

Nicolas Trotignon  
Publications list, updated June 25, 2024

**Publications on DBLP**

<https://dblp.org/pers/hd/t/Trotignon:Nicolas>

**Personnal page**

<http://perso.ens-lyon.fr/nicolas.trotignon/articles.html>

**Articles published in journals**

- [1] Sylvain Gravier, Frédéric Maffray, Jérôme Renault and Nicolas Trotignon. Ramsey-type results on singletons, co-singletons and monotone sequences in large collections of sets. *European Journal of Combinatorics*, 25(5):719–734, 2004.  
DOI:10.1016/j.ejc.2003.10.004 – arXiv:1308.5849
- [2] Frédéric Maffray and Nicolas Trotignon. Algorithms for perfectly contractile graphs. *SIAM Journal on Discrete Mathematics*, 19(3):553–574, 2005.  
DOI:10.1137/S0895480104442522 – arXiv:1309.0435
- [3] Frédéric Maffray and Nicolas Trotignon. A class of perfectly contractile graphs. *Journal of Combinatorial Theory, Series B*, 96(1):1–19, 2006.  
DOI:1309.0438 – arXiv:1309.0438
- [4] Michel Burlet, Frédéric Maffray and Nicolas Trotignon. Odd pairs of cliques. In Adrian Bondy, Jean Fonlupt, Jean-Luc Fouquet, Jean-Claude Fournier and Jorge L. Ramírez Alfonsín, editors, *Graph Theory in Paris, Proceedings of a Conference in Memory of Claude Berge*, pages 85–95. Birkhäuser, 2007.  
DOI:10.1007/978-3-7643-7400-6\_8 – arXiv:1309.0449
- [5] Nicolas Trotignon. Decomposing Berge graphs and detecting balanced skew partitions. *Journal of Combinatorial Theory, Series B*, 98(1):173–225, 2008.  
DOI:10.1016/j.jctb.2007.07.004 – arXiv:1309.0680
- [6] Frédéric Maffray, Nicolas Trotignon and Kristina Vušković. Algorithms for square-3PC( $\cdot, \cdot$ )-free Berge graphs. *SIAM Journal on Discrete Mathematics*, 22(1):51–71, 2008.  
DOI:10.1137/050628520 – arXiv:1309.0694
- [7] Benjamin Lévêque, Frédéric Maffray, Bruce Reed, and Nicolas Trotignon. Coloring Artemis graphs. *Theoretical Computer Science*, 410:2234–2240, 2009.  
DOI: 10.1016/j.tcs.2009.02.012 – arXiv:cs/0504082
- [8] Benjamin Lévêque, David Lin, Frédéric Maffray and Nicolas Trotignon. Detecting induced subgraphs. *Discrete Applied Mathematics*, 157:3540–3551, 2009.  
DOI: 10.1016/j.dam.2009.02.015 – arXiv:1309.0971
- [9] Nicolas Derhy, Christophe Picouleau and Nicolas Trotignon. The four-in-a-tree problem for triangle-free graphs. *Graphs and Combinatorics*, 25:489–502, 2009.  
DOI:10.1007/s00373-009-0867-3 – arXiv:1309.0978
- [10] Nicolas Trotignon and Kristina Vušković. A structure theorem for graphs with no cycle with a unique chord and its consequences. *Journal of Graph Theory*, 63(1):31–67, 2010.  
DOI:10.1002/jgt.20405 – arXiv:1309.0979

