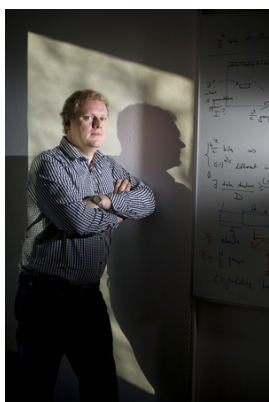


# Curriculum Vitæ



**Name** Gerth Stølting Brodal  
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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. Since March 2007 he is 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

February 1993–April 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).
August 1989–November 1994	MSc (cand.scient.) in Computer Science and Mathematics, Aarhus University, Denmark.
August 1988–May 1989	Military service, Jyske Telegrafregiment, Fredericia, Denmark.
August 1985–June 1988	“Studentereksamen”, Aabenraa Gymnasium og HF, Aabenraa, Denmark.

## Positions

January 2016–present	Professor, Department of Computer Science, Aarhus University.
April 2009–December 2015	Associate Professor (tenured, Lektor MSK), Department of Computer Science, Aarhus University.

April 2004–March 2009	Associate Professor (tenured), Department of Computer Science, Aarhus University.
August 2001–January 2005	Associate Professor, BRICS, Department of Computer Science, Aarhus University.
August 1999–July 2001	Research Associate Professor, BRICS, Department of Computer Science, Aarhus University.
August 1998–July 1999	Research Assistant Professor, BRICS Ph.D. School, Department of Computer Science, Aarhus University.
February 1997–July 1998	PostDoc at the Max-Planck-Institut for Computer Science, Saarbrücken, Germany.

## Funding

September 2013–June 2014	Aarhus University Research Foundation, Guest Researcher Grant, Seth Pettie (University of Michigan Ann Arbor), 250.000 DKK.
January 2011–December 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).
July 2005–June 2006	The Danish Natural Science Research Council, <i>Graph Algorithms and Constraint Programming</i> , PostDoc Irit Katriel., 480.000 DKK.
January 2005–December 2007	The Danish Natural Science Research Council, Grant #21-04-0389, <i>Algoritmer til rekonstruktion og sammenligning af træer og netværk</i> . Coordinator Christian N.S. Pedersen, Aarhus University, 360.000 DKK.
January 2005–December 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).
January 2008–December 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).
February 2002–January 2005	Associate Professor grant from the Carlsberg Foundation, 1.350.000 DKK.
May–July 1998	Scholarship (PostDoc) from the Max-Planck-Institut für Informatik, Saarbrücken, Germany, 10.200 DM (39.200 DKK).
May 1997–April 1998	Scholarship (PostDoc) from the Carlsberg Foundation, 300.000 DKK.
February–April 1997	Scholarship (PostDoc) from the Max-Planck-Institut für Informatik, Saarbrücken, Germany, 10.200 DM (39.200 DKK).
February 1995–January 1997	Scholarship (PhD-stipendium) from the Danish Natural Science Research Council, 717.591 DKK.
February 1993–January 1995	Scholarship (Scholarstipendium) from the Danish Research Academy, 156.000 DKK.

## Awards

2017	Lecturer of the Year, Department of Computer Science, Aarhus University.
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- 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

Conference publications appearing in journals and technical reports appearing elsewhere are numbered in parenthesis with the newer appearance.

### Editor

- 1 *Algorithms - ESA 2005: 13th Annual European Symposium*, Gerth Stølting Brodal and Stefano Leonardi (Edt.), volume 3669 of *Lecture Notes in Computer Science*. Springer Verlag, Berlin, 2005.
- 2 *Algorithm Engineering – 5th International Workshop (WAE 2001)*, Gerth Stølting Brodal, Daniele Frigioni, and Alberto Marchetti-Spaccamela (Edt.), volume 2141 of *Lecture Notes in Computer Science*. Springer Verlag, Berlin, 2001.

### Book Chapters

- 3 **Cache-Oblivious Sorting**, Gerth Stølting Brodal. In *Encyclopedia of Algorithms*, Ming-Yang Kao (Edt.), pages 126-129. Springer, 2008.
- 4 **Cache-Oblivious Data Structures**, Lars Arge, Gerth Stølting Brodal, and Rolf Fagerberg. In *Handbook of Data Structures and Applications*, Dinesh Mehta and Sartaj Sahni (Edt.), 27 pages. CRC Press, 2005.
- 5 **Finger Search Trees**, Gerth Stølting Brodal. In *Handbook of Data Structures and Applications*, Dinesh Mehta and Sartaj Sahni (Edt.), 11 pages. CRC Press, 2005.

### Journal Articles

- 6 **Two Dimensional Range Minimum Queries and Fibonacci Lattices**, Gerth Stølting Brodal, Pooya Davoodi, Moshe Lewenstein, Rajeev Raman, and S. Srinivasa Rao. In *Theoretical Computer Science*, volume 638, pages 33-43, 2016.
- 7  **$D^2$ -Tree: A New Overlay with Deterministic Bounds**, Gerth Stølting Brodal, Spyros Sioutas, Kostas Tsichlas, and Christos D. Zaroliagis. In *Algorithmica*, volume 72(3), pages 860-883, 2015.
- 8 **OnlineMin: A Fast Strongly Competitive Randomized Paging Algorithm**, Gerth Stølting Brodal, Gabriel Moruz, and Andrei Negoescu. In *Theory of Computing Systems, Special issue of the 9th Workshop on Approximation and Online Algorithms*, volume 56(1), pages 22-40, 2015.
- 9 **tqDist: A Library for Computing the Quartet and Triplet Distances Between Binary or General Trees**, Andreas Sand, Morten Kragelund Holt, Jens Johansen, Gerth Stølting Brodal, Thomas Mailund, and Christian Nørgaard Storm Pedersen. In *Bioinformatics*, 2014.
- 10 **Dynamic 3-sided Planar Range Queries with Expected Doubly Logarithmic Time**, Gerth Stølting Brodal, Alexis Kaporis, Apostolos Papadopoulos, Spyros Sioutas, Konstantinos Tsakalidis, and Kostas Tsichlas. In *Theoretical Computer Science*, volume 526, pages 58-74, 2014.

- 11 **Integer Representations towards Efficient Counting in the Bit Probe Model**, Gerth Stølting Brodal, Mark Greve, Vineet Pandey, and S. Srinivasa Rao. In *Journal of Discrete Algorithms*, volume 26, pages 34-44, 2014.
- 12 **Algorithms for Computing the Triplet and Quartet Distances for Binary and General Trees**, Andreas Sand, Morten Kragelund Holt, Jens Johansen, Rolf Fagerberg, Gerth Stølting Brodal, Christian Nørgaard Storm Pedersen, and Thomas Mailund. In *Biology - Special Issue on Developments in Bioinformatic Algorithms*, volume 2(4), pages 1189-1209, 2013.
- 13 **A practical  $O(n \log^2 n)$  time algorithm for computing the triplet distance on binary trees**, Andreas Sand, Gerth Stølting Brodal, Rolf Fagerberg, Christian Nørgaard Storm Pedersen, and Thomas Mailund. In *BMC Bioinformatics*, volume 14(Suppl 2), S18 pages, 2013.
- 14 **External Memory Planar Point Location with Logarithmic Updates**, Lars Arge, Gerth Stølting Brodal, and S. Srinivasa Rao. In *Algorithmica*, volume 63(1), pages 457-475, 2012.
- 15 **On Space Efficient Two Dimensional Range Minimum Data Structures**, Gerth Stølting Brodal, Pooya Davoodi, and S. Srinivasa Rao. In *Algorithmica, Special issue on ESA 2010*, volume 63(4), pages 815-830, 2012.
- 16 **Optimal Sparse Matrix Dense Vector Multiplication in the I/O-Model**, Michael A. Bender, Gerth Stølting Brodal, Rolf Fagerberg, Riko Jacob, and Elias Vicari. In *Theory of Computing Systems, Special issue of SPAA '07*, volume 47(4), pages 934-962, 2010.
- 17 **Towards Optimal Range Median**, Gerth Stølting Brodal, Beat Gfeller, Allan Grønlund Jørgensen, and Peter Sanders. In *Theoretical Computer Science, Special issue of ICALP'09*, volume 412(24), pages 2588-2601, 2011.
- 18 **Faster Algorithms for Computing Longest Common Increasing Subsequences**, Martin Kutz, Gerth Stølting Brodal, Kanela Kaligosi, and Irit Katriel. In *Journal of Discrete Algorithms, Special Issue of CPM 2006*, volume 9(4), pages 314-325, 2011.
- 19 **The Cost of Cache-Oblivious Searching**, Michael A. Bender, Gerth Stølting Brodal, Rolf Fagerberg, Dongdong Ge, Simai He, Haodong Hu, John Iacono, and Alejandro López-Ortiz. In *Algorithmica*, volume 61(2), pages 463-505, 2011.
- 20 **Computing the All-Pairs Quartet Distance on a set of Evolutionary Trees**, Martin Stissing, Thomas Mailund, Christian Nørgaard Storm Pedersen, Gerth Stølting Brodal, and Rolf Fagerberg. In *Journal of Bioinformatics and Computational Biology*, volume 6(1), pages 37-50, 2008.
- 21 **On the Adaptiveness of Quicksort**, Gerth Stølting Brodal, Rolf Fagerberg, and Gabriel Moruz. In *ACM Journal of Experimental Algorithmics, Special Issue of ALENEX 2005*, volume 12(Article No. 3.2), 19 pages, 2008.
- 22 **An  $O(n \log n)$  Version of the Averbakh-Berman Algorithm for the Robust Median of a Tree**, Gerth Stølting Brodal, Loukas Georgiadis, and Irit Katriel. In *Operations Research Letters*, volume 36(1), pages 14-18, 2008.
- 23 **Engineering a Cache-Oblivious Sorting Algorithm**, Gerth Stølting Brodal, Rolf Fagerberg, and Kristoffer Vinther. In *ACM Journal of Experimental Algorithmics, Special Issue of ALENEX 2004*, volume 12(Article No. 2.2), 23 pages, 2007.
- 24 **Recrafting the Neighbor-Joining Method**, Thomas Mailund, Gerth Stølting Brodal, Rolf Fagerberg, Christian Nørgaard Storm Pedersen, and Derek Phillips. In *BMC Bioinformatics*, volume 7(29), 2006.
- 25 **Fast Allocation and Deallocation with an Improved Buddy System**, Gerth Stølting Brodal, Erik D. Demaine, and J. Ian Munro. In *Acta Informatica*, volume 41(4-5), pages 273-291, 2005.

- 26 **On External-Memory MST, SSSP and Multi-way Planar Graph Separation**, Lars Arge, Gerth Stølting Brodal, and Laura Toma. In *Journal of Algorithms*, volume 53(2), pages 186-206, 2004.
- 27 **Computing the Quartet Distance Between Evolutionary Trees in Time  $O(n \log n)$** , Gerth Stølting Brodal, Rolf Fagerberg, and Christian Nørgaard Storm Pedersen. In *Algorithmica, Special issue on ISAAC 2001*, volume 38(2), pages 377-395, 2004.
- 28 **Optimal Finger Search Trees in the Pointer Machine**, Gerth Stølting Brodal, George Lagogiannis, Christos Makris, Athanasios Tsakalidis, and Kostas Tsichlas. In *Journal of Computer and System Sciences, Special issue on STOC 2002*, volume 67(2), pages 381-418, 2003.
- 29 **Optimal Solutions for the Temporal Precedence Problem**, Gerth Stølting Brodal, Christos Makris, Spyros Sioutas, Athanasios Tsakalidis, and Kostas Tsichlas. In *Algorithmica*, volume 33(4), pages 494-510, 2002.
- 30 **Comparator Networks for Binary Heap Construction**, Gerth Stølting Brodal and M. Cristina Pinotti. In *Theoretical Computer Science*, volume 250(1-2), pages 235-245, 2001.
- 31 **Improved Bounds for Dictionary Look-up with One Error**, Gerth Stølting Brodal and Venkatesh Srinivasan. In *Information Processing Letters*, volume 75(1-2), pages 57-59, 2000.
- 32 **Finding Maximal Pairs with Bounded Gap**, Gerth Stølting Brodal, Rune Bang Lyngsø, Christian Nørgaard Storm Pedersen, and Jens Stoye. In *Journal of Discrete Algorithms, Special Issue of Matching Patterns*, volume 1(1), pages 77-104, 2000.
- 33 **Priority Queues on Parallel Machines**, Gerth Stølting Brodal. In *Parallel Computing*, volume 25(8), pages 987-1011, 1999.
- 34 **A Parallel Priority Queue with Constant Time Operations**, Gerth Stølting Brodal, Jesper Larsson Träff, and Christos D. Zaroliagis. In *Journal of Parallel and Distributed Computing, Special Issue on Parallel Data Structures*, volume 49(1), pages 4-21, 1998.
- 35 **The Randomized Complexity of Maintaining the Minimum**, Gerth Stølting Brodal, Shiva Chaudhuri, and Jaikumar Radhakrishnan. In *Nordic Journal of Computing, Selected Papers of the 5th Scandinavian Workshop on Algorithm Theory (SWAT'96)*, volume 3(4), pages 337-351, 1996.
- 36 **Partially Persistent Data Structures of Bounded Degree with Constant Update Time**, Gerth Stølting Brodal. In *Nordic Journal of Computing*, volume 3(3), pages 238-255, 1996.
- 37 **Optimal Purely Functional Priority Queues**, Gerth Stølting Brodal and Chris Okasaki. In *Journal of Functional Programming*, volume 6(6), pages 839-858, 1996.

