Gwenaël JORET

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Nationality Belgian

Positions

2016 - current Associate Professor (*Chargé de Cours*), Université Libre de Bruxelles (ULB)

2012 - 2016 Assistant Professor (*Premier Assistant*), ULB[1]

2013 - 2014 DECRA Research Fellow of the Australian Research Council, The University of Melbourne

2008 - 2012 Postdoctoral Researcher of the Belgian Fund for Scientific Research (FNRS), ULB

2004 - 2008 Research Fellow of the 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 (*Greatest Honours*), ULB

Publications

All papers are available from `https://gjoret.be/`

1. G. Joret, P. Micek, M. Pilipczuk, and B. Walczak. Cliquewidth and dimension. Extended abstract in proc. of SODA 2024 (to appear).

[1] On leave at The University of Melbourne during the 2013–2014 academic year

2. V. Dujmović, R. Hickingbotham, J. Hodor, G. Joret, H. La, P. Micek, P. Morin, C. Rambaud, and D. R. Wood. The grid-minor theorem revisited. Extended abstract in proc. of SODA 2024 (to appear).

3. V. Dujmović, R. Hickingbotham, G. Joret, P. Micek, P. Morin, and D. R. Wood. The excluded tree minor theorem revisited. *Combinatorics, Probability, and Computing*, to appear.

4. G. Joret, W. Lochet, and M. T. Seweryn. Edge separators for graphs excluding a minor. *Electronic Journal of Combinatorics*, **30**/4:P4.12, 2023.

5. M. Briański, G. Joret, K. Majewski, P. Micek, M. T. Seweryn, and R. Sharma. Treedepth vs circumference. *Combinatorica*, **43**:659–664, 2023.

6. L. Esperet, G. Joret, and P. Morin. Sparse universal graphs for planarity. *Journal of the London Mathematical Society*, **108**/4:1333–1357, 2023.

7. C. Groenland, G. Joret, W. Nadara, and B. Walczak. Approximating pathwidth for graphs of small treewidth. *ACM Transactions on Algorithms*, **19**/2:1–19, 2023. Extended abstract in proc. of SODA 2021.

8. G. Joret and P. Micek. Improved bounds for weak coloring numbers. *Electronic Journal of Combinatorics*, **29**/1:P1.60, 2022.

9. T. Huynh, G. Joret, and D. R. Wood. Subgraph densities in a surface. *Combinatorics, Probability, and Computing*, **31**/5:812–839, 2022.

10. T. Huynh, G. Joret, P. Micek, M. T. Seweryn, and P. Wollan. Excluding a ladder. *Combinatorica*, **42**:405–432, 2022.

11. M. Aprile, S. Fiorini, T. Huynh, G. Joret, and D. R. Wood. Smaller extended formulations for spanning tree polytopes in minor-closed classes and beyond. *Electronic Journal of Combinatorics*, **28**/4:P4.47, 2021.

12. S. Fiorini, G. Joret, S. Weltge, and Y. Yuditsky. Integer programs with bounded subdeterminants and two nonzeros per row. Extended abstract in proc. of FOCS 2021.

13. G. Joret, P. Micek, B. Reed, and M. Smid. Tight bounds on the clique chromatic number. *Electronic Journal of Combinatorics*, **28**/3:P3.51, 2021.

14. V. Dujmović, L. Esperet, C. Gavoille, G. Joret, P. Micek, and P. Morin. Adjacency labelling for planar graphs (and beyond). *Journal of the ACM*, **68**/6:Article 42, 2021. Extended abstract in proc. of FOCS 2020.

15. Z. Dvořák, T. Huynh, G. Joret, C.-H. Liu, and D. R. Wood. Notes on graph product structure theory. In: Wood D.R., de Gier J., Praeger C.E., Tao T. (eds) 2019-20 MATRIX Annals. MATRIX Book Series, vol 4, 513–533, 2021. Springer.

