Jérémy Barbay's publications

Jérémy Barbay

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1 Chapters in Books

1. Jérémy Barbay. *Randomized Complexity*, volume 1, chapter 2, pages 21–38. Wiley, August 2010. ISBN: 978-1-84821-147-6

2. Jérémy Barbay and J. Ian Munro. Succinct encoding of permutations: Applications to text indexing. In Ming-Yang Kao, editor, *Encyclopedia of Algorithms*. Springer, 2008

3. Jérémy Barbay. Algorithmes probabilistes. In V. Th. Paschos, editor, *Optimisation Combinatoire : Concepts Fondamentaux*, chapter 17. Hermès, Paris, 2005

2 Journal Publications

4. Jérémy Barbay, Timothy M. Chan, Gonzalo Navarro, and Pablo Pérez-Lantero. Maximum-weight planar boxes in $o(n^2)$ time (and better). *IPL*, 2014

5. Jérémy Barbay, Francisco Claude, Travis Gagie, Gonzalo Navarro, and Yakov Nekrich. Efficient fully-compressed sequence representations. *Algorithmica*, 69(1):232–268, 2014

6. Jérémy Barbay and Gonzalo Navarro. On compressing permutations and adaptive sorting. *ELSEVIER Theoretical Computer Science (TCS)*, 2013

7. J. Barbay, F. Claude, and G. Navarro. Compact binary relation representations with rich functionality. *Information and Computation*, 232:19–37, 2013

8. Jérémy Barbay, Luca Castelli Aleardi, Meng He, and J. Ian Munro. Succinct representation of labeled graphs. *Algorithmica*, 62(1-2):224–257, 2012

9. Jérémy Barbay, Johannes Fischer, and Gonzalo Navarro. LRM-trees: Compressed indices, adaptive sorting, and compressed permutations. *ELSEVIER Theoretical Computer Science (TCS)*, 459:26–41, 2012

10. Jérémy Barbay. Review of understanding and applying cryptography and data security by adam j. elbirt. *SIGACT News*, 43(1):18–21, 2012

11. Jérémy Barbay, Meng He, J. Ian Munro, and Srinivasa Rao Satti. Succinct indexes for strings, binary relations and multilabeled trees. *ACM Transactions on Algorithms*, 7(4):52, 2011

12. Jérémy Barbay, Alejandro López-Ortiz, Tyler Lu, and Alejandro Salinger. An experimental investigation of set intersection algorithms for text searching. *ACM Journal of Experimental Algorithmics*, 14, 2009

13. Jérémy Barbay and Claire Kenyon. Alternation and redundancy analysis of the intersection problem. *ACM Transactions on Algorithms (TALG)*, 4(1):4:1–4:18, March 2008. (Journal version of [14])

14. Jérémy Barbay, Alexander Golynski, J. Ian Munro, and S. Srinivasa Rao. Adaptive searching in succinctly encoded binary relations and tree-structured documents. *ELSEVIER Theoretical Computer Science (TCS)*, October 2007. (Journal version of [16])

3 Conference Publications

15. Jérémy Barbay. From time to space: Fast algorithms that yield small and fast data structures. In Andrej Brodnik, Alejandro López-Ortiz, Venkatesh Raman, and Alfredo Viola, editors, *Space-Efficient Data Structures, Streams, and Algorithms (IanFest)*, volume 8066 of *Lecture Notes in Computer Science*, pages 97–111. Springer, 2013

16. Jérémy Barbay, Ankur Gupta, Seungbum Jo, S. Srinivasa Rao, and Jonathan Sorenson. Theory and implementation of online multiselection algorithms. In *Proceedings of ESA 2013*, 2013. To appear

17. Jérémy Barbay, Timothy M. Chan, Gonzalo Navarro, and Pablo Pérez-Lantero. Maximum-weight planar boxes in o(n^2) time (and better). In *CCCG*. Carleton University, Ottawa, Canada, 2013

18. Jérémy Barbay, Gonzalo Navarro, and Pablo Pérez-Lantero. Adaptive techniques to find optimal planar boxes. In *CCCG*, pages 71–76, 2012

