms** from the Nordic Academy for Advanced Study (NORFA). Coordinator **Fedor V. Fomin**, University of Bergen, 600.000 NOK (510.000 DKK).
- 2005 – 2006 The Danish Natural Science Research Council, *Graph Algorithms and Constraint Programming*, PostDoc Irit Katriel, 480.000 DKK.
- 2005 – 2007 The Danish Natural Science Research Council, Grant no. 21-04-0389, *Algoritmer til rekonstruktion og sammenligning af træer og netværk*. Coordinator **Christian N.S. Pedersen**, Aarhus University, 360.000 DKK.
- 2005 – 2007 **Nordic Network on Algorithms** from the Nordic Academy for Advanced Study (NORFA). Coordinator **Fedor V. Fomin**, University of Bergen, 900.000 NOK (825.000 DKK).
- 2002 – 2005 Associate Professor grant from the **Carlsberg Foundation**, 1.350.000 DKK.
- 1998 Scholarship (PostDoc) from the Max-Planck-Institut für Informatik, Saarbrücken, Germany, 10.200 DM (39.200 DKK).
- 1997 – 1998 Scholarship (PostDoc) from the **Carlsberg Foundation**, 300.000 DKK.
- 1997 Scholarship (PostDoc) from the Max-Planck-Institut für Informatik, Saarbrücken, Germany, 10.200 DM (39.200 DKK).
- 1995 – 1997 Scholarship (PhD-stipendium) from the Danish Natural Science Research Council, 717.591 DKK.
- 1993 – 1995 Scholarship (Scholarstipendium) from the Danish Research Academy, 156.000 DKK.

Awards

- 2022 **Aarhus University Anniversary Foundation Teaching Price**. Aarhus University.
- 2019 **Lecturer of the Year**. Department of Computer Science, Aarhus University.
- 2017 **Lecturer of the Year**. Department of Computer Science, Aarhus University.
- 2012 **Lecturer of the Year**. Department of Computer Science, Aarhus University.
- 2001 Best paper award 12th Annual International Symposium on Algorithms and Computation, for the paper “Computing the Quartet Distance Between Evolutionary Trees in Time $O(n \log^2 n)$ ”, coauthored with Rolf Fagerberg and Christian N. S. Pedersen.

Publications

Editor

- 1 *Scalable Data Structures (Dagstuhl Seminar 21071)*, Dagstuhl, Germany, 14–19 February 2021, Gerth Stølting Brodal, John Iacono, Markus E. Nebel and Vijaya Ramachandran (Edt.), Volume 11 of Dagstuhl Reports(1), pages 1-23. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2019, doi: [10.4230/DagRep.11.1.1](https://doi.org/10.4230/DagRep.11.1.1).
- 2 *Data Structures for the Cloud and External Memory Data (Dagstuhl Seminar 19051)*, Dagstuhl, Germany, 27 January – 1 February 2019, Gerth Stølting Brodal, Ulrich Carsten Meyer, Markus

- E. Nebel and Robert Sedgewick (Edt.), Volume 9 of Dagstuhl Reports(1), pages 104-124. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2019, doi: [10.4230/DagRep.9.1.104](https://doi.org/10.4230/DagRep.9.1.104).
- 3 *Algorithms - ESA 2005: 13th Annual European Symposium, Palma de Mallorca, Spain, 3–6 October 2005*, Gerth Stølting Brodal and Stefano Leonardi (Edt.), Volume 3669 of Lecture Notes in Computer Science. Springer Verlag, Berlin, 2005, doi: [10.1007/11561071](https://doi.org/10.1007/11561071).
 - 4 *Algorithm Engineering – 5th International Workshop (WAE 2001), Aarhus, Denmark, 28–31 August 2001*, Gerth Stølting Brodal, Daniele Frigioni and Alberto Marchetti-Spaccamela (Edt.), Volume 2141 of Lecture Notes in Computer Science. Springer Verlag, Berlin, 2001, doi: [10.1007/3-540-44688-5](https://doi.org/10.1007/3-540-44688-5).

Book Chapters

- 5 Gerth Stølting Brodal, *Cache-Oblivious Sorting*. In *Encyclopedia of Algorithms*, Ming-Yang Kao (Edt.), pages 126-129. Springer Verlag, Berlin, 2008, doi: [10.1007/978-0-387-30162-4_63](https://doi.org/10.1007/978-0-387-30162-4_63).
- 6 Lars Arge, Gerth Stølting Brodal and Rolf Fagerberg, *Cache-Oblivious Data Structures*. In *Handbook of Data Structures and Applications*, Dinesh Mehta and Sartaj Sahni (Edt.), Chapter 34, 27 pages. CRC Press, 2005, doi: [10.1201/9781420035179.ch34](https://doi.org/10.1201/9781420035179.ch34).
- 7 Gerth Stølting Brodal, *Finger Search Trees*. In *Handbook of Data Structures and Applications*, Dinesh Mehta and Sartaj Sahni (Edt.), Chapter 11, 11 pages. CRC Press, 2005, doi: [10.1201/9781420035179.ch11](https://doi.org/10.1201/9781420035179.ch11).