16. N. Bousquet, W. Cames van Batenburg, L. Esperet, G. Joret, W. Lochet, C. Muller, and F. Pirot. Packing and covering balls in graphs excluding a minor. *Combinatorica*, **41**:299–318, 2021.

17. S. Fiorini, T. Huynh, G. Joret, and C. Muller. Unavoidable minors for graphs with large ℓ_p-dimension. *Discrete and Computational Geometry*, **66**:301–343, 2021.

18. L. Dubois, G. Joret, G. Perarnau, M. Pilipczuk, and F. Pitois. Two lower bounds for p-centered colorings. *Discrete Mathematics and Theoretical Computer Science*, 2020.

19. W. Cames van Batenburg, G. Joret, and A. Ulmer. Erdős-Pósa from ball packing. *SIAM Journal on Discrete Mathematics*, **34**/3:1609–1619, 2020.

20. W. Cames van Batenburg, J. Goedgebeur, and G. Joret. Large independent sets in triangle-free cubic graphs: beyond planarity. *Advances in Combinatorics*, P7, 45 pp, 2020.

21. M. Conforti, S. Fiorini, T. Huynh, G. Joret, and S. Weltge. The stable set problem in graphs with bounded genus and bounded odd cycle packing number. Extended abstract in proc. of SODA 2020.

22. M. Bonamy, P. Charbit, O. Defrain, G. Joret, A. Lagoutte, V. Limouzy, L. Pastor, and J.-S. Sereni. Revisiting a theorem by Folkman on graph colouring. *Electronic Journal of Combinatorics*, **27**/1:P1.56, 2020.

23. V. Dujmović, L. Esperet, G. Joret, B. Walczak, and D. R. Wood. Planar graphs have bounded nonrepetitive chromatic number. *Advances in Combinatorics*, P5, 11 pp, 2020.

24. V. Dujmović, G. Joret, P. Micek, P. Morin, T. Ueckerdt, and D. R. Wood. Planar graphs have bounded queue-number. *Journal of the ACM*, **67**/4:Article 22, 2020. Extended abstract in proc. of FOCS 2019.

25. V. Dujmović, D. Eppstein, G. Joret, P. Morin, and D. R. Wood. Minor-closed graph classes with bounded layered pathwidth. *SIAM Journal on Discrete Mathematics*, **34**/3:1693–1709, 2020.

26. G. Joret and W. Lochet. Progress on the adjacent vertex distinguishing edge colouring conjecture. *SIAM Journal on Discrete Mathematics*, **34**/4:2221–2238, 2020.

27. T. Huynh, G. Joret, P. Micek, and D. R. Wood. Seymour's conjecture on 2-connected graphs of large pathwidth. *Combinatorica*, **40**:839–868, 2020.

28. S. Fiorini, G. Joret, and O. Schaudt. Improved approximation algorithms for hitting 3-vertex paths. *Mathematical Programming*, **182**:355–367, 2020. Extended abstract in proc. of IPCO 2016.

29. G. Berbeglia and G. Joret. Assortment optimisation under a general discrete choice model: A tight analysis of revenue-ordered assortments. *Algorithmica*, **82**/4:681–720, 2020. Extended abstract in proc. of EC 2017.

30. W. Cames van Batenburg, T. Huynh, G. Joret, and J.-F. Raymond. A tight Erdős-Pósa function for planar minors. *Advances in Combinatorics*, P2, 33 pp, 2019. Extended abstract in proc. of SODA 2019.

31. G. Joret, P. Micek, P. Ossona de Mendez, and V. Wiechert. Nowhere dense graph classes and dimension. *Combinatorica*, **39**/5:1055–1079, 2019.

32. P. Aboulker, S. Fiorini, T. Huynh, G. Joret, J.-F. Raymond, and I. Sau. A tight Erdős-Pósa function for wheel minors. *SIAM Journal on Discrete Mathematics*, **32**/3:2302–2312, 2018.

