

Publication List of Cyril Gavoille (period 2007 – 2015)

Journals (peer-reviewed)

- [1] N. BONICHON, C. GAVOILLE, N. HANUSSE, AND L. PERKOVIĆ, *Tight stretch factors for L_1 - and L_∞ -Delaunay triangulations*, Computational Geometry, 48 (2015), pp. 237–250.
- [2] N. BONICHON, C. GAVOILLE, AND N. HANUSSE, *An information-theoretic upper bound on planar graphs using well-orderly maps*, in Towards an Information Theory of Complex Networks, Birkhäuser Boston, July 2011, ch. 2, pp. 17–46.
- [3] B. COURCELLE, C. GAVOILLE, AND M. M. KANTÉ, *Compact labelings for efficient first-order model-checking*, Journal of Combinatorial Optimization, 21 (2011), pp. 19–46.
- [4] I. ABRAHAM, C. GAVOILLE, D. MALKHI, AND U. WIEDER, *Strong-diameter decompositions of minor free graphs*, Theory of Computing Systems, 47 (2010), pp. 837–855.
- [5] F. BAZZARO AND C. GAVOILLE, *Localized and compact data-structure for comparability graphs*, Discrete Mathematics, 309 (2009), pp. 3465–3484.
- [6] P. FRAIGNIAUD, C. GAVOILLE, D. ILCINKAS, AND A. PELC, *Distributed computing with advice : Information sensitivity of graph coloring*, Distributed Computing, 21 (2009), pp. 395–403.
- [7] C. GAVOILLE, R. KLASING, A. KOSOWSKI, Ł. KUSZNER, AND A. NAVARRA, *On the complexity of distributed graph coloring with local minimality constraints*, Networks, 54 (2009), pp. 12–19.
- [8] P. FRAIGNIAUD, C. GAVOILLE, A. KOSOWSKI, E. LEBHAR, AND Z. LOTKER, *Universal augmentation schemes for network navigability : Overcoming the \sqrt{n} -barrier*, Theoretical Computer Science, 410 (2009), pp. 1970–1981.
- [9] I. ABRAHAM, C. GAVOILLE, D. MALKHI, N. NISAN, AND M. THORUP, *Compact name-independent routing with minimum stretch*, ACM Transactions on Algorithms, 3 (2008), p. Article No. 37.
- [10] C. GAVOILLE AND N. HANUSSE, *On compact encoding of pagenumber k graphs*, Discrete Mathematics & Theoretical Computer Science, 10 (2008), pp. 23–34.
- [11] C. GAVOILLE AND C. PAUL, *Optimal distance labeling for interval graphs and related graphs families*, SIAM Journal on Discrete Mathematics, 22 (2008), pp. 1239–1258.
- [12] B. DERBEL AND C. GAVOILLE, *Fast deterministic distributed algorithms for sparse spanners*, Theoretical Computer Science, 399 (2008), pp. 83–100.
- [13] T. EILAM, C. GAVOILLE, AND D. PELEG, *Average stretch analysis of compact routing schemes*, Discrete Applied Mathematics, 155 (2007), pp. 598–610.
- [14] Y. DOURISBOURE, F. F. DRAGAN, C. GAVOILLE, AND C. YAN, *Spanners for bounded tree-length graphs*, Theoretical Computer Science, 383 (2007), pp. 34–44.
- [15] Y. DOURISBOURE AND C. GAVOILLE, *Tree-decompositions with bags of small diameter*, Discrete Mathematics, 307 (2007), pp. 2008–2029.

Editors

- [1] P. FRAIGNIAUD AND C. GAVOILLE, *Proceedings of the 30th Annual ACM Symposium on Principles of Distributed Computing, PODC 2011, San Jose, USA*, ACM Press, June 2011.

- [2] S. ABRAMSKY, C. GAVOILLE, C. KIRCHNER, F. MEYER AUF DER HEIDE, AND P. G. SPIRAKIS, *Proceedings of the 37th International Colloquium on Automata, Languages and Programming, ICALP 2010, Bordeaux, France*, vol. 6198 & 6199 of LNCS, Springer, July 2010.
- [3] C. GAVOILLE, B. PATT-SHAMIR, AND C. SCHEIDELER, *Special issue : Parallelism on Algorithms and Architectures, SPAA 2010, San Jose, USA*, Theory of Computing Systems, 47 :809–962, 2010.

