

Gwenaël Joret – C.V.

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CONTACT INFORMATION

Université Libre de Bruxelles
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PERSONAL INFORMATION

Date of birth: December 22, 1982
Nationality: Belgian

POSITIONS

Oct. 2008 - present Postdoctoral Researcher of the F.R.S.–FNRS, Université Libre de Bruxelles (ULB)
Oct. 2004 - Sept. 2008 Research fellow of the F.R.S.–FNRS, ULB

EDUCATION

2007 Ph. D. in Computer Science, ULB

Thesis: *Entropy and Stability in Graphs*
Advisors: Jean Cardinal and Jean-Paul Doignon

2004 M. Sc. in Computer Science, *La Plus Grande Distinction*, ULB

PUBLICATIONS

All papers are available from www.ulb.ac.be/di/algo/gjoret/

1. J. Barát, G. Joret, and D. R. Wood. Disproof of the list Hadwiger conjecture. *Electronic Journal of Combinatorics*, 18, no. 1:R232, 2011.
2. G. Joret and D. R. Wood. Nordhaus-Gaddum for treewidth. *European Journal of Combinatorics*, to appear.
3. L. Esperet and G. Joret. Boxicity of graphs on surfaces. *Graphs and Combinatorics*, to appear.
4. G. Joret, C. Paul, I. Sau, S. Saurabh, and S. Thomassé. Hitting and harvesting pumpkins. Proceedings of the *19th Annual European Symposium on Algorithms (ESA 2011)*.
5. S. Fiorini and G. Joret. Approximating the balanced minimum evolution problem. *Operations Research Letters*, 40, no. 1:31–35, 2012.
6. G. Joret and K. G. Milans. First-Fit is linear on posets excluding two long incomparable chains. *Order*, 28, no. 3:455–464, 2011.
7. V. Bruyère, G. Joret, and H. Mélot. Trees with given stability number and minimum number of stable sets. *Graphs and Combinatorics*, to appear.
8. S. Fiorini, G. Joret, and U. Pietropaoli. Hitting diamonds and growing cacti. Proceedings of the *14th Conference on Integer Programming and Combinatorial Optimization (IPCO 2010)*.

9. J. Cardinal, S. Fiorini, G. Joret, R. M. Jungers, and J. I. Munro. Sorting under partial information (without the ellipsoid algorithm). *Combinatorica*, accepted pending minor revisions.
Also in: Proceedings of the *42th ACM Symposium on Theory of Computing (STOC 2010)*.
10. G. Joret and D. R. Wood. Irreducible triangulations are small. *Journal of Combinatorial Theory, Series B*, 100, no. 5:446–455, 2010.
11. V. Dujmović, G. Fijavž, G. Joret, T. Sulanke, and D. R. Wood. On the maximum number of cliques in a graph embedded in a surface. *European Journal of Combinatorics*, 32, no. 8:1244–1252, 2011.
12. J. Cardinal, E. D. Demaine, S. Fiorini, G. Joret, I. Newman, and O. Weimann. The Stackelberg minimum spanning tree game on planar and bounded-treewidth graphs. *Journal of Combinatorial Optimization*, accepted.
Also in: Proceedings of the *5th Workshop on Internet & Network Economics (WINE 2009)*.
13. G. Joret. Stackelberg network pricing is hard to approximate. *Networks*, 57, no. 2:117–120, 2011.
14. J. Cardinal, S. Fiorini, G. Joret, R. M. Jungers, and J. I. Munro. An efficient algorithm for partial order production. *SIAM Journal on Computing*, 39, no. 7:2927–2940, 2010.
Also in: Proceedings of the *41th ACM Symposium on Theory of Computing (STOC 2009)*.
15. J. Cardinal, S. Fiorini, and G. Joret. Minimum entropy combinatorial optimization problems. *Theory of Computing Systems*, to appear.
Also in: Proceedings of the *5th Conference on Mathematical Theory and Computational Practice: Computability in Europe (CiE 2009)*.
16. G. Joret, M. Kamiński, and D. O. Theis. The Cops and Robber game on graphs with forbidden (induced) subgraphs. *Contributions to Discrete Mathematics*, 5, no. 2:40–51, 2010.
17. J. Cardinal, E. D. Demaine, S. Fiorini, G. Joret, S. Langerman, I. Newman, and O. Weimann. The Stackelberg minimum spanning tree game. *Algorithmica*, 59, no. 2:129–144, 2011.
Also in: Proceedings of the *10th International Workshop on Algorithms and Data Structures (WADS 2007)*.
18. J. Cardinal, S. Fiorini, and G. Joret. Minimum entropy orientations. *Operations Research Letters*, 36, no. 6:680–683, 2008.
19. J.-P. Doignon, S. Fiorini, and G. Joret. Weighted graphs defining facets: a connection between stable set and linear ordering polytopes. *Discrete Optimization*, 6, no. 1:1–9, 2009.
20. S. Fiorini and G. Joret. On a theorem of Sewell and Trotter. *European Journal of Combinatorics*, 30, no. 2:425–428, 2009.
21. A. Bernáth and G. Joret. Well-balanced orientations of mixed graphs. *Information Processing Letters*, 106, no. 4:149–151, 2008.
22. N. Bougard and G. Joret. Turán’s theorem and k -connected graphs. *Journal of Graph Theory*, 58, no. 1:1–13, 2008.
23. J. Cardinal, S. Fiorini, and G. Joret. Tight results on minimum entropy set cover. *Algorithmica*, 51, no. 1:49–60, 2008.
Also in: Proceedings of the *9th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2006)*.
24. J. Cardinal, S. Fiorini, and G. Joret. Minimum entropy coloring. *Journal of Combinatorial Optimization*, 16, no. 4:361–377, 2008.
Also in: Proceedings of the *16th International Symposium on Algorithms and Computation (ISAAC 2005)*.
25. J.-P. Doignon, S. Fiorini, and G. Joret. Facets of the linear ordering polytope: a unification for the fence family through weighted graphs. *Journal of Mathematical Psychology*, 50, no. 3:251–262, 2006.

