

# Sophie Hautphenne

*Associate Professor in Applied Probability*

DOB: 22 November 1983  
Nationality: Belgian

## Research areas

Stochastic processes with special interest in branching processes, matrix analytic methods, demography, population processes, epidemic processes, queueing models, modelling of biological systems, and modelling of environmental issues.

## Academic qualifications

- 2005–2009 **PhD in Mathematics**, *Université libre de Bruxelles*, Belgium  
○ **Thesis:** *An algorithmic look at phase-controlled branching processes*. Completed in Oct. 2009.  
○ **Supervisor:** Guy Latouche, **co-supervisor:** Marie-Ange Remiche.  
○ **Jury members:** Nigel Bean, Thomas Bruss, Gianluca Bontempi, Jean Cardinal, Udo Krieger, and Claude Lefèvre.
- 2005–2006 **Diplôme d'études approfondies (doctoral school)**, *Université libre de Bruxelles*, Belgium
- 2001–2005 **Degree in Mathematical Sciences**, *Université libre de Bruxelles*, Belgium  
First class, Summa cum laude.

## Academic appointments

- 2023–present **School of Mathematics and Statistics (M&S)**, *The University of Melbourne (UoM)*, Australia  
Associate Professor.
- 2017–2022 **School of Mathematics and Statistics (M&S)**, *The University of Melbourne (UoM)*, Australia  
Senior Lecturer.
- 2015–2018 **Chair of Statistics**, *Ecole polytechnique fédérale de Lausanne (EPFL)*, Switzerland  
Scientist (part time).
- 2011–2019 **School of M&S**, *UoM*, Australia  
Research fellow.
- 2010 **Departement of Computer Science**, *Université libre de Bruxelles*, Belgium  
Postdoctoral researcher (Nov. 2010–Dec. 2010).
- 2005–2010 **Belgian National Science Foundation (F.R.S. – F.N.R.S.)**, Belgium  
PhD student (Oct. 2005–Oct. 2009), and postdoctoral researcher (Oct. 2009–Nov. 2010).

## Grants and awards

- 2025 **ASEM-DUO Fellowship Programme**, *Stochastic Modelling of Chronic Myeloid Leukemia: From Onset to Treatment-Free Remission*, Académie de Recherche et d'enseignement supérieur (ARES), Belgium  
(C.I.: A/Prof. S. Hautphenne and Dr Céline Engelbeen, approx. \$12,000)

- 2025 **Three-year Discovery Project**, *Closing the gap between integrable models and branching processes*, Australian Research Council (ARC), Australia  
DP250103199 (C.I.: Prof. J. de Gier (lead C.I.), A/Prof S. Hautphenne, A/Prof M. Wheeler, \$551,600)
- 2022 **Franco-Australian Hubert Curien (PHC FASIC) Program Researcher Grant**, *Stochastic analysis of branching processes conditioned on survival*, France  
(C.I.: Dr S. Hautphenne and Dr Emma Horton, approx. \$5,000)
- 2020 **Three-year Discovery Project**, *Population-size-dependent branching processes: computational methods and applications in biology*, Australian Research Council (ARC), Australia  
DP200101281 (C.I.: Dr S. Hautphenne (lead C.I.), Dr Giang Nguyen, Dr Melanie Massaro, \$380,000)
- 2015 **Three-year Discovery Early Career Researcher Award (DECRA)**, *New computational approaches for branching processes in population biology*, Australian Research Council (ARC), Australia  
DE150101044 (\$315,000)
- 2015 **Establishment Grant**, *UoM*, Australia, (\$50,000)
- 2011 **Three-year Discovery Project (Australian Postdoctoral Fellow)**, *Advanced matrix-analytic methods with applications*, Australian Research Council (ARC), Australia  
DP110101663 (C.I.: Prof. Peter Taylor, Prof. Nigel Bean, Dr Mark Fackrell, Dr Malgorzata O'Reilly; P.I.: Prof. Guy Latouche, \$600,000)
- 2009 **Travel support to visit Melbourne**, *F.R.S. – F.N.R.S.*, Belgium, (approx. \$3,000)
- 2007 **Travel support to visit Melbourne**, *F.R.S. – F.N.R.S.*, Belgium, (approx. \$3,000)
- 2006 **Four-year Aspirant Research Fellow grant**, *F.R.S. – F.N.R.S.*, Belgium, (approx. \$140,000)
- 2005 **Two-year Research Fellow grant**, *F.R.I.A. (F.R.S. – F.N.R.S.)*, Belgium, (approx. \$70,000)
- 2005 **University Medal**, *Université libre de Bruxelles*, Belgium  
For graduating from Mathematics Degree with first class and highest distinction
- 2004 **Ruth and Joe Gani prize**, *Université libre de Bruxelles*, Belgium  
For best student in Probability during Bachelor Degree