## Conference Articles

- 38 **A Simple Greedy Algorithm for Dynamic Graph Orientation**, Edvin Berglin and Gerth Stølting Brodal. To appear in *Proc. 25th Annual European Symposium on Algorithms, Leibniz International Proceedings in Informatics*. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2017.
- 39 **Cache Oblivious Algorithms for Computing the Triplet Distance between Trees**, Gerth Stølting Brodal and Konstantinos Mampentzidis. In *Proc. 25th Annual European Symposium on Algorithms, Leibniz International Proceedings in Informatics*. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2017.
- 40 **External Memory Three-Sided Range Reporting and Top- $k$  Queries with Sublogarithmic Updates**, Gerth Stølting Brodal. In *Proc. 33rd Annual Symposium on Theoretical Aspects of Computer Science*, volume 47 of *Leibniz International Proceedings in In-*

- formatics*, 23:1-23:14 pages. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2016.
- 41 **Strictly Implicit Priority Queues: On the Number of Moves and Worst-Case Time**, Gerth Stølting Brodal, Jesper Sindahl Nielsen, and Jakob Truelsen. 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.
  - 42 **Expected Linear Time Sorting for Word Size  $\Omega(\log^2 n \log \log n)$** , Djamal Belazzougui, Gerth Stølting Brodal, and Jesper Sindahl Nielsen. In *Proc. 14th Scandinavian Workshop on Algorithm Theory*, volume 8503 of *Lecture Notes in Computer Science*, pages 26-37. Springer Verlag, Berlin, 2014.
  - 43 **Optimal Planar Orthogonal Skyline Counting Queries**, Gerth Stølting Brodal and Kasper Green Larsen. In *Proc. 14th Scandinavian Workshop on Algorithm Theory*, volume 8503 of *Lecture Notes in Computer Science*, pages 98-109. Springer Verlag, Berlin, 2014.
  - 44 **On the Scalability of Computing Triplet and Quartet Distances**, Morten Kragelund Holt, Jens Johansen, and Gerth Stølting Brodal. In *Proc. 16th Workshop on Algorithm Engineering and Experiments*, pages 9-19, 2014.
  - 45 **An Optimal and Practical Cache-Oblivious Algorithm for Computing Multiresolution Rasters**, Lars Arge, Gerth Stølting Brodal, Jakob Truelsen, and Constantinos Tsirogiannis. In *Proc. 21st Annual European Symposium on Algorithms*, volume 8125 of *Lecture Notes in Computer Science*, pages 61-72. Springer Verlag, Berlin, 2013.
  - 46 **The Encoding Complexity of Two Dimensional Range Minimum Data Structures**, Gerth Stølting Brodal, Andrej Brodnik, and Pooya Davoodi. In *Proc. 21st Annual European Symposium on Algorithms*, volume 8125 of *Lecture Notes in Computer Science*, pages 229-240. Springer Verlag, Berlin, 2013.
  - 47 **A Survey on Priority Queues**, Gerth Stølting Brodal. 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.
  - (13) **A practical  $O(n \log^2 n)$  time algorithm for computing the triplet distance on binary trees**, Andreas Sand, Gerth Stølting Brodal, Rolf Fagerberg, Christian Nørgaard Storm Pedersen, and Thomas Mailund. In *Proc. 11th Asia Pacific Bioinformatics Conference*. Tsinghua University Press, 2013.
  - 48 **Efficient Algorithms for Computing the Triplet and Quartet Distance Between Trees of Arbitrary Degree**, Gerth Stølting Brodal, Rolf Fagerberg, Christian Nørgaard Storm Pedersen, Thomas Mailund, and Andreas Sand. In *Proc. 24th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 1814-1832, 2013.
  - 49 **Finger Search in the Implicit Model**, Gerth Stølting Brodal, Jesper Sindahl Nielsen, and Jakob Truelsen. 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.
  - 50 **Two Dimensional Range Minimum Queries and Fibonacci Lattices**, Gerth Stølting Brodal, Pooya Davoodi, Moshe Lewenstein, Rajeev Raman, and S. Srinivasa Rao. In *Proc. 20th Annual European Symposium on Algorithms*, volume 7501 of *Lecture Notes in Computer Science*, pages 217-228. Springer Verlag, Berlin, 2012.
  - 51 **Strict Fibonacci Heaps**, Gerth Stølting Brodal, George Lagogiannis, and Robert E. Tarjan. In *Proc. 44th Annual ACM Symposium on Theory of Computing*, pages 1177-1184, 2012.
  - 52 **Cache-Oblivious Implicit Predecessor Dictionaries with the Working Set Property**, Gerth Stølting Brodal and Casper Kejlberg-Rasmussen. In *Proc. 29th Annual Symposium on Theoretical Aspects of Computer Science*, volume 14 of *Leibniz International Pro-*

- ceedings in Informatics*, pages 112-123. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany, 2012.
- 53 **Fully Persistent B-trees**, Gerth Stølting Brodal, Spyros Sioutas, Konstantinos Tsakalidis, and Kostas Tsichlas. In *Proc. 23rd Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 602-614, 2012.
- (8) **OnlineMin: A Fast Strongly Competitive Randomized Paging Algorithm**, Gerth Stølting Brodal, Gabriel Moruz, and Andrei Negoescu. In *Proc. 9th Workshop on Approximation and Online Algorithms*, volume 7164 of *Lecture Notes in Computer Science*, pages 164-175. Springer Verlag, Berlin, 2011.
- 54 **Path Minima Queries in Dynamic Weighted Trees**, Gerth Stølting Brodal, Pooya Davoodi, and S. Srinivasa Rao. 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.
- 55 **Dynamic Planar Range Maxima Queries**, Gerth Stølting Brodal and Konstantinos Tsakalidis. 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.
- (11) **Integer Representations towards Efficient Counting in the Bit Probe Model**, Gerth Stølting Brodal, Mark Greve, Vineet Pandey, and S. Srinivasa Rao. In *Proc. 8th Annual Conference on Theory and Applications of Models of Computation*, volume 6648 of *Lecture Notes in Computer Science*, pages 206-217. Springer Verlag, Berlin, 2011.
- 56 **Ordered and Unordered Top-K Range Reporting in Large Data Sets**, Peyman Afshani, Gerth Stølting Brodal, and Norbert Zeh. In *Proc. 22nd Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 390-400, 2011.
- (7)  **$D^2$ -Tree: A New Overlay with Deterministic Bounds**, Gerth Stølting Brodal, Spyros Sioutas, Kostas Tsichlas, and Christos D. Zaroliagis. In *Proc. 21th Annual International Symposium on Algorithms and Computation, Part II*, volume 6507 of *Lecture Notes in Computer Science*, pages 1-12. Springer Verlag, Berlin, 2010.
- 57 **A Cache-Oblivious Implicit Dictionary with the Working Set Property**, Gerth Stølting Brodal, Casper Kejlberg-Rasmussen, and Jakob Truelsen. In *Proc. 21th Annual International Symposium on Algorithms and Computation, Part II*, volume 6507 of *Lecture Notes in Computer Science*, pages 37-48. Springer Verlag, Berlin, 2010.
- (15) **On Space Efficient Two Dimensional Range Minimum Data Structures**, Gerth Stølting Brodal, Pooya Davoodi, and S. Srinivasa Rao. In *Proc. 18th Annual European Symposium on Algorithms*, volume 6347 of *Lecture Notes in Computer Science*, pages 171-182. Springer Verlag, Berlin, 2010.
- 58 **Cache-Oblivious Dynamic Dictionaries with Optimal Update/Query Tradeoff**, Gerth Stølting Brodal, Erik D. Demaine, Jeremy T. Fineman, John Iacono, Stefan Langerman, and J. Ian Munro. In *Proc. 21st Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 1448-1456, 2010.
- (17) **Data Structures for Range Median Queries**, Gerth Stølting Brodal and Allan Grønlund Jørgensen. In *Proc. 20th Annual International Symposium on Algorithms and Computation*, volume 5878 of *Lecture Notes in Computer Science*, pages 822-831. Springer Verlag, Berlin, 2009.
- 59 **Online Sorted Range Reporting**, Gerth Stølting Brodal, Rolf Fagerberg, Mark Greve, and Alejandro López-Ortiz. 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.
- (10) **Dynamic 3-sided Planar Range Queries with Expected Doubly Logarithmic Time**, Gerth Stølting Brodal, Alexis C. Kaporis, Spyros Sioutas, Konstantinos Tsakalidis,

- and Kostas Tsichlas. In *Proc. 20th Annual International Symposium on Algorithms and Computation*, volume 5878 of *Lecture Notes in Computer Science*, pages 193-202. Springer Verlag, Berlin, 2009.
- 60 **Counting in the Presence of Memory Faults**, Gerth Stølting Brodal, Allan Grønlund Jørgensen, Gabriel Moruz, and Thomas Mølhave. 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.
- 61 **Fault Tolerant External Memory Algorithms**, Gerth Stølting Brodal, Allan Grønlund Jørgensen, and Thomas Mølhave. 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.
- 62 **Selecting Sums in Arrays**, Gerth Stølting Brodal and Allan Grønlund Jørgensen. 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.
- (14) **External memory planar point location with logarithmic updates**, Lars Arge, Gerth Stølting Brodal, and S. Srinivasa Rao. In *Proc. 24th Annual ACM Symposium on Computational Geometry*, pages 139-147, 2008.
- 63 **Optimal Resilient Dynamic Dictionaries**, Gerth Stølting Brodal, Rolf Fagerberg, Irene Finocchi, Fabrizio Grandoni, Giuseppe Italiano, Allan Grønlund Jørgensen, Gabriel Moruz, and Thomas Mølhave. In *Proc. 15th Annual European Symposium on Algorithms*, volume 4708 of *Lecture Notes in Computer Science*, pages 347-358. Springer Verlag, Berlin, 2007.
- 64 **Dynamic Matchings in Convex Bipartite Graphs**, Gerth Stølting Brodal, Loukas Georgiadis, Kristoffer A. Hansen, and Irit Katriel. 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.
- 65 **A Linear Time Algorithm for the  $k$  Maximal Sums Problem**, Gerth Stølting Brodal and Allan Grønlund Jørgensen. 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.
- 66 **The ComBack Method - Extending Hash Compaction with Backtracking**, Michael Westergaard, Lars Michael Kristensen, Gerth Stølting Brodal, and Lars Arge. 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.
- (16) **Optimal Sparse Matrix Dense Vector Multiplication in the I/O-Model**, Michael A. Bender, Gerth Stølting Brodal, Rolf Fagerberg, Riko Jacob, and Elias Vicari. In *Proc. 19th ACM Symposium on Parallelism in Algorithms and Architectures*, pages 61-70, 2007.
- 67 **Computing the Quartet Distance Between Evolutionary Trees of Bounded Degree**, Martin Stissing, Christian Nørgaard Storm Pedersen, Thomas Mailund, Gerth Stølting Brodal, and Rolf Fagerberg. In *Proc. 5th Asia Pacific Bioinformatics Conference*, volume 5 of *Advances in Bioinformatics & Computational Biology*, pages 101-110. Imperial College Press, 2007.
- (20) **Computing the All-Pairs Quartet Distance on a set of Evolutionary Trees**, Martin Stissing, Thomas Mailund, Christian Nørgaard Storm Pedersen, Gerth Stølting Brodal, and Rolf Fagerberg. In *Proc. 5th Asia Pacific Bioinformatics Conference, Advances in Bioinformatics & Computational Biology*, pages 91-100. Imperial College Press, 2007.
- 68 **Improved Dynamic Planar Point Location**, Lars Arge, Gerth Stølting Brodal, and Loukas Georgiadis. In *Proc. 47th Annual Symposium on Foundations of Computer Science*, pages 305-314, 2006.



