Louigi Addario-Berry

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PERSONAL

Born May 28, 1981. Married, two children.

ACADEMIC EMPLOYMENT

Associate Professor	McGill University	Jun 2013-Present
Assistant Professor	McGill University	Jun 2009-May 2013
Professeur Adjoint	Université de Montréal	Aug 2008-May 2009
Marie Curie Fellow	University of Oxford	Sep 2006-Aug 2008

EDUCATION

Doctor of Philosophy	McGill University	Sep 2003-Aug 2006
Master of Science	McGill University	Jan 2002-Aug 2003
Bachelors of Science	McGill University	Sep 1997-Dec 2001

VISITING POSITIONS, FELLOWSHIPS AND AWARDS

Professeur Invité	Université Pierre et Marie Curie, Paris	Jan-Feb 2017
Coxeter-James Prize	Canadian Mathematical Society	2016
Simons Visiting Fellow	Isaac Newton Institute, Cambridge	Mar-Apr 2015
Visiting Scholar	Corpus Christi College, Oxford	Jan-Jun 2015
Visiting Fellow	Magdalen College, Oxford	Oct-Dec 2014
Leverhulme Visiting Professor	Department of Statistics, Oxford	Jul 2014-Jun 2015
Professeur Invité	École Normale Supérieure, Lyon	Feb 2013
Chercheur Invité	École Polytechnique, Paris	Sep-Oct 2009

LEADERSHIP AND MANAGEMENT WORK

Deputy Director	Centre de Recherches Mathématiques	Jul 2015-Present
Scientific Director	CMS 2015 winter meeting	Jan-Dec 2015
Vice President for Québec	Canadian Mathematical Society (CMS)	Jul 2013-Jun 2015

EDITORIAL WORK

Editor-in-Chief	Canadian Journal of Mathematics	Jan 2017-Dec 2021
Associate Editor	Electronic Journal of Probability	2015-2017
Associate Editor	Electronic Communications in Probability	2015-2017
Associate Editor	Canadian Journal of Mathematics	2014-2016
Associate Editor	Canadian Bulletin of Mathematics	2014-2016
PC Member	AnalCo 2015	2015
PC Member	RANDOM 2014	2014

SELECTED ORGANIZATIONAL WORK

Seminar on Stochastic Processes, scientific committee long-term member	Ongoing
40'th SPA conference, program committee member	June 2018
Oberwolfach workshop on network models	December 2017
Mathematical Congress of the Americas, CRM-IMPA satellite workshop on challenges at the interface of optimization and stochastic processes	July 2017
CRM workshop on random growth models, random walks and random matrices	Sep 2016
CRM-PIMS Summer School in Probability	Jun-Jul 2015
CRM workshop on multiplicative and probabilistic number theory	Dec 2014
CLAPEM conference, invited session on probability and graphs	Sep 2014
BIRS workshop on probability on trees and planar graphs	Sep 2014
38'th SPA conference, invited session on random graph processes	Jul 2014
MCA session on combinatorics and graph theory	Aug 2013
CRM workshop on random trees	Aug 2013
CRM thematic semester on biodiversity and evolution	Jul-Dec 2013
Oberwolfach workshop on extremes in branching random walk	Apr 2013
CMS winter meeting, session on probability and mathematical physics	Dec 2012
SMS graduate summer school	Jun-Jul 2012
BIRS workshop on branching random walks and searching in trees	Feb 2010
CRM workshop on combinatorics and probability	May 2009
Bellairs workshop on probability and combinatorics	Annual, 2009-2016

TEACHING

Brownian motion	Several times
Graduate probability	Several times
Stochastic processes	Several times
Combinatorial stochastic processes	Winter 2010
Discrete structures	Several times
Additive combinatorics	Fall 2008

SUPERVISION AND TRAINING

Postdoctoral

Sanchayan Sen, September 2016-August 2018.
Janosch Ortmann, August 2015-July 2017.
Guillem Perarnau, October 2013-August 2015. (Assistant professor, University of Lancaster, starting Fall 2016.)
David Belius, September 2013-August 2014. (Currently holds a Courant instructorship.)
Yu-Ting Chen, August 2013-August 2014. (Currently holds a postdoc at Harvard.)
Matthew Roberts, September 2011-September 2012. (Prize Fellow and Assistant Professor, Bath.)
Ross Kang, September 2008-January 2010. (Veni Fellow and Assistant Professor, Nijmegen.)
Simon Griffiths, September 2008-August 2010. (Research fellow, Department of Statistics, Oxford.)

