

Curriculum vitae

Mireille Bousquet-Mélou

Employment

- Senior researcher (“directrice de recherche”) at CNRS
Department of Computer Science (LaBRI), Université de Bordeaux, France (2002–present)
- Junior researcher (“chargée de recherche”) at CNRS
Department of Computer Science (LaBRI), Université de Bordeaux, France (1990–2002)

Visiting appointments

- Mittag-Leffler Institute, Stockholm. Program *Algebraic and Enumerative Combinatorics*. January 2020.
- Université du Québec à Montréal, Canada. (September 2018, April 1995, April 1994, September – November 1991)
- The University of Melbourne, Australia. (December 2015, June – July 2002, October – November 1999, April 1998, September – November 1995)
- Schrödinger Institute, Vienna. Program *Combinatorics, Geometry, and Physics*. June 2014.
- Institute of Mathematics and Computer Science, Universität Leipzig. April – August 2013
- MSRI, Berkeley. Program *Random spatial processes*. January 2012
- Centre de Recerca Matemàtica, Barcelone. Program *Enumerative Combinatorics and Random Structures*. March – April 2007
- Mittag-Leffler Institute, Stockholm. Program *Algebraic Combinatorics*. March – May 2005
- University of Göteborg, Sweden. February 2004
- Mittag-Leffler Institute, Stockholm. Program *Combinatorics*. April – May 1992

Education

- Student at the École normale supérieure (Paris, rue d’Ulm) 1986–1990
- PhD, Université de Bordeaux, France (1991)
- Habilitation à diriger des recherches, Université de Bordeaux, France (1996)

Distinctions

- Aisenstadt Chair of the CRM (Centre de recherches mathématiques de Montréal), September–October 2018
- “Distinguished speaker” of the EMS (European mathematical society), conference “Foundations of Computational Mathematics”, Barcelona, 2017

- CNRS Silver medal for Mathematics, 2014
- Prize *Charles-Louis de Saulces de Freycinet* (a mathematics prize from the French Academy of Sciences), 2009
- Invited speaker at the International Congress of Mathematicians (Combinatorics session), 2006
- Honorary doctorate of the University of Linköping, Sweden, 2005
- CNRS bronze medal for computer science, 1993
- IBM prize for young researchers in Computer science, 1993
- Agrégation de mathématiques, rank 1, 1989

Editorial appointments

- Journal of Combinatorial Theory, Series A (2001–)
- Advances in Applied Mathematics (2000–)
- Séminaire lotharingien de combinatoire (2007–)
- Annales de l’institut Poincaré D: Combinatorics, Physics and their Interactions (2013–)
- Electronic J. Combinatorics (2013–)
- CRM short courses series (Centre de recherches en mathématiques, Montréal) (2016–)
- Annales Henri Lebesgue (2017–)

Other appointments

- National committee for scientific research (“comité national de la recherche scientifique”) in mathematics (2016–)
- Scientific committee of the Mathematics Institute at CNRS (INSMI) (2010–2014)
- Scientific committee of the Fondation Sciences Mathématiques de Paris (2012–2015)

Organization of Programs and Conferences (selection)

- *Enumerative Combinatorics II*, Oberwolfach, 2018. With C. Krattenthaler, M. Drmota, M. Noy.
- *Algorithmic and Enumerative Combinatorics*, E. Schrödinger Institute, Vienna. With M. Drmota, C. Krattenthaler, P. Paule et M. Singer (October–November 2017).
- *Lattice walks at the Interface of Algebra, Analysis and Combinatorics*, BIRS, Banff, Canada, Septembre 2017 (with Marni Mishna, Steve Melczer, Michael Singer)
- *Enumerative Combinatorics*, Oberwolfach, March 2014. With C. Krattenthaler, M. Drmota, M. Noy.
- *Random spatial processes*, MSRI, Berkeley (Mathematical Sciences Research Institute), January–June 2012. With R. Kenyon, G. Lawler, A. Okunkov, Y. Peres.
(<http://www.msri.org/web/msri/scientific/programs/show/-/event/Pm140>)

- *Statistical physics, combinatorics and probability: from discrete to continuous models*, Henri Poincaré Institute, Paris, September-December 2009. With J. Bouttier, G. Miermont et G. Schaeffer.
(<http://www.ihp.jussieu.fr/ceb/Trimestres/T09-4/index.html>)
- *Combinatorics and Statistical Physics*, E. Schrödinger Institute, Vienna. With C. Krattenthaler, B. Nienhuis, M. Drmota (February-July 2008).
(<http://www.mat.univie.ac.at/users/kratt/public.html/esi/>)
- During the 2007 program *Recent progress in combinatorics*, (CRM, Montréal), I co-organized a winter school and a workshop. With T. Guttman, P. Leroux et A. Sokal.
- 54th *Séminaire lotharingien de Combinatoire*, for Xavier Viennot’s 60th birthday. Alsace, April 2005. With Christian Krattenthaler.
- Summer school of the European network ACE, *Combinatorics of groups and algebras*. CIRM, Luminy, July 2004 (two weeks)
- *Physics and Combinatorics*, CIRM, Luminy, March 1995