Journal Articles

- 8 Gerth Stølting Brodal, *Priority Queues with Decreasing Keys*. In *Theoretical Computer Science*, 2024, doi: [10.1016/j.tcs.2024.114563](https://doi.org/10.1016/j.tcs.2024.114563).
- 9 Gerth Stølting Brodal and Konstantinos Mampentzidis, *Cache Oblivious Algorithms for Computing the Triplet Distance Between Trees*. In *ACM Journal of Experimental Algorithmics*, Volume 26(Article No. 1.2), pages 1-44, April 2021, doi: [10.1145/3433651](https://doi.org/10.1145/3433651).
- 10 Gerth Stølting Brodal, *In Memoriam Lars Arge*. In *Bulletin of the EATCS*, Volume 133, pages 11-14, February 2021.
- 11 Gerth Stølting Brodal, Spyros Sioutas, Konstantinos Tsakalidis and Kostas Tsihclas, *Fully persistent B-trees*. In *Theoretical Computer Science*, Volume 841, pages 10-26, 2020, doi: [10.1016/j.tcs.2020.06.027](https://doi.org/10.1016/j.tcs.2020.06.027).
- 12 Edvin Berglin and Gerth Stølting Brodal, *A Simple Greedy Algorithm for Dynamic Graph Orientation*. In *Algorithmica*, Volume 82, pages 245-259, 2020, doi: [10.1007/s00453-018-0528-0](https://doi.org/10.1007/s00453-018-0528-0).
- 13 Gerth Stølting Brodal, Pooya Davoodi, Moshe Lewenstein, Rajeev Raman and S. Srinivasa Rao, *Two Dimensional Range Minimum Queries and Fibonacci Lattices*. In *Theoretical Computer Science*, Volume 638, pages 33-43, 2016, doi: [10.1016/j.tcs.2016.02.016](https://doi.org/10.1016/j.tcs.2016.02.016).
- 14 Gerth Stølting Brodal, Spyros Sioutas, Kostas Tsihclas and Christos D. Zaroliagis, *D²-Tree: A New Overlay with Deterministic Bounds*. In *Algorithmica*, Volume 72(3), pages 860-883, 2015, doi: [10.1007/s00453-014-9878-4](https://doi.org/10.1007/s00453-014-9878-4).
- 15 Gerth Stølting Brodal, Gabriel Moruz and Andrei Negoescu, *OnlineMin: A Fast Strongly Competitive Randomized Paging Algorithm*. In *Theory of Computing Systems, Special issue of the 9th Workshop on Approximation and Online Algorithms*, Volume 56(1), pages 22-40, 2015, doi: [10.1007/s00224-012-9427-y](https://doi.org/10.1007/s00224-012-9427-y).
- 16 Andreas Sand, Morten Kragelund Holt, Jens Johansen, Gerth Stølting Brodal, Thomas Mailund and Christian Nørgaard Storm Pedersen, *tqDist: A Library for Computing the Quartet and Triplet Distances Between Binary or General Trees*. In *Bioinformatics*, Volume 30(14), pages 2079-2080, 2014, doi: [10.1093/bioinformatics/btu157](https://doi.org/10.1093/bioinformatics/btu157).
- 17 Gerth Stølting Brodal, Alexis Kaporis, Apostolos Papadopoulos, Spyros Sioutas, Konstantinos Tsakalidis and Kostas Tsihclas, *Dynamic 3-sided Planar Range Queries with Expected Doubly Logarithmic Time*. In *Theoretical Computer Science*, Volume 526, pages 58-74. Elsevier Science, 2014, doi: [10.1016/j.tcs.2014.01.014](https://doi.org/10.1016/j.tcs.2014.01.014).
- 18 Gerth Stølting Brodal, Mark Greve, Vineet Pandey and S. Srinivasa Rao, *Integer Representations*

- towards *Efficient Counting in the Bit Probe Model*. In *Journal of Discrete Algorithms*, Volume 26, pages 34-44, 2014, doi: [10.1016/j.jda.2013.11.001](https://doi.org/10.1016/j.jda.2013.11.001).
- 19 Andreas Sand, Morten Kragelund Holt, Jens Johansen, Rolf Fagerberg, Gerth Stølting Brodal, Christian Nørgaard Storm Pedersen and Thomas Mailund, *Algorithms for Computing the Triplet and Quartet Distances for Binary and General Trees*. In *Biology - Special Issue on Developments in Bioinformatic Algorithms*, Volume 2(4), pages 1189-1209, 2013, doi: [10.3390/biology2041189](https://doi.org/10.3390/biology2041189).
- 20 Andreas Sand, Gerth Stølting Brodal, Rolf Fagerberg, Christian Nørgaard Storm Pedersen and Thomas Mailund, *A practical $O(n \log^2 n)$ time algorithm for computing the triplet distance on binary trees*. In *BMC Bioinformatics*, Volume 14(Suppl 2), S18 pages, 2013, doi: [10.1186/1471-2105-14-S2-S18](https://doi.org/10.1186/1471-2105-14-S2-S18).
- 21 Lars Arge, Gerth Stølting Brodal and S. Srinivasa Rao, *External Memory Planar Point Location with Logarithmic Updates*. In *Algorithmica*, Volume 63(1), pages 457-475, 2012, doi: [10.1007/s00453-011-9541-2](https://doi.org/10.1007/s00453-011-9541-2).
- 22 Gerth Stølting Brodal, Pooya Davoodi and S. Srinivasa Rao, *On Space Efficient Two Dimensional Range Minimum Data Structures*. In *Algorithmica, Special issue on ESA 2010*, Volume 63(4), pages 815-830, 2012, doi: [10.1007/s00453-011-9499-0](https://doi.org/10.1007/s00453-011-9499-0).
- 23 Gerth Stølting Brodal, Beat Gfeller, Allan Grønlund Jørgensen and Peter Sanders, *Towards Optimal Range Median*. In *Theoretical Computer Science, Special issue of ICALP'09*, Volume 412(24), pages 2588-2601. Elsevier Science, 2011, doi: [10.1016/j.tcs.2010.05.003](https://doi.org/10.1016/j.tcs.2010.05.003).
- 24 Martin Kutz, Gerth Stølting Brodal, Kanela Kaligosi and Irit Katriel, *Faster Algorithms for Computing Longest Common Increasing Subsequences*. In *Journal of Discrete Algorithms, Special Issue of CPM 2006*, Volume 9(4), pages 314-325. Elsevier Science, 2011, doi: [10.1016/j.jda.2011.03.013](https://doi.org/10.1016/j.jda.2011.03.013).
- 25 Michael A. Bender, Gerth Stølting Brodal, Rolf Fagerberg, Dongdong Ge, Simai He, Haodong Hu, John Iacono and Alejandro López-Ortiz, *The Cost of Cache-Oblivious Searching*. In *Algorithmica*, Volume 61(2), pages 463-505, 2011, doi: [10.1007/s00453-010-9394-0](https://doi.org/10.1007/s00453-010-9394-0).
- 26 Michael A. Bender, Gerth Stølting Brodal, Rolf Fagerberg, Riko Jacob and Elias Vicari, *Optimal Sparse Matrix Dense Vector Multiplication in the I/O-Model*. In *Theory of Computing Systems, Special issue of SPAA '07*, Volume 47(4), pages 934-962. Springer Verlag, Berlin, 2010, doi: [10.1007/s00224-010-9285-4](https://doi.org/10.1007/s00224-010-9285-4).
- 27 Martin Stissing, Thomas Mailund, Christian Nørgaard Storm Pedersen, Gerth Stølting Brodal and Rolf Fagerberg, *Computing the All-Pairs Quartet Distance on a set of Evolutionary Trees*. In *Journal of Bioinformatics and Computational Biology*, Volume 6(1), pages 37-50, 2008, doi: [10.1142/S0219720008003266](https://doi.org/10.1142/S0219720008003266).
- 28 Gerth Stølting Brodal, Rolf Fagerberg and Gabriel Moruz, *On the Adaptiveness of Quicksort*. In *ACM Journal of Experimental Algorithmics, Special Issue of 7th Workshop on Algorithm Engineering and Experiments*, Volume 12(Article No. 3.2), 19 pages, 2008, doi: [10.1145/1227161.1402294](https://doi.org/10.1145/1227161.1402294).
- 29 Gerth Stølting Brodal, Loukas Georgiadis and Irit Katriel, *An $O(n \log n)$ Version of the Averbakh-Berman Algorithm for the Robust Median of a Tree*. In *Operations Research Letters*, Volume 36(1), pages 14-18, 2008, doi: [10.1016/j.orl.2007.02.012](https://doi.org/10.1016/j.orl.2007.02.012).
- 30 Gerth Stølting Brodal, Rolf Fagerberg and Kristoffer Vinther, *Engineering a Cache-Oblivious Sorting Algorithm*. In *ACM Journal of Experimental Algorithmics, Special Issue of 6th Workshop on Algorithm Engineering and Experiments*, Volume 12(Article No. 2.2), 23 pages, 2007, doi: [10.1145/1227161.1227164](https://doi.org/10.1145/1227161.1227164).
- 31 Thomas Mailund, Gerth Stølting Brodal, Rolf Fagerberg, Christian Nørgaard Storm Pedersen and Derek Phillips, *Recrafting the Neighbor-Joining Method*. In *BMC Bioinformatics*, Volume 7(29), 2006, doi: [10.1186/1471-2105-7-29](https://doi.org/10.1186/1471-2105-7-29).
- 32 Gerth Stølting Brodal, Erik D. Demaine and J. Ian Munro, *Fast Allocation and Deallocation with an Improved Buddy System*. In *Acta Informatica*, Volume 41(4-5), pages 273-291, 2005, doi: [10.1007/s00236-004-0159-6](https://doi.org/10.1007/s00236-004-0159-6).
- 33 Lars Arge, Gerth Stølting Brodal and Laura Toma, *On External-Memory MST, SSSP and Multiway Planar Graph Separation*. In *Journal of Algorithms*, Volume 53(2), pages 186-206, 2004, doi: [10.1016/j.jalgor.2004.04.001](https://doi.org/10.1016/j.jalgor.2004.04.001).
- 34 Gerth Stølting Brodal, Rolf Fagerberg and Christian Nørgaard Storm Pedersen, *Computing the*

