

Publications of Jérémie Barbay by type

Type A

1. Jérémie Barbay, Luca Castelli-Aleardi, Meng He, Ian J. Munro. Succinct Representation of Labeled Graphs. *Algorithmica* 453:1-34, 2010. Springer, New York, NY, USA. ISSN 0178-4617.
2. Jérémie Barbay, Meng He, Ian Munro, Srinivasa Rao Satti. Succinct Indexes for Strings, Binary Relations and Multilabeled Trees. *ACM Transactions on Algorithms* 7(4):article 52, 2011. ACM Press, New York, NY, USA. ISSN 1549-6325.
3. Jérémie Barbay, Johannes Fischer, Gonzalo Navarro. LRM-Trees: Compressed Indices, Adaptive Sorting, and Compressed Permutations. *Theoretical Computer Science (TCS)* 459:26-41, 2012. Elsevier Science, Amsterdam, The Netherlands. ISSN 0304-3975.
4. Jérémie Barbay, Francisco Claude, Gonzalo Navarro. Compact Binary Relation Representations with Rich Functionality. *Information and Computation* 232:19-37, 2013. Elsevier Science, Amsterdam, The Netherlands. ISSN 0890-5401.
5. Jérémie Barbay, Gonzalo Navarro. On Compressing Permutations and Adaptive Sorting. *Theoretical Computer Science (TCS)* 513:109-123, 2013. Elsevier Science, Amsterdam, The Netherlands. ISSN 0304-3975.
6. Jérémie Barbay, Francisco Claude, Travis Gagie, Gonzalo Navarro, Yakov Nekrich. Efficient Fully-Compressed Sequence Representations. *Algorithmica* 69(1):232-268, 2014. Springer, New York, NY, USA. ISSN 0178-4617.
7. Jérémie Barbay, Timothy Chan, Pablo Pérez-Lantero, Gonzalo Navarro. Maximum-Weight Planar Boxes in $O(n^2)$ Time (and Better). *Information Processing Letters* 114(8):437-445, 2014. Elsevier Science, Amsterdam, The Netherlands. ISSN 0020-0190.
8. Peyman Afshani, Jérémie Barbay, Timothy Chan. Instance-Optimal Geometric Algorithms. *Journal of the ACM (JACM)* 64(1):3:1-3:38, Mar 2017. ACM Press, New York, NY, USA. ISSN 0004-5411.
9. Jérémie Barbay, Pablo Pérez-Lantero. Adaptive Computation of the Swap-Insert Correction Distance. *ACM Transactions on Algorithms* 14(4):article 49, 2018. ACM Press, New York, NY, USA. ISSN 1549-6325.
10. Jérémie Barbay, Pablo Pérez-Lantero, Javier Rojas-Ledesma. Computing Coverage Kernels under Restricted Settings. *Theoretical Computer Science (TCS)* 815:270-288, 2020. Elsevier Science, Amsterdam, The Netherlands. ISSN 0304-3975.
11. Jérémie Barbay, Pablo Pérez-Lantero, Javier Rojas-Ledesma. Computing the Depth Distribution of a Set of Boxes. *Theoretical Computer Science (TCS)* 883:69-82, Jun 2021. Elsevier Science, Amsterdam, The Netherlands. ISSN 0304-3975.

Type B

1. Jérémie Barbay, Alejandro López-Ortiz, Tyler Lu, Salinger Alejandro. An Experimental Investigation of Set Intersection Algorithms for Text Searching. *ACM Journal of Experimental Algorithmics (JEA)* 14:article 3.7, Aug 2009. ACM Press, New York, NY, USA. ISSN 1084-6654.
2. Jérémie Barbay. Optimal Prefix Free Codes with Partial Sorting. *Algorithms* 13(1):article 12, Jan 2020. Molecular Diversity Preservation International, Basel, Switzerland. ISSN 1999-4893.

Type H

1. Jérémie Barbay. Randomized Complexity. In *Concepts of Combinatorial Optimization*, pp. 21-38, 2010. John Wiley & Sons, Hoboken, NJ, USA. ISBN 978-1-84821-147-6. Chapter 2.
2. Jérémie Barbay. Fast Algorithms That Yield Small and Fast Data Structures. In *Conference on Space Efficient Data Structures, Streams and Algorithms, in Honor of Ian Munro's 66th Birthday*, pp. 97-111, 2013. Springer, New York, NY, USA. ISBN 978-3-642-40272-2. Lecture Notes in Computer Science vol. 8066.
3. Jérémie Barbay. From Adaptive Analysis to Instance Optimality. In *Beyond the Worst-Case Analysis of Algorithms*, pp. 52-71, 2021. Cambridge University Press, Cambridge, UK. Chapter 3.

Type L0

1. Jérémie Barbay, Gonzalo Navarro. Compressed Representations of Permutations, and Applications. In Susanne Albers, Jean-Yves Marion (ed.), *Proc. 26th International Symposium on Theoretical Aspects of Computer Science (STACS)*, pp. 111-122, Feb 2009. Freiburg, Germany. IBFI Schloss Dagstuhl, Wadern, Germany. Dagstuhl Seminar Proceedings vol. 09001. ISBN 978-3-939897-09-5.
2. Peyman Afshani, Jérémie Barbay, Timothy Chan. Instance-Optimal Geometric Algorithms. In *Proc. 50th IEEE Symposium on Foundations of Computer Science (FOCS)*, pp. 129-138, Oct 2009. Atlanta, GA, USA. IEEE Computer Society Press, Los Alamitos, CA, USA.