Program committees

- ***International Congress of Mathematicians 2018***: panel “Combinatorics”
- *FPSAC* 2016 (Vancouver), 2007 (Nankai), 2000 (Moscou), 1997 (Vienna)
- *EUROCOMB*, Bergen, Norway, 2015
- ***AofA 2014 (Analysis of Algorithms)*, Paris. Co-chair of the program committee, with Michelle Soria**
- ***International Congress of Mathematicians 2014***: panel “Combinatorics”
- *SIAM Conference on Discrete Mathematics*, Minneapolis, 2014
- ***FPSAC 2011 (Formal power series and algebraic combinatorics)*, Reykjavik, Iceland. Co-chair of the program committee, with Michelle Wachs.**
- *CANT’2006* (International School and Conference on Combinatorics, Automata and Number Theory), Liège, Belgique.
- *4th Colloquium on Mathematics and Computer Science: Algorithms, Trees, Combinatorics and Probabilities*, 2006, Nancy, France.
- *Discrete Random Walks*, Paris, 2003.
- *STACS 2001 (Symposium on theoretical aspects of computer science)*, Dresden

PhD students

- Wenjie Fang (2013–2016). Joint supervision with Guillaume Chapuy, Université Paris 7.
- Julien Courtiel (2011–2014). PIMS post-doc in Vancouver, now post-doc in Paris.
- Axel Bacher (2008-2011). “Maître de conférences”, Université Paris Nord.
- Olivier Bernardi (2003–2006). Assistant professor, Brandeis University, Boston (on leave from CNRS)
- Yvan Le Borgne (2000–2004). CNRS, Bordeaux, France

- Andrew Rechnitzer (1998–2000). Associate professor, UBC, Vancouver, Canada.

Personal Born 12th May, 1967

One child (born 2009)

Contact information

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Publications

1 Journals

Lattice walks

- [1] Plane lattice walks avoiding a quadrant, *J. Combin. Theory Ser. A* **144** (2016) 37-79. Special issue for the 50th anniversary of the journal. ArXiv:1511.02111.
- [2] An elementary solution for Gessel's walks in the quadrant *Adv. Math.* **303** (2016) 1171-1189. arxiv:1503.08573.
- [3] (with Alin Bostan, Manuel Kauers, Steve Melczer) On 3-dimensional lattice walks confined to the positive octant, *Annals of Comb.*, **20** no. 4 (2016) 661-704. ArXiv:1409.3669
- [4] (with N. Beaton, J. de Gier, H. Duminil-Copin and A. Guttmann) The critical fugacity for surface adsorption of self-avoiding walks on the honeycomb lattice is $1 + \sqrt{2}$, *Comm. Math. Phys.* **326** no. 3 (2014) 727-754. arXiv:1109.0358
- [5] On the importance sampling of self-avoiding walks
Combin. Probab. Comput., **23** no. 5 (2014) 725-748. ArXiv:1106.1876.
- [6] (with G. Chapuy and L.-F. Prévaille-Ratelle) The representation of the symmetric group on m -Tamari intervals, *Adv. Math.* **247** (2013) 309-342. Arxiv:1202.5925, 2012.
- [7] (with É. Fusy and L.-F. Prévaille-Ratelle) The number of intervals in the m -Tamari lattices, *Elec. J. Combinatorics* **18** no. 2 (2012) paper P31 ArXiv:1106.1498
- [8] (with A. Bacher) Weakly directed self-avoiding walks, *J. Combin. Theory Ser. A* **118** no. 8, (2011) 2365-2391. ArXiv:1010.3200.
- [9] (with M. Mishna) Walks with small steps in the quarter plane.
Contemp. Math. **520** (2010) 1-40. ArXiv:0810.4387
- [10] Families of prudent self-avoiding walks, *J. Combin. Theory Ser. A* **117** no. 3 (2010) 313-344. ArXiv:0804.4843.
- [11] (with Yann Ponty) Culminating paths, *Discrete Math. Theoret. Comput. Sci.* **10** no. 2 (2008) 125-152.
- [12] Discrete excursions, *Séminaire Lotharingien de combinatoire* **57** (2008), article B57d, 23 pages (électronique). ArXiv math.CO/0701171.
- [13] Three osculating walkers, math.CO/0504153. *Journal of Physics: Conference Series* **42** (2006) 35-46.
- [14] Walks in the quarter plane: Kreweras' algebraic model, *Ann. Appl. Proba.* **15** no. 2 (2005) 1451-1491.
- [15] (with Anthony Guttmann and Iwan Jensen) Self-avoiding walks crossing a square, cond-mat/0506341. *J. Phys. A: Math. Gen.* **38** (2005) 9159-9181.
- [16] (with Marko Petkovšek) Walks confined in a quadrant are not always D-finite, *Theoret. Comput. Sci.* **307** (2003) 257-276.
- [17] (with Gilles Schaeffer) Walks on the slit plane, *Probab. Theory Relat. Fields* **124** no. 3 (2002) 305-344.
- [18] Walks on the slit plane: new approaches, *Adv. in Applied Math.* **27** (2001) 243-288.