- 69 **Purely Functional Worst Case Constant Time Catenable Sorted Lists**, Gerth Stølting Brodal, Christos Makris, and Kostas Tsichlas. In *Proc. 14th Annual European Symposium on Algorithms*, volume 4168 of *Lecture Notes in Computer Science*, pages 172-183. Springer Verlag, Berlin, 2006.
- 70 **Skewed Binary Search Trees**, Gerth Stølting Brodal and Gabriel Moruz. In *Proc. 14th Annual European Symposium on Algorithms*, volume 4168 of *Lecture Notes in Computer Science*, pages 708-719. Springer Verlag, Berlin, 2006.
- (18) **Faster Algorithms for Computing Longest Common Increasing Subsequences**, Gerth Stølting Brodal, Kanela Kaligosi, Irit Katriel, and Martin Kutz. In *Proc. 17th Annual Symposium on Combinatorial Pattern Matching*, volume 4009 of *Lecture Notes in Computer Science*, pages 330-341. Springer Verlag, Berlin, 2006.
- 71 **Cache-oblivious String Dictionaries**, Gerth Stølting Brodal and Rolf Fagerberg. In *Proc. 17th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 581-590, 2006.
- 72 **Tradeoffs Between Branch Mispredictions and Comparisons for Sorting Algorithms**, Gerth Stølting Brodal and Gabriel Moruz. In *Proc. 9th International Workshop on Algorithms and Data Structures*, volume 3608 of *Lecture Notes in Computer Science*, pages 385-395. Springer Verlag, Berlin, 2005.
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## Submissions

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## Coauthors

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## Program Committees

- 2017 *43rd International Conference on Current Trends in Theory and Practice of Computer Science*, Limerick, Ireland.  
*28th Annual ACM-SIAM Symposium on Discrete Algorithms*, Barcelona, Spain.
- 2016 *18th Workshop on Algorithm Engineering and Experiments*, Arlington, Virginia, USA.
- 2015 *31st European Workshop on Computational Geometry*, Ljubljana, Slovenia.  
*26th International Workshop on Combinatorial Algorithms*, Verona, Italy.
- 2014 *25th Annual ACM-SIAM Symposium on Discrete Algorithms*, Portland, Oregon, USA.  
*6th Workshop on Massive Data Algorithmics*, Wroclaw, Poland.  
*39th International Symposium on Mathematical Foundations of Computer Science*, Budapest, Hungary.  
*25th Annual International Symposium on Algorithms and Computation*, Jeonju, Korea.  
*25th International Workshop on Combinatorial Algorithms*, Duluth, Minnesota, USA.  
*41st International Colloquium on Automata, Languages, and Programming*, IT University of Copenhagen, Copenhagen, Denmark.
- 2013 *5th Workshop on Massive Data Algorithmics*, Sophia Antipolis, France.  
*19th International Symposium on Fundamentals of Computation Theory*, Liverpool, United Kingdom.  
*24rd International Workshop on Combinatorial Algorithms*, Rouen, Normandy, France.  
*7th International Conference on Language and Automata Theory and Applications*, Bilbao, Spain.
- 2012 *14th Workshop on Algorithm Engineering and Experiments*, Kyoto, Japan.  
*4th Workshop on Massive Data Algorithmics*, Ljubljana, Slovenia.  
*23rd International Workshop on Combinatorial Algorithms*, Kalasalingam University, Tamil Nadu, India.
- 2011 *3rd Workshop on Massive Data Algorithmics*, Paris, France.  
*22nd International Workshop on Combinatorial Algorithms*, University of Victoria, Victoria, British Columbia, Canada.
- 2010 *2nd Workshop on Massive Data Algorithmics*, Snowbird, Utah.  
*21st International Workshop on Combinatorial Algorithms*, King's College London, UK.



- 9th Latin American Symposium on Theoretical Informatics*, Oaxaca, Mexico.
- 12th Scandinavian Workshop on Algorithm Theory*, Bergen, Norway.
- 18th Annual European Symposium on Algorithms*, Liverpool, UK.
- 2009 *11th International Workshop on Algorithms and Data Structures*, Banff, Alberta, Canada.
- 8th International Symposium on Experimental Algorithms*, Dortmund, Germany.
- 1st Workshop on Massive Data Algorithmics*, Aarhus, Denmark (co-chair).
- 21st ACM Symposium on Parallelism in Algorithms and Architectures*, Calgary, Canada.
- 36th International Colloquium on Automata, Languages and Programming*, Rhodes, Greece.
- 2008 *7th International Workshop on Experimental Algorithms*, Provincetown, Cape Cod, Massachusetts, USA.
- 2007 *10th International Workshop on Algorithms and Data Structures*, Halifax, Canada.
- 18th Annual ACM-SIAM Symposium on Discrete Algorithms*, New Orleans, Louisiana, USA.
- 9th Workshop on Algorithm Engineering and Experiments*, New Orleans, Louisiana, USA (co-chair).
- IEEE 2007 International Symposium on Parallel and Distributed Processing with Applications*, Niagara Falls, Ontario, Canada.
- 24th Annual Symposium on Theoretical Aspects of Computer Science*, Aachen, Germany.
- International Workshop on Algorithmic Topics in Constraint Programming (cancelled)*, Wrocław, Poland.
- 2006 *9th Scandinavian Workshop on Algorithm Theory*, Riga, Latvia.
- 13th Symposium on String Processing and Information Retrieval (SPIRE)*, Glasgow, Scotland.
- 2005 *13th Annual European Symposium on Algorithms – Engineering and Application Track*, Mallorca, Spain (chair).
- 37th Annual ACM Symposium on Theory of Computing*, Baltimore, Maryland, USA.
- 4th International Workshop on Efficient and Experimental Algorithms*, Santorini Island, Greece.
- 2004 *15th Annual ACM-SIAM Symposium on Discrete Algorithms*, New Orleans, Louisiana, USA.
- 31st International Colloquium on Automata, Languages and Programming*, Turku, Finland.
- 24th Conference on Foundations of Software Technology and Theoretical Computer Science*, Chennai, India.
- 3rd International Conference on Fun With Algorithms*, Isola d’Elba, Tuscany, Italy.

- 6th Latin American Symposium on Theoretical Informatics*, Buenos Aires, Argentina.  
*15th Annual Symposium on Combinatorial Pattern Matching*, Istanbul, Turkey.  
 2003 *8th International Workshop on Algorithms and Data Structures*, Ottawa, Canada.  
*5th Workshop on Algorithm Engineering and Experiments*, Baltimore, MD, USA.  
*Workshop on Algorithms for Massive Data Sets (cancelled)*, Eindhoven, The Netherlands (co-chair).  
*11th Euromicro Conference on Parallel Distributed and Networking based Processing, Special session on Memory Hierarchies*, Genoa, Italy.  
 2001 *9th Annual European Symposium on Algorithms*, Aarhus, Denmark.  
 1999 *Workshop on Algorithmic Aspects of Advanced Programming Languages*, Paris, France.

## Invited Speaker

- August 2008 *Lectures on lower bounds and string algorithms, MADALGO Summer School on Cache Oblivious Algorithms*, MADALGO, Aarhus University, Denmark.  
 June 2008 *Word RAM algorithms, International PhD School in Algorithms for Advanced Processor Architectures*, IT University of Copenhagen, Denmark. [pdf, pptx]  
 July 2004 *Cache-Oblivious Algorithms and Data Structures, 9th Scandinavian Workshop on Algorithm Theory*, Louisiana Museum of Modern Art, Humlebæk, Denmark. [pdf]  
 December 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*, Chennai, India. [pdf]

## Conference Participation

- January 2017 *28th Annual ACM-SIAM Symposium on Discrete Algorithms*. Barcelona, Spain.  
 August 2016 *8th Workshop on Massive Data Algorithmics*. Aarhus, Denmark (presentation [pdf, pptx]).  
 February 2016 *33rd Annual Symposium on Theoretical Aspects of Computer Science*. Orléans, France (presentation [pdf, pptx]).  
 January 2016 *27th Annual ACM-SIAM Symposium on Discrete Algorithms*. Washington, DC, USA.  
 September–October 2014 *Algorithms for Big Data*. Goethe University, Frankfurt am Main, Germany.  
 September 2014 *22nd Annual European Symposium on Algorithms*. Wrocław, Poland.

- September 2014 *6th Workshop on Massive Data Algorithmics*. Wroclaw, Poland.
- July 2014 *14th Scandinavian Workshop on Algorithm Theory*. Copenhagen, Denmark (presentation [pdf, pptx] ).
- January 2014 *25th Annual ACM-SIAM Symposium on Discrete Algorithms*. Portland, Oregon, USA.
- September 2013 *Dagstuhl Seminar on “Algorithm Engineering”*. Dagstuhl, Germany.
- September 2013 *5th Workshop on Massive Data Algorithmics*. Inria, Sophia Antipolis, France.
- September 2013 *21st Annual European Symposium on Algorithms*. Inria, Sophia Antipolis, France (presentation [pdf, pptx] ).
- August 2013 *Conference on Space Efficient Data Structures, Streams and Algorithms – In Honor of J. Ian Munro on the Occasion of His 66th Birthday*. University of Waterloo, Waterloo, Ontario, Canada (presentation [pdf, pptx] ).
- August 2013 *13th International Workshop on Algorithms and Data Structures*. University of Western Ontario, London, Ontario, Canada.
- January 2013 *24th Annual ACM-SIAM Symposium on Discrete Algorithms*. New Orleans, Louisiana, USA (presentation [pdf, pptx] ).
- September 2012 *4th Workshop on Massive Data Algorithmics*. Ljubljana, Slovenia (presentation [pdf, pptx] ).
- September 2012 *20th Annual European Symposium on Algorithms*. Ljubljana, Slovenia.
- May 2012 *44th Annual ACM Symposium on Theory of Computing*. New York, New York, USA (presentation [pdf, pptx] ).
- January 2012 *23rd Annual ACM-SIAM Symposium on Discrete Algorithms*. Kyoto, Japan (presentation [pdf, pptx] ).
- January 2012 *14th Workshop on Algorithm Engineering and Experiments*. Kyoto, Japan.
- August 2011 *12th International Workshop on Algorithms and Data Structures*. Polytechnic Institute of New York University, Brooklyn, NY, USA.
- June 2011 *3rd Workshop on Massive Data Algorithmics*. Paris, France.
- January 2011 *22nd Annual ACM-SIAM Symposium on Discrete Algorithms*. San Francisco, CA, USA.
- January 2011 *13th Workshop on Algorithm Engineering and Experiments*. San Francisco, CA, USA.
- September 2010 *18th Annual European Symposium on Algorithms*. Liverpool, United Kingdom (presentation [pdf, pptx] ).
- June 2010 *2nd Workshop on Massive Data Algorithmics*. Snowbird, Utah, USA (presentation [pdf, pptx] ).
- January 2010 *21st Annual ACM-SIAM Symposium on Discrete Algorithms*. Austin, TX, USA.
- January 2010 *11th Workshop on Algorithm Engineering and Experiments*. Austin, TX, USA.
- September 2009 *17th Annual European Symposium on Algorithms*. Copenhagen, Denmark.
- June 2009 *25th Annual ACM Symposium on Computational Geometry*. Aarhus, Denmark.

- June 2009 *Workshop on Massive Data Algorithmics*. Aarhus, Denmark.
- March 2009 *Current Trends in Algorithms, Complexity Theory, and Cryptography*. Tsinghua University, Beijing, China (presentation [pdf, pptx] ).
- August 2008 *MADALGO Summer School on Cache Oblivious Algorithms*. MADALGO, Aarhus University, Denmark (invited speaker).
- June 2008 *International PhD School in Algorithms for Advanced Processor Architectures*. IT University of Copenhagen, Denmark (invited speaker, presentation [pdf, pptx] ).
- January 2008 *19th Annual ACM-SIAM Symposium on Discrete Algorithms*. San Francisco, CA, USA.
- January 2008 *10th Workshop on Algorithm Engineering and Experiments*. San Francisco, CA, USA.
- September–October 2007 *3rd Bertinoro Workshop on Algorithms and Data Structures*. Bertinoro, Forlì, Italy (presentation [pdf, ppt] ).
- August 2007 *32nd International Symposium on Mathematical Foundations of Computer Science*. Cesky Krumlov, Czech Republic (presentation [pdf, ppt] ).
- January 2007 *18th Annual ACM-SIAM Symposium on Discrete Algorithms*. New Orleans, LA, USA.
- January 2007 *9th Workshop on Algorithm Engineering and Experiments*. New Orleans, LA, USA.
- September 2006 *14th Annual European Symposium on Algorithms*. Zürich, Switzerland (presentation [pdf, ppt] ).
- June 2006 *Workshop on Space-Conscious Algorithms*. Bertinoro, Forlì, Italy (presentation [pdf] ).
- July 2006 *10th Scandinavian Workshop on Algorithm Theory*. Riga, Latvia.
- January 2006 *17th Annual ACM-SIAM Symposium on Discrete Algorithms*. Miami, Florida, USA (presentation [pdf] ).
- January 2006 *8th Workshop on Algorithm Engineering and Experiments*. Miami, Florida, USA.
- October 2005 *13th Annual European Symposium on Algorithms (ALGO 2005)*. Palma de Mallorca, Mallorca, Spain.
- May–June 2005 *Algorithms and Data Structures*. Bertinoro, Forlì, Italy (presentation [pdf] ).
- January 2005 *16th Annual ACM-SIAM Symposium on Discrete Algorithms*. Vancouver, British Columbia, Canada.
- September 2004 *12th Annual European Symposium on Algorithms (ALGO 2004)*. Bergen, Norway.
- July 2004 *Dagstuhl Seminar on “Cache-Oblivious and Cache-Aware Algorithms”*. Dagstuhl, Germany.
- July 2004 *9th Scandinavian Workshop on Algorithm Theory*. Louisiana Museum of Modern Art, Humlebæk, Denmark (invited speaker, presentation [pdf] ).
- January 2004 *6th Workshop on Algorithm Engineering and Experiments*. New Orleans, Louisiana, USA (presentation [pdf] ).
- January 2004 *15th Annual ACM-SIAM Symposium on Discrete Algorithms*. New Orleans, Louisiana, USA.