33. S. Felsner, G. Joret, P. Micek, W. T. Trotter, and V. Wiechert. Burling graphs, chromatic number, and orthogonal tree-decompositions. *Electronic Journal of Combinatorics*, **25**/1:P1.35, 2018.

34. V. Dujmović, G. Joret, P. Morin, S. Norin, and D. R. Wood. Orthogonal tree decompositions of graphs. *SIAM Journal on Discrete Mathematics*, **32**/2:839–863, 2018.

35. G. Joret, P. Micek, and V. Wiechert. Planar posets have dimension at most linear in their height. *SIAM Journal on Discrete Mathematics*, **31**/4:2754–2790, 2018.

36. G. Joret and D. R. Wood. K_4-minor-free induced subgraphs of sparse connected graphs. *SIAM Journal on Discrete Mathematics*, **32**/1:123–147, 2018.

37. G. Joret, P. Micek, and V. Wiechert. Sparsity and dimension. *Combinatorica*, **38**/5:1129–1148, 2018. Extended abstract in proc. of SODA 2016.

38. S. Fiorini, T. Huynh, G. Joret, and K. Pashkovich. Smaller extended formulations for the spanning tree polytope of bounded-genus graphs. *Discrete and Computational Geometry*, **57**/3:757–761, 2017.

39. S. Fiorini, T. Huynh, G. Joret, and A. Varvitsiotis. The excluded minors for isometric realizability in the plane. *SIAM Journal on Discrete Mathematics*, **31**/1:438–453, 2017.

40. G. Joret, P. Micek, W. T. Trotter, R. Wang, and V. Wiechert. On the dimension of posets with cover graphs of treewidth 2. *Order*, **34**/2:185–234, 2017.

41. A. Gagol, G. Joret, J. Kozik, and P. Micek. Pathwidth and nonrepetitive list coloring. *Electronic Journal of Combinatorics*, **23**/4:P4.40, 2016.

42. G. Joret, P. Micek, K. G. Milans, W. T. Trotter, B. Walczak, and R. Wang. Tree-width and dimension. *Combinatorica*, **36**/4:431–450, 2016.

43. V. Dujmović, G. Joret, J. Kozik, and D. R. Wood. Nonrepetitive colouring via entropy compression. *Combinatorica*, **36**/6:661–686, 2016.

44. G. Joret and A. Vetta. Reducing the rank of a matroid. *Discrete Mathematics and Theoretical Computer Science*, **17**/2:143–156, 2015.

45. J. Cardinal and G. Joret. Hitting all maximal independent sets of a bipartite graph. *Algorithmica*, **72**/2:359–368, 2015.

46. J. Barát, V. Dujmović, G. Joret, M. Payne, L. Scharf, D. Schymura, P. Valtr, and D. R. Wood. Empty pentagons in point sets with collinearities. *SIAM Journal on Discrete Mathematics*, **29**/1:198–209, 2015.

47. L. Esperet and G. Joret. Coloring planar graphs with three colors and no large monochromatic components. *Combinatorics, Probability, and Computing*, **23**/4:551–570, 2014.

48. G. Joret, C. Paul, I. Sau, S. Saurabh, and S. Thomassé. Hitting and harvesting pumpkins. *SIAM Journal on Discrete Mathematics*, **103**/1:1363–1390, 2014. Extended abstract in proc. of ESA 2011.

49. 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. *Graphs and Combinatorics*, **30**/1:119–124, 2014.

50. S. Fiorini, G. Joret, and D. R. Wood. Excluded forest minors and the Erdős-Pósa property. *Combinatorics, Probability, and Computing*, **22**/5:700–721, 2013.

51. V. Dujmović, D. J. Harvey, G. Joret, B. Reed, and D. R. Wood. A linear-time algorithm for finding a complete graph minor in a dense graph. *SIAM Journal on Discrete Mathematics*, **27**/4:1770–1774, 2013.