## Teaching experience

- 2020–present **School of M&S**, *UoM*, Australia  
Lecturer and subject coordinator for
- *Probability for Statistics – MAST20006* (Semester 1, 2020–2024)
  - *Elements of Probability – MAST90057* (Semester 1, 2020–2024)
- Lecturer for
- *Probability – MAST20004* (Semester 1, 2020, 2021).
- 2016–2018 **Section of Mathematics**, *Ecole polytechnique fédérale de Lausanne (EPFL)*, Switzerland  
Lecturer and subject coordinator for *Applied Stochastic Processes* (Semester 2, 2016, 2017, 2018).
- 2015 **University of Tasmania**, *Hobart*, Australia  
Presentation of two lectures on branching processes (Nov. 2015).
- 2013 **Vietnam Institute of Mathematics, VNU University of Science, and Hanoi University of Sciences and Technology**, *Hanoi*, Vietnam  
Presentation of a series of six lectures entitled *Matrix-analytic Methods: From Theory to Applications*, in collaboration with Dr Giang Nguyen (The University of Adelaide) (May 2013).

- 2011–2014 **School of M&S, UoM, Australia**  
 Lecturer and subject coordinator for  
 ○ *Decision Making – MAST30022* (Semester 2, 2012 and 2013)  
 Guest lecturer at the AMSI Summer School (January 2013) for  
 ○ *Structured Markov models and control theory: A unified approach via linear algebra* (I taught approx. 20% of the course);  
 ○ *Mathematical epidemiology: stochastic models and their statistical calibration* (1 lecture)  
 Tutor (outside of subject teaching) for  
 ○ *Probability – MAST20004* (Semester 1, 2011, 2012 and 2014)  
 ○ *Discrete Maths and Operations Research – MAST20018* (Semester 2, 2011)
- 2010 **Centre International de Rencontres Mathématiques, Marseille, France**  
 Presentation of three lectures on matrix-analytic methods at the *Spatio-temporal risk modelling workshop* (April 2010).
- 2006–2009 **Department of Computer Science, Université libre de Bruxelles, Belgium**  
 Guest lecturer for *Markovian Models* (Semester 1, 2009)  
 Tutor for  
 ○ *Stochastic Processes* (Semester 2, 2006 and 2008)  
 ○ *Algorithmic Methods* (Semester 2, 2007)
- 2005 **Department of Mathematics, Université libre de Bruxelles, Belgium**  
 Tutor for  
 ○ *Analysis* (Semester 1, 2005)  
 ○ *Stochastic Processes* (Semester 1, 2005)  
 ○ *General Mathematics* (Semester 1, 2005)
- 2003–2005 **Solvay Business School, Université libre de Bruxelles, Belgium**  
 Tutor for *General Mathematics* (Semester 2, 2003–2005).

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## Publications

### Refereed journal papers

- [38] P. Braunsteins, **S. Hautphenne** and C. Minuesa. Consistent least squares estimation in population-size-dependent branching processes. To appear in *Journal of the American Statistical Association*, **2026**.
- [37] M. He, Y.-b. Chan, **S. Hautphenne**. Approximate Bayesian computation for Markovian binary trees in phylogenetics. *Journal of Theoretical Biology*, 616:112246, **2026**.
- [36] P. Braunsteins, **S. Hautphenne** and J. Kerlidis. Linking Population-Size-Dependent and Controlled Branching Processes. *Stochastic Processes and their Applications*, 181:104556, **2025**.
- [35] **S. Hautphenne** and B. Patch. Birth-and-death Processes in Python: The BirDePy Package. *Journal of Statistical Software*, 111(5), 1–54, **2024**.
- [34] **S. Hautphenne** and M. Li. A fluid approach to total-progeny-dependent birth-and-death processes. *Stochastic Models*, 39(1), 80-103, **2023**.
- [33] D. Bertacchi, P. Braunsteins, **S. Hautphenne**, and F. Zucca. Parameter estimation in branching processes with almost sure extinction. *ALEA, Latin American Journal of Probability and Mathematical Statistics*, 19:311–338, **2022**.
- [32] P. Braunsteins, **S. Hautphenne**, and C. Minuesa. Parameter estimation in branching processes with almost sure extinction. *Bernoulli*, 28(1):33–63, **2022**.
- [31] M. de Gunst, **S. Hautphenne**, M. Mandjes, and B. Solлие. Parameter estimation for multivariate population processes: a saddlepoint approach. *Stochastic Models*, 37(1), 168-196, **2021**.
- [30] A. Davison, **S. Hautphenne**, and A. Kraus. Parameter estimation for discretely-observed linear birth-and-death processes. *Biometrics*, 77(1), 186-196, **2021**.