Doctoral

Yuting Wen, Aug 2012-Feb 2016. (Now a postdoctoral scholar at Monash University.)
Laura Eslava, Jan 2013-December 2016. (Now a postdoctoral researcher at IHP.)
Tao Lei, Sep 2012-March 2016 (est).

Masters

Alexandre Brandts-Longtin, Sep 2016-Dec 2017 (est.)
Nicholas Leavitt, Sep 2014-Aug 2015.
Omar Khalil, Sep 2011-Apr 2013,Jan 2014-Aug 2014.
Laura Eslava, Jan 2011-Jan 2013.
Tao Lei, Sep 2010-Aug 2012.

Undergraduate

2016. *Apolline Bard, Alexandre Brandts-Longtin, Paul Thevenin*
2014-15. *Lyuba Bozhilova, Yutian Wang.*
2013. *Nicholas Leavitt.*
2011. *Jean-Philippe Fortin, Samantha Rudinski.*
2010. *Maria Eberg, Sisi Chen.*
2009. *Jean-Françlis Cyr.*

PEER-REVIEWED INDIVIDUAL FUNDING

FRQNT team research grant (requested)	Apr 2017-Mar 2018
FQRNT strategic partnership programme	Apr 2016-Mar 2018
NSERC discovery grant	Apr 2012-Mar 2017
INRIA équipe associée	May 2013-Apr 2016
Royal Society international collaboration grant	Aug 2012-Feb 2015
FRQNT young researchers grant	Apr 2012-Mar 2014
FRQNT team research grant	Apr 2010-Mar 2013
NSERC discovery grant	Apr 2007-Mar 2012
Royal Society international collaboration grant	May 2007-May 2009
Marie Curie Intra-European Fellowship	Oct 2006-Aug 2008

PEER-REVIEWED PROJECT FUNDING

CRMenDirect — July 2017-June 2018
Source: Canada Foundation for Innovation (requested)
Role: Co-applicant

Simons CRM Fellows Programme — Jan 2017-Dec 2021
Source: Simons Foundation targeted grants to institutes
Role: Co-principal investigator

Thematic semester on probabilistic methods in analysis and geometry — July-Dec 2016
Sources: CRM,NSF
Role: Co-organizer

CRM-PIMS summer school in probability — June-July 2015
Sources: CRM, PIMS, MSRI, ISM, NSF, Clay Math Institute
Role: Principal organizer

Thematic semestre on biodiversity — July-Dec 2013
Sources: CRM, NSF
Role: Principal organizer

Séminaire de mathématiques supérieures — June-July 2012
Sources: CRM,PIMS,Fields,MSRI, ISM, CMS
Role: Principal organizer

INVITED LECTURES SINCE 2011

Note: (T) *indicates an invited lecture* (P) *indicates an invited plenary lecture.*

Future
(T) Durham University, LMS Durham Research Symposium, July 2017.
(T) Fields Institute, 1-week mini-course on random trees, June 2017.
(T) Brown Probability Seminar, April 2017.
(T) Colloque des sciences mathématiques du Québec, Montréal, March 2017

2017
(T) Journées de combinatoire de Bordeaux, Universit'e de Bordeaux, January 2017.
(T) Conference on large 2D random structures, IHP, Paris, January 2017.

2016
(P) Canadian Mathematical Society winter meeting, Niagra Falls, December 2016.
Random Geometric Graphs and Their Applications to Complex Networks, BIRS, Banff, November 2016 (T)
Duke Probability Seminar, November 2016
(T) University of Pennsylvania Probability Seminar, October 2016
(T) 9'th World Congress in Probability and Statistics, Toronto, July 2016
(P) 36'th Annual Seminar on Stochastic Processes, Maryland, March 2016
(T) Harvard Probability Seminar, Jan 2016
(T) Joint Mathematics Meetings, AMS Special session, Seattle, Jan 2016