Graphs, maps and trees

- [19] (with Nicolas Bonichon, Paul Dorbec and Claire Pennarun) On the number of planar Eulerian orientations, *Europ. J. Combin.* **65** (2017) 59-91. [arXiv:1610.09837](https://arxiv.org/abs/1610.09837).
- [20] (with Olivier Bernardi) The Potts model on planar maps: differential equations, to appear in *Comm. Math. Phys.* Arxiv:1507.02391
- [21] (with Nicolas Bonichon, Paul Dorbec and Claire Pennarun) On the number of planar Eulerian orientations, *Europ. J. Combin.* **65** (2017) 59-91. ArXiv:1610.09837.
- [22] (with Julien Courtiel) Spanning forests in regular planar maps, *J. Combin. Theory Ser. A* **135** (2015) 1–59. ArXiv:1306.4536.
- [23] (with Markus Lohrey, Sebastian Maneth, Eric Noeth) XML Compression via directed acyclic graphs. *Theory of Computing Systems* **57** no. 4 (2015) 1322–1371. ArXiv:1309.5927.
- [24] (with Kerstin Weller) Asymptotic properties of some minor-closed classes of graphs *Combin. Probab. Comput.* **23** no. 5 (2014) 749-795. ArXiv:1303.3836.
- [25] (with Guillaume Chapuy) The vertical profile of embedded trees, *Elec. J. Combin* **19** no. 3 (2012) Paper P46. ArXiv:1203.4148.
- [26] (with Olivier Bernardi) Counting colored planar maps: algebraicity results. *J. Combin. Theory Ser. B.* **101** no. 5 (2011) 315-377. ArXiv:0909.1695
- [27] (with Svante Janson) The density of the ISE and local limit laws for embedded trees, math.PR/0509322. *Ann. Appl. Proba.* **16** no. 3 (2006) 1597–1632.
- [28] Limit laws for embedded trees. Applications to the integrated superbrownian excursion, math.CO/0501266. *Random Structures Algorithms.* **29**, no. 4 (2006) 475–523.
- [29] (with Gilles Schaeffer) Enumeration of planar constellations. *Adv. in Applied Math.* **24** (2000) 337–368.

Functional equations in combinatorics

- [30] (with Arnaud Jehanne) Polynomial equations with one catalytic variable, algebraic series and map enumeration, math.CO/0504018. *J. Combin. Theory Ser. B.* **96** (2006) 623–672.
- [31] (with Cyril Banderier, Alain Denise, Danièle Gardy, Dominique Gouyou-Beauchamps and Philippe Flajolet), Generating functions for generating trees, *Discrete Math.* **246** no. 1-3 (2002) 29–55.
- [32] (with Marko Petkovšek) Linear recurrences with constant coefficients: the multivariate case, *Discrete Math.* **225** (2000) 51–75.

Permutations and set partitions

- [33] (with Michael Albert) Permutations sortable by two stacks in parallel and quarter plane walks, *Europ. J. Combin.* **43** (2015) 131–164. ArXiv:1312.4487.
- [34] (with Andrei Asinowski, Gill Barequet, Toufik Mansour, Ron Pinter) Orders induced by segments in floorplan partitions and $(2 - 14 - 3, 3 - 41 - 2)$ -avoiding permutations. *Elec. J. Combin.* **20** no. 2 (2013) P35
- [35] Counting permutations with no long monotone subsequence via generating trees and the kernel method. *J. Alg. Combin.* **33** no. 4 (2011) 571–608. Arxiv:1006.0311.