52. V. Dujmović, F. Frati, G. Joret, and D. R. Wood. Nonrepetitive colourings of planar graphs with $O(\log n)$ colours. *Electronic Journal of Combinatorics*, **20**/1:P51, 2013.

53. L. Esperet and G. Joret. Boxicity of graphs on surfaces. *Graphs and Combinatorics*, **29**/3:417–427, 2013.

54. G. Joret and D. R. Wood. Complete graph minors and the graph minor structure theorem. *Journal of Combinatorial Theory, Series B*, **103**/1:61–74, 2013.

55. 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*, **25**/1:19–46, 2013. Extended abstract in proc. of WINE 2009.

56. J. Cardinal, S. Fiorini, G. Joret, R. M. Jungers, and J. I. Munro. Sorting under partial information (without the ellipsoid algorithm). *Combinatorica*, **33**/6:655–697, 2013. Extended abstract in proc. of STOC 2010.

57. S. Fiorini and G. Joret. Approximating the balanced minimum evolution problem. *Operations Research Letters*, **40**/1:31–35, 2012.

58. V. Dujmović, G. Joret, and D. R. Wood. An improved bound for First-Fit on posets without two long incomparable chains. *SIAM Journal on Discrete Mathematics*, **26**/3:1068–1075, 2012.

59. G. Joret and D. R. Wood. Nordhaus-Gaddum for treewidth. *European Journal of Combinatorics*, **33**/4:488–490, 2012.

60. S. Fiorini, G. Joret, D. O. Theis, and D. R. Wood. Small minors in dense graphs. *European Journal of Combinatorics*, **33**/6:1226–1245, 2012.

61. V. Bruyère, G. Joret, and H. Mélot. Trees with given stability number and minimum number of stable sets. *Graphs and Combinatorics*, **28**/2:167–187, 2012.

62. J. Cardinal, S. Fiorini, and G. Joret. Minimum entropy combinatorial optimization problems. *Theory of Computing Systems*, **51**/1:4–21, 2012. Extended abstract in proc. of CiE 2009.

63. G. Joret and K. G. Milans. First-Fit is linear on posets excluding two long incomparable chains. *Order*, **28**/3:455–464, 2011.

64. J. Barát, G. Joret, and D. R. Wood. Disproof of the list Hadwiger conjecture. *Electronic Journal of Combinatorics*, **18**/1:R232, 2011.

65. 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**/8:1244–1252, 2011.

66. G. Joret. Stackelberg network pricing is hard to approximate. *Networks*, **57**/2:117–120, 2011.

67. J. Cardinal, E. D. Demaine, S. Fiorini, G. Joret, S. Langerman, I. Newman, and O. Weimann. The Stackelberg minimum spanning tree game. *Algorithmica*, **59**/2:129–144, 2011. Extended abstract in proc. of WADS 2007.

68. S. Fiorini, G. Joret, and U. Pietropaoli. Hitting diamonds and growing cacti. Extended abstract in proc. of IPCO 2010.

69. G. Joret and D. R. Wood. Irreducible triangulations are small. *Journal of Combinatorial Theory, Series B*, **100**/5:446–455, 2010.

70. 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**/7:2927–2940, 2010. Extended abstract in proc. of STOC 2009.

71. G. Joret, M. Kamiński, and D. O. Theis. The Cops and Robber game on graphs with forbidden (induced) subgraphs. *Contributions to Discrete Mathematics*, **5**/2:40–51, 2010.

72. J.-P. Doignon, S. Fiorini, and G. Joret. Weighted graphs defining facets: a connection between stable set and linear ordering polytopes. *Discrete Optimization*, **6**/1:1–9, 2009.

73. S. Fiorini and G. Joret. On a theorem of Sewell and Trotter. *European Journal of Combinatorics*, **30**/2:425–428, 2009.