- [11] Wei Liu and Nicolas Trotignon. The  $k$ -in-a-tree problem for graphs of girth at least  $k$ . *Discrete Applied Mathematics*, 158:1644–1649, 2010.  
DOI: [10.1016/j.dam.2010.06.005](https://doi.org/10.1016/j.dam.2010.06.005) – [arXiv:1309.1279](https://arxiv.org/abs/1309.1279)
- [12] Nicolas Trotignon and Kristina Vušković. *On Roussel–Rubio-type lemmas and their consequences*. *Discrete Mathematics*, 311(8–9):684–687, 2011.  
DOI: [10.1016/j.disc.2011.01.013](https://doi.org/10.1016/j.disc.2011.01.013) – [arXiv:1309.1284](https://arxiv.org/abs/1309.1284)
- [13] Maurice Pouzet, Hamza Si Kaddour and Nicolas Trotignon. Claw-freeness, 3-homogeneous subsets of a graph and a reconstruction problem. *Contributions to Discrete Mathematics*, 6(1):92–103, 2011.  
DOI:[10.11575/cdm.v6i1](https://doi.org/10.11575/cdm.v6i1) – [arXiv:1309.1835](https://arxiv.org/abs/1309.1835)
- [14] Nicolas Trotignon and Kristina Vušković. Combinatorial optimization with 2-joins. *Journal of Combinatorial Theory, Series B*, 102:153–185, 2012.  
DOI: [10.1016/j.jctb.2011.06.002](https://doi.org/10.1016/j.jctb.2011.06.002) – [arXiv:1309.1547](https://arxiv.org/abs/1309.1547)
- [15] Benjamin Lévêque, Frédéric Maffray and Nicolas Trotignon. On graphs with no induced subdivision of  $K_4$ . *Journal of Combinatorial Theory, Series B*, 102:924–947, 2012.  
DOI:[10.1016/j.jctb.2012.04.005](https://doi.org/10.1016/j.jctb.2012.04.005) – [arXiv:1309.1926](https://arxiv.org/abs/1309.1926)
- [16] Jørgen Bang-Jensen, Frédéric Havet and Nicolas Trotignon. Finding an induced subdivision of a digraph. *Theoretical Computer Science*, 443:10–24, 2012.  
DOI:[10.1016/j.tcs.2012.03.017](https://doi.org/10.1016/j.tcs.2012.03.017) – [arXiv:1309.1553](https://arxiv.org/abs/1309.1553)
- [17] Maria Chudnovsky, Irena Penev, Alex Scott and Nicolas Trotignon. Excluding induced subdivisions of the bull and related graphs. *Journal of Graph Theory*, 71:49–68, 2012.  
DOI:[10.1002/jgt.20631](https://doi.org/10.1002/jgt.20631) – [arXiv:1309.1312](https://arxiv.org/abs/1309.1312)
- [18] András Gyárfás, András Sebő and Nicolas Trotignon. The chromatic gap and its extremes. *Journal of Combinatorial Theory, Series B*, 102:1155–1178, 2012.  
DOI:[10.1016/j.jctb.2012.06.001](https://doi.org/10.1016/j.jctb.2012.06.001) – [arXiv:1108.3444](https://arxiv.org/abs/1108.3444)
- [19] Pierre Aboulker, Marko Radovanović, Nicolas Trotignon and Kristina Vušković. Graphs that do not contain a cycle with a node that has at least two neighbors on it. *SIAM Journal on Discrete Mathematics*, 26(4):1510–1531, 2012.  
DOI:[10.1137/11084933X](https://doi.org/10.1137/11084933X) – [arXiv:1309.1841](https://arxiv.org/abs/1309.1841)
- [20] Pierre Charbit, Michel Habib, Nicolas Trotignon and Kristina Vušković. Detecting 2-joins faster. *Journal of Discrete Algorithms*, 17:60–66, 2012.  
DOI:[10.1016/j.jda.2012.11.003](https://doi.org/10.1016/j.jda.2012.11.003) – [arXiv:1107.3977](https://arxiv.org/abs/1107.3977)
- [21] Raphael C.S. Machado, Celina M.H. de Figueiredo and Nicolas Trotignon. Edge-colouring and total-colouring chordless graphs, *Discrete Mathematics*, 313:1547–1552, 2013.  
DOI:[10.1016/j.disc.2013.03.020](https://doi.org/10.1016/j.disc.2013.03.020) – [arXiv:1309.1842](https://arxiv.org/abs/1309.1842)
- [22] András Gyárfás, Zhentao Li, Raphael Machado, András Sebő, Stéphan Thomassé and Nicolas Trotignon. Complements of nearly perfect graphs. *Journal of Combinatorics*, 4(3):299–310, 2013.  
DOI:[10.4310/JOC.2013.v4.n3.a2](https://doi.org/10.4310/JOC.2013.v4.n3.a2) – [arXiv:1304.2862](https://arxiv.org/abs/1304.2862)