- [36] (with N. Bonichon and É. Fusy) Baxter permutations and bipolar orientations. *Séminaire Lotharingien de Combinatoire* **61A** (2010) paper B61Ah, 19 pp. Arxiv:0805.4180.
- [37] The expected number of inversions after n adjacent transpositions. *Discrete Math. Theoret. Comput. Sci.* **12** no. 2 (2010) 65–88. ArXiv:0909.0103
- [38] (with Anders Claesson, Mark Dukes, Sergey Kitaev) : $(2+2)$ -free posets, ascent sequences and pattern avoiding permutations. *J. Combin. Theory Ser. A* **117** no. 7 (2010) 884–909. ArXiv:0806.0666
- [39] (with Steven Butler) Forest-like permutations, math.CO/0603617. *Annals of Combinatorics* **11** (2007) 335–354.
- [40] (with Guoce Xin) On partitions avoiding 3-crossings, math.CO/0506551. *Séminaire Lotharingien de Combinatoire*, vol. 54 (The Viennot Festschrift), paper B54e (21 pp.), 2005.
- [41] (with Einar Steingrímsson) Decreasing subsequences in permutations and Wilf equivalence for involutions, math.CO/0405334. *J. Alg. Combin.* **22**, no. 4 (2005) 383–409.
- [42] Four classes of pattern-avoiding permutations under one roof: generating trees with two labels, *Electronic J. Combinatorics* **9** no. 2 (2003) R19.
- [43] Sorted and/or sortable permutations, *Discrete Math.* **225** (2000) 25–50.
- [44] Multi-statistic enumeration of two-stack sortable permutations, *Electronic J. Combinatorics* **5** (1998) R21.

Integer partitions

- [45] (with Kimmo Eriksson) A refinement of the Lecture Hall Theorem, *J. Combin. Theory Ser. A.* **86** (1999) 63–84.
- [46] (with Kimmo Eriksson) Lecture Hall Partitions 2, *The Ramanujan Journal* **1** no. 2 (1997) 165–186.
- [47] (with Kimmo Eriksson) Lecture Hall Partitions, *The Ramanujan Journal* **1** no. 1 (1997) 101–111.

Directed animals

- [48] (with Andrew Rechnitzer) Lattice animals and heaps of dimers, *Discrete Math.* **258** (2002) 235–274.
- [49] New enumerative results on two-dimensional directed animals, *Discrete Math.* **180** (1998) 73–106.
- [50] (with Andrew Conway) Enumeration of directed animals on an infinite family of lattices, *J. Phys. A: Math. Gen.* **29** (1996) 3357–3365.

Convex polygons

- [51] (with Andrew Rechnitzer) The site-perimeter of bargraphs, *Adv. in Applied Math.* **31** (2003) 86–112.
- [52] (with Anthony Guttmann, William Orrick, Andrew Rechnitzer) Inversion relations, reciprocity and polyominoes, *Annals of Combinatorics* **3** no. 2–4 (1999) 223–249.

- [53] (with Anthony Guttmann) Enumeration of three-dimensional convex polygons, *Annals of Combinatorics* **1** (1997) 27–53.
- [54] (with Anthony Guttmann) Three-dimensional convex polygons, *Phys. Rev. E* **55** (1997) R6323–6326.
- [55] A method for the enumeration of various classes of column-convex polygons, *Discrete Math.* **154** (1996) 1–25.
- [56] Percolation models and animals, *European J. Combin.* **17** (1996) 343–369.
- [57] (with Jean-Marc Fédou) The generating function of convex polyominoes : the resolution of a q -differential system, *Discrete Math.* **137** (1995) 53–75.
- [58] Polyominoes and polygons, in “Jerusalem Combinatorics ’93” (H. Barcelo, G. Kalai eds.), *Contemporary Mathematics* **178** (1994) 55–70.
- [59] Codage des polyominos convexes et équations pour l’énumération suivant l’aire, *Discrete Appl. Math.* **48** (1994) 21–43.
- [60] q -Énumération de polyominos convexes, *J. Combin. Theory Ser. A* **64** (1993) 265–288.
- [61] (with Xavier Viennot) Empilements de segments et q -énumération de polyominos convexes dirigés, *J. Combin. Theory Ser. A* **60** (1992) 196–224.
- [62] Une bijection entre les polyominos convexes dirigés et les mots de Dyck bilatères, *Inf. Th. et Appl.* **26** (1992) 205–219.
- [63] Convex polyominoes and heaps of segments, *J. Phys. A : Math. Gen.* **25** (1992) 1925–1934.
- [64] Convex polyominoes and algebraic languages, *J. Phys. A : Math. Gen.* **25** (1992) 1935–1944.

Other enumeration problems

- [65] (with Riccardo Biagioli, Frédéric Jouhet and Philippe Nadeau) Length enumeration of fully commutative elements in finite and affine Coxeter groups, *J. of Algebra* **513** (2018), 466–515. [arXiv:1612.07591](https://arxiv.org/abs/1612.07591).
- [66] (with James Propp and Julian West) Perfect matchings for the three-term Gale-Robinson sequences. *Elec. J. Combin.* **16** no. 1 (2009) Article R125. ArXiv:0906.3125
- [67] (with Svante Linusson and Eran Nevo) On the independence complex of square grids, *J. Alg. Combinatorics* **27** (2008) 423–450. ArXiv:math.CO/0701890.
- [68] (with Laurent Habsieger) Sur les matrices à signes alternants, *Discrete Math.* **139** (1995) 57–72.
- [69] (with François Bergeron and Serge Dulucq) Standard paths in the composition poset, *Ann. Sci. Math. Québec* **19** (1995) 139–151.