- Quartet Distance Between Evolutionary Trees in Time $O(n \log n)$* . In *Algorithmica, Special issue on ISAAC 2001*, Volume 38(2), pages 377-395, 2004, doi: [10.1007/s00453-003-1065-y](https://doi.org/10.1007/s00453-003-1065-y).
- 35 Gerth Stølting Brodal, George Lagogiannis, Christos Makris, Athanasios Tsakalidis and Kostas Tsichlas, *Optimal Finger Search Trees in the Pointer Machine*. In *Journal of Computer and System Sciences, Special issue on 34th Annual ACM Symposium on Theory of Computing*, Volume 67(2), pages 381-418, 2003, doi: [10.1016/S0022-0000\(03\)00013-8](https://doi.org/10.1016/S0022-0000(03)00013-8).
- 36 Gerth Stølting Brodal, Christos Makris, Spyros Sioutas, Athanasios Tsakalidis and Kostas Tsichlas, *Optimal Solutions for the Temporal Precedence Problem*. In *Algorithmica*, Volume 33(4), pages 494-510, 2002, doi: [10.1007/s00453-002-0935-z](https://doi.org/10.1007/s00453-002-0935-z).
- 37 Gerth Stølting Brodal and M. Cristina Pinotti, *Comparator Networks for Binary Heap Construction*. In *Theoretical Computer Science*, Volume 250(1-2), pages 235-245, 2001, doi: [10.1016/S0304-3975\(99\)00137-1](https://doi.org/10.1016/S0304-3975(99)00137-1).
- 38 Gerth Stølting Brodal and Venkatesh Srinivasan, *Improved Bounds for Dictionary Look-up with One Error*. In *Information Processing Letters*, Volume 75(1-2), pages 57-59, 2000, doi: [10.1016/S0020-0190\(00\)00079-X](https://doi.org/10.1016/S0020-0190(00)00079-X).
- 39 Gerth Stølting Brodal, Rune Bang Lyngsø, Christian Nørgaard Storm Pedersen and Jens Stoye, *Finding Maximal Pairs with Bounded Gap*. In *Journal of Discrete Algorithms, Special Issue of Matching Patterns*, Volume 1(1), pages 77-104. Hermes Science Publishing Ltd, Oxford 2000, 2000.
- 40 Gerth Stølting Brodal, *Priority Queues on Parallel Machines*. In *Parallel Computing*, Volume 25(8), pages 987-1011, 1999, doi: [10.1016/S0167-8191\(99\)00032-0](https://doi.org/10.1016/S0167-8191(99)00032-0).
- 41 Gerth Stølting Brodal, Jesper Larsson Tråff and Christos D. Zaroliagis, *A Parallel Priority Queue with Constant Time Operations*. In *Journal of Parallel and Distributed Computing, Special Issue on Parallel Data Structures*, Volume 49(1), pages 4-21, 1998, doi: [10.1006/jpdc.1998.1425](https://doi.org/10.1006/jpdc.1998.1425).
- 42 Gerth Stølting Brodal, Shiva Chaudhuri and Jaikumar Radhakrishnan, *The Randomized Complexity of Maintaining the Minimum*. In *Nordic Journal of Computing, Selected Papers of the 5th Scandinavian Workshop on Algorithm Theory (SWAT'96)*, Volume 3(4), pages 337-351, 1996.
- 43 Gerth Stølting Brodal, *Partially Persistent Data Structures of Bounded Degree with Constant Update Time*. In *Nordic Journal of Computing*, Volume 3(3), pages 238-255, 1996.
- 44 Gerth Stølting Brodal and Chris Okasaki, *Optimal Purely Functional Priority Queues*. In *Journal of Functional Programming*, Volume 6(6), pages 839-858, November 1996, doi: [10.1017/S095679680000201X](https://doi.org/10.1017/S095679680000201X).

Conference Papers

- 45 Gerth Stølting Brodal, *Bottom-up Rebalancing Binary Search Trees by Flipping a Coin*. In *Proc. 12th International Conference on Fun With Algorithms*, Volume 291 of Leibniz International Proceedings in Informatics(Article No. 25), pages 25:1--25:15. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2024, doi: [10.4230/LIPIcs.FUN.2024.25](https://doi.org/10.4230/LIPIcs.FUN.2024.25).
- 46 Gerth Stølting Brodal and Sebastian Wild, *Deterministic Cache-Oblivious Funnelselect*. In *Proc. 19th Scandinavian Workshop on Algorithm Theory*, Volume 294 of Leibniz International Proceedings in Informatics(Article No. 5). Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2024, doi: [10.4230/LIPIcs.SWAT.2024.5](https://doi.org/10.4230/LIPIcs.SWAT.2024.5).
- 47 Bruce Brewer, Gerth Stølting Brodal and Haitao Wang, *Dynamic Convex Hulls for Simple Paths*. In *Proc. 40th International Symposium on Computational Geometry*, Volume 293 of Leibniz International Proceedings in Informatics. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2024.
- 48 Gerth Stølting Brodal and Sebastian Wild, *Funnelselect: Cache-Oblivious Multiple Selection*. In *Proc. 31st Annual European Symposium on Algorithms*, Volume 274 of Leibniz International Proceedings in Informatics(Article No. 25), pages 25:1--25:17. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2023, doi: [10.4230/LIPIcs.ESA.2023.25](https://doi.org/10.4230/LIPIcs.ESA.2023.25).
- 49 Gerth Stølting Brodal, Casper Moldrup Rysgaard, Jens Kristian Refsgaard Schou and Rolf Svenning, *Space Efficient Functional Off-line Partial Persistent Trees with Applications to Planar Point Location*. In *Proc. 18th International Workshop on Algorithms and Data Structures*, Volume