- June 2003 *Algorithms and Data Structures*. Bertinoro, Forlì, Italy (presentation [pdf] ).
- January 2003 *5th Workshop on Algorithm Engineering and Experiments*. Baltimore, Maryland, USA.
- January 2003 *14th Annual ACM-SIAM Symposium on Discrete Algorithms*. Baltimore, Maryland, USA (presentation [pdf] ).
- November 2002 *13th Annual International Symposium on Algorithms and Computation*. Vancouver, British Columbia, Canada (presentation [pdf] ).
- November 2002 *43rd Annual Symposium on Foundations of Computer Science*. Vancouver, British Columbia, Canada.
- November 2002 *Workshop on Algorithms and Models for the Web-Graph*. Vancouver, British Columbia, Canada.
- May 2002 *34th Annual ACM Symposium on Theory of Computing*. Montréal, Québec, Canada.
- August 2001 *ALGO 2001 (9th Annual European Symposium on Algorithms, 5th Workshop on Algorithm Engineering, and 1st Workshop on Algorithms in BioInformatics)*. Aarhus, Denmark.
- July 2001 *33rd Annual ACM Symposium on Theory of Computing*. Hersonissos, Crete, Greece (presentation [pdf] ).
- July 2001 *28th International Colloquium on Automata, Languages, and Programming*. Hersonissos, Crete, Greece.
- September 2000 *Alcom-FT Meeting*. Saarbrücken, Germany.
- July 2000 *7th Scandinavian Workshop on Algorithm Theory*. Bergen, Norway.
- September 2000 *Dagstuhl Seminar on “Experimental Algorithmics”*. Dagstuhl, Germany.
- December 1999 *19th Annual Conference on Foundations of Software Technology and Theoretical Computer Science*. Chennai, India.
- December 1999 *Workshop on Advances in Data Structures, preworkshop of the 19th Annual Conference on Foundations of Software Technology and Theoretical Computer Science*. Chennai, India (invited speaker, presentation [pdf] ).
- January 1999 *10th Annual ACM-SIAM Symposium on Discrete Algorithms*. Baltimore, Maryland, USA.
- January 1999 *1st Workshop on Algorithm Engineering and Experimentation*. Baltimore, Maryland, USA.
- July 1998 *6th Scandinavian Workshop on Algorithm Theory*. Stockholm, Sweden (presentation [pdf; pdf] ).
- May 1998 *DIMACS Workshop on External Memory Algorithms and Visualization*. Piscataway, New Jersey, USA.
- January 1998 *9th Annual ACM-SIAM Symposium on Discrete Algorithms*. San Francisco, California, USA (presentation [pdf] ).
- January 1998 *ALCOM-IT Review Meeting*. Saarbrücken, Germany.
- September 1997 *11th International Workshop on Distributed Algorithms*. Saarbrücken, Germany.
- September 1997 *International School On Distributed Computing and Systems - ALCOM-IT SODICS*. Saarbrücken, Germany.

- May 1997 *Algorithms for Future Technologies - ALTEC'97*. Saarbrücken, Germany.
- February–March 1997 *14th Annual Symposium on Theoretical Aspects of Computer Science*. Lübeck, Germany (presentation [pdf]).
- July 1996 *5th Scandinavian Workshop on Algorithm Theory*. Reykjavik, Iceland (presentation [pdf; pdf]).
- January 1996 *7th Annual ACM-SIAM Symposium on Discrete Algorithms*. Atlanta, Georgia, USA (presentation [pdf]).
- August 1995 *4th International Workshop on Algorithms and Data Structures*. Kingston, Ontario, Canada (presentation [pdf]).
- March 1995 *12th Annual Symposium on Theoretical Aspects of Computer Science*. München, Germany.
- September 1994 *2nd Annual European Symposium on Algorithms*. Utrecht, The Netherlands.
- August 1994 *Complexity Theory: Present and Future*. Aarhus, Denmark.
- July 1994 *4th Scandinavian Workshop on Algorithm Theory*. Aarhus, Denmark.
- September–October 1993 *1st Annual European Symposium on Algorithms*. Bad Honnef, Germany.

## Talks

- August 2017 *An Optimal and Practical Cache-Oblivious Algorithm for Computer Multiresolution Rasters*. Lecture for new computer science students. Aarhus, Denmark. [pdf, pptx]
- February 2017 *Pong - The Multiplayer Game*. Verdens Kedeligste Foredrag (The World's Most Boring Lecture). Tågekammeret, Aarhus Universitet. Aarhus.
- March 2016 *External Memory Three-Sided Range Reporting and Top-k Queries with Sublogarithmic Updates*. Dagstuhl Seminar on “Data Structures and Advanced Models of Computation on Big Data”. Dagstuhl, Germany. [pdf, pptx]
- February 2016 *Professor inauguration talk: Data Structures and Models of Computation*. Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- November 2015 *External Memory Three-Sided Range Reporting and Top-k Queries with Sublogarithmic Updates*. Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Odense, Denmark. [pdf, pptx]
- November 2015 *External Memory Three-Sided Range Reporting and Top-k Queries with Sublogarithmic Updates*. MADALGO, Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- August 2015 *Blackboard Introduction to TAs @ CS*. Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- August 2015 *Håndtering af øvelseshold og gruppeafleveringer*. Blackboard Brugermøde @ ST. Aarhus Universitet. Aarhus, Denmark. [pdf, pptx]

- March 2015 *Prime Time*. Verdens Kedeligste Foredrag (The World's Most Boring Lecture). Tågekammeret, Aarhus Universitet. Aarhus. [pdf]
- November 2014 *The Algorithms and Data Structures Group at Aarhus University*. Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- September 2014 *Computing Triplet and Quartet Distances Between Trees*. Computer Science Institute, Charles University. Prague, Czech Republic. [pdf, pptx]
- September 2014 *Simplicity in Computational Geometry – Sven Skyum's Algorithm for Computing the Smallest Enclosing Circle*. Sven Skyum - farewell celebration. Department of Computer Science, Aarhus, Denmark. [pdf, pptx]
- August 2014 *Voronoi Diagrammer*. Lecture for new computer science students. Aarhus, Denmark. [pdf, pptx]
- April 2014 *Sorting Integers in the RAM Model*. Annual MADALGO Review Meeting. Aarhus, Denmark. [pdf, pptx]
- April 2014 *Algoritmer*. Master Class in Mathematics, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- April 2014 *Writing and Defending your Thesis*. PhD retreat, Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- February 2014 *Range Minimum Queries (Part II)*. Dagstuhl Seminar on “Data Structures and Advanced Models of Computation on Big Data”. Dagstuhl, Germany. [pdf, pptx]
- January 2014 *Computing Triplet and Quartet Distances Between Trees*. Department of Computer Science, University of Copenhagen. Copenhagen, Denmark. [pdf, pptx]
- October 2013 *The Encoding Complexity of Two Dimensional Range Minimum Data Structures*. MADALGO, Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- August 2013 *Voronoi Diagrammer*. Lecture for new computer science students. Aarhus, Denmark. [pdf, pptx]
- May 2013 *Algorithms and Data Structures*. Computer Science Day. Department of Computer Science, Aarhus University. Aarhus. [pdf, pptx]
- April 2013 *Algoritmer*. Master Class in Mathematics, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- February–March 2013 *Algoritmer*. u-days, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- December 2012 *Julehjerter*. Open Space Aarhus. Aarhus, Denmark. [pdf, pptx]
- November 2012 *Triplet and Quartet Distances Between Trees of Arbitrary Degree*. ETH Zürich. Zürich, Switzerland. [pdf, pptx]
- May 2012 *Algorithms and Data Structures – Strict Fibonacci Heaps*. Computer Science Day. Department of Computer Science, Aarhus University. Aarhus. [pdf, pptx]
- February 2012 *Closing a Classical Data Structure Problem: Strict Fibonacci Heaps*. Annual MADALGO Review Meeting. Aarhus, Denmark. [pdf, pptx]

- November 2011 *Dynamic Planar Range Maxima Queries*. LIAFA, Université Paris Diderot, Paris. Paris, France. [pdf, pptx]
- October 2011 *Integer Representations towards Efficient Counting in the Bit Probe Model*. University of Ljubljana. Ljubljana, Slovenia. [pdf, pptx]
- October 2011 *Dynamic Planar Range Maxima Queries*. University of Primorska. Koper, Slovenia. [pdf, pptx]
- August 2011 *Sådan virker Google*. Ungdommens Naturvidenskabelige Forening i Aarhus (UNF). Aarhus Universitet. Aarhus, Denmark. [pdf, pptx]
- June 2011 *Integer Representations towards Efficient Counting in the Bit Probe Model*. MADALGO, Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf, pptx]
- April 2011 *Sådan virker Google*. Ungdommens Naturvidenskabelige Forening i København (UNF). IT Universitet. København, Denmark. [pdf, pptx]
- March 2011 *Binære Tællere*. Verdens Kedeligste Foredrag (The World's Most Boring Lecture). Tågekammeret, Aarhus Universitet. Aarhus. [pdf, pptx]
- November 2010 *Udfordringer ved håndtering af massive datamængder: Forskingen ved Grundforskningscenteret for Massive Data Algorithmics Data Algorithmics*. Møde i Universitets-Samvirket Århus. Aarhus Universitet. Statsbiblioteket, Århus. [pdf, pptx]
- November 2010 *Massive Data Algorithmics*. Forskningsdag for Datamatikerlærere. Erhvervsakademiet Lillebælt. Vejle. [pdf, pptx]
- October 2010 *External Memory Indexing Structures*. Dansk Selskab for Datalogi. Copenhagen Business School. Frederiksbjerg. [pdf, pptx]
- February–March 2010 *Time-Space Trade-Offs for 2D Range Minimum Queries*. Dagstuhl Seminar on “Data Structures”. Dagstuhl, Germany. [pdf, pptx]
- October 2009 *Algorithms: Matrices and Graphs*. MasterClass in Mathematics. ScienceTalenter. Mærsk Mc-Kinney Møller Videncenter, Sorø, Denmark. [pdf, pptx]
- September 2009 *Internetsøgemaskiner*. Ungdommens Naturvidenskabelige Forening i Aalborg (UNF). Aalborg Universitet. Ålborg, Denmark. [pdf]
- September 2009 *MADALGO*. MasterClass Teacher Meeting. ScienceCenter. Mærsk Mc-Kinney Møller Videncenter, Sorø, Denmark. [pdf, pptx]
- June 2008 *Algorithms and Data Structures for Faulty Memory*. Computer Science Day. Department of Computer Science, Aarhus University. Aarhus. [pdf, pptx]
- January 2008 *Massive Data Algorithmics*. Danske Bank, Faglig Dag. Danske Bank. Aarhus. [pdf, ppt]
- May 2007 *Cache-Oblivious and External Memory Algorithms: Theory and Experiments*. Oberwolfach Seminar on “Algorithm Engineering”. Oberwolfach, Germany. [pdf, ppt]
- February 2007 *Internetsøgemaskiner*. Ungdommens Naturvidenskabelige Forening i Ålborg (UNF). Aalborg Universitet. Ålborg, Denmark. [pdf]
- October 2006 *Skewed Binary Search Trees*. Department of Computer Science, University of Copenhagen. Copenhagen, Denmark. [pdf]
- February–March 2006 *Skewed Binary Search Trees*. Dagstuhl Seminar on “Data Structures”. Dagstuhl, Germany. [pdf]