19. Jérémy Barbay, Johannes Fischer, and Gonzalo Navarro. Lrm-trees: Compressed indices, adaptive sorting, and compressed permutations. In Raffaele Giancarlo and Giovanni Manzini, editors, *CPM*, volume 6661 of *Lecture Notes in Computer Science*, pages 285–298. Springer, 2011

20. Jérémy Barbay, Travis Gagie, Gonzalo Navarro, and Yakov Nekrich. Alphabet partitioning for compressed rank/select and applications. In Otfried Cheong, Kyung-Yong Chwa, and Kunsoo Park, editors, *ISAAC (2)*, volume 6507 of *Lecture Notes in Computer Science (LNCS)*, pages 315–326. Springer, 2010

21. Jérémy Barbay and Gonzalo Navarro. Compressed representations of permutations, and applications. In Susanne Albers and Jean-Yves Marion, editors, *STACS*, volume 3 of *LIPIcs*, pages 111–122. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, Germany, 2009

22. Jérémy Barbay and Aleh Veraskouski. Adaptive algorithm for threshold path subset queries. In Arenas and Bustos [25], pages 3–10

23. Jérémy Barbay and Alex López-Ortiz. Efficient algorithms for context query evaluation over a tagged corpus. In Arenas and Bustos [25], pages 11–17

24. Peyman Afshani, Jérémy Barbay, and Timothy M. Chan. Instance-optimal geometric algorithms. In *FOCS*, pages 129–138. IEEE Computer Society, 2009

25. Jérémy Barbay and Eric Y. Chen. Convex hull of the union of convex objects in the plane: an adaptive analysis. In *CCCG*, 2008

26. Jérémy Barbay, Luca Castelli Aleardi, Meng He, and J. Ian Munro. Succinct representation of labeled graphs. In *Proceedings of the 18th International Symposium Algorithms and Computation (ISAAC)*, volume 2906 of *Lecture Notes in Computer Science (LNCS)*, pages 575–584. Springer, 2007

27. Jérémy Barbay, Meng He, J. Ian Munro, and S. Srinivasa Rao. Succinct indexes for strings, binary relations and multi-labeled trees. In *Proceedings of the 18th ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 680–689. ACM, 2007

28. Jérémy Barbay, Alexander Golynski, J. Ian Munro, and S. Srinivasa Rao. Adaptive searching in succinctly encoded binary relations and tree-structured documents. In *Proceedings of the 17th Annual Symposium on Combinatorial Pattern Matching (CPM)*, volume 4009 of *Lecture Notes in Computer Science (LNCS)*, pages 24–35. Springer-Verlag, 2006. (Later extended in [15])

29. Jérémy Barbay, Alejandro López-Ortiz, and Tyler Lu. Faster adaptive set intersections for text searching. In *Proceedings of the 5th International Workshop on Experimental Algorithms (WEA)*, volume 4007 of *Lecture Notes in Computer Science (LNCS)*, pages 146–157. Springer Berlin / Heidelberg, 2006

30. Jérémy Barbay. On the use of a computer, to teach more and better, in a collective manner. In *X International Convention of Computer Sciences of Havana (INFORMATICA 2004)*, 2004

31. Jérémy Barbay and Claire Kenyon. Deterministic algorithm for the t-threshold set problem. In *Proceedings of the 14th International Symposium Algorithms and Computation (ISAAC)*, volume 2906 of *Lecture Notes in Computer Science (LNCS)*, pages 575–584. Springer, 2003

32. Jérémy Barbay. Optimality of randomized algorithms for the intersection problem. In Andreas Albrecht, editor, *Proceedings of the Symposium on Stochastic Algorithms, Foundations and Applications (SAGA)*, volume 2827 of *Lecture Notes in Computer Science (LNCS)*, pages 26–38. Springer, November 2003. (Later extended in [13])

33. Jérémy Barbay and Claire Kenyon. Adaptive intersection and t-threshold problems. In *Proceedings of the 13th ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 390–399. Society for Industrial and Applied Mathematics (SIAM), January 2002

34. Jérémy Barbay and Claire Kenyon. On the discrete Bak-Sneppen model. In *Proceedings of the 12th ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 928–931. ACM-SIAM, ACM, January 2001