- 14079 of Lecture Notes in Computer Science, pages 644-659. Springer Verlag, Berlin, 2023, doi: [10.1007/978-3-031-38906-1_43](https://doi.org/10.1007/978-3-031-38906-1_43).
- 50 Gerth Stølting Brodal, Casper Moldrup Rysgaard and Rolf Svenning, *External Memory Fully Persistent Search Trees*. *Proc. 55th Annual ACM Symposium on Theory of Computing*, In *55th Annual ACM Symposium on Theory of Computing*, pages 1410-1423, 2023, doi: [10.1145/3564246.3585140](https://doi.org/10.1145/3564246.3585140).
- 51 Gerth Stølting Brodal, *Priority Queues with Decreasing Keys*. In *Proc. 11th International Conference on Fun With Algorithms*, Volume 226 of Leibniz International Proceedings in Informatics(Article No. 8), pages 8:1–8:19. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2022, doi: [10.4230/LIPIcs.FUN.2022.8](https://doi.org/10.4230/LIPIcs.FUN.2022.8) (presentation [pdf](#), [pptx](#)).
- 52 Gerth Stølting Brodal, Rolf Fagerberg, David Hammer, Ulrich Meyer, Manuel Penschuck and Hung Tran, *An Experimental Study of External Memory Algorithms for Connected Components*. In *Proc. 19th International Symposium on Experimental Algorithms*, Volume 190 of Leibniz International Proceedings in Informatics(Article No. 23), pages 23:1–23:23. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2021, doi: [10.4230/LIPIcs.SEA.2021.23](https://doi.org/10.4230/LIPIcs.SEA.2021.23).
- 53 Gerth Stølting Brodal, *Soft Sequence Heaps*. In *Proc. 4th SIAM Symposium on Simplicity in Algorithms*, pages 14-24, 2021, doi: [10.1137/1.9781611976496.2](https://doi.org/10.1137/1.9781611976496.2) (presentation [pdf](#), [pptx](#), [mp4](#)).
- 54 Gerth Stølting Brodal and Konstantinos Mampentzidis, *Cache Oblivious Algorithms for Computing the Triplet Distance between Trees*. In *Proc. 25th Annual European Symposium on Algorithms*, Volume 87 of Leibniz International Proceedings in Informatics, pages 21:1–21:14. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2017, doi: [10.4230/LIPIcs.ESA.2017.21](https://doi.org/10.4230/LIPIcs.ESA.2017.21).
- 55 Gerth Stølting Brodal, *External Memory Three-Sided Range Reporting and Top-k Queries with Sublogarithmic Updates*. In *Proc. 33rd Annual Symposium on Theoretical Aspects of Computer Science*, Volume 47 of Leibniz International Proceedings in Informatics, pages 23:1-23:14. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2016, doi: [10.4230/LIPIcs.STACS.2016.23](https://doi.org/10.4230/LIPIcs.STACS.2016.23) (presentation [pdf](#), [pptx](#)).
- 56 Gerth Stølting Brodal, Jesper Sindahl Nielsen and Jakob Truelsen, *Strictly Implicit Priority Queues: On the Number of Moves and Worst-Case Time*. In *Proc. 14th International Workshop on Algorithms and Data Structures*, Volume 9214 of Lecture Notes in Computer Science, pages 1-12. Springer Verlag, Berlin, 2015, doi: [10.1007/978-3-319-21840-3_8](https://doi.org/10.1007/978-3-319-21840-3_8).
- 57 Djamel Belazzougui, Gerth Stølting Brodal and Jesper Sindahl Nielsen, *Expected Linear Time Sorting for Word Size $\Omega(\log^2 n \log \log n)$* . In *Proc. 14th Scandinavian Workshop on Algorithm Theory*, Volume 8503 of Lecture Notes in Computer Science, pages 26-37. Springer Verlag, Berlin, 2014, doi: [10.1007/978-3-319-08404-6_3](https://doi.org/10.1007/978-3-319-08404-6_3).
- 58 Gerth Stølting Brodal and Kasper Green Larsen, *Optimal Planar Orthogonal Skyline Counting Queries*. In *Proc. 14th Scandinavian Workshop on Algorithm Theory*, Volume 8503 of Lecture Notes in Computer Science, pages 98-109. Springer Verlag, Berlin, 2014, doi: [10.1007/978-3-319-08404-6_10](https://doi.org/10.1007/978-3-319-08404-6_10) (presentation [pdf](#), [pptx](#)).
- 59 Morten Kragelund Holt, Jens Johansen and Gerth Stølting Brodal, *On the Scalability of Computing Triplet and Quartet Distances*. In *Proc. 16th Workshop on Algorithm Engineering and Experiments*, pages 9-19, 2014, doi: [10.1137/1.9781611973198.2](https://doi.org/10.1137/1.9781611973198.2) (presentation [pdf](#), [pptx](#)).
- 60 Lars Arge, Gerth Stølting Brodal, Jakob Truelsen and Constantinos Tsirogiannis, *An Optimal and Practical Cache-Oblivious Algorithm for Computing Multiresolution Rasters*. In *Proc. 21st Annual European Symposium on Algorithms*, Volume 8125 of Lecture Notes in Computer Science, pages 61-72. Springer Verlag, Berlin, 2013, doi: [10.1007/978-3-642-40450-4_6](https://doi.org/10.1007/978-3-642-40450-4_6).
- 61 Gerth Stølting Brodal, Andrej Brodnik and Pooya Davoodi, *The Encoding Complexity of Two Dimensional Range Minimum Data Structures*. In *Proc. 21st Annual European Symposium on Algorithms*, Volume 8125 of Lecture Notes in Computer Science, pages 229-240. Springer Verlag, Berlin, 2013, doi: [10.1007/978-3-642-40450-4_20](https://doi.org/10.1007/978-3-642-40450-4_20) (presentation [pdf](#), [pptx](#)).
- 62 Gerth Stølting Brodal, *A Survey on Priority Queues*. In *Proc. Conference on Space Efficient Data Structures, Streams and Algorithms – Papers in Honor of J. Ian Munro on the Occasion of His 66th Birthday*, Volume 8066 of Lecture Notes in Computer Science, pages 150-163. Springer Verlag, Berlin, 2013, doi: [10.1007/978-3-642-40273-9_11](https://doi.org/10.1007/978-3-642-40273-9_11) (presentation [pdf](#), [pptx](#)).