- December 2004 *Internetsøgemaskiner*. Ungdommens Naturvidenskabelige Forening i Aarhus (UNF). Aarhus Universitet. Aarhus, Denmark. [pdf]
- November 2004 *Søgemaskiner*. Udviklerkonference. Danske Bank. Brabrand, Denmark. [pdf]
- May 2004 *Algorithms and Data Structures for Hierarchical Memory*. Opfølgingsmøde med Danmarks Grundforskningsfond. BRICS, Department of Computer Science, Aarhus University. [pdf]
- April 2003 *Cache Oblivious Searching and Sorting*. IT University of Copenhagen. Copenhagen, Denmark. [pdf]
- January 2003 *Søgemaskiner på Internettet (with Rolf Fagerberg)*. Datalogforeningen. Department of Computer Science, Aarhus University. [pdf]
- October 2002 *BRICS Research Activities - Algorithms*. BRICS Retreat. Sandbjerg, Denmark. [pdf]
- February–March 2002 *Optimal Finger Search Trees in the Pointer Machine*. Dagstuhl Seminar on “Data Structures”. Dagstuhl, Germany. [pdf]
- October 2001 *Cache Oblivious Search Trees via Trees of Small Height*. Computer Technology Institute. Patras, Greece. [pdf]
- September 2001 *Cache Oblivious Search Trees via Trees of Small Height*. ALCOM-FT Annual Review Meeting. Rome, Italy. [pdf]
- January 2001 *Udvikling og Implementering af Ombrydningsalgoritmer - Et projekt med CCI Europe*. Opfølgingsmøde med Danmarks Grundforskningsfond. BRICS, Department of Computer Science, Aarhus University. [pdf]
- November 2000 *Optimal Static Range-Reporting in One Dimension*. BRICS, Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf]
- October 2000 *BRICS Research Activities - Algorithms*. BRICS Retreat. Sandbjerg, Denmark. [pdf]
- February–March 2000 *Dynamic Convex Hull*. Dagstuhl Seminar on “Data Structures”. Dagstuhl, Germany. [pdf]
- January 1999 *Level-Balanced B-Trees*. Department of Computer Science, Duke University. Durham, North Carolina. [pdf]
- August 1998 *Level-Rebuilt B-Trees*. Theory and Practice of Algorithms for Problems Involving Massive Data Sets. BRICS, Department of Computer Science, Aarhus University. [pdf]
- March 1998 *Worst-Case Efficient External-Memory Priority Queues*. Dagstuhl Seminar on “Data Structures”. Dagstuhl, Germany. [pdf]
- November 1997 *Finger Search Trees with Constant Insertion Time*. Istituto di Elaborazione della Informazione, CNR, Pisa. Pisa, Italy. [pdf]
- August 1997 *Finger Search Trees with Constant Insertion Time*. Oberwolfach Seminar on “Effiziente Algorithmen”. Oberwolfach, Germany. [pdf]
- February 1997 *Predecessor Queries in Dynamic Integer Sets*. Max-Planck-Institut für Informatik. Saarbrücken, Germany.
- September 1996 *Approximate dictionary queries*. BRICS, Department of Computer Science, Aarhus University. Aarhus, Denmark.
- September 1996 *Predecessor Queries in Dynamic Integer Sets*. BRICS, Department of Computer Science, Aarhus University. Aarhus, Denmark.

March 1996	<i>Priority Queues on Parallel Machines</i> . BRICS, Department of Computer Science, Aarhus University. Aarhus, Denmark. [pdf]
February–March 1996	<i>Priority Queues on Parallel Machines</i> . Dagstuhl Seminar on “Data Structures”. Dagstuhl, Germany. [pdf]
September 1995	<i>Fast Meldable Priority Queues</i> . Max-Planck-Institut für Informatik. Saarbrücken, Germany. [pdf]
August 1995	<i>Priority Queues with Good Worst Case Performance</i> . Toronto University. Toronto, Ontario, Canada. [pdf]
May 1994	<i>Finger Search Trees</i> . BRICS Strategy Workshop. BRICS, Department of Computer Science, Aarhus University. Hjørring, Denmark. [pdf]

## Scientific Visits

June 2013	Riko Jacob, ETH Zürich. Zürich, Switzerland.
November 2012	Riko Jacob, ETH Zürich. Zürich, Switzerland.
November 2011	Andy Brodtknik, University of Primorska & University of Ljubljana. Koper & Ljubljana, Slovenia.
November 2009	Riko Jacob, Technische Universität München. Munich, Germany.
May 2002	Michiel Smid, School of Computer Science, Carleton University. Ottawa, Ontario, Canada.
October 2001	Athanasios K. Tsakalidis, Computer Technology Institute. Patras, Greece.
January 1999	Lars Arge, Department of Computer Science, Duke University. Durham, North Carolina, USA.
January 1999	Jyrki Katajainen, Department of Computer Science, University of Copenhagen. Copenhagen, Denmark.
May 1998	Ian Munro, Department of Computer Science, University of Waterloo. Waterloo, Ontario, Canada.
May 1998	Lars Arge, Department of Computer Science, Duke University. Durham, North Carolina, USA.
November 1997	M. Cristina Pinotti, Istituto di Elaborazione della Informazione, CNR, Pisa. Pisa, Italy.
January 1996	Haim Kaplan, Princeton University/DIMACS. Princeton, NJ, USA.
September 1995–May 1996	Kurt Mehlhorn, Max-Planck-Institut für Informatik. Saarbrücken, Germany.
August 1995	Peter Bro Miltersen, Toronto University. Toronto, Ontario, Canada.

## Teaching

Fall 2016	Lecturer, <i>Computer Science in Perspective (topic Classic Algorithms, and Internet Algorithms, 2 weeks)</i> . Department of Computer Science, Aarhus University.
Spring 2016 (Quarter 4)	Lecturer, <i>Algorithms and Data Structures 2</i> . Department of Computer Science, Aarhus University.
Spring 2016 (Quarter 3)	Lecturer, <i>Algorithm Engineering</i> . Department of Computer Science, Aarhus University.

- Spring 2016 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- Fall 2015 Lecturer, *Computer Science in Perspective (topic Classic Algorithms, and Internet Algorithms, 2 weeks)*. Department of Computer Science, Aarhus University.
- Fall 2015 (Quarters 1+2) Lecturer, *Advanced Algorithms: Data Structures*. Department of Computer Science, Aarhus University.
- Spring 2015 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2015 (Quarter 3) Lecturer, *Algorithm Engineering*. Department of Computer Science, Aarhus University.
- Spring 2015 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- October 2014 Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- Fall 2014 Lecturer, *Computer Science in Perspective (topic Classic Algorithms, and Internet Algorithms, 2 weeks)*. Department of Computer Science, Aarhus University.
- Spring 2014 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2014 (Quarter 3) Lecturer, *Algorithm Engineering*. Department of Computer Science, Aarhus University.
- Spring 2014 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- Fall 2013 (Quarters 1+2) Lecturer, *Advanced Algorithms: Data Structures*. Department of Computer Science, Aarhus University.
- October 2013 Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- October 2013 Lecturer, *Exercise class on algorithms at the IT Camp 2013 (woman in CS initiative)*. Department of Computer Science, Aarhus University.
- Fall 2013 Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, and Internet Algorithms, 2 weeks)*. Department of Computer Science, Aarhus University.
- Spring 2013 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2013 (Quarter 3) Lecturer, *Algorithm Engineering*. Department of Computer Science, Aarhus University.
- Spring 2013 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- October 2012 Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- October 2012 Lecturer, *Exercise class on algorithms at the IT Camp 2012 (woman in CS initiative)*. Department of Computer Science, Aarhus University.
- Fall 2012 Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, and Internet Algorithms, 2 weeks)*. Department of Computer Science, Aarhus University.
- May 2012 Lecturer, *Lecture on Google and exercises on algorithms for high-school students (from Silkeborg Gymnasium and Rødkilde Gymnasium, Vejle)*. Department of Computer Science, Aarhus University.

- Spring 2012 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2012 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- October 2011 Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- Fall 2011 Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, 1 week)*. Department of Computer Science, Aarhus University.
- Fall 2011 (Quarters 1+2) Lecturer, *Advanced Algorithms: Data Structures*. Department of Computer Science, Aarhus University.
- Spring 2011 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2011 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- October 2010 Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- Fall 2010 (Quarters 1+2) Lecturer, *Computational Geometry*. Department of Computer Science, Aarhus University.
- Fall 2010 Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, 1 week)*. Department of Computer Science, Aarhus University.
- Spring 2010 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2010 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- October 2009 Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- Fall 2009 (Quarters 1+2) Lecturer, *Advanced Algorithms: Data Structures*. Department of Computer Science, Aarhus University.
- Fall 2009 Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, 1 week)*. Department of Computer Science, Aarhus University.
- Spring 2009 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2009 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- October 2008 Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- Fall 2008 (Quarters 1+2) Lecturer, *Computational Geometry*. Department of Computer Science, Aarhus University.
- Fall 2008 Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, 1 week)*. Department of Computer Science, Aarhus University.
- Spring 2008 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2008 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- November 2007 Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.

- Fall 2007           Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, 1 week)*. Department of Computer Science, Aarhus University.
- Fall 2007 (Quarters 1+2) Lecturer, *Advanced Algorithms: Data Structures*. Department of Computer Science, Aarhus University.
- Spring 2007 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2007 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- November 2006   Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- Fall 2006 (Quarters 1+2) Lecturer, *Computational Geometry* (with Lars Arge). Department of Computer Science, Aarhus University.
- Fall 2006           Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, 1 week)*. Department of Computer Science, Aarhus University.
- Spring 2006 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2006 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- November 2005   Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- Fall 2005 (Quarter 1+2) Lecturer, *Advanced Algorithms: Data Structures* (with Lars Arge). Department of Computer Science, Aarhus University.
- Fall 2005           Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, 1 week)*. Department of Computer Science, Aarhus University.
- Spring 2005 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2005 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- February 2005   Lecturer, *Exercise class on algorithms for high-school students (Gymnasiepraktik)*. Department of Computer Science, Aarhus University.
- Fall 2004           Lecturer, *Computer Science in Perspective (topic Algorithms and Complexity, 1 week)*. Department of Computer Science, Aarhus University.
- Fall 2004 (Quarter 1+2) Lecturer, *Computational Geometry* (with Lars Arge). Department of Computer Science, Aarhus University.
- Spring 2004 (Quarter 4) Lecturer, *Algorithms and Data Structures 2*. Department of Computer Science, Aarhus University.
- Spring 2004 (Quarter 3) Lecturer, *Algorithms and Data Structures 1*. Department of Computer Science, Aarhus University.
- Autumn 2003     Lecturer, *External Memory Algorithms and Data Structures* (with Rolf Fagerberg). Department of Computer Science, Aarhus University.
- Spring 2003       Lecturer, *Algorithms and Data Structures* (with Erik Meineche Schmidt). Department of Computer Science, Aarhus University.
- Autumn 2002     Lecturer, *Algorithms and Data Structures* (with Rolf Fagerberg). Department of Computer Science, Aarhus University.
- Autumn 2002     Lecturer, *Algorithms for Web Indexing and Searching* (with Rolf Fagerberg). Department of Computer Science, Aarhus University.

Spring 2002	Lecturer, <i>Algorithms and Data Structures</i> (with Erik Meineche Schmidt). Department of Computer Science, Aarhus University.
Autumn 2001	Lecturer, <i>External Memory Algorithms and Data Structures</i> (with Rolf Fagerberg). Department of Computer Science, Aarhus University.
Spring 2001	Three lectures on I/O-algorithms, <i>Advanced Algorithms (Stephen Alstrup and Theis Rauhe)</i> . IT University of Copenhagen.
Spring 2001	Lecturer, <i>Algorithms study group</i> . BRICS International PhD School, Department of Computer Science, Aarhus University.
Autumn 2000	Lecturer, <i>External Memory Algorithms and Data Structures</i> (with Rolf Fagerberg). Department of Computer Science, Aarhus University.
Autumn 1999	Lecturer, <i>External Memory Algorithms and Data Structures</i> (with Rolf Fagerberg). Department of Computer Science, Aarhus University.
Autumn 1999	Lecturer, <i>Algorithms</i> (with Rolf Fagerberg). BRICS International PhD School, Department of Computer Science, Aarhus University.
Autumn 1998	Lecturer, <i>Algorithms</i> . BRICS International PhD School, Department of Computer Science, Aarhus University.
May 1998	Lecturer, <i>MPII Advanced Mini Course: Functional Data Structures</i> . Max-Planck-Institut für Informatik.
Autumn 1996	Lecturer, <i>Algorithms and Data Structures: A course for students at the Engineering College of Aarhus</i> . Department of Computer Science, Aarhus University.
Spring 1995	Administrator and Teaching Assistant (Instruktør), <i>dADS: Algorithms and Data Structures</i> . Department of Computer Science, Aarhus University.
Spring 1994	Teaching Assistant (Instruktør), <i>dAlg: Algorithmic</i> . Department of Computer Science, Aarhus University.
Autumn 1993	Teaching Assistant (Instruktør), 2 classes, <i>dOvs: Compiler Construction</i> . Department of Computer Science, Aarhus University.
Spring 1993	Teaching Assistant (Instruktør), <i>dAlg: Algorithmic</i> . Department of Computer Science, Aarhus University.
Autumn 1992	Teaching Assistant (Instruktør), <i>dProg2: Object Oriented Programming</i> . Department of Computer Science, Aarhus University.

