

Curriculum Vitæ



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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 23211)*, Dagstuhl, Germany, 21–26 May 2023, Gerth Stølting Brodal, John Iacono, László Kozma and Vijaya Ramachandran (Edt.), Volume 13 of Dagstuhl Reports(5), pages 114-135. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2023, doi: [10.4230/DagRep.13.5.114](https://doi.org/10.4230/DagRep.13.5.114).
- 2 *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, 2021, doi: [10.4230/DagRep.11.1.1](https://doi.org/10.4230/DagRep.11.1.1).
- 3 *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 Sedgwick (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).
 - 4 *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).
 - 5 *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

- 6 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).
- 7 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).
- 8 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

- 9 Gerth Stølting Brodal, *Priority Queues with Decreasing Keys*. In *Theoretical Computer Science*, Volume 1000, 2024, doi: [10.1016/j.tcs.2024.114563](https://doi.org/10.1016/j.tcs.2024.114563).
- 10 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).
- 11 Gerth Stølting Brodal, *In Memoriam Lars Arge*. In *Bulletin of the EATCS*, Volume 133, pages 11-14, February 2021.
- 12 Gerth Stølting Brodal, Spyros Sioutas, Konstantinos Tsakalidis and Kostas Tsichlas, *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).
- 13 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).
- 14 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).
- 15 Gerth Stølting Brodal, Spyros Sioutas, Kostas Tsichlas 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).
- 16 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).
- 17 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).
- 18 Gerth Stølting Brodal, Alexis Kaporis, Apostolos Papadopoulos, Spyros Sioutas, Konstantinos

- Tsakalidis and Kostas Tsihlias, *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).
- 19 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).
- 20 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).
- 21 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).
- 22 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).
- 23 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).
- 24 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).
- 25 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).
- 26 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).
- 27 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).
- 28 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).
- 29 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).
- 30 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).
- 31 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).
- 32 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).
- 33 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).

- 34 Lars Arge, Gerth Stølting Brodal and Laura Toma, *On External-Memory MST, SSSP and Multi-way 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).
- 35 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).
- 36 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).
- 37 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).
- 38 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).
- 39 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).
- 40 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.
- 41 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).
- 42 Gerth Stølting Brodal, Jesper Larsson Träff 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).
- 43 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.
- 44 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.
- 45 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

- 46 Gerth Stølting Brodal, Rolf Fagerberg and Casper Moldrup Rysgaard, *On Finding Longest Palindromic Subsequences using Longest Common Subsequences*. In *Proc. 32nd Annual European Symposium on Algorithms*, Leibniz International Proceedings in Informatics, pages :1-:16. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2024.
- 47 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. 6), pages 6:1-6:15. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2024, doi: [10.4230/LIPIcs.FUN.2024.6](https://doi.org/10.4230/LIPIcs.FUN.2024.6) (presentation [pdf](#), [pptx](#)).
- 48 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. 17). Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2024, doi: [10.4230/LIPIcs.SWAT.2024.17](https://doi.org/10.4230/LIPIcs.SWAT.2024.17) (presentation [pdf](#), [pptx](#)).
- 49 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 Inter-

- national Proceedings in Informatics(Article No. 24), pages 24:1-24:15. Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2024, doi: [10.4230/LIPIcs.SocG.2024.24](https://doi.org/10.4230/LIPIcs.SocG.2024.24).
- 50 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).
- 51 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).
- 52 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).
- 53 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](#)).
- 54 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).
- 55 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](#)).
- 56 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).
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Program Committees

SOFSEM25, SoCG25, 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”.