- 63 Gerth Stølting Brodal, Rolf Fagerberg, Christian Nørgaard Storm Pedersen, Thomas Mailund and Andreas Sand, *Efficient Algorithms for Computing the Triplet and Quartet Distance Between Trees of Arbitrary Degree*. In *Proc. 24th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 1814-1832, 2013, doi: [knowledgecenter.siam.org/0236-000098](https://doi.org/10.1137/1.9781611973099.51) (presentation pdf, pptx).
- 64 Gerth Stølting Brodal, Jesper Sindahl Nielsen and Jakob Truelsen, *Finger Search in the Implicit Model*. In *Proc. 23th Annual International Symposium on Algorithms and Computation*, Volume 7676 of Lecture Notes in Computer Science, pages 527-536. Springer Verlag, Berlin, 2012, doi: [10.1007/978-3-642-35261-4_55](https://doi.org/10.1007/978-3-642-35261-4_55).
- 65 Gerth Stølting Brodal, George Lagogiannis and Robert E. Tarjan, *Strict Fibonacci Heaps*. In *Proc. 44th Annual ACM Symposium on Theory of Computing*, pages 1177-1184, 2012, doi: [10.1145/2213977.2214082](https://doi.org/10.1145/2213977.2214082) (presentation pdf, pptx).
- 66 Gerth Stølting Brodal and Casper Kejlberg-Rasmussen, *Cache-Oblivious Implicit Predecessor Dictionaries with the Working Set Property*. In *Proc. 29th Annual Symposium on Theoretical Aspects of Computer Science*, Volume 14 of Leibniz International Proceedings in Informatics, pages 112-123. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2012, doi: [10.4230/LIPIcs.STACS.2012.112](https://doi.org/10.4230/LIPIcs.STACS.2012.112).
- 67 Gerth Stølting Brodal, Spyros Sioutas, Konstantinos Tsakalidis and Kostas Tsihclas, *Fully Persistent B-trees*. In *Proc. 23rd Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 602-614, 2012, doi: [10.1137/1.9781611973099.51](https://doi.org/10.1137/1.9781611973099.51) (presentation pdf, pptx).
- 68 Gerth Stølting Brodal, Pooya Davoodi and S. Srinivasa Rao, *Path Minima Queries in Dynamic Weighted Trees*. In *Proc. 12th International Workshop on Algorithms and Data Structures*, Volume 6844 of Lecture Notes in Computer Science, pages 290-301. Springer Verlag, Berlin, 2011, doi: [10.1007/978-3-642-22300-6_25](https://doi.org/10.1007/978-3-642-22300-6_25).
- 69 Gerth Stølting Brodal and Konstantinos Tsakalidis, *Dynamic Planar Range Maxima Queries*. In *Proc. 38th International Colloquium on Automata, Languages, and Programming*, Volume 6755 of Lecture Notes in Computer Science, pages 256-267. Springer Verlag, Berlin, 2011, doi: [10.1007/978-3-642-22006-7_22](https://doi.org/10.1007/978-3-642-22006-7_22).
- 70 Peyman Afshani, Gerth Stølting Brodal and Norbert Zeh, *Ordered and Unordered Top-K Range Reporting in Large Data Sets*. In *Proc. 22nd Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 390-400, 2011, doi: [10.1137/1.9781611973082.31](https://doi.org/10.1137/1.9781611973082.31).
- 71 Gerth Stølting Brodal, Casper Kejlberg-Rasmussen and Jakob Truelsen, *A Cache-Oblivious Implicit Dictionary with the Working Set Property*. In *Proc. ISAAC10, Part II*, Volume 6507 of Lecture Notes in Computer Science, pages 37-48. Springer Verlag, Berlin, 2010, doi: [10.1007/978-3-642-17514-5_4](https://doi.org/10.1007/978-3-642-17514-5_4).
- 72 Gerth Stølting Brodal, Erik D. Demaine, Jeremy T. Fineman, John Iacono, Stefan Langerman and J. Ian Munro, *Cache-Oblivious Dynamic Dictionaries with Optimal Update/Query Tradeoff*. In *Proc. 21st Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 1448-1456, 2010, doi: [10.1137/1.9781611973075.117](https://doi.org/10.1137/1.9781611973075.117).
- 73 Gerth Stølting Brodal, Rolf Fagerberg, Mark Greve and Alejandro López-Ortiz, *Online Sorted Range Reporting*. In *Proc. 20th Annual International Symposium on Algorithms and Computation*, Volume 5878 of Lecture Notes in Computer Science, pages 173-182. Springer Verlag, Berlin, 2009, doi: [10.1007/978-3-642-10631-6_19](https://doi.org/10.1007/978-3-642-10631-6_19).
- 74 Gerth Stølting Brodal, Allan Grønlund Jørgensen, Gabriel Moruz and Thomas Mølhave, *Counting in the Presence of Memory Faults*. In *Proc. 20th Annual International Symposium on Algorithms and Computation*, Volume 5878 of Lecture Notes in Computer Science, pages 842-851. Springer Verlag, Berlin, 2009, doi: [10.1007/978-3-642-10631-6_85](https://doi.org/10.1007/978-3-642-10631-6_85).
- 75 Gerth Stølting Brodal, Allan Grønlund Jørgensen and Thomas Mølhave, *Fault Tolerant External Memory Algorithms*. In *Proc. 11th International Workshop on Algorithms and Data Structures*, Volume 5664 of Lecture Notes in Computer Science, pages 411-422. Springer Verlag, Berlin, 2009, doi: [10.1007/978-3-642-03367-4_36](https://doi.org/10.1007/978-3-642-03367-4_36).
- 76 Gerth Stølting Brodal and Allan Grønlund Jørgensen, *Selecting Sums in Arrays*. In *Proc. 19th Annual International Symposium on Algorithms and Computation*, Volume 5369 of Lecture Notes in Computer Science, pages 100-111. Springer Verlag, Berlin, 2008, doi: [10.1007/978-3-540-92182-0_12](https://doi.org/10.1007/978-3-540-92182-0_12).