- [29] P. Braunsteins and **S. Hautphenne**. The probabilities of extinction in a branching random walk on a strip. *Journal of Applied Probability*, 57(3):811–831, **2020**.
- [28] P. Duchon, **S. Hautphenne**, Laurent Lehmann, and N. Salamin. Linking micro and macroevolution in the presence of migration. *Journal of Theoretical Biology*, 486:110087, **2020**.
- [27] **S. Hautphenne** and S. Massei. A low-rank technique for computing the quasi-stationary distribution of subcritical Galton–Watson processes. *SIAM Journal on Matrix Analysis and Applications*, 41(1):29–57, **2020**.
- [26] **S. Hautphenne**, M. Massaro, and K. Turner. Fitting Markovian binary trees using global and individual demographic data. *Theoretical Population Biology*, 128:39–50, **2019**.
- [25] S. Dendievel, **S. Hautphenne**, P. Taylor and G. Latouche. The time-dependent expected reward and deviation matrix of a finite QBD process. *Linear Algebra and its Applications*, 570:61–92, **2019**.
- [24] P. Braunsteins and **S. Hautphenne**. Extinction in lower Hessenberg branching processes with countably many types. *The Annals of Applied Probability*, 29(5):2782–2818, **2019**.
- [23] P. Braunsteins, G. Decrouez, and **S. Hautphenne**. A pathwise approach to the extinction of branching processes with countably many types. *Stochastic Processes and their Applications*, 129(3):713–739, **2019**.
- [22] **S. Hautphenne**, M. Massaro, and P. Taylor. How old is this bird? The age distribution under some phase sampling schemes. *Journal of Mathematical Biology*, 75(6-7):1319–1347, **2017**.
- [21] P. Braunsteins, **S. Hautphenne**, and P. Taylor. The roles of coupling and the deviation matrix in determining the value of capacity in M/M/1/C queues. *Queueing Systems*, 83(1):157–179, **2016**.
- [20] **S. Hautphenne** and G. Latouche. Lyapunov exponents for branching processes in a random environment: The effect of information. *Journal of Statistical Physics*, 163(2):393–410, **2016**.
- [19] **S. Hautphenne** and M. Haviv. The Bias Optimal k in the M/M/1/k Queue: An Application of the Deviation Matrix. *Probability in the Engineering and Informational Sciences*, 30(1):61–78, **2016**.
- [18] **S. Hautphenne**. A structured Markov chain approach to branching processes. *Stochastic Models*, 31(3):403–432, **2015**.
- [17] **S. Hautphenne**, G. Krings, J-C. Delvenne and V. D. Blondel. Sensitivity analysis of a branching process evolving on a network with application in epidemiology. *Journal of Complex Networks*, doi:10.1093/comnet/cnv001, **2015**.
- [16] **S. Hautphenne**, Y. Kerner, Y. Nazarathy and P. Taylor. The intercept term of the asymptotic variance curve for some queueing output processes. *European Journal of Operational Research*, 242(2):455–464, **2015**.
- [15] **S. Hautphenne** and M. Fackrell. An EM algorithm for the model fitting of Markovian binary trees, *Computational Statistics and Data Analysis*, 70:19–34, **2014**.
- [14] **S. Hautphenne**, G. Latouche and G. Nguyen. On the nature of phase-type Poisson distributions. *Annals of Actuarial Science*, 8(1):79–98, **2014**.
- [13] **S. Hautphenne** and M. Telek. Extension of some MAP results to transient MAPs and Markovian binary trees. *Performance Evaluation*, 70(9):607–622, **2013**.
- [12] **S. Hautphenne**, G. Latouche and G. Nguyen. Extinction probabilities of branching processes with countably infinitely many types. *Advances in Applied Probability*, 45(4):1068–1082, **2013**.
- [11] **S. Hautphenne**. Extinction probabilities of supercritical decomposable branching processes. *Journal of Applied Probability*, 49(3):639–651, **2012**.
- [10] **S. Hautphenne** and G. Latouche. The Markovian binary tree applied to demography. *Journal of Mathematical Biology*, 64(7):1109–35, **2012**.
- [9] **S. Hautphenne** and G. Latouche. Markovian trees subject to catastrophes: Transient features and extinction probability. *Stochastic Models*, 27:569–590, **2011**.