- [23] Maria Chudnovsky, Irena Penev, Alex Scott and Nicolas Trotignon. Substitutions and  $\chi$ -boundedness. *Journal of Combinatorial Theory, Series B*, 103(5):567–586, 2013.  
DOI:10.1016/j.jctb.2013.02.004 – arXiv:1302.1145
- [24] Maria Chudnovsky, Paul Seymour and Nicolas Trotignon. Detecting an induced net subdivision. *Journal of Combinatorial Theory, Series B*, 103(5):630–641, 2013.  
DOI:10.1016/j.jctb.2013.07.005 – arXiv:1309.1960
- [25] Pierre Aboulker, Marko Radovanović, Nicolas Trotignon, Théophile Trunck and Kristina Vušković. Linear balanceable and subcubic balanceable graphs. *Journal of Graph Theory*, 75(2):150–166, 2014.  
DOI:10.1002/jgt.21728 – arXiv:1302.1145
- [26] Raphael C.S. Machado, Celina M.H. de Figueiredo and Nicolas Trotignon. Complexity of colouring problems restricted to unichord-free and {square,unichord}-free graphs. *Discrete Applied Mathematics*, 164(1):191–199, 2014.  
DOI:10.1016/j.dam.2012.02.016 – arXiv:1309.2749
- [27] Émilie Diot, Sébastien Tavenas and Nicolas Trotignon, Detecting wheels. *Applicable Analysis and Discrete Mathematics*, 8:111–122, 2014.  
DOI:10.2298/AADM131128023D – arXiv:1308.6433
- [28] Pierre Aboulker, Pierre Charbit, Nicolas Trotignon and Kristina Vušković, Vertex elimination orderings for hereditary graph classes. *Discrete Mathematics* 338:825–834, 2015.  
DOI:10.1016/j.disc.2014.12.014 – arXiv:1205.2535
- [29] Pierre Aboulker, Maria Chudnovsky, Paul Seymour and Nicolas Trotignon, Wheel-free planar graphs. *European Journal of Combinatorics* 49:57–67, 2015.  
DOI:10.1016/j.ejc.2015.02.027 – arXiv:13097120
- [30] Maria Chudnovsky, Nicolas Trotignon, Théophile Trunck and Kristina Vušković, Coloring perfect graphs with no balanced skew-partitions. *Journal of Combinatorial Theory, Series B*, 115:26–65, 2015.  
DOI:10.1016/j.jctb.2015.04.007 – arXiv:1308.6444
- [31] Pierre Charbit, Irena Penev, Stéphan Thomassé and Nicolas Trotignon. Perfect graphs of arbitrarily large clique-chromatic number. *Journal of Combinatorial Theory, Series B*, 116:456–464, 2016.  
DOI:10.1016/j.jctb.2015.09.008 – arXiv:1506.08628
- [32] Irena Penev, Stéphan Thomassé and Nicolas Trotignon. Isolating highly connected induced subgraphs. *SIAM Journal on Discrete Mathematics*, 30:592–619, 2016.  
DOI:10.1137/140981939 – arXiv:1406.1671
- [33] Stéphan Thomassé, Nicolas Trotignon and Kristina Vušković. A Polynomial Turing-kernel for weighted independent set in bull-free graphs. *Algorithmica*, 77:619–641, 2017.  
DOI:10.1007/s00453-015-0083-x – arXiv:1310.6205