International Conferences
(peer-reviewed and proceedings)

- [1] L. BARENBOIM, M. ELKIN, AND C. GAVOILLE, *A fast network-decomposition algorithm and its applications to constant-time distributed computation*, in 22nd International Colloquium on Structural Information & Communication Complexity (**SIROCCO**), vol. 9439 of LNCS, Springer, Jul. 2015, pp. 209–223.
- [2] C. GAVOILLE, C. GLACET, N. HANUSSE, AND D. ILCINKAS, *Brief announcement : Routing the Internet with very few entries*, in 34th Annual ACM Symposium on Principles of Distributed Computing (**PODC**), ACM Press, July 2015, pp. 33–35.
- [3] I. ABRAHAM, C. GAVOILLE, A. GUPTA, O. NEIMAN, AND K. TALWAR, *Cops, robbers, and threatening skeletons : Padded decomposition for minor-free graphs*, in 46th Annual ACM Symposium on Theory of Computing (**STOC**), ACM Press, May 2014, pp. 79–88.
- [4] C. GAVOILLE, C. GLACET, N. HANUSSE, AND D. ILCINKAS, *On the communication complexity of distributed name-independent routing schemes*, in 27th International Symposium on Distributed Computing (**DISC**), vol. 8205 of LNCS, Springer, Oct. 2013, pp. 418–432.
- [5] N. BONICHON, C. GAVOILLE, N. HANUSSE, AND L. PERKOVIĆ, *The stretch factor of L_1 - and L_∞ -Delaunay triangulations*, in 20th Annual European Symposium on Algorithms (**ESA**), vol. 7501 of LNCS, Springer, Sept. 2012, pp. 205–216.
- [6] I. ABRAHAM, S. CHECHIK, AND C. GAVOILLE, *Fully dynamic approximate distance oracles for planar graphs via forbidden-set distance labels*, in 44th Annual ACM Symposium on Theory of Computing (**STOC**), ACM Press, May 2012, pp. 1199–1217.
- [7] I. ABRAHAM AND C. GAVOILLE, *On approximate distance labels and routing schemes with affine stretch*, in 25th International Symposium on Distributed Computing (**DISC**), vol. 6950 of LNCS, Springer, Sept. 2011, pp. 404–415.
- [8] C. GAVOILLE AND C. SOMMER, *Sparse spanners vs. compact routing*, in 23rd Annual ACM Symposium on Parallel Algorithms and Architectures (**SPAA**), ACM Press, June 2011, pp. 225–234.
- [9] C. GAVOILLE, Q. GODFROY, AND L. VIENNOT, *Node-disjoint multipath spanners and their relationship with fault-tolerant spanners*, in 15th International Conference on Principles of Distributed Systems (**OPODIS**), vol. 7109 of LNCS, Springer, Dec. 2011, pp. 143–158.
- [10] I. ABRAHAM, S. CHECHIK, C. GAVOILLE, AND D. PELEG, *Forbidden-set distance labels for graphs of bounded doubling dimension*, in 29th Annual ACM Symposium on Principles of Distributed Computing (**PODC**), ACM Press, July 2010, pp. 192–200.
- [11] N. BONICHON, C. GAVOILLE, N. HANUSSE, AND L. PERKOVIĆ, *Plane spanners of maximum degree six*, in 37th International Colloquium on Automata, Languages and Programming (**ICALP**), vol. 6198 of LNCS, Springer, July 2010, pp. 19–30.
- [12] N. BONICHON, C. GAVOILLE, N. HANUSSE, AND D. ILCINKAS, *Connections between theta-graphs, Delaunay triangulations, and orthogonal surfaces*, in 36th International Workshop on Graph-Theoretic Concepts in Computer Science (**WG**), vol. 6410 of LNCS, Springer, June 2010, pp. 266–278.