- [8] **S. Hautphenne**, G. Latouche, and M.-A. Remiche. Algorithmic approach to the extinction probability of branching processes. *Methodology and Computing in Applied Probability*, 13(1):171–192, **2011**.
- [7] **S. Hautphenne** and B. van Houdt. On the link between Markovian trees and tree-structured Markov chains. *European Journal of Operational Research*, 201(3):791–798, **2010**.
- [6] **S. Hautphenne**, G. Latouche, and M.-A. Remiche. Newton’s iteration for the extinction probability of a Markovian binary tree. *Linear Algebra and its Applications*, 428(11-12):2791–2804, **2008**.

#### Book chapter

- [5] **S. Hautphenne**, K. Leibnitz, and M.-A. Remiche. Modeling of P2P file sharing with a level-dependent QBD process. *Advances in Queueing Theory and Network Applications*, Yue, Wuyi; Takahashi, Yutaka; Takagi, Hideaki (Eds.), Springer, 247–263, **2009**.

#### Refereed conference papers

- [4] **S. Hautphenne** and B. Patch. Simulating population-size-dependent birth-and-death processes using CUDA and piecewise approximations. *Proceedings of the International Congress on Modelling and Simulation*, **2021**.
- [3] **S. Hautphenne**, G. Latouche and G. Nguyen. Markovian trees subject to catastrophes: Would they survive forever? *Matrix-Analytic Methods in Stochastic Models*, p. 87–106. Springer New York, **2013**.
- [2] **S. Hautphenne**, G. Latouche, and M.-A. Remiche. Transient features for Markovian binary trees. *Proceedings of the Fourth International ICST Conference on Performance Evaluation Methodologies and Tools*, Article No. 18, **2009**.
- [1] **S. Hautphenne**, K. Leibnitz, and M.-A. Remiche. Extinction probability in Peer-to-Peer file diffusion. *ACM SIGMETRICS Performance Evaluation Review*, 34(2):3–4, **2006**.

#### PhD thesis

- **S. Hautphenne**. An algorithmic look at phase-controlled branching processes. *PhD thesis*, Departement d’informatique, University of Brussels, **2009**.

#### Papers submitted for publication

- **S. Hautphenne** and E. Horton. Consistent estimation in subcritical birth-and-death processes. arXiv:2511.01153, **2025**.
- S. Vande Velde, C. Engelbeen, I. S. Pagani, D. M. Ross, **S. Hautphenne**. Statistical inference of the cellular origin of chronic myeloid leukemia using a discrete-parameter ABC–PMC framework. bioRxiv DOI 10.1101/2025.10.17.683025, **2025**.
- P. Braunsteins, **S. Hautphenne**, and J. Kerlidis. Existence and non-existence of consistent estimators in supercritical controlled branching processes. arXiv:2504.03389, **2025**.
- A. Asanjarani, **S. Hautphenne**, and Y. Nazarathy. Moment Properties for Certain Classes of Structured Markovian Arrival Processes. **2025**.
- D. P. J. Germano, A. E. Zarebski, **S. Hautphenne**, R. Moss, J. A. Flegg, M. B. Flegg. A hybrid framework for compartmental models enabling simulation-based inference. arXiv:2405.13239v2, **2025**.

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#### Invited talks

- [41] Linking Population-Size-Dependent and Controlled Branching Processes. *Bernoulli-Ims 11th World Congress in Probability and Statistics*, August **2024**, Bochum, Germany. **Invited by Dr Carmen Minuesa (University of Extremadura)**.
- [40] Consistent estimation in subcritical birth-and-death processes. *IMS APRM 2024*, January **2024**, Melbourne, Australia. **Invited by Dr Peter Braunsteins (UNSW)**.