- [34] Nicolas Trotignon, and Kristina Vušković. On triangle-free graphs that do not contain a subdivision of the complete graph on four vertices as an induced subgraph. *Journal of Graph Theory*, 84(3):233–248, 2017.  
DOI:10.1002/jgt.22023 – arXiv:1407.6531
- [35] Martin Milanič and Nicolas Trotignon. Equistable graphs and counterexamples to three conjectures on equistable graphs. *Journal of Graph Theory*, 84(3):536–551, 2017.  
DOI:10.1002/jgt.22040 – arXiv:1407.1670
- [36] Pierre Aboulker, Nick Brettell, Frédéric Havet, Daniel Marx and Nicolas Trotignon. Colouring graphs with constraints on connectivity. *Journal of Graph Theory*, 85(4):814–838, 2017.  
DOI:10.1002/jgt.22109 – arXiv:1505.01616
- [37] Isolde Adler, Ngoc Khang Le, Haiko Müller, Marko Radovanović, Nicolas Trotignon and Kristina Vušković. On rank-width of even-hole-free graphs, *Discrete Mathematics & Theoretical Computer Science*, 19(1), 2017.  
DOI:10.23638/DMTCS-19-1-24 – arXiv:1611.09907
- [38] Martin Milanič, Irena Penev, and Nicolas Trotignon. Stable sets in  $\{\text{ISK4}, \text{wheel}\}$ -free graphs. *Algorithmica*, 80(2):415–447, 2018.  
DOI:10.1007/s00453-016-0255-3 – arXiv:1602.02916
- [39] Lan Anh Pham and Nicolas Trotignon.  $\chi$ -bounds, operations and chords, *Journal of Graph Theory* 88(2):312–336, 2018.  
DOI:10.1002/jgt.22214 – arXiv:1608.07413
- [40] Maria Chudnovsky, Chun-Hung Liu Liu, Oliver Schaudt, Sophie Spirkl, Nicolas Trotignon and Kristina Vušković. Triangle-free graphs that do not contain an induced subdivision of  $K_4$  are 3-colorable, *Journal of Graph Theory*, 92(2):67–95, 2019.  
DOI:10.1002/jgt.22441 – arXiv:1704.08104
- [41] Maria Chudnovsky, Irene Lo, Frédéric Maffray, Nicolas Trotignon and Kristina Vušković. Coloring Square-free Berge Graphs. *Journal of Combinatorial Theory, Series B*, 135:96–128, 2019.  
DOI:10.1016/j.jctb.2018.07.010 – arXiv:1509.09195
- [42] Émilie Diot, Marko Radovanović, Nicolas Trotignon and Kristina Vušković. The (theta, wheel)-free graphs. Part I: only-prism and only-pyramid graphs. *Journal of Combinatorial Theory, Series B*, 143:123–147, 2020.  
DOI:10.1016/j.jctb.2017.12.004 – arXiv:1504.01862
- [43] Marko Radovanović, Nicolas Trotignon and Kristina Vušković. The (theta, wheel)-free graphs. Part II: structure theorem. *Journal of Combinatorial Theory, Series B*, 143:148–184, 2020.  
DOI:10.1016/j.jctb.2019.07.004 – arXiv:1703.08675
- [44] Marko Radovanović, Nicolas Trotignon and Kristina Vušković. The (theta, wheel)-free graphs. Part III: cliques, stable sets and coloring. *Journal of Combinatorial Theory, Series B*, 143:185–218, 2020.  
DOI:10.1016/j.jctb.2019.07.003 – arXiv:1707.04205