74. J. Cardinal, S. Fiorini, and G. Joret. Minimum entropy orientations. *Operations Research Letters*, **36**/6:680–683, 2008.

75. A. Bernáth and G. Joret. Well-balanced orientations of mixed graphs. *Information Processing Letters*, **106**/4:149–151, 2008.

76. N. Bougard and G. Joret. Turán's theorem and k-connected graphs. *Journal of Graph Theory*, **58**/1:1–13, 2008.

77. J. Cardinal, S. Fiorini, and G. Joret. Tight results on minimum entropy set cover. *Algorithmica*, **51**/1:49–60, 2008. Extended abstract in proc. of APPROX 2006.

78. J. Cardinal, S. Fiorini, and G. Joret. Minimum entropy coloring. *Journal of Combinatorial Optimization*, **16**/4:361–377, 2008. Extended abstract in proc. of ISAAC 2005.

79. 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**/3:251–262, 2006.

Talks in conferences and workshops

September 2023 "The Grid Minor Theorem revisited", Structural graph theory Workshop, Będlewo, Poland.

August 2023 "χ-Boundedness for posets", EUROCOMB 2023, Prague, Czech Republic.

July 2022 "Integer programs with bounded subdeterminants and two nonzeros per row", Probability and Combinatorics: A workshop in celebration of Bruce Reed's mathematical career, Oxford, England.

July 2022 "Product structure of planar graphs", The 11th International Colloquium on Graph Theory and combinatorics, Montpellier, France.

Jan. 2022 "Further applications of the product structure theorem", Oberwolfach graph theory meeting, Oberwolfach, Germany.

Nov. 2021 "Sparse universal graphs for planarity", Banff Workshop on "Graph product structure theorems", Banff International Research Station, Banff, Canada.[2]

Sept. 2021 "Product structure of planar graphs", Dagstuhl Seminar on "Sparsity in Algorithms, Combinatorics and Logic", Dagstuhl, Germany.

May 2021 "The extension dimension and the linear extension polytope of a poset", CANADAM 2021, online.

May 2021 "Sparse universal graphs for planarity", CANADAM 2021, online.[3]

Aug. 2020 "Packing and covering balls in graphs excluding a minor", Virtual Discrete Math Colloquium organized by IBS Discrete Mathematics Group, Daejeon, South Korea (online talk).

May 2020 "Product structure of planar graphs", JCRAALMA Online Spring School on Product Structure Theorems (online lecture).[4]

[2] http://www.birs.ca/events/2021/5-day-workshops/21w5235/videos/watch/202111230900-Joret.html
[3] https://www.youtube.com/watch?v=8Sv_FaEN8zE&t=7129s
[4] https://visio.u-bordeaux.fr/playback/presentation/2.0/playback.html?meetingId=2f0650b79e14fde9ea24e253

Aug. 2019 "Large independent sets in triangle-free subcubic graphs", Ghent graph theory workshop, Ghent, Belgium.

June 2019 "Large independent sets in triangle-free subcubic graphs", Structural graph theory workshop, Gułtowy, Poland.

May 2019 "Layered partitions of planar graphs", Graph theory and sparse structures workshop, Paris, France.

Jan. 2019 "Large independent sets in triangle-free subcubic graphs", Oberwolfach graph theory meeting, Oberwolfach, Germany.

Dec. 2018 "Large independent sets in triangle-free subcubic graphs", Conference in honor of Stéphan Thomassé, Lyon, France.

Sept. 2018 "Generalized coloring numbers", Order & Geometry workshop, Ciazen, Poland.

Jun. 2018 "Seymour's conjecture on 2-connected graphs of large pathwidth", Mini-Workshop on Graph Theory, Nijmegen, The Netherlands.

Jan. 2018 "Graph entropy and sorting: From classical to quantum", Aussois optimization workshop, Aussois, France.

Nov. 2017 "Weak coloring numbers", Journées Graphes et Algorithmes (JGA 2017), Bordeaux, France.