Papers currently under review

- V. Dujmović, G. Joret, and D. R. Wood. An improved bound for First-Fit on posets without two long incomparable chains. Submitted to *SIAM Journal on Discrete Mathematics*.
- G. Joret and D. R. Wood. Complete graph minors and the graph minor structure theorem. Submitted to *Journal of Combinatorial Theory, Series B*.
- N. E. Clarke, S. Fiorini, G. Joret, and D. O. Theis. A note on the Cops & Robber game on graphs embedded in non-orientable surfaces. Submitted to *Graphs and Combinatorics*.
- S. Fiorini, G. Joret, D. O. Theis, and D. R. Wood. Small minors in dense graphs. Submitted to *European Journal of Combinatorics*.

TALKS IN CONFERENCES

- June 2011 “Hitting and harvesting pumpkins”, 7th Slovenian International Conference on Graph Theory, Bled, Slovenia.
- Sept. 2010 “Small minors in dense graphs”, Banff Workshop on New Trends in Structural Graph Theory, Banff, Canada.
- June 2010 “Sorting under partial information (without the ellipsoid algorithm)”, 42th ACM Symposium on Theory of Computing (STOC 2010), Cambridge, Massachusetts, USA.
- Jan. 2010 “Sorting under partial information (without the ellipsoid algorithm)”, 14th Combinatorial Optimization Workshop, Aussois, France.
- Dec. 2009 “The Stackelberg minimum spanning tree game on planar and bounded-treewidth graphs”, 5th Workshop on Internet & Network Economics, Rome, Italy.
- Nov. 2009 “Complete graph minors and the graph minor structure theorem”, 11èmes Journées Graphes et Algorithmes, Montpellier, France.
- May 2008 “Weighted graphs defining facets: a connection between stable set and linear ordering polytopes”, ROGICS 2008: International Conference on Relations, Orders and Graphs: Interaction with Computer Science, Mahdia, Tunisia.
- Nov. 2006 “Tight results on minimum entropy set cover”, DIAMANT/EIDMA Symposium 2006, Vught, The Netherlands.
- Aug. 2006 “Tight results on minimum entropy set cover”, 9th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems, Barcelona, Spain.
- June 2006 “Graphes pondérés produisant des facettes du polytope des ordres totaux”, Troisièmes Journées Polyèdres et Optimisation Combinatoire, Avignon, France.
- May 2006 “On weighted graphs yielding facets of the linear ordering polytope”, DIMACS Workshop on Polyhedral Combinatorics of Random Utility, Rutgers University, New Jersey, USA.
- Dec. 2005 “Minimum entropy coloring”, 16th International Symposium on Algorithms and Computation, Sanya, China.
- Nov. 2005 “A weighted generalization of α -critical graphs in connection with linear ordering polytopes”, DIAMANT/EIDMA Symposium 2005, Mierlo, The Netherlands.
- Sept. 2005 “On a weighted generalization of α -critical graphs”, 7th International Colloquium on Graph Theory, Hyères, France.
- June 2005 “Une nouvelle famille de facettes du polytope des ordres totaux”, Deuxièmes Journées Polyèdres et Optimisation Combinatoire, 2005, Marseille, France.