2015
(T) Duke Probability Seminar, November 2015
(T) Toronto Probability Seminar, November 2015
(T) XXVI Analysis of Algorithms conference, Ströbl, June 2015
(T) Combinatorial Probability conference, Uppsala, June 2015
(P) XVI One-day meeting in Combinatorics, Oxford, UK, May 2015
(T) Utrecht Mathematics Seminar, May 2015
(T) Informal Probability Workshop, Oxford, May 2015
(T) Newton Institute, Workshop on Random Planar Structures, April 2015
(T) Queen Mary Probability Seminar, March 2015
(T) Zurich/ETH Probability Seminar, February 2015
(T) Bath Probability Seminar, February 2015
(T) Warwick Probability Seminar, January 2015

2014
(T) CMS Winter Meeting, Hamilton, December 2014
(T) XIII Northeast Probability Seminar, CUNY Stonybrook, November 2014
(T) Workshop on Probability, Trees and Algorithms, Oberwolfach, November 2014
(T) Combinatorics Seminar, Warwick, October 2014
(T) Informal Probability Workshop, Oxford, October 2014
(T) Recent models in Random Media, BIRS, Banff, September 2014
(T) IMS-ASC Conference, Sydney, July 2014
(T) Combinatorics Seminar, Oxford, June 2014
(P) Conference on random walks and random media, CIRM, Marseille, June 2014.
(T) Statistical Society of Canada Annual Conference, University of Toronto, May 2014
(T) IV Southeast Probability Seminar, Duke University, May 2014

2013
(P) XI Symposium of Probability and Stochastic Processes, CIMAT, Guanajuato, Nov 2013.
(T) University of Chicago Probability Seminar, July 2013
(T) Universités Paris VI& VII Probability Seminar, Feb 2013
(T) École normale supérieur de Lyon Probability Seminar, Feb 2013

(T) Two-dimensional Statistical Mechanics, Diablerets, Feb 2013.

2012
(T) Workshop on Scaling Limits in Models of Statistical Mechanics, Oberwolfach, Sep 2012.
(T) 8'th World Congress in Probability and Statistics, Istanbul, July 2012
(P) XIV one-day meeting in Combinatorics, Oxford, UK, May 2012
(T) Combinatorics Seminar, École Polytechnique, Paris, France, May 2012
(T) Université de Laval Probability Seminar, Québec, February 2012
(T) New Zealand Probability Workshop, Auckland, January 2012

2011
(T) Canadian Mathematical Society winter meeting, Toronto, December 2011
(T) University of Bath Probability Seminar, Bath, November 2011
(T) IMPA probability seminar, Rio De Janeiro, October 2011
(P) 35'th Conference on stochastic processes and their applications, Oaxaca, June 2011
(T) 3'rd Canadian Discrete and Algorithmic Mathematics Conference, Victoria BC, June 2011
(T) Workshop on Random Trees, Information and Algorithms, Oberwolfach, April 2011
(P) British workshop on discrete structures and dynamics, Oxford, April 2011