- 77 Michael Westergaard, Lars Michael Kristensen, Gerth Stølting Brodal and Lars Arge, *The Com-Back Method - Extending Hash Compaction with Backtracking*. In *Proc. 28th International Conference on Applications and Theory of Petri Nets and Other Models of Concurrency, ICATPN 2007*, Volume 4546 of Lecture Notes in Computer Science, pages 445-464. Springer Verlag, Berlin, 2007, doi: [10.1007/978-3-540-73094-1_26](https://doi.org/10.1007/978-3-540-73094-1_26).
- 78 Gerth Stølting Brodal, Rolf Fagerberg, Irene Finocchi, Fabrizio Grandoni, Giuseppe Italiano, Allan Grønlund Jørgensen, Gabriel Moruz and Thomas Mølhave, *Optimal Resilient Dynamic Dictionaries*. In *Proc. 15th Annual European Symposium on Algorithms*, Volume 4708 of Lecture Notes in Computer Science, pages 347-358. Springer Verlag, Berlin, 2007, doi: [10.1007/978-3-540-75520-3_32](https://doi.org/10.1007/978-3-540-75520-3_32).
- 79 Gerth Stølting Brodal, Loukas Georgiadis, Kristoffer A. Hansen and Irit Katriel, *Dynamic Matchings in Convex Bipartite Graphs*. In *Proc. 32nd International Symposium on Mathematical Foundations of Computer Science*, Volume 4708 of Lecture Notes in Computer Science, pages 406-417. Springer Verlag, Berlin, 2007, doi: [10.1007/978-3-540-74456-6_37](https://doi.org/10.1007/978-3-540-74456-6_37) (presentation pdf, ppt).
- 80 Gerth Stølting Brodal and Allan Grønlund Jørgensen, *A Linear Time Algorithm for the k Maximal Sums Problem*. In *Proc. 32nd International Symposium on Mathematical Foundations of Computer Science*, Volume 4708 of Lecture Notes in Computer Science, pages 442-453. Springer Verlag, Berlin, 2007, doi: [10.1007/978-3-540-74456-6_40](https://doi.org/10.1007/978-3-540-74456-6_40) (presentation pdf, ppt).
- 81 Martin Stissing, Christian Nørgaard Storm Pedersen, Thomas Mailund, Gerth Stølting Brodal and Rolf Fagerberg, *Computing the Quartet Distance Between Evolutionary Trees of Bounded Degree*. In *Proc. 5th Asia Pacific Bioinformatics Conference*, Volume 5 of Advances in Bioinformatics & Computational Biology, pages 101-110. Imperial College Press, 2007, doi: [10.1142/9781860947995_0013](https://doi.org/10.1142/9781860947995_0013).
- 82 Lars Arge, Gerth Stølting Brodal and Loukas Georgiadis, *Improved Dynamic Planar Point Location*. In *Proc. 47th Annual Symposium on Foundations of Computer Science*, pages 305-314, 2006, doi: [10.1109/FOCS.2006.40](https://doi.org/10.1109/FOCS.2006.40).
- 83 Gerth Stølting Brodal, Christos Makris and Kostas Tsichlas, *Purely Functional Worst Case Constant Time Catenable Sorted Lists*. In *Proc. 14th Annual European Symposium on Algorithms*, Volume 4168 of Lecture Notes in Computer Science, pages 172-183. Springer Verlag, Berlin, 2006, doi: [10.1007/11841036_18](https://doi.org/10.1007/11841036_18) (presentation pdf, ppt).
- 84 Gerth Stølting Brodal and Gabriel Moruz, *Skewed Binary Search Trees*. In *Proc. 14th Annual European Symposium on Algorithms*, Volume 4168 of Lecture Notes in Computer Science, pages 708-719. Springer Verlag, Berlin, 2006, doi: [10.1007/11841036_63](https://doi.org/10.1007/11841036_63) (presentation pdf, zip).
- 85 Gerth Stølting Brodal and Rolf Fagerberg, *Cache-oblivious String Dictionaries*. In *Proc. 17th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 581-590, 2006, doi: [10.1145/1109557.1109621](https://doi.org/10.1145/1109557.1109621) (presentation pdf, zip).
- 86 Gerth Stølting Brodal and Gabriel Moruz, *Tradeoffs Between Branch Mispredictions and Comparisons for Sorting Algorithms*. In *Proc. 9th International Workshop on Algorithms and Data Structures, Waterloo, Canada, 15-17 August 2005*, Volume 3608 of Lecture Notes in Computer Science, pages 385-395. Springer Verlag, Berlin, 2005, doi: [10.1007/11534273_34](https://doi.org/10.1007/11534273_34).
- 87 Gerth Stølting Brodal, Rolf Fagerberg and Gabriel Moruz, *Cache-Aware and Cache-Oblivious Adaptive Sorting*. In *Proc. 32nd International Colloquium on Automata, Languages, and Programming*, Volume 3580 of Lecture Notes in Computer Science, pages 576-588. Springer Verlag, Berlin, 2005, doi: [10.1007/11523468_47](https://doi.org/10.1007/11523468_47).
- 88 Lars Arge, Gerth Stølting Brodal, Rolf Fagerberg and Morten Laustsen, *Cache-Oblivious Planar Orthogonal Range Searching and Counting*. In *Proc. 21st Annual ACM Symposium on Computational Geometry*, pages 160-169, 2005, doi: [10.1145/1064092.1064119](https://doi.org/10.1145/1064092.1064119).
- 89 Gerth Stølting Brodal, *Cache-Oblivious Algorithms and Data Structures*. In *Proc. 9th Scandinavian Workshop on Algorithm Theory*, Volume 3111 of Lecture Notes in Computer Science, pages 3-13. Springer Verlag, Berlin, 2004, doi: [10.1007/978-3-540-27810-8_2](https://doi.org/10.1007/978-3-540-27810-8_2) (presentation pdf, zip).
- 90 Gerth Stølting Brodal, Rolf Fagerberg, Ulrich Meyer and Norbert Zeh, *Cache-Oblivious Data Structures and Algorithms for Undirected Breadth-First Search and Shortest Paths*. In *Proc. 9th Scandinavian Workshop on Algorithm Theory*, Volume 3111 of Lecture Notes in Computer Science, pages 480-492. Springer Verlag, Berlin, 2004, doi: [10.1007/978-3-540-27810-8_41](https://doi.org/10.1007/978-3-540-27810-8_41).