## Advising

### PhD

August 2014–present	PhD advisor for Konstantinos Mampentzidis.
April 2014–present	PhD advisor for Edvin Berglin.
April 2014–present	PhD co-advisor for Ingo van Duijn.
February 2011–September 2015	PhD advisor for Jesper Sindahl Nielsen. Thesis: <i>Implicit Data Structures, Sorting, and Text Indexing</i> (slides).
February 2009–November 2013	PhD advisor for Casper Kejlberg-Rasmussen (Danske Commodities). Thesis: <i>Dynamic Data Structures: The Interplay of Invariants and Algorithm Design</i> (slides).
August 2008–January 2015	PhD advisor for Jakob Truelsen (SCALGO). Thesis: <i>Space Efficient Data Structures and External Terrain Algorithms</i> (slides).

- May 2008–July 2011 PhD advisor for Pooya Davoodi (Polytechnic Institute of New York University). Thesis: *Data Structures: Range Queries and Space Efficiency* (slides).
- February 2008–January 2013 PhD advisor for Mark Greve (discontinued) (Octoshape). Thesis: *Online Sorted Range Reporting and Approximating the Mode* (Progress report).
- August 2007–September 2011 PhD advisor for Kostantinos Tsakalidis (The Chinese University of Hong Kong). Thesis: *Dynamic Data Structures: Orthogonal Range Queries and Update Efficiency* (slides).
- February 2006–February 2010 PhD advisor for Allan Grønlund Jørgensen (Siemens Wind Power A/S). Thesis: *Data Structures: Sequence Problems, Range Queries, and Fault Tolerance* (slides).
- September 2005–November 2009 PhD advisor for Martin Olsen (Aarhus University, Institute of Business and Technology). Thesis: *Link building* (slides).
- August 2004–October 2007 PhD advisor for Johan Nilsson (Octoshape). Thesis: *Combinatorial algorithms for graphs and partially ordered sets* (slides).
- August 2003–September 2007 PhD advisor for Gabriel Moruz (Johann Wolfgang Goether-Universität Frankfurt). Thesis: *Hardware Aware Algorithms and Data Structures* (slides).
- February 2001–February 2002 PhD advisor for Riko Jacob (Technische Universität München). Thesis: *Dynamic Planar Convex Hull* (slides).

## MSc

- February–June 2016 MSc advisor for Peter Gabrielsen og Christoffer Holbæk Hansen (formal advisor; project advisor Kasper Green Larsen). Thesis: *Three-sided Range Reporting in External Memory*.
- February–June 2016 MSc advisor for Jonas Nicolai Hovmand and Morten Houmøller Nygård (formal advisor; project advisor Kasper Green Larsen). Thesis: *Estimating Frequencies and Finding Heavy Hitters*.
- February–June 2016 MSc advisor for Thor Bagge and Kent Grigo (formal advisor; project advisor Kasper Green Larsen). Thesis: *Getting to Know the Captain's Mistress with Reinforcement Learning*.
- February–June 2016 MSc advisor for Troels Thorsen (formal advisor; project advisor Kasper Green Larsen). Thesis: *Categorical Range Searching*.
- February–June 2016 MSc advisor for Kenn Daniel and Casper Fægemand. Thesis: *Selection in a Heap*.
- September–December 2015 MSc advisor for Jens Christan Christensen Jensen. Thesis: *Event Detection in Soccer using Spatio-Temporal Data*.
- September 2015–January 2016 MSc advisor for Henrik Knakkegaard Christensen. Thesis: *Algorithms for Finding Dominators in Directed Graphs*.
- September 2015–January 2016 MSc advisor for Jakob Peter Landbo and Casper Green (formal advisor; project advisor Kasper Green Larsen). Thesis: *Range Mode Queries in Arrays*.
- February–July 2015 MSc advisor for Simon Nordved Madsen and Rasmus Hallenberg-Larsen (formal advisor; project advisor Peyman Afshani). Thesis: *Computing Set Operations on Simple Polygons Using Binary Space Partition Trees*.

- February–June 2015 MSc advisor for Mathies Boile Christensen and Thomas Sandholt (formal advisor; project advisor Peyman Afshani). Thesis: *Geometric Measures of Depth*.
- February–August 2015 MSc advisor for Lukas Walther (formal advisor; project advisor Peyman Afshani). Thesis: *Intersection of Convex Objects in the Plane*.
- February–June 2015 MSc advisor for Anders Strand-Holm Vinther and Magnus Strand-Holm Vinther (formal advisor; project advisor Peyman Afshani). Thesis: *Pathfinding in Two-dimensional Worlds*.
- February–June 2015 MSc advisor for Mads Ravn (formal advisor; project advisor Kasper Green Larsen). Thesis: *Orthogonal Range Searching in 2D with Ball Inheritance*.
- December 2014–June 2015 MSc advisor for Jan Hesselund Knudsen and Roland Larsen Pedersen. Thesis: *Engineering Rank and Select Queries on Wavelet Trees*.
- November 2014–April 2015 MSc advisor for Kris Vestergaard Ebbesen. Thesis: *On the Practicality of Data-Oblivious Sorting*.
- August 2014–February 2015 MSc advisor for Bo Mortensen (project advisor Peyman Afshani). Thesis: *Algorithms for Computing Convex Hulls Using Linear Programming*.
- May 2014–March 2015 MSc advisor for Claus Jespersen. Thesis: *Monte Carlo Evaluation of Financial Options Using a GPU*.
- May 2013–June 2014 MSc advisor for Daniel Winther Petersen (Nykredit). Thesis: *Orthogonal Range Skyline Counting Queries*.
- April 2013–April 2014 MSc advisor for Jana Kunert. Thesis: *Hashing and Random Graphs*.
- May 2013–January 2014 MSc advisor for Jakob Mark Friis (Lind Capital) and Steffen Beier Olesen (Lind Capital). Thesis: *An Experimental Comparison of Max Flow Algorithms*.
- November 2012–August 2013 MSc advisor for Jørgen Fogh. Thesis: *Engineering a Fast Fourier Transform*.
- October 2012–June 2013 MSc advisor for Morten Holt and Jens Johansen (thesis awarded the best Danish MSc thesis in Computer Science in 2013, by the Danish Society for Computer Science). Thesis: *Computing Triplet and Quartet Distances*.
- August 2012–October 2013 MSc advisor for Jeppe Schou. Thesis: *Range Minimum Data Structures*.
- April 2012–January 2015 MSc advisor for Mikkel Engelbrecht Hougaard. Thesis: *On the Complexity of Red-Black Trees for Higher Dimensions*.
- September 2011–March 2012 MSc advisor for Andreas Koefoed-Hansen (Aarhus University). Thesis: *Representations for Path Finding in Planar Environments*.
- February–September 2010 MSc advisor for David Kjær (Milestone Systems). Thesis: *Range Median Algorithms*.
- September 2009–September 2010 MSc advisor (joint with Mohammad Ali Abam) for Jonas Suhr Christensen. Thesis: *Experimental Study of Kinetic Geometric  $t$ -Spanner Algorithms*.
- April 2008–April 2009 MSc advisor for Henrik Bitsch Kirk (Statsbiblioteket). Thesis: *Searching with Dynamic Optimality: In Theory and Practice*.
- January 2008–February 2009 MSc advisor for Krzysztof Piatkowski (Peopleway). Thesis: *Implementering og udvikling af maksimum delsum algoritmer*.



- February–December 2008 MSc advisor for Claus Andersen (Translucent). Thesis: *An optimal minimum spanning tree algorithm.*
- September 2007–March 2008 MSc advisor for Jonas Maturana Larsen (Trifork) and Michael Nielsen (Plushost). Thesis: *En undersøgelse af algoritmer til løsning af generalized movers problem i 3D.*
- September 2006–August 2007 MSc advisor for Thomas Rasmussen. Thesis: *Evaluering af en skæringsalgoritme for Bezier kurver i planen.*
- September 2006–March 2007 MSc advisor for Bjørn Casper Torndahl and Bo Søndergaard Carstensen. Thesis: *Cache Oblivious String Dictionaries.*
- March 2006–August 2007 MSc advisor for Lasse Østerlund Gram (Marcantec). Thesis: *Robusthed af netværk - med focus på scale-free grafer.*
- July 2005–January 2007 MSc advisor for Kristian Dorph-Petersen (Danske Bank). Thesis: *Praktisk brug af dynamisk sampling i data streams.*
- February 2005–June 2006 MSc advisor for Dennis Søgaard (Accenture). Thesis: *Minimising the Number of Collision Tests in Probabilistic Road Maps using Approximations in a Binary Connection Strategy.*
- January 2005–January 2006 MSc advisor for Jesper Buch Hansen (Danske Bank). Thesis: *Computing the Visibility Graph of Points Within a Polygon.*
- February 2004–May 2006 MSc advisor for Morten Laustsen. Thesis: *Orthogonal Range Counting in The Cache Oblivious Model.*
- August 2002–January 2004 MSc advisor for Louise Skouboe Bjerg (Systematic Software Engineering A/S) and Lone Asferg Laursen. Thesis: *Approximative afstande i planare grafer.*
- August 2002–June 2003 MSc advisor (joint with Rolf Fagerberg) for Kristoffer Vinther (Bang & Olufsen). Thesis: *Engineering Cache-Oblivious Sorting Algorithms.*
- February 2000–January 2001 MSc advisor for Kristian Høgsberg Kristensen (Intel). Thesis: *Automated Layout of Classified Ads.*

## Other

- February–September 2000 Project advisor for Jakob Skyberg. Title: *Implementation of three Convex Hull algorithms in Java.*

## Service

### Department of Computer Science, Aarhus University

- August 2016 Organizing chair of ALGO 2016 (319 participants) that covered the jointly conferences and workshops: ESA, WABI, IPEC, WAOA, ALGOCLOUD, ALGOSENSORS, ATMOS, MASSIVE.
- February 2015–present Member of the study board of the Aarhus School of Science (ASOS), Aarhus University.
- September 2014–present Chair of the departments education committee.
- October 2013–present Member of the departments PostDoc committee.
- May 2013–February 2016 Member of the departments PhD committee.
- November–December 2009 Chair of assessment committee for associate professor position.
- December 2008–present Member of the departments office-committee.

June 2006	Organizing chair of the Summer School on Game Theory in Computer Science.
July 2003	Member of the organizing committee of the 18th IEEE Conference on Computational Complexity.
June–July 2002	Organizing chair of the EEF Summer School on Massive Data Sets (55 participants), BRICS, Aarhus University, Denmark.
August 2001	Organizing chair of ALGO 2001 (178 participants) that covered the jointly conferences and workshops: 9th Annual European Symposium on Algorithms, 5th Workshop on Algorithm Engineering, 1st Workshop on Algorithms in BioInformatics, and 2nd International Workshop on Approximation and Randomized Algorithms in Communication Networks.
January 1999–December 2005	Co-organizer of the BRICS mini-courses.
February 2002–November 2009	Member of the departments web-committee.
May 1999–May 2000	Member of the departments web-committee.
August 1998–present	Co-organizer of the algorithms and complexity theory seminars.

### To the profession

May 2014–present	co-Editor-in-Chief Journal of Discrete Algorithms.
April 2006–March 2018	Member of the Danish Censor list for Computer Science.
April 2014–March 2018	Member of the Danish Censor list for Engineering (Mathematics, Physics, and Social Sciences).
January 2007–January 2016	Member of the Steering Committee, Meeting on Algorithm Engineering and Experiments (ALENEX).
April 2010–December 2016	Member of the Computer Science Group (Group 38) of the Danish Bibliometric Research Indicator, chair January 2014–December 2016.
January 2010–present	Member of the Scientific Advising Group for the ESS Data Management Centre.
March–October 2010	Member of the Scientific Panel for e-Science, the Danish National Roadmap for Research Infrastructures.
September 2004–September 2007	Member of the Steering Committee, European Symposium on Algorithms (ESA).
March 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.
September 2000–January 2004	Responsible for the electronic server handling ALCOM-FT technical reports.
July 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.
August 1997	Editor of the Oberwolfach report “Tagungsbericht 29/1997 – Effiziente Algorithmen”.