Combinatorics on words

- [70] (with Jean-Paul Allouche) On the conjectures of Rauzy and Shallit for infinite words. *Commentationes Math. Univ. Carolinae* **36** (1995) 705–712.
- [71] (with Jean-Paul Allouche) Canonical positions for the factors in the paperfolding sequences, *Theoret. Comput. Science* **129** (1994) 263–278.

- [72] (with Jean-Paul Allouche) Facteurs des suites de Rudin-Shapiro généralisées, Journées Montoises d’Informatique Théorique, *Bulletin of the Belgian Math. Society* **1** (1994) 145–164.
- [73] The number of minimal word chains computing the Thue-Morse word, *Inform. Process. Lett.* **44** (1992) 57–64.

2 Book chapter(s)

- [74] Counting planar maps, coloured or uncoloured. Invited paper for the *23rd British Combinatorial Conference*, 2011. Surveys in Combinatorics 2011, *London Math. Soc. Lecture Note Ser.* **392** (2011) 1–50. R. Chapman ed.
- [75] (with Richard Brak) Exactly solved models of polyominoes and polygons, Chapter 3 of *Polygons, Polyominoes and Polycubes*, Lecture Notes in Physics, Volume 775, pp. 43–78, Springer Berlin/Heidelberg 2009. Arxiv:0811.4415.

3 Submitted papers

1. (with Éric Fusy and Kilian Raschel) Plane bipolar orientations and quadrant walks
[arXiv:1905.04256](https://arxiv.org/abs/1905.04256), 61 p.
2. (with Alin Bostan and Steve Melczer) Counting walks with large steps in an orthant
[arXiv:1806.00968](https://arxiv.org/abs/1806.00968), 60 p.
3. (with Andrew Elvey Price) The generating function of planar Eulerian orientations
[arXiv:1803.08265](https://arxiv.org/abs/1803.08265), 41 p.
4. (with Olivier Bernardi and Kilian Raschel) Counting quadrant walks via Tutte’s invariant method, [arXiv:1708.08215](https://arxiv.org/abs/1708.08215), 52 pp.

4 Others

- [1] Invited editor for a special issue of *Algorithmica* devoted to a selection of papers presented at *Analysis of Algorithms 2014*. With Michèle Soria and Robert Sedgewick. **75** no. 4 (2016) 250 pp.
- [2] Invited editor of a special issue of *Math. Comput. Modelling* devoted to *Combinatorics and Physics*, **26** (1997). With Daniel Loeb.
- [3] Scientific report for the “habilitation à diriger des recherches”, report LaBRI 1154-96, 1996, 90 pp.
- [4] *q-Énumération de polyominos convexes*, PhD Thesis, Publications du LACIM, Université du Québec à Montréal, no. 9, 1991, 168 pp.

Conferences

1 Invited lectures (international meetings)

1. Eulerian orientations of planar maps, *Walking through the Brownian zoo*, Conference for Jean-François Le Gall's 60th birthday, Paris, June 2019
2. Counting walks confined to a cone, a series of 4 talks in the framework of the **Aisenstadt chair** in Montréal, October 2018.
3. Plane bipolar orientations and quadrant walks, *Séminaire lotharingien de combinatoire*, special edition for Christian Krattenthaler's 60th birthday, Strobl, Austria, September 2018.
4. Plane bipolar orientations and quadrant walks, *Algebra and Combinatorics at LaCIM*, a conference for the 50th anniversary of CRM (Centre de recherches mathématiques de Montréal), Montréal, September 2018.
5. Counting quadrant walks with large steps, *Algebra, Arithmetic and Combinatorics of Differential and Difference Equations*, CIRM, Marseille, May 2018.
6. Tutte's invariants in enumerative combinatorics, *Tutte centenary* (workshop for the centenary of William Tutte), Cambridge, Trinity College, July 2017.
7. Functional equations in enumerative combinatorics, plenary conference at *FOCM (Foundations of computational mathematics)*, Barcelona, July 2017. **“Distinguished speaker” of the EMS** (European Math Society).
8. Walks in the quadrant: differential algebraicity, *Séminaire lotharingien de combinatoire*, special edition for Jean-Yves Thibon's 60th birthday, Obernai, March 2017.
9. Enumerative combinatorics of maps, **Course (20 h)** at the Henri Poincaré Institute in Paris, during the programme *“Combinatorics and interactions”*, january-february 2017 ([can be seen on You Tube!](#))
10. Bipolar orientations in planar maps, Random Trees and Maps: Probabilistic and Combinatorial Aspects, CIRM, Luminy, June 2016
11. Lattice walks and algebraic power series, *Conference dedicated to the scientific legacy of Marcel Paul Schützenberger*, Bordeaux, March 2016.
12. Lattice walks avoiding a quadrant, *Conference in honour of Tony Guttmann's 70th birthday*, Newcastle, Australia, December 2015.
13. The Potts model on planar maps, *ANZAMP meeting (Australian and New Zealand Association of Mathematical Physics)*, keynote speaker. Newcastle, Australia, December 2015.
14. The Potts model on planar maps, *Journées Itzykson*, CEA Saclay, June 2015
15. The Potts model on planar maps, *2D-Quantum Gravity and Statistical Mechanics*, Program “Combinatorics, Geometry and Physics”, Schrödinger Institute, Vienna, June 2014
16. Spanning forests in regular planar maps, *Workshop on Combinatorial Physics*, Cardiff, December 2013