Type L1

1. Jérémie Barbay, Travis Gagie, Gonzalo Navarro, Yakov Nekrich. Alphabet Partitioning for Compressed Rank/Select and Applications. In O. Cheong, K.-Y. Chwa, and K. Park (ed.), *Proc. 21st Annual International Symposium on Algorithms and Computation (ISAAC)*, pp. 315-326, Dec 2010. Jeju, South Korea. Springer-Verlag, Berlin/Heidelberg, Germany. Lecture Notes in Computer Science vol. 6507 (part II).
2. Jérémie Barbay, Johannes Fischer, Gonzalo Navarro. LRM-Trees: Compressed Indices, Adaptive Sorting, and Compressed Permutations. In Raffaele Giancarlo, Giovanni Manzini (ed.),

Proc. 22nd Annual Symposium on Combinatorial Pattern Matching (CPM), pp. 285-298, Jun 2011. Palermo, Italy. Springer-Verlag, Berlin/Heidelberg, Germany. Lecture Notes in Computer Science vol. 6661.

3. Jérémie Barbay, Srinivasa Rao Satti, Ankur Gupta, Jonathan Sorenson. Theory and Implementation Of Online MultiSelection Algorithms. In H.L. Bodlaender and G.F. Italiano (ed.), *Proc. 20th Annual European Symposium on Algorithms (ESA)*, pp. 109-120, Sep 2013. Sophia Antipolis, France. Springer-Verlag, Berlin/Heidelberg, Germany. Lecture Notes in Computer Science vol. 8125.
4. Jérémie Barbay, Pablo Pérez-Lantero. Adaptive Computation of the Swap-Insert Correction Distance. In C. Iliopoulos, S. Puglisi, E. Yilmaz (ed.), *Proc. 22nd International Symposium on String Processing and Information Retrieval (SPIRE)*, pp. 21-32, Sep 2015. London, UK. Springer-Verlag, Berlin/Heidelberg, Germany. Lecture Notes in Computer Science vol. 9309.
5. Jérémie Barbay. Optimal Prefix Free Codes with Partial Sorting. In Roberto Grossi, Moshe Lewenstein (ed.), *Proc. Annual Symposium on Combinatorial Pattern Matching (CPM)*, pp. 29:1-29:13, Jun 2016. Tel Aviv, Israel. IBFI Schloss Dagstuhl, Wadern, Germany. Leibniz International Proceedings in Informatics (LIPIcs) vol. 54. ISBN 978-3-95977-012-5.
6. Jérémie Barbay, Srinivasa Rao Satti, Carlos Ochoa. Synergistic Solutions on MultiSets. In *Proc. 28th Annual Symposium on Combinatorial Pattern Matching (CPM)*, pp. article 31, Jul 2017. Warsaw, Poland. IBFI Schloss Dagstuhl, Wadern, Germany. Leibniz International Proceedings in Informatics (LIPIcs) vol. 78.
7. Jérémie Barbay, Pablo Pérez-Lantero, Javie Rojas-Ledesma. Depth Distribution in High Dimensions. In *Proc. International Computing and Combinatorics Conference (COCOON)*, pp. 38-49, Aug 2017. Hong Kong. Springer, New York, NY, USA. LNCS.
8. Jérémie Barbay, Carlos Ochoa. Synergistic Solutions for Merging and Computing Planar Convex Hulls. In *Proc. 24th International Computing and Combinatorics Conference (COCOON)*, pp. 156-167, Jul 2018. Qingdao, China. Springer, New York, NY, USA. LNCS.
9. Jérémie Barbay, Pablo Pérez-Lantero, Javie Rojas-Ledesma. Computing Coverage Kernels Under Restricted Settings. In *Proc. 24th International Computing and Combinatorics Conference (COCOON)*, pp. 180-191, Jul 2018. Qingdao, China. Springer, New York, NY, USA. LNCS.
10. Jérémie Barbay, Andres Olivares. Indexed Dynamic Programming to boost Edit Distance and LCSS Computation. In *Proc. 25th International Symposium on String Processing and Information Retrieval (SPIRE)*, pp. 61-73, Oct 2018. Lima, Peru. Springer-Verlag, Berlin/Heidelberg, Germany. Lecture Notes in Computer Science vol. 11147. ISBN 978-3-030-00478-1.
11. Jérémie Barbay. Adaptive Computation of the Discrete Fr'echet Distance. In *Proc. 25th International Symposium on String Processing and Information Retrieval (SPIRE)*, pp. 50-60, Oct 2018. Lima, Peru. Springer-Verlag, Berlin/Heidelberg, Germany. Lecture Notes in Computer Science vol. 11147. ISBN 978-3-030-00478-1.

