

Personal Information

- Full name: Cécile Mailler
- Bio data: Born 3rd April 1987, French citizen
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Employment history

- Lecturer at the University of Bath (October 2018 – present) and EPSRC postdoctoral research fellow (June 2018 – present).
- Prize Fellow at the University of Bath, October 2016 – Sept 2018.
Researcher on a two-year contract funded by the University of Bath.
- Postdoctoral researcher at the University of Bath, August 2013 – September 2016.
Supported by the project “Emergence of condensation in stochastic systems”
PI: Peter Mörters, EPSRC Grant number EP/K016075/1.

Education

- Ph.D. Student in Mathematics at the University of Versailles (France), September 2010 – August 2013.
Title of the thesis: Random Boolean trees and Pólya urns: combinatorics and probability.
Supervisors: Prof. Brigitte Chauvin and Prof. Danièle Gardy
Reviewers: Prof. Svante Janson (Uppsala) and Prof. Conrado Martínez (Barcelona)

Journal publications

1. **Stochastic approximation on non-compact measure spaces and application to measure-valued Pólya processes.**
Cécile Mailler and Denis Villemonais.
Annals of Applied Probability (accepted for publication).
2. **Characterising random partitions by random colouring**
Jakob E. Björnberg, Cécile Mailler, Peter Mörters and Daniel Ueltschi.
Electronic Communications in Probability, Volume 25, paper no. 4, 12 pp, 2020.
3. **Unbiased on-lattice domain growth.**
Cameron Smith, Cécile Mailler and Kit Yates.
Physical Review E, 100(6), pp 063307, 2019.
4. **Random walks with preferential relocations and fading memory: a study through random recursive trees.**
Cécile Mailler and Gerónimo Uribe Bravo.
Journal of Statistical Mechanics: Theory and Experiment, September 2019.
5. **Multiple drawing multi-colour urns by stochastic approximation.**
Nabil Lasmar, Cécile Mailler and Olfa Selmi.
Journal of Applied Probability, 55(1), pp 254-281, 2018.
6. **Describing the asymptotic behaviour of multicolour Pólya urns via smoothing systems analysis.**
Cécile Mailler.
Latin American Journal of Probability and Mathematical Statistics - ALEA, XV, pp 375-408, 2018.
7. **And/or trees: A local limit point of view.**
Nicolas Broutin and Cécile Mailler.
Random Structures and Algorithms, 53(1), pp 15-58, 2018.
8. **Non extensive condensation in reinforced branching processes.**
Steffen Dereich, Cécile Mailler and Peter Mörters.
Annals of Applied Probability 27(4), pp 2539-2568, 2017.

9. **Measure-valued Pólya processes.**
Cécile Mailler and Jean-François Marckert.
Electronic Journal of Probability 22, paper no. 26, pp 33, 2017.
10. **A bijective study of Basketball walks.**
Jérémie Bettinelli, Éric Fusy, Cécile Mailler and Lucas Randazzo.
Séminaire Lotharingien de Combinatoire, 77, Art. B77a, pp 1–24, 2017.
11. **Condensation and symmetry-breaking in the zero-range process with weak site disorder.**
Cécile Mailler, Peter Mörters and Daniel Ueltschi.
Stochastic Processes and their Applications, 126 (11), pp 3283-3309, 2016.
12. *Generalised and quotient models for random and/or trees and application to satisfiability.*
Antoine Genitrini and Cécile Mailler.
Algorithmica, 76:1106, 2016.
13. **The relation between tree size complexity and probability for Boolean functions generated by uniform random trees.**
Antoine Genitrini, Bernhard Gittenberger, Veronika Kraus and Cécile Mailler.
Applicable Analysis and Discrete Mathematics, Volume 10(2), pp 408-446, 2016.
14. **Associative and commutative tree representations for Boolean functions.**
Antoine Genitrini, Bernhard Gittenberger, Veronika Kraus and Cécile Mailler.
Theoretical Computer Science, 570, pages 70–101, 2015.
15. **A sprouting tree model for random Boolean functions.**
Brigitte Chauvin, Danièle Gardy and Cécile Mailler.
Random Structures and Algorithms, 47(4), page 635, 2014.
16. **Smoothing equations for large Pólya urns.**
Brigitte Chauvin, Cécile Mailler and Nicolas Pouyanne.
Journal of Theoretical Probability, 28, pages 923–957, 2013.
17. **Probabilities of Boolean functions given by random implicational formulas.**
Antoine Genitrini, Bernhard Gittenberger, Veronika Kraus and Cécile Mailler.
Electronic Journal of Combinatorics, 19, nb. 2, P37, 2012.