- [13] E. DIOT AND C. GAVOILLE, *Path separability of graphs*, in 4th International Frontiers of Algorithmics Workshop (**FAW**), vol. 6213 of LNCS, Springer, Aug. 2010, pp. 262–273.
- [14] C. GAVOILLE, Q. GODFROY, AND L. VIENNOT, *Multipath spanners*, in 17th International Colloquium on Structural Information & Communication Complexity (**SIROCCO**), vol. 6058 of LNCS, Springer, June 2010, pp. 211–223.
- [15] C. GAVOILLE, A. KOSOWSKI, AND M. MARKIEWICZ, *What can be observed locally? Round-based models for quantum distributed computing*, in 23rd International Symposium on Distributed Computing (**DISC**), vol. 5805 of LNCS, Springer, Sept. 2009, pp. 243–257.
- [16] B. DERBEL, C. GAVOILLE, D. PELEG, AND L. VIENNOT, *Local computation of nearly additive spanners*, in 23rd International Symposium on Distributed Computing (**DISC**), vol. 5805 of LNCS, Springer, Sept. 2009, pp. 176–190.
- [17] Y. DIENG AND C. GAVOILLE, *On the tree-width of planar graphs*, in European Conference on Combinatorics, Graph Theory and Applications (**EuroComb**), Elsevier, ed., vol. 34, Electronic Notes in Discrete Mathematics, Sept. 2009, pp. 593–596.
- [18] E. DIOT AND C. GAVOILLE, *On the path separability of planar graphs*, in European Conference on Combinatorics, Graph Theory and Applications (**EuroComb**), Elsevier, ed., vol. 34, Electronic Notes in Discrete Mathematics, Sept. 2009, pp. 549–552.
- [19] P. FRAIGNIAUD AND C. GAVOILLE, *Polylogarithmic network navigability using compact metrics with small stretch*, in 20th Annual ACM Symposium on Parallel Algorithms and Architectures (**SPAA**), ACM Press, June 2008, pp. 62–69.
- [20] B. COURCELLE, C. GAVOILLE, AND M. M. KANTÉ, *Efficient first-order model-checking using short labels*, in 2nd International Frontiers of Algorithmics Workshop (**FAW**), vol. 5059 of LNCS, Springer, June 2008, pp. 159–170.
- [21] B. DERBEL, C. GAVOILLE, D. PELEG, AND L. VIENNOT, *On the locality of distributed sparse spanner construction*, in 27th Annual ACM Symposium on Principles of Distributed Computing (**PODC**), ACM Press, Aug. 2008, pp. 273–282.
- [22] B. COURCELLE, C. GAVOILLE, M. M. KANTÉ, AND D. A. TWIGG, *Connectivity check in 3-connected planar graphs with obstacles*, in International Conference on Topological & Geometric Graph Theory (**TGGT**), vol. 31, Electronic Notes in Discrete Mathematics, Aug. 2008, pp. 151–155.
- [23] P. FRAIGNIAUD, C. GAVOILLE, A. KOSOWSKI, E. LEBHAR, AND Z. LOTKER, *Universal augmentation schemes for network navigability : Overcoming the \sqrt{n} -barrier*, in 19th Annual ACM Symposium on Parallel Algorithms and Architectures (**SPAA**), ACM Press, June 2007, pp. 1–7.
- [24] P. FRAIGNIAUD, C. GAVOILLE, D. ILCINKAS, AND A. PELC, *Distributed computing with advice : Information sensitivity of graph coloring*, in 34th International Colloquium on Automata, Languages and Programming (**ICALP**), vol. 4596 of LNCS, Springer, July 2007, pp. 231–242.
- [25] B. DERBEL, C. GAVOILLE, AND D. PELEG, *Deterministic distributed construction of linear stretch spanners in polylogarithmic time*, in 21st International Symposium on Distributed Computing (**DISC**), vol. 4731 of LNCS, Springer, Sept. 2007, pp. 179–192.
- [26] C. GAVOILLE, R. KLASING, A. KOSOWSKI, AND A. NAVARRA, *Brief announcement : On the complexity of distributed greedy coloring*, in 21st International Symposium on Distributed Computing (**DISC**), vol. 4731 of LNCS, Springer, Sept. 2007, pp. 482–484.
- [27] I. ABRAHAM, C. GAVOILLE, D. MALKHI, AND U. WIEDER, *Strong-diameter decompositions of minor free graphs*, in 19th Annual ACM Symposium on Parallel Algorithms and Architectures (**SPAA**), ACM Press, June 2007, pp. 16–24.
- [28] C. GAVOILLE AND A. LABOUREL, *Brief announcement : On local representation of distances in trees*, in 26th Annual ACM Symposium on Principles of Distributed Computing (**PODC**), ACM Press, Aug. 2007, pp. 246–247.

- [29] C. GAVOILLE AND A. LABOUREL, *Distributed relationship schemes for trees*, in 18th Annual International Symposium on Algorithms and Computation (**ISAAC**), vol. 4835 of LNCS, Springer, Dec. 2007, pp. 728–738.
- [30] C. GAVOILLE AND A. LABOUREL, *Shorter implicit representation for planar graphs and bounded treewidth graphs*, in 15th Annual European Symposium on Algorithms (**ESA**), L. Arge and E. Welzl, eds., vol. 4698 of LNCS, Springer, Oct. 2007, pp. 582–593.
- [31] N. BONICHON, C. GAVOILLE, AND A. LABOUREL, *Short labels by traversal and jumping*, in 6th Czech-Slovak International Symposium on Combinatorics, Graph Theory, Algorithms and Applications, Elsevier, ed., vol. 28, Electronic Notes in Discrete Mathematics, Mar. 2007, pp. 153–160.