- 91 Gerth Stølting Brodal and Riko Jacob, *Time-Dependent Networks as Models to Achieve Fast Exact Time-Table Queries*. In *Proc. Algorithmic Methods and Models for Optimization of Railways (AT-MOS 2003)*, Volume 92 of Electronic Notes in Theoretical Computer Science(1), 12 pages. Elsevier Science, 2003, doi: [10.1016/j.entcs.2003.12.019](https://doi.org/10.1016/j.entcs.2003.12.019).
- 92 Gerth Stølting Brodal, Rolf Fagerberg, Anna Östlin, Christian Nørgaard Storm Pedersen and S. Srinivasa Rao, *Computing Refined Buneman Trees in Cubic Time*. In *Proc. 3rd Workshop on Algorithms in BioInformatics*, Volume 2812 of Lecture Notes in Computer Science, pages 259-270. Springer Verlag, Berlin, 2003, doi: [10.1007/978-3-540-39763-2_20](https://doi.org/10.1007/978-3-540-39763-2_20).
- 93 Gerth Stølting Brodal and Rolf Fagerberg, *On the Limits of Cache-Obliviousness*. In *Proc. 35th Annual ACM Symposium on Theory of Computing*, pages 307-315, 2003, doi: [10.1145/780542.780589](https://doi.org/10.1145/780542.780589).
- 94 Gerth Stølting Brodal and Rolf Fagerberg, *Lower Bounds for External Memory Dictionaries*. In *Proc. 14th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 546-554, 2003, doi: [doi.acm.org/10.1145/644108.644201](https://doi.org/doi.acm.org/10.1145/644108.644201) (presentation pdf, zip).
- 95 Gerth Stølting Brodal and Rolf Fagerberg, *Funnel Heap - A Cache Oblivious Priority Queue*. In *Proc. 13th Annual International Symposium on Algorithms and Computation*, Volume 2518 of Lecture Notes in Computer Science, pages 219-228. Springer Verlag, Berlin, 2002 2002, doi: [10.1007/3-540-36136-7_20](https://doi.org/10.1007/3-540-36136-7_20) (presentation pdf, zip).
- 96 Gerth Stølting Brodal and Riko Jacob, *Dynamic Planar Convex Hull*. In *Proc. 43rd Annual Symposium on Foundations of Computer Science*, pages 617-626, 2002, doi: [10.1109/SFCS.2002.1181985](https://doi.org/10.1109/SFCS.2002.1181985).
- 97 Stephen Alstrup, Gerth Stølting Brodal, Inge Li Gørtz and Theis Rauhe, *Time and Space Efficient Multi-Method Dispatching*. In *Proc. 8th Scandinavian Workshop on Algorithm Theory*, Volume 2368 of Lecture Notes in Computer Science, pages 20-29. Springer Verlag, Berlin, 2002, doi: [10.1007/3-540-45471-3_3](https://doi.org/10.1007/3-540-45471-3_3).
- 98 Gerth Stølting Brodal and Rolf Fagerberg, *Cache Oblivious Distribution Sweeping*. In *Proc. 29th International Colloquium on Automata, Languages, and Programming*, Volume 2380 of Lecture Notes in Computer Science, pages 426-438. Springer Verlag, Berlin, 2002, doi: [10.1007/3-540-45465-9_37](https://doi.org/10.1007/3-540-45465-9_37).
- 99 Gerth Stølting Brodal, Rune Bang Lyngsø, Anna Östlin and Christian Nørgaard Storm Pedersen, *Solving the String Statistics Problem in Time $O(n \log n)$* . In *Proc. 29th International Colloquium on Automata, Languages, and Programming*, Volume 2380 of Lecture Notes in Computer Science, pages 728-739. Springer Verlag, Berlin, 2002, doi: [10.1007/3-540-45465-9_62](https://doi.org/10.1007/3-540-45465-9_62).
- 100 Gerth Stølting Brodal, Rolf Fagerberg and Riko Jacob, *Cache-Oblivious Search Trees via Binary Trees of Small Height*. In *Proc. 13th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 39-48, 2002, doi: [doi.acm.org/10.1145/545381.545386](https://doi.org/doi.acm.org/10.1145/545381.545386).
- 101 Gerth Stølting Brodal, Rolf Fagerberg, Christian Nørgaard Storm Pedersen and Anna Östlin, *The Complexity of Constructing Evolutionary Trees Using Experiments*. In *Proc. 28th International Colloquium on Automata, Languages, and Programming, Hersonissos, Crete, Greece, 8-12 July 2001*, Volume 2076 of Lecture Notes in Computer Science, pages 140-151. Springer Verlag, Berlin, 2001, doi: [10.1007/3-540-48224-5_12](https://doi.org/10.1007/3-540-48224-5_12).
- 102 Stephen Alstrup, Gerth Stølting Brodal and Theis Rauhe, *Optimal Static Range Reporting in One Dimension*. In *Proc. 33rd Annual ACM Symposium on Theory of Computing*, pages 476-482, 2001, doi: [10.1145/380752.380842](https://doi.org/10.1145/380752.380842) (presentation pdf, zip).
- 103 Gerth Stølting Brodal and Riko Jacob, *Dynamic Planar Convex Hull with Optimal Query Time and $O(\log n \cdot \log \log n)$ Update Time*. In *Proc. 7th Scandinavian Workshop on Algorithm Theory, Bergen, Norway, 5-7 July 2000*, Volume 1851 of Lecture Notes in Computer Science, pages 57-70. Springer Verlag, Berlin, 2000, doi: [10.1007/3-540-44985-x_7](https://doi.org/10.1007/3-540-44985-x_7).
- 104 Gerth Stølting Brodal and Christian Nørgaard Storm Pedersen, *Finding Maximal Quasiperiodicities in Strings*. In *Proc. 11th Annual Symposium on Combinatorial Pattern Matching, Montreal, Quebec, Canada, 21-23 June 2000*, Volume 1848 of Lecture Notes in Computer Science, pages 397-411. Springer Verlag, Berlin, 2000, doi: [10.1007/3-540-45123-4_33](https://doi.org/10.1007/3-540-45123-4_33).
- 105 Stephen Alstrup, Gerth Stølting Brodal and Theis Rauhe, *New Data Structures for Orthogonal Range Searching*. In *Proc. 41st Annual Symposium on Foundations of Computer Science*, pages

- 198-207, 2000, doi: [10.1109/SFCS.2000.892088](https://doi.org/10.1109/SFCS.2000.892088).
- 106 [Stephen Alstrup](#), Gerth Stølting Brodal and [Theis Rauhe](#), *Pattern Matching in Dynamic Texts*. In *Proc. 11th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 819-828, 2000, doi: [doi.acm.org/10.1145/338219.338645](https://doi.org/10.1145/338219.338645).
- 107 Gerth Stølting Brodal and [Rolf Fagerberg](#), *Dynamic Representations of Sparse Graphs*. In *Proc. 6th International Workshop on Algorithms and Data Structures, Vancouver, Canada, 11–14 August 1999*, Volume 1663 of Lecture Notes in Computer Science, pages 342-351. Springer Verlag, Berlin, 1999, doi: [10.1007/3-540-48447-7_34](https://doi.org/10.1007/3-540-48447-7_34).
- 108 [Pankaj K. Agarwal](#), [Lars Arge](#), Gerth Stølting Brodal and [Jeff Vitter](#), *I/O-Efficient Dynamic Point Location in Monotone Subdivisions*. In *Proc. 10th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 11-20, 1999, doi: [doi.acm.org/10.1145/314500.314525](https://doi.org/10.1145/314500.314525).
- 109 Gerth Stølting Brodal and [Jyrki Katajainen](#), *Worst-Case Efficient External-Memory Priority Queues*. In *Proc. 6th Scandinavian Workshop on Algorithm Theory, Stockholm, Sweden, 8–10 July 1998*, Volume 1432 of Lecture Notes in Computer Science, pages 107-118. Springer Verlag, Berlin, 1998, doi: [10.1007/BFb0054359](https://doi.org/10.1007/BFb0054359) (presentation [pdf](#), [zip](#)).
- 110 Gerth Stølting Brodal, *Finger Search Trees with Constant Insertion Time*. In *Proc. 9th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 540-549, 1998, doi: [doi.acm.org/10.1145/314613.314842](https://doi.org/10.1145/314613.314842) (presentation [pdf](#), [zip](#)).
- 111 Gerth Stølting Brodal, *Predecessor Queries in Dynamic Integer Sets*. In *Proc. 14th Annual Symposium on Theoretical Aspects of Computer Science*, Volume 1200 of Lecture Notes in Computer Science, pages 21-32. Springer Verlag, Berlin, 1997, doi: [10.1007/BFb0023445](https://doi.org/10.1007/BFb0023445) (presentation [pdf](#)).
- 112 Gerth Stølting Brodal and [Leszek Gąsieniec](#), *Approximate Dictionary Queries*. In *Proc. 7th Annual Symposium on Combinatorial Pattern Matching, Laguna Beach, CA, 10–12 June 1996*, Volume 1075 of Lecture Notes in Computer Science, pages 65-74. Springer Verlag, Berlin, 1996, doi: [10.1007/3-540-61258-0_6](https://doi.org/10.1007/3-540-61258-0_6).
- 113 Gerth Stølting Brodal, *Worst-Case Efficient Priority Queues*. In *Proc. 7th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 52-58, 1996, doi: [doi.acm.org/10.1145/313852.313883](https://doi.org/10.1145/313852.313883) (presentation [pdf](#), [zip](#)).
- 114 Gerth Stølting Brodal, *Fast Meldable Priority Queues*. In *Proc. 4th International Workshop on Algorithms and Data Structures*, Volume 955 of Lecture Notes in Computer Science, pages 282-290. Springer Verlag, Berlin, 1995, doi: [10.1007/3-540-60220-8_70](https://doi.org/10.1007/3-540-60220-8_70) (presentation [pdf](#), [zip](#)).