- [39] Linking Population-Size-Dependent and Controlled Branching Processes. *The conference Branching Processes and Applications*, May **2023**, Angers, France. **Invited by Prof Loic Chaumont (University of Angers)**.
- [38] The probabilities of extinction in a branching random walk. *AustMS*, December **2022**, UNSW, Sydney, Australia. **Invited by A/Prof Andrea Collevocchio (Monash University) and A/Prof Andriy Olenko (University of La Trobe)**.
- [37] The probabilities of extinction in a branching random walk. *University of Extremadura*, September **2022**, Badajoz, Spain. **Invited by Dr Carmen Minuesa (University of Extremadura)**.
- [36] The probabilities of extinction in a branching random walk. *Stochastic Network Conference*, June **2022**, Cornell University, Ithaca, United States. **Invited by Prof. Jim Dai (Cornell University)**.
- [35] Parameter estimation in branching processes with almost sure extinction. *Research Webinar in Statistics, University of Geneva*, April **2021**, online. **Invited by A/Prof. Sebastian Engelke (University of Geneva)**.
- [34] Weighted least squares estimation in population-size-dependent branching processes. *The 5th International Workshop on Branching Processes and their Applications*, April **2021**, online. **Invited by Prof. Inés del Puerto (University of Extremadura)**.
- [33] Inference in Population-Size-Dependent Branching Processes. *Minisymposium on Stochastic Population Dynamics*, August **2020**, online. **Invited by Prof. Peter Jagers (University of Gothenburg and Chalmers University of Technology)**.
- [32] Inference in Population-Size-Dependent Branching Processes. *Bernoulli-IMS One World Symposium*, August **2020**, online. **Invited by A/Prof. Simon Harris (University of Auckland)**.
- [31] Inference in Population-Size-Dependent Branching Processes. *Seventh Wellington Workshop in Probability and Mathematical Statistics*, December **2019**, Wellington, New Zealand. **Invited by Prof. Mark Holmes (UoM)**.
- [30] An introduction to Markovian binary trees and their applications. *The Eleventh UTAS Theoretical Phylogenetics Meeting*, November **2019**, Hobart, Australia. **Keynote speaker – Invited by A/Prof. Malgorzata O’Reilly (University of Tasmania)**.
- [29] The probabilities of extinction in a branching random walk on a strip. *The 5th Workshop on Branching Processes and Related Topics*, June **2019**, Beijing Normal University, China. **Invited by Profs. Romain Abraham (University of Orlean), Andreas Kyprianou (University of Bath) and Zenghu Li (Beijing Normal University)**.
- [28] The Markovian binary tree applied to demography and conservation biology. *Colloquium at Macquarie University*, May **2019**, Sydney, Australia. **Invited by Dr Lyndon Koens**.
- [27] Parameter estimation for discretely-observed linear birth-and-death processes. *The 40th Conference on Stochastic Processes and their Applications*, June **2018**, Gothenburg, Sweden. **Invited by Prof. Peter Jagers (University of Gothenburg and Chalmers University of Technology)**.
- [26] The probabilities of extinction in a branching random walk on a strip. *Università di Milano-Bicocca*, May **2018**, Milan, Italy. **Invited by Prof. Daniela Bertacchi**.
- [25] Extinction in block lower Hessenberg branching processes with countably many types. *4th Workshop on Branching Processes and their Applications*, April **2018**, Badajoz, Spain. **Invited by Prof. Inés del Puerto (University of Extremadura)**.
- [24] The Markovian binary tree applied to demography and conservation biology. *Colloquium at the University of Adelaide*, October **2017**, Adelaide, Australia. **Invited by Dr Giang Nguyen**.
- [23] The Markovian binary tree applied to the conservation of an endangered bird species. *Seminar in the Institute of Statistics at the University of Neuchatel*, September **2017**, Neuchatel, Switzerland. **Invited by Dr Matthieu Wilhelm**.