PUBLICATION LIST

Refereed contributions

Articles, published or accepted

1. Addario-Berry, L. and Penington, S. (2017+), The front location in branching Brownian motion with decay of mass. *Annals of Probability*, to appear.
2. Addario-Berry, L., Broutin, N., Goldschmidt, C. and Miermont, G. (2017+) The scaling limit of the minimum spanning tree of the complete graph. *Annals of Probability*, to appear.
3. Addario-Berry, L and Albenque, M. (2017+) The scaling limit of random simple triangulations and random simple quadrangulations. *Annals of Probability*, to appear.
4. Addario-Berry, L., Wen, Y. (2017+) Joint convergence of random quadrangulations and their cores. *Annales de l'Institut Henri Poincaré, Probability and Statistics*, to appear.
5. Addario-Berry, L., Oliveira, R.I., Peres, Y. and Sousi, P. (2016), Random walks colliding before getting trapped. *Electronic Journal of Probability* 21, no. 42, pages 1-19.
6. Addario-Berry, L., Leavitt, N. (2016), Random infinite squarings of rectangles. *Annales de l'Institut Henri Poincaré, Probability and Statistics* 52:596-611.
7. Addario-Berry L., Bhamidi, S., Bubeck, S., Devroye, L., Lugosi, G. and Oliveira, R.I. (2015), Exceptional rotations of random graphs: a VC theory, *Journal of Machine Learning Research* 16:1893-1922.
8. L. Addario-Berry (2015), Partition functions of discrete coalescents: from Cayley's formula to Frieze's $\zeta(3)$ limit theorem, in *Proceedings of the XI Symposium on Probability and Stochastic Processes*, ed. R.H. Mena, J.C. Pardo, V. Rivero, G. Uribe Bravo. Birkhauser Progress in Probability 69:1-45.
9. Addario-Berry, L., Lei, T. (2015), The mixing time of the Newman-Watts Small World, *Advances in Applied Probability* 47:37-56.
10. Addario-Berry, L., Broutin, N., Holmgren, C. (2014), Cutting down trees with a Markov chainsaw, *Annals of Applied Probability*, 24:2297-2339.
11. Addario-Berry, L. (2014), Growing random 3-connected maps, or "comment s'enfuir de l'hexagone", *Electronic Communications in Probability*, 19:no. 54, 1-12.
12. Addario-Berry, L, Eslava, L. (2014) Hitting time theorems for random matrices, *Combinatorics, Probability and Computing*, 23:635-669.
13. Addario-Berry, L., Janson, S., McDiarmid, C. (2014) On the spread of supercritical random graphs, *Combinatorics, Probability and Computing*, 23:477-504.
14. Addario-Berry, L., Havet, F., Linhares Sales, C., Reed, B., Thomassé, S. (2013) Oriented trees in digraphs, *Discrete Mathematics*, 313:967-974.
15. Addario-Berry, L., Devroye, L., Janson, S. (2013) Sub-Gaussian tail bounds for the width and height of conditioned Galton–Watson trees, *Annals of Probability*, 41:1072-1087.

16. Addario-Berry, L., Ford, K. (2013) Poisson–Dirichlet branching random walks, *Annals of Applied Probability*, 21:283-307.

17. Addario-Berry, L., McDiarmid, C., Reed, B. (2012) Connectivity of addable monotone graph classes, *Combinatorics, Probability and Computing*, 21:803-815.

18. Addario-Berry, L. (2012) Tail bounds for the height and width of a random tree with a given degree sequence, *Random Structures and Algorithms*, 41:253-261.

19. Addario-Berry, L., Griffiths, S., Kang, R. (2012) Invasion percolation on the Poisson-weighted infinite tree, *Annals of Applied Probability*, 22:931-970.

20. Addario-Berry, L., Broutin, N., Goldschmidt, C. (2012) The continuum limit of critical random graphs. *Probability Theory and Related Fields*, 152:367-406.

21. Addario-Berry, L., Broutin, N. (2011) Total progeny in killed branching random walk. *Probability Theory and Related Fields*, 151:265-295.

22. Addario-Berry, L., Dowden, C. (2011) Subgraphs of 4-regular planar graphs, *Algorithmica*, 61:758-776.

23. Addario-Berry, L., Broutin, N., Devroye, L., Lugosi, G. (2010) On combinatorial testing problems. *Annals of Statistics*, 38:3063-3092.

24. Addario-Berry, L., Broutin, N., Goldschmidt, C. (2010) Critical random graphs: limiting constructions and distributional properties. *Electronic Journal of Probability*, 15:741-775

25. Addario-Berry, L., Broutin, N., Lugosi, G. (2010) Effective resistance of random trees, *Annals of Applied Probability* 19:1092-1107

26. Addario-Berry, L., Kang, R., Müller, T. (2010) Acyclic dominating partitions, *Journal of Graph Theory*, 64:292–311.

27. Addario-Berry, L., Broutin, N., Lugosi, G. (2010) The longest minimum-weight path in a complete graph, *Combinatorics, Probability and Computing* 19:1-19.

28. Addario-Berry, L., Esperet, L., Kang, R., McDiarmid, C., Pinlou, A. (2010) Acyclic t-improper colourings of graphs with bounded maximum degree, *Discrete Mathematics* 310:223-229.

29. Addario-Berry, L., Kennedy, W.S., King, A.D., Li, Z., Reed, B. (2010) Finding the maximum-weight induced k-partite subgraph of an i-triangulated graph, *Discrete Applied Mathematics* 158:765-770.

30. Addario-Berry, L., Reed, B. (2009) Minima in branching random walks, *Annals of Probability* 37:1044-1079.

31. Addario-Berry, L., Broutin, N., Reed, B. (2009) Critical random graphs and the structure of a minimum spanning tree, *Random Structures and Algorithms* 35:271-296.