**Max-Planck-Institut für Informatik**

- August 1998 Member of the organizing committee of the 2nd Workshop on Algorithm Engineering.
- January–July 1998 Member of the travel committee.

**Examiner**

- August 2016 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense, reexams BSc project/DM507/DM553/DM860/DM546 (14 students).
- August 2017 Course examiner, Department of Computer Science, Aarhus University. Algorithmic Gems (2017 Q4, 5 ECTS) Kasper Green Larsen (2 students).
- June 2017 MSc thesis examiner, Kristine Vitting Klinkby Knudsen, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Jørgen Bang-Jensen.
- June 2017 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. DM553 Complexity and Computability (10 ECTS, 23 student) and DM508 Algorithms and Complexity (5 ECTS, 1 student), Jørgen Bang-Jensen.
- June 2017 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Approximation Algorithms (IMADA DM833, 5 ECTS), Lene Monrad Favrholt (1 student).
- June 2017 Course examiner, Department of Computer Science, Aarhus University. Distribuerede systemer (2017 Q3+Q4, 5 ECTS) Claudio Orlandi (17 students).
- June 2017 Bachelor project examiner, Department of Computer Science, Aalborg University. Stefan Schmid and Klaus-Tycho Förster (7 students).
- June 2017 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Data Structures (IMADA DM507, 10 ECTS), Rolf Fagerberg (130 students).
- March 2017 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense, reexams DM543/DM557/VK-DKM-E1v16/DM534/DM558 (9 students).
- January 2016 Course examiner, Department of Computer Science, Aarhus University. Visualisering og projektkommunikation (2016 Q2, 5 ECTS) Majken Kirkegård Rasmussen (13 students).
- January 2017 Course examiner, Department of Computer Science, Aarhus University. IO Algorithms (Q3+Q4 2016, 10 ECTS), Lars Arge (12 students).
- January 2017 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2016, 5 ECTS, 40 students), Gudmund Skovbjerg Frandsen.
- October 2016 Course examiner, Department of Computer Science, Aarhus University. Computability and Logic (14 students).

- August 2016 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense, reexams DM508/DM553/DM817/DM556 (9 students).
- June 2016 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. DM553 Complexity and Computability (10 ECTS, 21 students).
- June 2016 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Data Structures (IMADA DM507, 10 ECTS), Rolf Fagerberg (118 students).
- February 2016 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense, reexams DM557/I-ITS5-EI/VK-DKM-E1, DM819, DM551, DM207, DM847 (14 students).
- January 2016 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. I/O-Efficient Algorithms and Data Structures (IMADA DM207, 10 ECTS), Rolf Fagerberg (10 students).
- January 2016 Course examiner, Department of Computer Science, Aarhus University. Computational Geometry (Q1+Q2 2015, 10 ECTS), Peyman Afshani (6 students).
- January 2016 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2015, 5 ECTS), Gudmund Skovbjerg Frandsen.
- November 2015 MSc thesis examiner, Michael Nørskov, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Jørgen Bang-Jensen.
- August 2015 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Complexity (IMADA DM508, 5 ECTS), Joan Boyar and Bjarne Toft (1 student).
- August 2015 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Data Structures (IMADA DM507, 10 ECTS), Rolf Fagerberg (8 students).
- June 2015 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. DM538 Algorithms and Probability (5 ECTS, 1 student) Lene Monrad Favrhøldt, DM553 Complexity and Computability (10 ECTS, 1 student) and DM508 Algorithms and Complexity (5 ECTS, 6 students) Joan Boyar.
- June 2015 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Data Structures (IMADA DM507, 10 ECTS), Rolf Fagerberg (106 students).
- March 2015 Course examiner, Department of Computer Science, Aarhus University. Fysisk Design (2015 Q3, 5 ECTS), Peter Krogh (22 students).
- March 2015 Course examiner, Department of Computer Science, Aarhus University. Visualisering og projektkommunikation (ITvap, 2014 Q2, 5 ECTS), Peter Krogh (4 students, reexam).

- January 2015 Course examiner, Department of Computer Science, Aarhus University. Visualisering og projektkommunikation (ITvap, 2014 Q2, 5 ECTS), Aviaja Borup (13 students).
- January 2015 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2014, 5 ECTS), Gudmund Skovbjerg Frandsen (32 students).
- October 2014 Course examiner, Department of Computer Science, Aarhus University. Pervasive Computing (OS, Q1 2014, 5 ECTS), Niels Olof Bouvin (14 students).
- September 2014 Bachelor project examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense (Summer 2014). Rolf Fagerberg (1 student).
- June 2014 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Data Structures (IMADA DM507, 10 ECTS), Rolf Fagerberg (73 students).
- June 2014 Course examiner, Department of Computer Science, Aarhus University. Discrete Computational Geometry (Q3+Q4 2014, 10 ECTS), Peyman Afshani (5 students).
- June 2014 Course examiner, Department of Computer Science, Aarhus University. Advanced Realtime Graphics Effects (Q4 2014, 5 ECTS), Toshiya Hachisuka (15 students).
- June 2014 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Complexity (IMADA DM508, 5 ECTS), Joan Boyar (33 students).
- June 2014 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Approximation Algorithms (IMADA DM833, 5 ECTS), Lene Monrad Favrholt (10 students).
- May 2014 Course examiner, Department of Computer Science, Aarhus University. Dynamic Algorithms (Q4 2013, 5 ECTS), Gudmund Skovbjerg Frandsen (1 student).
- May 2014 Study group examiner, Department of Computer Science, Aarhus University. Advisor Toshiya Hachisuka (1 student).
- January 2014 MSc thesis examiner, Thomas Nørbo Jensen, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Rolf Fagerberg.
- January 2014 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. String Algorithms (IMADA DM823, 5 ECTS), Rolf Fagerberg (4 students).
- January 2014 Course examiner, Department of Computer Science, Aarhus University. IO Algorithms (Q3+Q4 2013, 10 ECTS), Lars Arge (12 students).
- January 2014 MSc thesis examiner, Søren Erling Lynnerup, Department of Computer Science, University of Copenhagen. Advisor Pawel Winter.
- January 2014 BSc project examiner, Niklas Thiemann and Claus Vium, Department of Computer Science, University of Copenhagen. Advisor Pawel Winter.

- January 2014 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2013, 5 ECTS), Gudmund Skovbjerg Frandsen (55 students).
- December 2013 Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Computer Game Programming IV: Projects (IMADA DM816, 5 ECTS), Rolf Fagerberg (2 students).
- September 2013 MSc thesis examiner, Thomas Palludan Hargreaves, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Rolf Fagerberg.
- June 2013 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Data Structures (IMADA DM507, 10 ECTS), Rolf Fagerberg (47 students).
- June 2013 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Complexity (IMADA DM508, 5 ECTS), Joan Boyar (28 students).
- June 2013 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Computer Game Programming III: Physics (IMADA DM815, 5 ECTS), Rolf Fagerberg (6 students).
- June 2013 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Approximation Algorithms (IMADA DM833, 5 ECTS), Lene Monrad Favrholt (22 students).
- June 2013 Course examiner, Department of Computer Science, Aarhus University. Dynamic Algorithms (Q4 2013, 5 ECTS), Gudmund Skovbjerg Frandsen (1 student).
- January 2013 Course examiner, Department of Computer Science, Aarhus University. Computational Geometry (Q1+Q2 2012, 10 ECTS), Peyman Afshani (20 students).
- January 2013 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2012, 5 ECTS), Gudmund Skovbjerg Frandsen (59 students).
- January 2013 Course examiner, Department of Computer Science, Aarhus University. Operativ Systemer (dOpSys, Q2 2012, 5 ECTS), Erik Ernst (6 students).
- December 2012 MSc thesis examiner, Stoyan Ivanov Kamburov, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Rolf Fagerberg.
- August 2012 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2011, 5 ECTS), Gudmund Skovbjerg Frandsen (13 students).
- June 2012 Project examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Rolf Fagerberg (1 student).
- June 2012 Bachelor projects examiner, DTU Informatik, Technical University of Denmark (Spring 2012). Phillip Bille and Inge Li Gørtz (5 students).

- June 2012 Course examiner, Department of Computer Science, Aarhus University. IO Algorithms (Q3+Q4 2012, 10 ECTS), Lars Arge (9 students).
- March 2012 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Complexity (IMADA DM508, 5 ECTS), Joan Boyar (27 students).
- January 2012 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. I/O-Efficient Algorithms and Data Structures (IMADA DM207, 10 ECTS), Rolf Fagerberg (4 students).
- January 2012 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2011, 5 ECTS), Gudmund Skovbjerg Frandsen (42 students).
- September 2011 MSc thesis examiner, Jens Henrik Hertz and Martin Ancher Müller Neiiendam, DTU Informatik, Technical University of Denmark. Advisor Philip Bille and Inge Li Gørtz.
- August 2011 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algoritmer og Datastrukturer (IMADA DM507, 37 ECTS), Lene Monrad Favrholt (4 students).
- August 2011 MSc thesis examiner, Hjalte Wedel Vildhøj and Søren Vind, DTU Informatik, Technical University of Denmark. Advisor Philip Bille and Inge Li Gørtz.
- June 2011 Course examiner, Department of Computer Science, Aarhus University. IO Algorithms (Q3+Q4 2011, 10 ECTS), Lars Arge (21 students).
- June 2011 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algoritmer og Datastrukturer (IMADA DM507, 37 ECTS), Lene Monrad Favrholt (11 students).
- April 2011 MSc thesis examiner, Jakob Lund, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Rolf Fagerberg and Kim Skak Larsen.
- March 2011 Course examiner, Department of Computer Science, Aarhus University. Functional-Programming Techniques (dTFP, Q3 2011, 5 ECTS), Olivier Danvy (10 students).
- March 2011 Course examiner, Department of Computer Science, Aarhus University. Introduction to Functional Programming (dIFP Q1 2010, 5 ECTS), Olivier Danvy (1 student).
- January 2011 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2010, 5 ECTS), Gudmund Skovbjerg Frandsen (35 students).
- January 2011 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Computer Game Programming III: Physics (IMADA DM815, 5 ECTS), Rolf Fagerberg (11 students).
- January 2011 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Discrete Mathematics (IMADA MM524-DM527, 5 ECTS), Daniel Merkle (5 students).

- October 2010 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Discrete Mathematics (IMADA MM524-DM527, 5 ECTS), Daniel Merkle (70 students).
- October 2010 Course examiner, Department of Computer Science, Aarhus University. Introduction to Functional Programming (dIFP Q1 2010, 5 ECTS), Olivier Danvy (20 students).
- May 2010 MSc thesis examiner, Nikolaj Bytsø, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Rolf Fagerberg.
- April 2010 Course examiner, Department of Computer Science, Aarhus University. Reliable Software Architectures (5 ECTS), Henrik Bærbak Christensen (4 students).
- January 2010 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. I/O-Efficient Algorithms and Data Structures (IMADA DM207, 10 ECTS), Rolf Fagerberg (3 students).
- January 2010 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2009, 5 ECTS), Gudmund Skovbjerg Frandsen (28 students).
- October 2009 Course examiner, Department of Computer Science, Aarhus University. Introduction to Programming (dIntProg, Q1 2009, 5 ECTS), Michael Caspersen.
- August 2009 MSc thesis examiner, Thomas Nordahl Pedersen, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Lene Monrad Favrholt.
- August 2009 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms and Data Structures (IMADA DM507, 10 ECTS), Lene Monrad Favrholt (5 students).
- January 2009 Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2008, 5 ECTS), Gudmund Skovbjerg Frandsen (78 students).
- October 2008 Course examiner, Department of Computer Science, Aarhus University. Introduction to Programming (dIntProg, Q1 2008, 5 ECTS), Michael Caspersen.
- June 2008 Course examiner, Department of Computer Science, Aarhus University. IO Algorithms (Q3+Q4 2008, 10 ECTS), Lars Arge (17 students).
- June 2008 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. I/O-Efficient Algorithms and Data Structures (IMADA DM808, 10 ECTS), Rolf Fagerberg (4 students).
- June 2008 MSc thesis examiner, Torsten Bonde Christiansen, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Rolf Fagerberg.
- January 2008 Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Algorithms for Web Indexing and Searching (IMADA DM79, 10 ECTS), Rolf Fagerberg (7 students).