Program Committees

ESA24, ALENEX24, SEA23, ALENEX22, ESA21, IWOCA19, ICALP19, STACS19, SOFSEM17, SODA17, ALENEX16, IWOCA15, EuroCG15, ISAAC14, IWOCA14, MASSIVE14, MFCS14, ICALP14, SODA14, MASSIVE13, FCT13, IWOCA13, LATA13, MASSIVE12, IWOCA12, ALENEX12, IWOCA11, MASSIVE11, ESA10, IWOCA10, MASSIVE10, SWAT10, LATIN10, WADS09, SPAA09, ICALP09, MASSIVE09 (co-chair of program committee), SEA09, WEA08, ISPA07, WADS07, ATCP07, STACS07, SODA07, ALENEX07 (co-chair of program committee), SPIRE06, SWAT06, STOC05, WEA05, FSTTCS04, ESA04 (co-chair of program committee), ICALP04, CPM04, FUN04, LATIN04, SODA04, WADS03, MASSIVE03 (co-chair of program committee), PDP03, ALENEX03, ESA01, WAAAPL99.

Invited Speaker

- 2023 Algorithm Engineering the Theory. *Summer School on Algorithm Engineering for Network Problems (ADYN)*. Hasso Plattner Institute, Potsdam, Germany, 19–22 Sep 2023 (presentation [pdf](#), [pptx](#)).
- 2023 Data Structure Design: Theory and Practice. *48th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM)*. Nový Smokovec, Slovakia, 15–18 Jan 2023 (presentation [pdf](#), [pptx](#)).
- 2021 In Memoriam - Lars Arge. *Lars Arge Memorial Symposium*. Aarhus University, Aarhus, Denmark, 6 Oct 2021 (presentation [pdf](#), [pptx](#)).
- 2021 In Memoriam - Lars Arge. *23rd Workshop on Algorithm Engineering and Experiments*

- (*ALENEX*). Virtual conference. Originally scheduled in Alexandria, Virginia, USA, 11 Jan 2021 (presentation [pdf](#), [pptx](#), [mp4](#)).
- 2008 Lectures on lower bounds and string algorithms. *MADALGO Summer School on Cache Oblivious Algorithms*. MADALGO, Aarhus University, Denmark, 17–21 Aug 2008.
- 2008 Word RAM algorithms. *International PhD School in Algorithms for Advanced Processor Architectures (AFAPA)*. IT University of Copenhagen, Denmark, 9–12 Jun 2008 (presentation [pdf](#), [pptx](#)).
- 2004 **Cache-Oblivious Algorithms and Data Structures**. *9th Scandinavian Workshop on Algorithm Theory (SWAT)*. Louisiana Museum of Modern Art, Humlebæk, Denmark, 8–10 Jul 2004 (presentation [pdf](#), [zip](#)).
- 1999 Regularities in Sequences. *Workshop on Advances in Data Structures, preworkshop of the 19th Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS)*. Chennai, India, 11–12 Dec 1999 (presentation [pdf](#), [zip](#)).

Services

- 2023 Co-organizer **Dagstuhl Seminar on “Scalable Data Structures”**. Dagstuhl, Germany.
- 2022–2026 Member of the Danish Censor list for Mathematics.
- 2022–2026 Member of the Danish Censor list for Bachelor of Science (BSc), Master of Science (MSc) in Engineering programmes and master programmes (continuing education) within the field of Electronics, IT and Energy.
- 2022–2026 Member of the Danish Censor list for Bachelor of Engineering (BEng) programmes and Technical Diploma programmes (field Diplom - Electronics, IT and Energy).
- 2021 Co-organizer **Dagstuhl Seminar on “Scalable Data Structures”**. Dagstuhl, Germany.
- 2019 Co-organizer **Dagstuhl Seminar on “Data Structures for the Cloud and External Memory Data”**. Dagstuhl, Germany.
- 2014–2018 Co-Editor-in-Chief Journal of Discrete Algorithms.
- 2014–2022 Member of the Danish Censor list for Engineering (Mathematics, Physics, and Social Sciences).
- 2010–2016 Member of the Computer Science Group (Group 38) of the Danish Bibliometric Research Indicator, chair January 2014–December 2016.
- 2010 Member of the Scientific Panel for e-Science, the Danish National Roadmap for Research Infrastructures.
- 2010–2013 Member of the Scientific Advising Group for the ESS Data Management Centre.
- 2007–2016 Member of the Steering Committee, Meeting on Algorithm Engineering and Experiments (*ALENEX*).
- 2006–2026 Member of the Danish Censor list for Computer Science.
- 2006 Responsible for the electronic submission server and the electronic server for the program committee of the 10th Scandinavian Workshop on Algorithm Theory, Riga, Latvia.
- 2004–2007 Member of the Steering Committee, European Symposium on Algorithms (ESA).
- 2000–2004 Responsible for the electronic server handling **ALCOM-FT** technical reports.
- 1999 Co-responsible for the electronic submission server and the electronic server for the program committee of the 3rd Workshop on Algorithm Engineering, London, UK.
- 1997 Editor of the Oberwolfach report “Tagungsbericht 29/1997 – Effiziente Algorithmen”.