- [45] Marko Radovanović, Nicolas Trotignon and Kristina Vušković. The (theta, wheel)-free graphs. Part IV: induced paths and cycles. *Journal of Combinatorial Theory, Series B*, 146:495–531, 2021.  
DOI:10.1016/j.jctb.2020.06.002 – arXiv:1912.00516
- [46] Myriam Preissmann, Cléopée Robin and Nicolas Trotignon. On the complexity of colouring antiprismatic graphs. *Algorithmica*, 83(2):589–612, 2021.  
DOI:10.1007/s00453-020-00767-7 – arXiv:1910.11001
- [47] Ni Luh Dewi Sintari and Nicolas Trotignon. (Theta, triangle)-free and (even hole,  $K_4$ )-free graphs. Part 1: layered wheels. *Journal of Graph Theory*, 97(4):475–509, 2021.  
DOI:10.1002/jgt.22666 – arXiv:1906.10998
- [48] Marcin Pilipczuk, Ni Luh Dewi Sintari, Stéphan Thomassé and Nicolas Trotignon. (Theta, triangle)-free and (even hole,  $K_4$ )-free graphs. Part 2: bounds on treewidth. *Journal of Graph Theory*, 97(4):624–641–509, 2021.  
DOI:10.1002/jgt.22675 – arXiv:2001.01607
- [49] Pierre Aboulker, Isolde Adler, Eun Jung Kim, Ni Luh Dewi Sintari and Nicolas Trotignon. On the tree-width of even-hole-free graphs. *European Journal of Combinatorics*, 98:103394, 2021.  
DOI:10.1016/j.ejc.2021.103394 – arXiv:2008.05504
- [50] Tara Abrishami, Maria Chudnovsky, Cemil Dibek, Stéphan Thomassé, Nicolas Trotignon and Kristina Vušković. Graphs with polynomially many minimal separators. *Journal of Combinatorial Theory, series B*, 152:248–280, 2022.  
DOI:10.1016/j.jctb.2021.10.003 – arXiv:2005.05042
- [51] Pegah Pournajafi and Nicolas Trotignon. Burling graphs revisited, part I: New characterizations, *European Journal of Combinatorics*. 110:103686, 2023.  
DOI:10.1016/j.ejc.2023.103686 – arXiv:2104.07001
- [52] Pegah Pournajafi and Nicolas Trotignon. Burling graphs revisited, part II: Structure. *European Journal of Combinatorics*, 116:103849, 2024.  
DOI:10.1016/j.ejc.2023.103849 – arXiv:2106.16089
- [53] Pegah Pournajafi and Nicolas Trotignon. Burling graphs revisited, part III: Applications to  $\chi$ -boundedness. *European Journal of Combinatorics*, 116:103850, 2024.  
DOI:10.1016/j.ejc.2023.103850 – arXiv:2112.11970
- [54] Chinh Hoàng and Nicolas Trotignon. A class of graphs with large rankwidth. *Discrete Mathematics*, 347(1):113699, 2024.  
DOI:10.1016/j.disc.2023.113699 – arXiv:2007.11513
- [55] Linda Cook, Jake Horsfield, Myriam Preissmann, Cléopée Robin, Paul Seymour, Ni-Luh-Dewi Sintari, Nicolas Trotignon and Kristina Vušković. Graphs with all holes the same length, *Journal of Combinatorial Theory, Series B*, 168:96–158, 2024.  
DOI: 10.1016/j.jctb.2024.04.006 – arXiv:2110.09970

## Articles submitted to journals

• Maria Chudnovsky, Meike Hatzel, Tuukka Korhonen, Nicolas Trotignon, Sebastian Wiederrecht. *Unavoidable induced subgraphs in graphs with complete bipartite induced minors*, 2024.

[arXiv:2405.01879](https://arxiv.org/abs/2405.01879)

• Maria Chudnovsky and Nicolas Trotignon. *On treewidth and maximum cliques*, 2024.

[arXiv:2405.07471](https://arxiv.org/abs/2405.07471)

## Manuscripts (to be submitted)

• Édouard Bonnet, Romain Bourneuf, Julien Duron, Colin Geniet, Stéphan Thomassé and Nicolas Trotignon. *A tamed family of triangle-free graphs with unbounded chromatic number*, 2023.

[arXiv:2304.04296](https://arxiv.org/abs/2304.04296)

• Clément Dallard, Maël Dumas, Claire Hilaire, Martin Milanič, Anthony Perez and Nicolas Trotignon. *Detecting  $K_{2,3}$  as an induced minor*, 2024.

[arXiv:2402.08332](https://arxiv.org/abs/2402.08332)

• Édouard Bonnet, Carl Feghali, Tung Nguyen, Alex Scott, Paul Seymour, Stéphan Thomassé and Nicolas Trotignon. *Graphs without a 3-connected subgraph are 4-colorable*, 2024.

[arXiv: 2402.06338](https://arxiv.org/abs/2402.06338)

## Manuscripts (not to be submitted)

• Nicolas Trotignon. *On the structure of self-complementary graphs*, 2004.

[arXiv:1308.6139](https://arxiv.org/abs/1308.6139)

• Pierre Aboulker, Frédéric Havet and Nicolas Trotignon. *On wheel-free graphs*, 2011.