Peer-reviewed conference papers

- **The Disordered Chinese Restaurant and Other Competing Growth Processes.**
Cécile Mailler, Peter Mörters and Anna Senkevich.
In proc. 31st International Meeting on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA) (to appear).
- **No Shannon effect induced by And/Or trees.**
Antoine Genitrini, Bernhard Gittenberger et Cécile Mailler.
In proc. 25th International Meeting on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA), DMTCS, pages 109–120, 2014.
- **The Catalan satisfiability problem.** Antoine Genitrini et Cécile Mailler.
In proc. 11th Latin American Theoretical INformatics Symposium (LATIN), LNCS 8392, pages 466-477, 2014.
- **The growing tree distribution on Boolean functions.**
Brigitte Chauvin, Danièle Gardy et Cécile Mailler.
In proc. 8th SIAM Workshop on Analytic and Combinatorics (ANALCO), pages 45–56, 2011.

PhD students

- I am co-supervising (with M. Roberts) Stelios Boci, who started in October 2018.
- I am co-supervising (with M. Roberts) Umberto De Ambroggio, who started in October 2018.
- I co-supervised (with P. Mörters) Anna Senkevich, funded by the EPSRC CDT “Statistical Applied Mathematics at Bath” (SAMBa): 2016-2019.

Invited talks at conferences/workshops

- Workshop on Regeneration, Branching And Decomposability in Kyiv, Kiev, Ukraine, March 2021.
- Workshop on Stochastic Processes under Constraints, Oberwolfach, Germany, September 2020.
- Invited session on Random Trees (organised by Christina Goldschmidt) at SPA, July 2019.
- Second ANR/SNSF MALIN meeting, Les Diablerets, Switzerland, June 2019.
- Séminaire de Combinatoire Philippe Flajolet, IHP, Paris, June 2019.
- Women in Probability, TU Munich, May 2019.
- Workshop on Random Graphs and Random Processes, King's college, London, April 2019.
- Mini-course "Pólya urns: probabilistic approaches" at the ALEA conference, March 2019.
- 41st annual Research Students Conference in Probability and Statistics, Sheffield, July 2018.
- 672. WE-Heraeus Seminar "Search and Problem Solving by Random Walks", Bad Honnef, Germany, May, 2018.
- Workshop on Probabilistic Approaches to Quantum Spin Systems, Göteborg, Sweden, April 2018.
- Oberwolfach workshop on Interplay of Analysis and Probability in Applied Mathematics, Feb 2018.
- Alea in Europe, Vienna, Austria, October 2017.
- Conference Modern Perspectives of Branching in Probability, September 2017.
- Complex System Dynamics (CoSyDy) meeting, Leeds, 25th July 2017.
- Special Topic Session on Urns at the 61st World Statistics Congress, Marrakech, July 2017.
- Probability and Combinatorics: twelfth annual workshop, Barbados, April 2017.
- Workshop on Analytic and Probabilistic Combinatorics, BIRS, Canada, October 2016.
- Mini-course on Reinforced Branching Processes at the Alea-Network Young Researchers' Workshop, September 2016.
- Fourth Bath-Paris branching meeting, Paris, June 2016.
- LMS-funded day workshop Probability in the North-East, Sheffield, January 2016.
- Conference in honour of Svante Janson's 60th birthday, Krusenberg (Sweden), June 2015.
- Probability and Combinatorics: tenth annual workshop, Barbados, April 2015.
- Oberwolfach workshop Probability, Trees and Algorithms, November 2014.
- Mini-course on Markov Chains and Martingales for the Analysis of Discrete Random Structures at the CIMPA summer school Random structures, Analytic and Probabilistic Approaches, Nablus, August 2014.
- Journées de combinatoire de Bordeaux, February 2014.
- Random Combinatorial Structures and Statistical Mechanics workshop, Venice, May 2013.
- Combinatorial Probability and Statistical Mechanics Workshop, QMUL, London, February 2013.