Invited Conferences
(with an invited paper)

- [1] C. GAVOILLE, *Data Structures for Emergency Planning*, in 8th Foundations of Information and Knowledge Systems (FoIKS), vol. 8367 of LNCS, Bordeaux, Mar. 2014.
- [2] C. GAVOILLE, *Labeling schemes with forbidden-sets*, in 20th International Colloquium on Structural Information & Communication Complexity (SIROCCO), vol. 8179 of LNCS, Springer, Ischia, Italie, July 2013.

National Conferences and Journals
(peer-reviewed and proceedings)

- [1] C. GAVOILLE, C. GLACET, N. HANUSSE, AND D. ILCINKAS, *Router dans internet avec quinze entrées*, in 17e Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), vol. hal-01149335, HAL, May 2015.
- [2] C. GAVOILLE, C. GLACET, N. HANUSSE, AND D. ILCINKAS, *Algorithme distribué de routage compact en temps optimal*, in 15e Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), hal-00818445, HAL, May 2013, pp. 117–120.
- [3] C. GAVOILLE AND P. HALFTERMEYER, *Connectivity labeling scheme for graphs on surface*, in Bordeaux Graph Workshop (BGW), Nov. 2012, pp. 69–70.
- [4] C. GAVOILLE AND P. HALFTERMEYER, *Connexité dans l'urgence*, in 14e Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), hal-00690561, HAL, May 2012, pp. 75–78.
- [5] Y. DIENG AND C. GAVOILLE, *Routage compact optimal dans les (k, r) -constellations*, *Technique et Science Informatiques*, 30 (2011), pp. 485–513.
- [6] E. DIOT, C. GAVOILLE, AND P. OCHEM, *Sur la difficulté de séparer un graphe par des plus courts chemins*, in 13e Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), inria-00588312, HAL, May 2011, pp. 65–72.
- [7] N. BONICHON, C. GAVOILLE, N. HANUSSE, D. ILCINKAS, AND L. PERKOVIĆ, *Comment résumer le plan*, in 12e Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), inria-00476151, HAL, June 2010.
- [8] C. GAVOILLE, Q. GODFROY, AND L. VIENNOT, *Graphes de recouvrement multichemins*, in 12e Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), inria-00475970, HAL, June 2010.
- [9] C. GAVOILLE, *Spanner et routage compact : similarités et différences*, in 11^{èmes} Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), vol. inria-00383276, HAL, June 2009.

- [10] Y. DIENG AND C. GAVOILLE, *Routage dans les réseaux (k, r) -cellulaires*, in 10^{èmes} Journées Doctorales en Informatique et Réseaux (JDIR), Feb. 2009, pp. 7–12.
- [11] B. DERBEL, C. GAVOILLE, D. PELEG, AND L. VIENNOT, *Construction locale de sous-graphes couvrants peu denses*, in 10^{èmes} Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), May 2008, pp. 105–108.
- [12] Y. DIENG AND C. GAVOILLE, *Routage dans les graphes cellulaires*, in 9^{èmes} Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), May 2007, pp. 91–94.
- [13] P. FRAIGNIAUD, C. GAVOILLE, A. KOSOWSKI, E. LEBHAR, AND Z. LOTKER, *A propos des schémas d'augmentation universels pour la navigation dans les réseaux*, in 9^{èmes} Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications (AlgoTel), May 2007, pp. 23–26.

Other Conferences

- [1] N. BONICHON, C. GAVOILLE, N. HANUSSE, AND L. PERKOVIĆ, *The stretch factor of L_1 - and L_∞ -Delaunay triangulations*, New York, USA, May 2012. Poster at STOC '12.
- [2] E. DIOT AND C. GAVOILLE, *La hiérarchie des graphes k -chemin séparables*, in 12e Journées Graphes et Algorithmes, Nov. 2010, p. 7.
- [3] C. GAVOILLE, Q. GODFROY, AND L. VIENNOT, *Spanners additifs de taille sous-quadratique pour les graphes orientés*, in 12e Journées Graphes et Algorithmes, Nov. 2010, p. 9.
- [4] Y. DIENG AND C. GAVOILLE, *La structure des graphes sans mineur $K_{2,4}$* , in 10^{èmes} Journées Graphes et Algorithmes, Nov. 2008.
- [5] C. GAVOILLE AND A. LABOUREL, *Schéma relationnel distribué pour les arbres*, in 9^{èmes} Journées Graphes et Algorithmes, Nov. 2007, p. 19.
- [6] B. COURCELLE, C. GAVOILLE, M. M. KANTÉ, AND D. A. TWIGG, *Forbidden-set labeling on graphs*, in 2nd Workshop on Locality Preserving Distributed Computing Methods (LOCALITY), Aug. 2007. Co-located with PODC 2007.