January 2008	Course examiner, Department of Computer Science, Aarhus University. Programming 2 (dProg 2, Q2 2007, 5 ECTS), Gudmund Skovbjerg Frandsen (37 students).
June 2007	Course examiner, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Topics in Algorithmics (IMADA DM69, 10 ECTS), Lene Monrad Favrholt (4 students).
June 2007	Course examiner, Department of Computer Science, Aarhus University. IO Algorithms (Q3+Q4 2007, 10 ECTS), Lars Arge (19 students).
October 2006	Course examiner, Department of Computer Science, University of Copenhagen. The 6th STL Workshop, Jyrki Katajainen (6 students).
October 2006	MSc thesis examiner, Martin Ehmsen, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Kim Skak Larsen.
July 2006	MSc thesis examiner, Jacob Allerelli, Department of Mathematics and Computer Science, University of Southern Denmark, Odense. Advisor Rolf Fagerberg.
June 2006	Course examiner, Department of Computer Science, Aarhus University. IO Algorithms (Q3+Q4 2006, 10 ECTS), Lars Arge (11 students).
July 2005	Course examiner, Department of Computer Science, Aarhus University. Dynamic Algorithms (Q4 2005, 5 ECTS), Gudmund Skovbjerg Frandsen (21 students).
June 2005	Course examiner, Department of Computer Science, Aarhus University. IO Algorithms (Q3+Q4 2005, 10 ECTS), Lars Arge (12 students).
July 2004	Course examiner, Department of Computer Science, Aarhus University. Dynamic Algorithms (Q4 2004, 5 ECTS), Gudmund Skovbjerg Frandsen (17 students).

### PhD Committee

September 2014	PhD opponent, Jan Bulanek, Charles University, Prague, Czech Republic.
November 2011	PhD committee member, Djamal Belazzougui, LIAFA, Université Paris Diderot–Paris 7, Paris.
October 2011	PhD committee member, Andrea Campagna, IT University of Copenhagen.
December 2008	PhD committee member, Deepak Ajwani, Max Planck Institute for Computer Science, Saarbrücken, Germany.
August 2008	PhD committee member, Karim Douieb, Université Libre de Bruxelles, Belgium.
September 2006	PhD committee member, Anders Gidestam, Chalmers Technical University, Goteborg, Sweden.

## Grant Reviewer

- 2017 German Research Foundation (DFG), Excellence Strategy by the German Federal and State Governments to Promote Science and Research at German Universities, Research panel on Engineering Sciences.
- 2016 German Research Foundation (DFG), Priority Programme "Algorithms for Big Data" (SPP 1736/2).
- 2014 The Research Council of Norway, ICT Panel 1, FRINATEK Applications.
- 2013 The Research Council of Norway, ICT Panel 2, FRINATEK Applications.  
German Research Foundation (DFG), Priority Programme "Algorithms for Big Data" (SPP 1736).
- 2012 The Research Council of Norway, ICT Panel 1, FRINATEK Applications.

## Journal Review

- ACM Journal of Experimental Algorithmics, 1998, 2000, 2012, 2015, 2016.
- Algorithmica, 1998, 1999, 2000, 2001, 2002, 2004, 2005, 2008, 2010, 2011, 2012, 2013, 2014, 2015, 2017.
- Applicable Algebra in Engineering, Communication and Computing, 2003.
- Applied Computing and Informatics, 2015.
- ETRI Journal, 2004.
- Fundamenta Informaticae, 2014.
- Higher-Order and Symbolic Computation, 1999, 2003.
- Information Processing Letters, 2000, 2002, 2003, 2008, 2009, 2014, 2016.
- Information and Computation, 1998.
- International Journal of Computational Geometry and Applications, 2011, 2012.
- Journal of Algorithms, 1998.
- Journal of Algorithms - Algorithms in Cognition, Informatics and Logic, 2008.
- Journal of Automata, Languages and Combinatorics, 2003.
- Journal of Combinatorial Optimization, 2013.
- Journal of Computational Biology, 2016.
- Journal of Discrete Algorithms, 2000, 2011.
- Journal of Functional Programming, 1998.
- Journal of Parallel and Distributed Computing, 1997, 1998.
- Journal of Systems and Software, 2003.
- Journal of the Association for Computing Machinery, 1997.
- Nordic Journal of Computing, 1999, 2014.
- SIAM Journal of Computing, 2004, 2007, 2012.
- Software: Practice and Experience, 2006.
- The Computer Journal, 2005.
- Theoretical Computer Science, 2000, 2004, 2006.
- Transactions on Algorithms, 2013, 2017.
- Transportation Science, 2013.

**Conference Referee**

- 2018 29th Annual ACM-SIAM Symposium on Discrete Algorithms.
- 2017 44th ACM SIGPLAN Symposium on Principles of Programming Languages.  
43rd International Conference on Current Trends in Theory and Practice of Computer Science.  
28th Annual International Symposium on Algorithms and Computation.  
28th Annual ACM-SIAM Symposium on Discrete Algorithms.
- 2016 57th Annual Symposium on Foundations of Computer Science.  
48th Annual ACM Symposium on Theory of Computing.  
35th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems.  
33rd Annual Symposium on Theoretical Aspects of Computer Science.  
27th Annual ACM-SIAM Symposium on Discrete Algorithms.  
18th Workshop on Algorithm Engineering and Experiments.
- 2015 9th International Frontiers of Algorithmics Workshop.  
56th Annual Symposium on Foundations of Computer Science.  
31st European Workshop on Computational Geometry.  
26th International Workshop on Combinatorial Algorithms.  
23rd Annual European Symposium on Algorithms.  
17th Workshop on Algorithm Engineering and Experiments.
- 2014 41st International Colloquium on Automata, Languages, and Programming.  
39th International Symposium on Mathematical Foundations of Computer Science.  
25th International Workshop on Combinatorial Algorithms.  
25th Annual International Symposium on Algorithms and Computation.  
25th Annual ACM-SIAM Symposium on Discrete Algorithms.  
14th Scandinavian Workshop on Algorithm Theory.
- 2013 7th International Conference on Language and Automata Theory and Applications.  
54th Annual Symposium on Foundations of Computer Science.  
40th International Colloquium on Automata, Languages, and Programming.  
32nd ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems.  
27th IEEE International Parallel & Distributed Processing Symposium.  
24th Annual ACM-SIAM Symposium on Discrete Algorithms.  
24rd International Workshop on Combinatorial Algorithms.  
21st Annual European Symposium on Algorithms.  
19th International Symposium on Fundamentals of Computation Theory.  
13th International Workshop on Algorithms and Data Structures.
- 2012 53rd Annual Symposium on Foundations of Computer Science.  
39th International Colloquium on Automata, Languages, and Programming.  
31st ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems.  
23th Annual International Symposium on Algorithms and Computation.  
23rd International Workshop on Combinatorial Algorithms.  
23rd Annual ACM-SIAM Symposium on Discrete Algorithms.

- 20th Annual European Symposium on Algorithms.  
14th Workshop on Algorithm Engineering and Experiments.  
10th Latin American Symposium on Theoretical Informatics.
- 2011 6th International Computer Science Symposium in Russia.  
43rd Annual ACM Symposium on Theory of Computing.  
3rd Workshop on Massive Data Algorithmics.  
38th International Colloquium on Automata, Languages, and Programming.  
30th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems.  
22nd International Workshop on Combinatorial Algorithms.  
22nd Annual ACM-SIAM Symposium on Discrete Algorithms.  
10th International Symposium on Experimental Algorithms.
- 2010 9th Latin American Symposium on Theoretical Informatics.  
21th Annual International Symposium on Algorithms and Computation.  
21st Annual ACM-SIAM Symposium on Discrete Algorithms.  
12th Workshop on Algorithm Engineering and Experiments.  
12th Scandinavian Workshop on Algorithm Theory.
- 2009 8th International Symposium on Experimental Algorithms.  
50th Annual Symposium on Foundations of Computer Science.  
41st Annual ACM Symposium on Theory of Computing.  
36th International Colloquium on Automata, Languages, and Programming.  
21st ACM Symposium on Parallelism in Algorithms and Architectures.  
20th Annual International Symposium on Algorithms and Computation.  
20th Annual ACM-SIAM Symposium on Discrete Algorithms.  
1st Workshop on Massive Data Algorithmics.  
17th Annual European Symposium on Algorithms.  
11th Workshop on Algorithm Engineering and Experiments.  
11th International Workshop on Algorithms and Data Structures.
- 2008 IPDPS 2008 - IEEE International Parallel & Distributed Processing Symposium.  
Computability in Europe 2008 - Logic and Theory of Algorithms.  
7th International Workshop on Experimental Algorithms.  
40th Annual ACM Symposium on Theory of Computing.  
19th Annual Symposium on Combinatorial Pattern Matching.  
16th Scandinavian Workshop on Algorithm Theory.  
11th Scandinavian Workshop on Algorithm Theory.
- 2007 International Workshop on Algorithmic Topics in Constraint Programming (cancelled).  
6th International Workshop on Experimental Algorithms.  
34th International Colloquium on Automata, Languages, and Programming.  
27th Conference on Foundations of Software Technology and Theoretical Computer Science.  
24th Annual Symposium on Theoretical Aspects of Computer Science.  
18th Annual International Symposium on Algorithms and Computation.  
18th Annual ACM-SIAM Symposium on Discrete Algorithms.

- 15th Annual European Symposium on Algorithms.
- 10th International Workshop on Algorithms and Data Structures.
- 2006 47th Annual Symposium on Foundations of Computer Science.
- 33rd International Colloquium on Automata, Languages, and Programming.
- 31st International Symposium on Mathematical Foundations of Computer Science.
- 25th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems.
- 17th Annual Symposium on Combinatorial Pattern Matching.
- 17th Annual ACM-SIAM Symposium on Discrete Algorithms.
- 14th Annual European Symposium on Algorithms.
- 10th Scandinavian Workshop on Algorithm Theory.
- 2005 9th International Workshop on Algorithms and Data Structures.
- 7th Workshop on Algorithm Engineering and Experiments.
- 4th International Workshop on Efficient and Experimental Algorithms.
- 37th Annual ACM Symposium on Theory of Computing.
- 32nd International Colloquium on Automata, Languages, and Programming.
- 20th IEEE Conference on Computational Complexity.
- 16th Annual ACM-SIAM Symposium on Discrete Algorithms.
- 13th Annual European Symposium on Algorithms.
- 2004 9th Scandinavian Workshop on Algorithm Theory.
- 6th Latin American Symposium on Theoretical Informatics.
- 3rd International Conference on Fun With Algorithms.
- 31st International Colloquium on Automata, Languages, and Programming.
- 24th Conference on Foundations of Software Technology and Theoretical Computer Science.
- 21st Annual Symposium on Theoretical Aspects of Computer Science.
- 15th Annual Symposium on Combinatorial Pattern Matching.
- 15th Annual ACM-SIAM Symposium on Discrete Algorithms.
- 12th Annual European Symposium on Algorithms.
- 2003 International Conference on Software Engineering and Formal Methods.
- 8th International Workshop on Algorithms and Data Structures.
- 5th Workshop on Algorithm Engineering and Experiments.
- 20th Annual Symposium on Theoretical Aspects of Computer Science.
- 11th Annual European Symposium on Algorithms.
- 2002 8th Scandinavian Workshop on Algorithm Theory.
- 43rd Annual Symposium on Foundations of Computer Science.
- 34th Annual ACM Symposium on Theory of Computing.
- 13th Annual Symposium on Combinatorial Pattern Matching.
- 11th Euromicro Conference on Parallel Distributed and Networking based Processing, Special session on Memory Hierarchies.
- 10th Annual European Symposium on Algorithms.
- 2001 9th Annual European Symposium on Algorithms.
- 42nd Annual Symposium on Foundations of Computer Science.

- 28th International Colloquium on Automata, Languages and Programming.
- 2000 8th Annual European Symposium on Algorithms.  
7th Scandinavian Workshop on Algorithm Theory.
- 1999 Workshop on Algorithmic Aspects of Advanced Programming Languages.  
3rd Workshop on Algorithm Engineering.  
19th Annual Conference on Foundations of Software Technology and Theoretical Computer Science.  
16th Annual Symposium on Theoretical Aspects of Computer Science.
- 1998 6th Annual European Symposium on Algorithms.  
2nd Workshop on Algorithm Engineering.  
25th International Colloquium on Automata, Languages, and Programming.  
18th International Conference on Foundations of Software Technology & Theoretical Computer Science.  
15th Annual Symposium on Theoretical Aspects of Computer Science.
- 1996 Theory and Practice of Informatics; 23rd Seminar on Current Trends in Theory and Practice of Informatics.  
ACM SIGPLAN International Conference on Functional Programming.  
5th Scandinavian Workshop on Algorithm Theory.  
4th Annual European Symposium on Algorithms.
- 1995 Theory and Practice of Software Development. 6th International Joint Conference CAAP/FASE.  
ACM SIGPLAN Workshop on Partial Evaluation and Semantics-Based Program Manipulation.
- 1994 4th Scandinavian Workshop on Algorithm Theory.  
21st International Colloquium on Automata, Languages and Programming.