Invited talks at seminars and research visits

- UK: Cambridge, Warwick, Oxford, Brunel, Queen Mary University, Birmingham, University of Sussex, Lancaster, London School of Economics, King's College London, Durham
- Germany: Münster (one-month visit and seminar), Mainz, Cologne, Essen
- France: Nancy (several visits and one seminar), Bordeaux (several visits and one seminar), Tours, Paris 6, Nanterre, Grenoble, Lille, Lyon (three-day visit and seminar)
- Rest of Europe: TU Vienna (several one-week visits), ETH Zurich, Uppsala (one-week visit and seminar)
- Canada: McGill University (one-week visit and seminar)
- Mexico: UNAM (two one-week visits)
- Tunisia: Monastir (10-day visit)

Academic service

- I am a member of the DFG-funded Research Network "Stochastic Processes on Evolving Networks" (2019-2021).
- I have served as a referee for journals including Annals of Applied Probability, Bernoulli, Journal of Applied Probability, Electronic Journal of Probability, Random Structures and Algorithms, SIAM Journal on Discrete Mathematics, Statistics and Probability Letters, Markov Processes and Related Fields.
- I am a member of the Program Committee of the conference Complex Networks 2020. Previously, I was a member of the Program Committee of AofA 2018 and 2020 (Analysis of Algorithms) and Analco 2016 (Meeting on Analytic Algorithmics and Combinatorics). I also served as a referee for conference articles for STACS (Symposium on Theoretical Aspects of Computer Science) and AofA.
- I co-organised the following conferences/workshops:

- LMS Research School on “Random structures: from the discrete to the continuous”, Bath, July 2019. Funded by the LMS and the CDT SAMBa.
<https://sites.google.com/view/lms-research-school-bath2019/home>
- BMS summer-school Probabilistic and statistical methods for networks, Berlin, August 2017. Funded by the Berlin Mathematical School and the CDT SAMBa.
<http://www.math-berlin.de/academics/summer-schools/2017/randgraph>
- Workshop *Tours à grands pas* on random walks in the quadrant, Tours, December 2016. Funded by the CNRS. <http://www.fdpoisson.fr/tours-a-grands-pas/>
- Condensation phenomena in stochastic systems, Bath, July 2016. Funded by the EPSRC.
<http://people.bath.ac.uk/cdm37/CondensationWorkshopBath.html>
- Alea Network Young Researcher’s Workshop, Bath, December 2015. Funded by Alea-Network and the CDT SAMBa. <http://people.bath.ac.uk/cdm37/AE-YRW.html>
- Since 2018, I have co-organised the weekly Probability seminar at Bath and the Bath-Bristol Probability Colloquium.
- I founded and organised (2015–2018) the Prob-L@B Internal Monthly Seminar (PIMS); in this monthly seminar, members of the probability group at Bath present their work to the rest of the group.
- I have supervised undergraduate projects in probability at the University of Bath:
 - Summer research projects, UG student at École Polytechnique: Y. Hamdi (2020), T. Loisel (2019)
 - 10-week summer research project funded by the Bath Institute for Mathematical Innovation (IMI), 2017-2018 (B. Hansard – UG student at the University of Oxford), co-supervised by James Davenport.
 - Year-long MMath project: V. Brebeanu (2019-2020), N. Tolokonnikov (2018-2019), S. Sussex (2017-2018), T. Dellaportas (2016-2017)
 - 10-week summer project co-funded by the CDT SAMBa and the Bath Institute for Mathematical Innovation (IMI), 2016 (T. Dellaportas)