Type L2

1. Jérémie Barbay, Francisco Claude, Gonzalo Navarro. Compact Rich-Functional Binary Relation Representations. In Alex López-Ortiz (ed.), *Proc. 9th International Symposium of Latin American Theoretical Informatics (LATIN)*, pp. 170-183, Apr 2010. Oaxaca, Mexico. Springer-Verlag, Berlin/Heidelberg, Germany. Lecture Notes in Computer Science vol. 6034.
2. Jérémie Barbay, Gonzalo Navarro, Pablo Pérez-Lantero. Adaptive Techniques to find Optimal Planar Boxes. In *Proc. 24th Canadian Conference on Computational Geometry (CCCG)*, pp. 79-84, Aug 2012. Charlottetown, Prince Edward Island, Canada.
3. Jérémie Barbay, Timothy Chan, Gonzalo Navarro, Pablo Pérez-Lantero. Maximum-Weight Planar Boxes in $O(n^2)$ Time (and Better). In *Proc. 25th Canadian Conference on Computational Geometry (CCCG)*, pp. 151-156, Aug 2013. Waterloo, Ontario, Canada.
4. Jérémie Barbay, Ankur Gupta, Jonathan Sorenson, Srinivasa Rao Satti. Dynamic Online Multiselection in Internal and External Memory. In M. Sohel Rahman and Etsuji Tomita (ed.), *Proc. 9th International Workshop on Algorithms and Computation (WALCOM)*, pp. 199-209, 2015. Springer, New York, NY, USA. Lecture Notes in Computer Science vol. 8973.
5. Jérémie Barbay. Selenite Towers Move Faster Than Hanoi Towers, But Still Require Exponential Time. In Erik D. Demaine and Fabrizio Grandoni (ed.), *Proc. 8th International Conference on Fun with Algorithms (FUN)*, pp. 5:1–5:20, Jun 2016. La Maddalena, Maddalena Islands, Italy. IBFI Schloss Dagstuhl, Wadern, Germany. Leibniz International Proceedings in Informatics (LIPIcs) vol. 49. ISBN 978-3-95977-005-7.
6. Jérémie Barbay, Jocelyn Simmonds, Adriana Nishida, Monael Ribeiro. "Teaching is Learning": Pedagogical Material Created and Evaluated by Students. In *Proc. 46th Frontiers in Education (FIE)*, Oct 2016. Erie, Pennsylvania. IEEE Education Society, Los Alamitos, CA, USA.
7. Jérémie Barbay, Bernardo Subercaseaux. The Computational Complexity of Evil Hangman. In *Proc. 10th International Conference on Fun with Algorithms (FUN)*, pp. 23:1-23:12, 2021. IBFI Schloss Dagstuhl, Wadern, Germany. Leibniz International Proceedings in Informatics (LIPIcs) vol. 157. ISBN 978-3-95977-145-0.
8. Jérémie Barbay, Fabián Jaña-Ubal, Cristóbal Sepulveda-Álvarez. Measuring Discrimination Abilities of Monk Parakeets Between Discrete and Continuous Quantities Through a Digital Life Enrichment Application. In Ilyena Hirskyj-Douglas, David L. Roberts (ed.), *Proc. 9th International Conference on Animal-Computer Interaction (ACI)*, Dec 2022. Newcastle-upon-Tyne, UK. ACM Press, New York, NY, USA.
9. Jérémie Barbay, Daniel Freire-Fernández, Danko Lobos-Bustamante. Popping Up Balloons for Science: a Research Proposal. In Ilyena Hirskyj-Douglas, David L. Roberts (ed.), *Proc. 9th International Conference on Animal-Computer Interaction (ACI)*, Dec 2022. Newcastle-upon-Tyne, UK. ACM Press, New York, NY, USA.

10. Jérémie Barbay, Fabián Jaña-Ubal. Can Monk Parakeets compare quantities faster and/or better than Humans? A Research Proposal. In Ilyena Hirskyj-Douglas, David L. Roberts (ed.), *Proc. 9th International Conference on Animal-Computer Interaction (ACI)*, Dec 2022. Newcastle-upon-Tyne, UK. ACM Press, New York, NY, USA.
11. Jérémie Barbay, Camila Labarca-Rosenbluth, Brandon Peña-Haipas. A Loggable Aid to Speech: A Research Proposal. In Ilyena Hirskyj-Douglas, David L. Roberts (ed.), *Proc. 9th International Conference on Animal-Computer Interaction (ACI)*, Dec 2022. Newcastle-upon-Tyne, UK. ACM Press, New York, NY, USA.

Type N

1. Srinivasa Rao Satti, Jérémie Barbay, Ankur Gupta, Jonathan Sorensen. Near-Optimal Online Multiselection in Internal and External Memory. In *Proc. Workshop Massive Data Algorithms (MASSIVE)*, pp. 102-112, Sep 2012. Ljubljana, Slovenia.

Type O

1. Jérémie Barbay, Carlos Bedregal, Gonzalo Navarro. Improving Text Indexes Using Compressed Permutations. In *Proc. XXII Jornadas Chilenas de Computación (JCC)*, Nov 2010. Antofagasta, Chile.