Nov. 2017 "Graph entropy and sorting: From classical to quantum", Workshop in honor of János Körner, Rome, Italy.

June 2017 "Progress on the AVD edge coloring conjecture", CANADAM 2017, Toronto, Canada.

July 2016 "Sparsity and dimension", 2016 Workshop on Structure in Graphs and Matroids, Eindhoven University of Technology, Eindhoven, The Netherlands.

March 2016 "Sparsity and dimension", Bellairs workshop on graph theory, Holetown, Barbados.

Oct. 2015 "Sparsity and dimension", 7th workshop on Graph Classes, Optimization, and Width Parameters (GROW 2015), Aussois, France.

June 2015 "Sparsity and dimension", Workshop on Structure in Combinatorics, Institut Henri Poincaré, Paris, France.

June 2014 "On the dimension of posets with cover graphs of treewidth 2", SIAM Conference on Discrete Mathematics, Minneapolis, United States.

Apr. 2013 "Tree-width and dimension", Conference honoring the 65th birthday of Jean-Paul Doignon, Université Libre de Bruxelles, Brussels, Belgium.

Mar. 2013 "Tree-width and dimension", Dagstuhl Seminar on Bidimensional Structures: Algorithms, Combinatorics and Logic. Dagstuhl, Germany.

Aug. 2012 "Excluded forest minors and the Erdős-Pósa property", 21st International Symposium on Mathematical Programming (ISMP 2012), Berlin, Germany.

June 2012 "Nonrepetitive coloring via entropy compression", Journées Combinatoires Rhone, Alpes, Provence. Lyon, France.

June 2012 "An improved bound for First-Fit on posets without two long incomparable chains", SIAM Conference on Discrete Mathematics, Halifax, Canada.

May 2012 "Excluded forest minors and the Erdős-Pósa property", Graph Theory @ Georgia Tech, Conference honoring the 50th birthday of Robin Thomas, Atlanta, United States.

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

Nov. 2022 "New results on treedepth", Discrete mathematics seminar, Monash University, Melbourne, Australia.

Mar. 2021 "Approximating pathwidth for graphs of small treewidth", Bordeaux Graphs & Optimization seminar (online).[5]

Nov. 2020 "Sparse universal graphs for planarity", Oxford discrete mathematics and probability seminar (online).[6]

Oct. 2019 "A new proof of the Erdős-Pósa theorem", Combinatorics Seminar, Department of Theoretical Computer Science, Jagiellonian University, Kraków, Poland.

Mar. 2018 "Seymour's conjecture on 2-connected graphs of large pathwidth", INRIA Sophia-Antipolis, Sophia-Antipolis, France.

Mar. 2018 "Seymour's conjecture on 2-connected graphs of large pathwidth", Ghent University, Ghent, Belgium.

Feb. 2018 "Seymour's conjecture on 2-connected graphs of large pathwidth", Laboratoire d'Informatique Fondamentale, Marseille, France.

Feb. 2017 "The forbidden minors for isometric realizability in the plane", Probabilidade e Combinatória, Instituto Nacional de Matemática Pura e Aplicada, Rio de Janeiro, Brazil.

Dec. 2016 "Orthogonal tree decompositions of graphs", Combinatorics Seminar, Mathematics Department, FU Berlin, Berlin, Germany.

Jun. 2016 "Improved approximation algorithms for hitting 3-vertex paths", Combinatorics Seminar, Department of Theoretical Computer Science, Jagiellonian University, Kraków, Poland.

Jan. 2016 "Dimension of planar posets", Methods for Discrete Structures seminar, TU Berlin, Berlin, Germany.

[5] https://visio.u-bordeaux.fr/playback/presentation/2.0/playback.html?meetingId=2300964ed37832030257d033

[6] https://www.youtube.com/watch?v=6-vz5GmBrSA

May 2014 "Probabilistic algorithms and the entropy compression method", TRICS Seminar, Department of Computing and Information Systems, The University of Melbourne, Melbourne, Australia.