- [22] Parameter estimation for linear birth-and-death processes based on population data counts. *The 39th Conference on Stochastic Processes and their Applications*, July 2017, Moscow, Russia. **Invited by Profs. Inés del Puerto and Miguel Gonzalez (University of Extremadura).**
- [21] The Markovian binary tree applied to the conservation of an endangered bird species. *The 39th Conference on Stochastic Processes and their Applications*, July 2017, Moscow, Russia. **Invited by Prof. Peter Jagers (University of Gothenburg and Chalmers University of Technology).**
- [20] On the extinction of branching processes with countably many types. *Probability: from East to West*, July 2017, Prato, Italy. **Invited by Prof. Kais Hamza (Monash University).**
- [19] The extinction probability of Markovian binary trees. *EPFL*, June 2017, Lausanne, Switzerland. **Invited by Prof. Daniel Kressner.**
- [18] The Markovian binary tree applied to demography and conservation biology. *Université Pierre et Marie Curie*, May 2017, Paris, France. **Invited by Prof. Nicole El Karoui.**
- [17] A pathwise iterative approach to the extinction of branching processes with countably many types. *Chalmers University of Technology*, September 2016, Gothenburg, Sweden. **Invited by Prof. Peter Jagers.**
- [16] Fitting Markovian binary trees using global and individual population data. *2nd Lausanne CompBio Meeting*, September 2016, Lausanne, Switzerland. **Invited by Prof. Nicolas Salamin**
- [15] Markovian binary trees: Definition, computation and parameter estimation. *University of Tasmania*, Nov. 2015, Hobart, Australia. **Invited by Dr Malgorzata O'Reilly.**
- [14] An introduction to branching processes. *University of Tasmania*, Nov. 2015, Hobart, Australia. **Invited by Dr Malgorzata O'Reilly.**
- [13] An algorithmic approach to branching processes with infinitely many types. *National Research University*, Oct. 2015, Moscow, Russia. **Invited by Asst. Prof. Geoffrey Decrouez.**
- [12] An algorithmic approach to branching processes with infinitely many types. *Université de Franche-Comté*, Sept. 2015, Besancon, France. **Invited by Dr Romain Biard.**
- [11] Sensitivity analysis of epidemic networks. *The 18th INFORMS Applied Probability Conference*, July 2015, Istanbul, Turkey. **Invited by Prof. Antonio Gomez-Corral (Universidad Complutense de Madrid).**
- [10] Lyapunov exponent for multitype branching processes in a random environment. *The University of Queensland*, Oct. 2014, Brisbane, Australia. **Invited by Dr Yoni Nazarathy.**
- [9] An Expectation-maximization algorithm for the model fitting of Markovian binary trees. *The 22nd International Workshop on Matrices and Statistics*, Aug. 2013, Toronto, Canada. **Invited by Prof. Jeff Hunter (Auckland University of Technology).**
- [8] Some problems on the extinction probability of multitype branching processes. *Monash University*, April 2013, Melbourne, Australia. **Invited by Prof. Kais Hamza.**
- [7] Algorithmic methods for branching processes. *YEQT 2012*, Nov. 2012, Eindhoven, Netherlands. **Invited by Dr Stella Kapodistria and Asst. Prof. Jacques Resing (Eindhoven University of Technology).**
- [6] Sensitivity analysis of epidemic networks. *Canterbury University*, Aug. 2012, Christchurch, New Zealand. **Invited by Dr Raazesh Sainudiin.**
- [5] Sensitivity analysis of epidemic networks. *Stochastic Networks Workshop*, Apr. 2012, Auckland, New Zealand. **Invited by A/Prof. Ilze Ziedins**
- [4] An EM algorithm for the model fitting of Markovian binary trees. *Swinburne University*, Nov. 2011, Melbourne, Australia. **Invited by Dr Yoni Nazarathy.**

- [3] Algorithmic approach of branching processes and applications in parasitology and demography. *Symposium of the Institute of Intelligent Information and Communications Technology (IICT) of Konan University*, Dec. **2008**, Kobe, Japan. **Invited by Dr Kenji Leibnitz.**
- [2] Algorithmic approach of branching processes and application in demography. *Université Catholique de Louvain*, Nov. **2008**, Louvain-la-Neuve, Belgium. **Invited by Prof. Paul Van Dooren.**
- [1] Approche algorithmique des processus de branchement et application en démographie. *Universités Paris 6 et 7*, Oct. **2008**, Paris, France. **Invited by Dr Vincent Bansaye.**

## Students supervision

**5 PhD students** (Peter Braunsteins, Jan. 2015–Apr. 2018, UoM; James Kerlidis, Feb 2023 – present; Thisaakhya Jayakody, May 2024 – present; Jacob Cumming, Nov. 2024 – present; Mingqi He, Jan. 2025 – present.)