17. Two-dimensional self-avoiding walks, *Autumn school ALEA in Europe*, October 2013
18. Two-dimensional self-avoiding walks, *FPSAC 2013* (Formal Power Series and Algebraic Combinatorics), Paris, June 2013
19. The critical fugacity for surface adsorption of self-avoiding walks on the honeycomb lattice is $1 + \sqrt{2}$, *Workshop on random polymers*, Eurandom, Eindhoven, The Netherlands, January 2013
20. Asymptotic properties of some minor-closed classes of graphs, *Winter Combinatorics Meeting*, Open University, Milton Keynes, England, January 2013.
21. Intervals in the m -Tamari lattices, *Aurora borealis combinatorics*, Abisko, Suède, December 2012.
22. Exactly solvable models of self-avoiding walks, Workshop *Connections for women*, Program *Random spatial processes* at MSRI, Berkeley, USA, January 2012.
23. Philippe Flajolet, founder of Analytic Combinatorics, *Lattice Models and Combinatorics*, MSRI, Berkeley, USA, January 2012.
24. Lattice paths everywhere, *Philippe Flajolet and Analytic Combinatorics* (Conference in the memory of Philippe Flajolet), Paris, December 2011.
25. Enumeration with catalytic parameters, Plenary speaker (3 lectures) at the 67th *Séminaire lotharingien de combinatoire*, Bertinoro, Italy, September 2011.
26. Counting planar maps, coloured or uncoloured, Plenary speaker at the *23rd British Combinatorial Conference*, Exeter, Great-Britain, July 2011.
27. The Potts model on planar maps, *Stochastic analysis*, Oberwolfach, Germany, May 2011.
28. The expected inversion number after n adjacent transpositions, *Aurora borealis combinatorics*, Abisko, Sweden, December 2010.
29. Sur les chemins auto-évitants, Plenary lecture at the *Journées MAS* (Modélisation Aléatoire et Statistique), Bordeaux, September 2010.
30. Prudent self-avoiding walks, *Conference for Philippe Flajolet's 60th birthday*. Paris, December 2008.
31. Prudent self-avoiding walks, *Meeting of the AMS* (American Math Society), Vancouver, Canada, October 2008.
32. Counting permutations via generating trees, *6th Conference on permutation patterns*, Otago, New-Zealand, June 2008.
33. Counting coloured planar maps, *Topological and Geometric Graph Theory* (TGGT), École Normale Supérieure, Paris, May 2008. *Electronic Notes in Discrete Mathematics* **31** (2008) 57–62.
34. Prudent self-avoiding walks, *Discrete Mathematics Biannual Meeting of Fachgruppe Diskrete Mathematik of Deutsche Mathematiker Vereinigung*, Marburg, May 2008.
35. The shape of binary trees, and applications to the integrated superbrownian excursion, *Northeast Probability Seminar*, City University of New York, November 2007.
36. Families of prudent self-avoiding walks, *Workshop on quantum random walks*, University of Pennsylvania, Philadelphia, November 2007.
37. Asymptotic enumeration and large random objects, Series of lectures at the winter school *Statistical Mechanics and Combinatorics*, Val-Morin, Canada, February 2007.