32. Addario-Berry, L., Reed, B. (2008) Ballot Theorems, Old and New, *Bolyai Society Mathematical Studies Series* 17:1 9-35.

33. Addario-Berry, L., Chudnovsky, M., Havet, F., Reed, B., Seymour, P. (2008) Bisimplicial vertices in even-hole-free graphs, *Journal of Combinatorial Theory B* 98:6 1119-1164.

34. Addario-Berry, L., Dalal, K., Reed, B (2008) Degree Constrained Subgraphs, *Discrete Applied Mathematics* 156:7 1168-1174.

35. Addario-Berry, L., Dalal, K., McDiarmid, C., Reed, B., Thomason, A. (2007) Vertex Colouring Edge Weightings, *Combinatorica* 27:1 1-12.

36. Addario-Berry, L., Havet, F., Thomasse, S (2007) Paths with two blocks in n-chromatic digraphs, *Journal of Combinatorial Theory B* 97:4 620-626.

37. Addario-Berry, L., Olver, N., Vetta, A., (2007) A Polynomial Time Algorithm for Finding Nash Equilibria in Planar Win-Lose Games, *Journal of Graph Algorithms and Applications* 11:1 309-319.

38. Addario-Berry, L, Aldred, R.L., Dalal, K., Reed, B. (2005) Vertex Colouring Edge Partitions, *Journal of Combinatorial Theory B* 94:2 237-244.

39. Addario-Berry, L, Chor, B., Hallett, M, Lagergren, J, Panconesi, A., Wareham, T. (2004) Ancestral Maximum Likelihood of Evolutionary trees is Hard, *Journal of Bioinformatics and Computational Biology* 2:257-271.

Articles, submitted (also available on arXiv)

40. Addario-Berry, L. and Roberts, M. (2017+) Robustness of mixing under rough isometry, via bottleneck sequences.

41. Addario-Berry, L., Dieuleveut, D. and Goldschmidt, C. (2017+) Inverting the cut-tree transform.

42. Addario-Berry, L. and Eslava, L. (2017+) High degrees of random recursive trees.

43. Addario-Berry L., Balle, B. and Perarnau, G. (2017+) Diameter and stationary distribution of random r-out digraphs.

44. Addario-Berry L. (2017+) A probabilistic approach to core size in random maps.

45. Addario-Berry, L., (2017+) The local weak limit of the minimum spanning tree of the complete graph.

46. Addario-Berry, L., Griffiths, S. (2017+) The spectrum of random lifts.

Other Refereed Contributions

Conference Proceedings, published and accepted

47. Addario-Berry, L., Lei, T. (2012) The mixing time of the Newman–Watts small world, 2012 Symposium on Discrete Algorithms, Kyoto, January 17-19, 2012.

48. Addario-Berry, L., Amini, O.., Sereni, J.-S., Thomassé, S. (2008) Guarding art galleries: the extra cost for sculptures is linear. *Lecture notes in computer science* 5124:41-52.

49. Addario-Berry, L., Broutin, N., Reed, B. (2006) The Diameter of the Minimum Weight Spanning Tree of a Complete Graph, Fourth Colloquium on Mathematics and Computer Science Algorithms: Trees, Combinatorics and Probability, *Discrete Mathematics and Computer Science Proceedings* 237-250.

50. Addario-Berry, L., Dalal, K., Reed, B (2005) Degree Constrained Subgraphs, *ENDM Proceedings of the 2nd Brazilian Symposium on Graphs, Algorithms and Combinatorics* 19:257-263.

51. Addario-Berry, L, Chor, B., Hallett, M, Lagergren, J, Panconesi, A., Wareham, T. (2003) Ancestral Maximum Likelihood of Evolutionary trees is Hard, *Proc. of the Workshop on Algorithms in Bioinformatics (WABI '03)*, Budapest, 3:111-120.

52. Addario-Berry, L., Hallett, M., Lagergren, J. (2003) Toward Identifying Lateral Gene Transfer Events, *Proc. of the Pacific Symposium on Bioinformatics (PSB '03)* 8:279-290.

Correspondence

53. Addario-Berry, L., Reeve, P. (2008) Mental health: maybe human troubles don't fit into set categories, *Nature* 454, 13 August, 2008:824-824.