**10 Masters students** (Wengfei Shi, Mar. 2019–Jun. 2020, UoM; Mingqi He, Jul. 2020–Nov. 2021, UoM; Chenyang Zhuang, Jul. 2021–Oct. 2022, UoM; James Kerlidis, Jan. 2022–Oct. 2022, UoM; Yuyi Fang, Mar. 2022–Jun. 2023, UoM; Bas Haver, Oct. 2020–Nov. 2022, University of Amsterdam; Chun Hei Chan, Jul. 2022–Oct. 2023, UoM; Danielle Jayanthi, Aug. 2023–Nov. 2024, UoM; Shreyas Vijay Yadav, Feb. 2024–May 2025, UoM; Jinlan Tang, Jul. 2025 –present)

**2 ‘Semester Master Project’ students** (Adrien de Castro, Sep.–Dec. 2015, EPFL; Amaury Jammayrac, Feb.–Jun. 2017, EPFL)

**2 AMSI Vacation Research students** (Jiangrong Ouyang, Jan. 2018, UoM; Minyuan Li, Jan. 2022, UoM)

**9 Vacation Scholar students** (Alan Guo, Jan. 2018, UoM; Vivienne Bear, Jan. 2019, UoM; Mingqi He, Jan. 2020, UoM; Minyuan Li and Phong Nguyen, Dec. 2020, UoM; Charles Breen and Daniel Freidgeim, Jan. 2022, UoM; Ying Tan and Lyn Zeng, Jan. 2023, UoM)

## Leadership and service

### Coordination roles

- 2020–present Graduate Research Coordinator in the School of M&S, UoM.
- 2017–2020 ARC Grant Coordinator in the School of M&S, UoM.

### Membership of committees

- 2025–present School of M&S Visiting Scholars Committee, UoM.
- 2021–present Faculty of Science Graduate Research Ranking Committee, UoM.
- 2020–present School of M&S Management Committee, UoM.
- 2020–present School of M&S Strategic Scholarships Committee, UoM.
- 2019–present Faculty of Science Course Academic Progress Committee, UoM.
- 2024 2025 ANZIAM Medal Committee.
- 2021–2024 School of M&S Chancellor’s Prize and Dean’s Honours Award Committee, UoM.
- 2021–2024 School of M&S Research & Industry Committee, UoM.
- 2020–2024 Faculty of Science Graduate Research Stipend Extension Committee, UoM.
- 2021 School of M&S John and Allan Gilmour Research Award Committee, UoM.
- 2019–2021 School of M&S Harcourt-Doig and Wurru-Wurru Research Fellowships Committee, UoM.
- 2019, 2020 School of M&S Helen Freeman Scholarship Committee, UoM.
- 2018–present School of M&S Postgraduate Programs Committee, UoM.

### Editorial activities

- 2022–present On the editorial board of *Statistical Inference for Stochastic Processes*.
- 2020–present On the editorial board of *The Applied Probability Trust* (includes *Journal of Applied Probability* and *Advances in Applied Probability*).

2017–present On the editorial board of *Stochastic Models*.

2018–2020 On the editorial board of *PLOS ONE*.

### Organisation of scientific events

- 2025 *MATRIX program “Probabilistic models in evolutionary biology and game theory”* – Program co-organiser
- 2024 *The 6th International Workshop on Branching Processes and their Applications* – Member of the scientific program committee
- 2024 *Stochastic Networks conference* – Member of the scientific program committee
- 2023 *The 43rd Conference on Stochastic Processes and their Applications* – Organiser of two invited sessions
- 2019 *The 20th INFORMS Applied Probability Society Conference* – Session Organiser
- 2019 *Queues, Modelling, and Markov Chains: A Workshop Honouring Prof. Peter Taylor* – Organising Committee, Co-chair
- 2019 *The 10th International Conference on Matrix-Analytic Methods for Stochastic Models* – Program Committee, Co-chair
- 2017 *The 39th Conference on Stochastic Processes and their Applications* – Session Organiser
- 2017 *The 11th EAI International Conference on Performance Evaluation Methodologies and Tools* – Publicity co-chair
- 2014 *Melbourne Workshop on Matrix Analytic Methods* — Organising Committee, Co-chair
- 2012 *When Probability Meets Computation: A Workshop Honouring Prof. Guy Latouche* – Organising Committee, Co-chair
- 2010 *Performance 2010* – Proceedings Chair

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### Languages

English (fluent), French (mother tongue), Dutch (basic).