38. On the shape of binary trees, *Analysis of Algorithms*, Antibes, France, June 2007.
39. Rational and algebraic series in combinatorial enumeration, Combinatorics session, **International Congress of Mathematicians**, Madrid, August 2006. Proceedings of the ICM, Session lectures, pp. 789–826.
40. The Ising and hard-particle models on planar maps: a combinatorial solution, *2nd Workshop on Tutte polynomials and applications*, Centre de Recerca Matemàtica (CRM), Bellaterra, Spain, October 2005.
41. On the shape of binary trees, *EUROCOMB'05*, Berlin, September 2005.
42. Embedded trees, *Quantum Field Theory: Then and Now*, Conference in the memory of Claude Itzykson, CEA Saclay, Paris, June 2005.
43. Algebraic generating functions in enumerative combinatorics and context-free languages, *STACS 2005 (Symposium on theoretical aspects of computer science)*, Stuttgart, February 2005.
44. Are algebraic generating functions ordinary?, *24th Nordic and 1st Franco-Nordic Congress of Mathematicians*, Reykjavík, Iceland, January 2005.
45. Are algebraic generating functions ordinary?, *Third Colloquium on Mathematics and Computer Science Algorithms, Trees, Combinatorics and Probabilities*, Vienna, Austria, September 2004.
46. Planar maps and algebraic series: polynomial equations with one catalytic variable, Specialo edition of the *Séminaire Lotharingien* for Alain Lascoux's 60th birthday, Ottrott, March 2004.
47. *Summer school of the European Network of Algebraic Combinatorics*, Sweden, July 2003 (10 hours of lectures on Enumerative combinatorics).
48. Minimal transitive factorizations of permutations, *Recent Advances in Algebraic and Enumerative Combinatorics*, Banff, Canada, May 2003.
49. The Ising model on planar maps: a combinatorial solution, *Statistical Mechanics of Polymer Models*, Banff, Canada, May 2003.
50. The Ising model on planar maps: a combinatorial solution, 50th *Séminaire Lotharingien de Combinatoire*, Ottrott, March 2003.
51. Walks in the quarter plane: a functional equation approach, *Meeting of the Canadian Mathematical Society*, Québec, Canada, June 2002.
52. Linear recurrence relations with constant coefficients: the multivariate case, *Meeting of the American Mathematical Society*, Columbus, USA, September 2001.
53. The site-perimeter of bargraphs, *Meeting of the Canadian Mathematical Society*, Saskatoon, Canada, June 2001.
54. On (some) functional equations arising in enumerative combinatorics, *FPSAC 2001*, Tempe, USA, May 2001
55. Counting paths on the slit plane, *Classical Combinatorics: an international conference*, conference in honor of Dominique Foata, Philadelphia, USA, July 2000.
56. Counting paths on the slit plane, *Self-interacting random processes*, Oberwolfach, Germany, May 2000.

- 57. Two lectures at the meeting *Mathematical physics of polymers and percolation*, The Fields Institute, Toronto, August 1998.
- 58. Lecture hall partitions, *Combinatorics: algebraic, geometric and probabilistic aspects*, San Feliu de Guixols, Spain, September 1997.
- 59. Polyominoes and polygons, *Jerusalem Combinatorics 93*, Israel, May 1993.

2 Proceedings of international conferences with program committees

- [1] (with Andrew Elvey Price and Paul Zinn Justin), Eulerian orientations and the six-vertex model on planar maps, talk at FPSAC 2019, Ljubljana, Slovenia
- [2] (with Olivier Bernardi et Kilian Raschel), Counting quadrant walks via Tutte’s invariant method, talk at FPSAC 2016, Vancouver. *DMTCS Proceedings* (2016).
- [3] (with Michael Albert) Permutations sortable by two stacks in parallel and quarter plane walks, FPSAC 2014, Chicago. *DMTCS Proceedings* (2014) pp. 585-596.
- [4] (with Julien Courtiel) Spanning forests in regular planar maps, *FPSAC 13* (Formal power series and algebraic combinatorics), Paris, June 2013. *DMTCS Proceedings* (2013) pp. 241–252.
- [5] (with Kerstin Weller) Asymptotic properties of some minor-closed classes of graphs, *FPSAC 13*, Paris, June 2013. *DMTCS Proceedings* (2013) pp. 599–610.
- [6] (with Guillaume Chapuy and Louis-François Prévaille-Ratelle) The representation of the symmetric group on m -Tamari intervals, *FPSAC 2012*, Nagoya, Japan, August 2012. *DMTCS Proceedings* (2012) pp. 351–364.
- [7] Counting planar maps, coloured or uncoloured. Invited paper for the *23rd British Combinatorial Conference*, July 2011. *Surveys in Combinatorics 2011*, *London Math. Soc. Lecture Note Ser.* **392** (2011) 1–50. R. Chapman ed.
- [8] (with A. Bacher) Weakly directed self-avoiding walks, *FPSAC 10*, San Francisco, USA, August 2010. *DMTCS Proceedings* (2010) pp. 473–484.
- [9] (with A. Claesson, M. Dukes et S. Kitaev) $(2+2)$ -Free posets, ascent sequences and pattern avoiding permutations, *FPSAC 09*, Hagenberg, Austria, July 2009. *DMTCS Proceedings* (2009) pp. 217–228.
- [10] Families of prudent self-avoiding walks, *FPSAC 08* Valparaiso, Chili, June 2008. *DMTCS Proceedings* (2008) pp. 167–180.
- [11] (with N. Bonichon and É. Fusy) Baxter permutations and plane bipolar orientations, *TGGT (Topological and Geometric Graph Theory)*, Paris, May 2008. *Electronic Notes in Discrete Mathematics* **31** (2008) 69–74.
- [12] Counting coloured planar maps, *TGGT (Topological and Geometric Graph Theory)*, Paris, May 2008. *Electronic Notes in Discrete Mathematics* **31** (2008) 57-62.
- [13] Rational and algebraic series in combinatorial enumeration. Invited paper for the *International Congress of Mathematicians 2006*. Proceedings of the ICM, Session lectures, pp. 789–826. ArXiv:0805.0588
- [14] (with Einar Steingrímsson) Decreasing subsequences in permutations and Wilf equivalence for involutions, *FPSAC 05*, Messina, Italy, June 2005. Electronic proceedings.