[arXiv:1309.2113](https://arxiv.org/abs/1309.2113)

• Nicolas Trotignon. *Perfect graphs: a survey*, 2013.

[arXiv:1301.5149](https://arxiv.org/abs/1301.5149)

• Martin Milanič, Irena Penev, and Nicolas Trotignon. *A decomposition theorem for  $ISK_4$ , wheel-free trigraphs*, 2016.

[arXiv:1602.02406](https://arxiv.org/abs/1602.02406)

• Ngoc Khang Le and Nicolas Trotignon. *Connected greedy colouring in claw-free graphs*, 2018.

[arXiv:1805.01953](https://arxiv.org/abs/1805.01953)

• Louis Esperet and Nicolas Trotignon. *Coloring graphs with no induced subdivisions of  $K_4^+$* , 2019.

[arXiv:1901.04170](https://arxiv.org/abs/1901.04170)

• Maria Chudnovsky, Stéphan Thomassé, Nicolas Trotignon and Kristina Vušković. *Maximum independent sets in (pyramid, even hole)-free graphs*, 2019.

[arXiv:1912.11246](https://arxiv.org/abs/1912.11246)

• Jake Horsfield, Myriam Preissmann, Cléopée Robin, Ni Luh Dewi Sintiar, Nicolas Trotignon and Kristina Vušković. *When all holes have the same length*, 2022.

[arXiv:2203.11571](https://arxiv.org/abs/2203.11571)

## Book's chapters

- Nicolas Trotignon, LexBFS, Structure, and Algorithms, in *Encyclopedia of Algorithms*, edited by MY. Kao, Springer, 2015.

[DOI:10.1007/978-3-642-27848-8\\_687-1](https://doi.org/10.1007/978-3-642-27848-8_687-1)

- Nicolas Trotignon, Perfect graphs, in *Topics in Chromatic Graph Theory*, edited by Lowell W. Beineke and Robin J. Wilson, Cambridge University Press, 2015.

[DOI:10.1017/CBO9781139519793](https://doi.org/10.1017/CBO9781139519793)

## Dissertations

- Nicolas Trotignon. *Pascal, Fermat et la géométrie du hasard*. IUFM de Créteil, 1999. Supervisor Évelyne Barbin.

[arXiv:1309.2824](https://arxiv.org/abs/1309.2824)

- Nicolas Trotignon. *Graphes parfaits : structure et algorithmes*. PhD thesis, Université Joseph Fourier — Grenoble I, 2004. Supervisor Frédéric Maffray.

[arXiv:1309.0119](https://arxiv.org/abs/1309.0119)

- Nicolas Trotignon. *Structure of classes of graphs defined by forbidding induced subgraphs*. Habilitation thesis, Université Paris Diderot — Paris 7, 2009.

[arXiv:1308.6678](https://arxiv.org/abs/1308.6678)

- Nicolas Trotignon. *Sur le théorème des trois distances et la construction des gammes*. Mémoire de formation musicale, École Nationale de Musique de Villeurbanne, 2015.

[arXiv:1505.05380](https://arxiv.org/abs/1505.05380)

## Extended abstracts in proceedings of conferences

- Raphael Machado, Celina M.H. de Figueiredo and Nicolas Trotignon. Chromatic Index of Chordless Graphs. In *9th Cologne-Twente Workshop on Graphs and Combinatorial Optimization, Cologne, Germany, May 25-27, 2010. Extended Abstracts*, 2010.

- Stéphan Thomassé, Nicolas Trotignon and Kristina Vušković. A Polynomial Turing-Kernel for Weighted Independent Set in Bull-Free Graphs. In *Graph-Theoretic Concepts in Computer Science - 40th International Workshop, WG 2014, Nouan-le-Fuzelier, France, June 25-27, 2014*

- Edin Husić, Stéphan Thomassé and Nicolas Trotignon. *The independent set problem is FPT for even-hole-free graphs*, IPEC 2019:21:1-21:12

[arXiv:1907.01083](https://arxiv.org/abs/1907.01083)