TALKS IN SEMINARS

- Oct. 2011 “First-Fit chain partitioning of partial orders”, Seminar on Discrete Structures and Algorithms, Department of Mathematics and Statistics, The University of Melbourne, Melbourne, Australia.
- Apr. 2011 “Sorting under partial information (without the ellipsoid algorithm)”, Combinatorial Optimization group of the G-SCOP Laboratory, Grenoble, France.
- Dec. 2010 “Small minors in dense graphs”, Department of Computer Sciences, Università degli studi di Roma “La Sapienza”, Rome, Italy.
- Oct. 2010 “Small minors in dense graphs”, Algorithms, graphs, and combinatorics seminar, Université de Montpellier, Montpellier, France.
- Oct. 2010 “Small minors in dense graphs”, Centrum for Wiskunde en Informatica (CWI), Amsterdam, Netherlands.
- May 2010 “Small minors in dense graphs”, Discrete Mathematics and Optimization seminar, McGill University, Montreal, Canada
- Mar. 2010 “Irreducible triangulations of surfaces”, Department of Applied Mathematics, Université Catholique de Louvain, Louvain-La-Neuve, Belgium.
- Dec. 2009 “Sorting under partial information (without the ellipsoid algorithm)”, Department of Computer Sciences, Università degli studi di Roma “La Sapienza”, Rome, Italy.
- Dec. 2009 “Sorting under partial information (without the ellipsoid algorithm)”, Operations Research Group, Università degli studi di Roma “Tor Vergata”, Rome, Italy.
- June 2009 “An efficient algorithm for partial order production”, Seminar on Discrete Structures and Algorithms, Department of Mathematics and Statistics, The University of Melbourne, Melbourne, Australia.
- Febr. 2009 “An efficient algorithm for partial order production”, Seminar of the research group on Large Graphs and Networks at Université Catholique de Louvain, Louvain-La-Neuve, Belgium.
- Apr. 2007 “Facets of the linear ordering polytope from a generalization of α -critical graphs”, Seminar of the Egerváry Research Group on Combinatorial Optimization (EGRES), Budapest, Hungary.
- Febr. 2005 “Graphs defining facets of the linear ordering polytope”, ULB-RUG Seminar on Buildings and Finite Geometry, Brussels, Belgium.

LONG STAYS ABROAD

- May – July 2010: Visit of Adrian Vetta at the Department of Mathematics, McGill University (Montreal, Canada).
- April – August 2009: Visit of David R. Wood at the Department of Mathematics and Statistics of the University of Melbourne (Melbourne, Australia).
- March – June 2007: Research stay in the Egerváry research group on combinatorial optimization (EGRES), Department of Operations Research, Eötvös Loránd University (Budapest, Hungary).

SHORT STUDY STAYS ABROAD

- From May 2, 2010 to May 29, 2010: First Montreal Spring School in Graph Theory (lecturers: Maria Chudnovsky, Bruce Reed, Paul Seymour). McGill University, Montreal, Canada.
- From October 21, 2007 to October 25, 2007: ADONET-CIRM School on Graphs and Algorithms, Levico Terme, Trento, Italy.

- From June 19, 2006 to June 30, 2006: Summer school on Combinatorial Optimization: Methods and Applications, Université de Montréal, Montreal, Canada.
- From March 27, 2006 to March 29, 2006: Approximation Algorithms, EIDMA minicourse by Michel Goemans, TU-Eindhoven, Eindhoven, The Netherlands.
- From June 6, 2005 to June 10, 2005: Structural Graph Theory, EIDMA minicourse by Robin Thomas, TU-Eindhoven, Eindhoven, The Netherlands.
- From April 1, 2005 to April 4, 2005: NoNA Spring School in Algorithms, Geilo, Norway.

AWARDS

- Finalist of the ERCIM Cor Baayen Award 2009.
- Medal of the Université Libre de Bruxelles (2004).

REFEREE SERVICE

- Journals: Ars Combinatoria, Discrete Applied Mathematics, Discrete Mathematics, Discrete Mathematics & Theoretical Computer Science, Mathematical Social Sciences, Order
- Conferences: 28th International Symposium on Theoretical Aspects of Computer Science (STACS 2011), Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2011), European Conference on Combinatorics, Graph Theory and Applications (EuroComb 2011), 27th International Symposium on Theoretical Aspects of Computer Science (STACS 2010), 20th Canadian Conference on Computational Geometry (CCCG 2008), 14th Annual European Symposium on Algorithms (ESA 2006)

TEACHING

I taught the following course at the ULB:

- Graph Theory (Fall 2010)

I served as a teaching assistant for the following courses at the ULB:

- Data Structures and Algorithms (Fall 2008, Fall 2009)
- Networks (Fall 2004, Fall 2005, Fall 2006, Fall 2007, Fall 2008)