- [15] (with Tony Guttmann and Iwan Jensen) Self-avoiding walks crossing a square, *FPSAC* 05, Messina, Italy, June 2005. Electronic proceedings.
- [16] Algebraic generating functions in enumerative combinatorics and context-free languages, invited paper for *STACS* 2005, V. Diekert et B. Durand eds., *Lect. Notes Comput. Sci.* **3404** (2005) 18–35.
- [17] (with Gilles Schaeffer) The degree distribution in bipartite planar maps: applications to the Ising model, *FPSAC* 03, Vadstena, Sweden, June 2003, K. Eriksson and S. Linusson eds., pp. 312–323.
- [18] Counting paths on the quarter plane, in *Mathematics and Computer Science II: Algorithms, trees, combinatorics and probabilities*, Versailles, September 2002. Series *Trends in Mathematics*, B. Chauvin, P. Flajolet, D. Gardy and A. Mokkaedem eds., Birkhäuser, pp. 49–67.
- [19] Walks in the quarter plane: a functional equation approach, *FPSAC* 02, Melbourne, July 2002, R. Brak, O. Foda, C. Greenhill, A. Guttmann, A. Owczarek eds., pp. 148–160.
- [20] (with Isabelle Dutour and Guy Melançon) Random generation of dags for graph drawing, *EuroComb01*, Barcelona, Spain, September 2001. *Electronic Notes in Discrete Mathematics* **10** (2001) 1–6.
- [21] On (some) functional equations arising in enumerative combinatorics, *FPSAC* 01, Phoenix, USA, May 2001, H. Barcelo et V. Welker eds., pp. 83–89.
- [22] (with Gilles Schaeffer) Counting paths on the slit plane, in *Mathematics and Computer Science: Algorithms, trees, combinatorics and probabilities*, Versailles, September 2000. Series *Trends in Mathematics*, D. Gardy et A. Mokkaedem eds., Birkhäuser, 2000, pp. 101–112.
- [23] (with Gilles Schaeffer) Enumeration of planar constellations, *FPSAC* 99, Barcelone, June 1999, C. Martinez, M. Noy and O. Serra eds., pp. 96–107.
- [24] (with Cyril Banderier, Alain Denise, Philippe Flajolet, Danièle Gardy, Dominique Gouyou-Beauchamps) On generating functions of generating trees, *FPSAC* 99, Barcelone, June 1999, C. Martinez, M. Noy and O. Serra eds., pp. 40–52.
- [25] (with Andrew Rechnitzer) Connected heaps are nice animals, *FPSAC* 99, Barcelone, June 1999, C. Martinez, M. Noy and O. Serra eds., pp. 84–95.
- [26] Sorted and /or sortable permutations, *FPSAC* 98, Toronto, Canada, June 1998, N. Bergeron ed., pp. 91–102.
- [27] (with Kimmo Eriksson) Lecture Hall Partitions, *FPSAC* 96, Minneapolis, USA, June 1996, D. Stanton and D. White eds., pp. 59–68.
- [28] New enumerative results on two-dimensional directed animals, *FPSAC* 95, Marne-la-Vallée, June 1995, B. Leclerc and J.-Y. Thibon eds., pp. 103–116.
- [29] (with Jean-Marc Fédou) Énumération des polyominos convexes suivant l’aire : exemple de résolution d’un système de q -équations différentielles, *FPSAC* 93, Florence, Italy, June 1993, A. Barlotti, M. Delest and R. Pinzani eds., pp. 97–108.
- [30] (with Laurent Habsieger) Sur les matrices à signes alternants, *FPSAC* 92, Montréal, Canada, June 1992, P. Leroux and C. Reutenauer eds., pp. 19–32.
- [31] q -Énumération de polyominos convexes, *FPSAC* 91, Bordeaux, May 1991, M. Delest, G. Jacob, P. Leroux eds., pp. 111–119.