Apr. 2014 "Tree-width and dimension", Seminar on Discrete Structures and Algorithms, Department of Mathematics and Statistics, The University of Melbourne, Melbourne, Australia.

Mar. 2014 "Tree-width and dimension", Discrete mathematics seminar, Monash University, Melbourne, Australia.

June 2013 "On Sheehan's second hamiltonian cycle conjecture", Algorithms, graphs, and combinatorics seminar, Université de Montpellier, Montpellier, France.

May 2013 "On Sheehan's second hamiltonian cycle conjecture", Algebra & Combinatorics seminar, Université Libre de Bruxelles, Brussels, Belgium.

Dec. 2012 "On Moser's constructive proof of the local lemma", Theoretical computer science seminar, Université de Montréal, Montreal, Canada

Nov. 2012 "Nonrepetitive coloring via entropy compression", Combinatorics and Optimization seminar, University of Ottawa, Ottawa, Canada

Oct. 2012 "Nonrepetitive coloring via entropy compression", Discrete Mathematics and Optimization seminar, McGill University, Montreal, Canada

Apr. 2012 "Excluded forest minors and the Erdős-Pósa property", Combinatorics Seminar, Department of Theoretical Computer Science, Jagiellonian University, Kraków, Poland.

Apr. 2012 "Sorting under partial information (without the ellipsoid algorithm)", Theoretical Computer Science Seminar, Department of Theoretical Computer Science, Jagiellonian University, Kraków, Poland.

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.

Lectures at Spring & Summer Schools

- Lecturer at the Algorithms and Mathematics Network Spring School, Krakow, Poland. May 2022.
Topic: "Product stucture of planar graphs". (15 hours lecture over 5 days.)[7]

- Lecturer at the Cargese workshop on combinatorial optimization, Cargese, France. October 2018.
Topic: "Erdős-Pósa property of planar minors". (3 hours lecture.)

- Lecturer at the Brussels Summer School in Mathematics, Brussels. August 2015.
Topic: "The probabilistic method". (3 hours lecture.)

- Lecturer at the Order and Geometry Summer School, Dölnnsee, Germany. August 2013.
Topic: "Entropy of partial orders". (5 hours lecture.)

Other activities

Member of the editorial board of the following journals:

- *SIAM Journal on Discrete Mathematics* since 2021.
- *Annals of Combinatorics* since 2019.

[7] https://www.youtube.com/playlist?list=PLGxkI0mIkI4q7PYHmqMpDRTpWKJ4Oc8-t

Member of the program committee of the following conferences:

- *35th Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2024)*
- *24th International Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2021)*
- *47th International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2021)*
- *2nd Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2016)*
- *Journées Graphes et Algorithmes:* Years 2019, 2020, 2021, 2022

Organizer of the French graph theory conference *Journées Graphes et Algorithmes 2019* (3 days) at ULB.

Teaching

I taught the following courses at ULB since starting my teaching position there:

- INFOF106 - Projet d'informatique: *2012–2013, 2014–2015, 2015–2016, 2016–2017, 2017–2018, 2018–2019, 2019–2020, 2020–2021, 2021–2022, 2022–2023*
- INFOF206 - Informatique: *Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018, Fall 2019*
- INFOF521 - Graph theory: *Fall 2010, Spring 2012, Spring 2013, Fall 2015, Fall 2016, Fall 2017, Fall 2019, Fall 2020, Fall 2021, Fall 2022*
- Algorithmique (UMons, Charleroi campus): *Fall 2014, Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2022, Spring 2023*
- MATHF306 - Optimisation: *Spring 2019*
- INFOF421 - Advanced complexity theory and approximation algorithms: *Fall 2014*

I also served as a TA for exercise sessions for various courses at ULB between 2004 and 2010.