

# Amélie Trotignon

PhD Student in Mathematics

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## Education

- 2016–2019 **PhD - Walks with big steps in cones : combinatorial and probabilistic aspects**, *Simon Fraser University and Université François-Rabelais*, Burnaby and Tours.  
Under the supervision of Marni Mishna, professor at Simon Fraser University in Burnaby and Kilian Raschel, CNRS researcher at the Université de Tours.  
Defense planed in Fall 2019
- 2016 **Agrégation de Mathématiques - Mathematics French competition to teach in high school.**
- 2016 **Master de mathématiques approfondies - Master's degree in Mathematics**, *Université François-Rabelais*, Tours.  
Mention Bien - With high honors
- 2014 **Licence de mathématiques - Bachelor's degree in Mathematics**, *Université François-Rabelais*, Tours.  
Mention Très Bien - With highest honors

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## Award

- 2018 Spring **Graduate Fellowship**, *Simon Fraser University*, Mathematics Department.  
\$6500

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## Dissertations

- 2016 **Writing of a dissertation "Discrete harmonic functions in the quarter plane and the three-quarter plane"**, *Université François-Rabelais*, Tours.  
Under the supervision of Kilian Raschel, CNRS researcher at the Université de Tours
- 2015 **Writing of a dissertation "Walks with small steps in the quarter plane"**, *Université François-Rabelais*, Tours.  
Under the supervision of Kilian Raschel, CNRS researcher at the Université de Tours
- 2014 **Writing of a dissertation "Galton-Watson process"**, *Université François Rabelais*, Tours.  
Under the supervision of Kilian Raschel, CNRS researcher at the Université de Tours

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## Publications

### Preprints

- 2019 Jun. **Discrete harmonic functions in the three-quarter plane.**  
26 pages, arXiv:1906.08082
- 2018 Jul. **On walks avoiding a quadrant**, *with Kilian Raschel.*  
27 pages, arXiv:1807.08610
- 2018 Apr. **3D positive lattice walks and spherical triangles**, *with Beniamin Bogosel, Vincent Perrollaz and Kilian Raschel.*  
41 pages, arXiv:1804.06245

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## Conferences attended and talks

### Invited Conference Talks

- 2019 Mar. **Probability PhD student seminar**, *Université de Montpellier*, Montpellier.  
14-17 Talk : Marches dans trois quarts de plan

- 2019 Feb. **Journées de combinatoire de Bordeaux**, *LaBRI*, Bordeaux.  
11-13 Talk : Walks in the three quarter plane.
- 2018 Nov. 15 **PhD student day of IDP**, *Université d'Orléans*, Orléans.  
Talk : Marches dans les trois quarts de plan : une approche analytique
- 2018 Mar. 31 **Pacific Northwest Combinatorics Day**, *University of Washington*, Seattle.  
Talk : Simple Walks in the Quadrant : An Analytic Approach
- 2017 Sep. **Lattice walks at the Interface of Algebra, Analysis and Combinatorics**, *Banff International Research Station*, Banff.  
17-22  
Talk : Simple Walks in the Three Quarter Plane

### Conference Talks

- 2019 May **Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM)**,  
27-31 *Simon Fraser University*, Vancouver.  
Talk : Walks avoiding a quadrant
- 2018 Nov. **18e Forum des Jeunes Mathématiciennes et Mathématiciens (Forum Young Mathematicians)**, Orléans.  
28-30  
Talk : Marches aléatoires discrètes et biologie des populations
- 2018 May **Young Probabilists and Statisticians 2018**, Oléron.  
14-18  
Talk : Walks Avoiding a Quadrant : An Analytic Approach
- 2017 Aug. 15 **SFU Symposium on Mathematics & Computation**, *Simon Fraser University*, Burnaby.  
Poster : Simple Walks Avoiding a Quadrant

### Seminar Talks

- 2019 Mar. 26 **Combinatorics and number theory seminar**, *Institut Camille Jordan Université Lyon 1*, Lyon.  
Talk : Marches dans les trois quarts de plan
- 2018 Jun. 5 **Analysis Seminar**, *IRMA - Université de Strasbourg*, Strasbourg.  
Talk : Marches dans les trois quarts de plan : une approche analytique
- 2018 Apr. 12 **Graduate Seminar (Grad Social)**, *Simon Fraser University*, Burnaby.  
Talk : Walks Avoiding a Quadrant
- 2017 Sep. 12 **Discrete Math Seminar**, *Simon Fraser University*, Burnaby.  
Talk : Simple Walks in the Three Quarter Plane
- 2017 Apr. 28 **PhD Student Seminar**, *Université François-Rabelais*, Tours.  
Talk : Marches dans le quart de plan

### Conference and Workshop Attendance

- 2019 May **Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM)**,  
- 27-31 *Simon Fraser University*, Vancouver.  
Student volunteer support to help the organization
- 2018 Jul. **48th Probability Summer School**, Saint-Flour.  
8-20
- 2018 Jun. **Probabilities Days**, *Université de Tours*, Tours.  
25-29 Organization
- 2018 May 28- **Algebra, Arithmetic and Combinatorics of Differential and Difference Equations**, *CIRM*, Marseille.  
June 1
- 2017 Jun. **PIMS-CRM Summer school in probability**, *University of British Columbia*,  
5-30 Vancouver.
- 2016 Dec. **Tours à grands pas**, *Université François-Rabelais*, Tours.  
14-16

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### Teaching

- 2019 **Teaching Assistant in the Calculus Workshop**, *Simon Fraser University*, Burnaby.  
Summer MATH 150-152-251

- 2019 Spring **Exercices sessions teacher in Mathematics - Chargée de TD en Mathématiques**, *Université François-Rabelais*, Tours.  
First Year Students, parcours Réussir Ma Licence en Quatre Ans
- 2018 Fall **Exercices sessions teacher in Statistics - Chargée de TD en Statistiques**, *Université François-Rabelais*, Tours.  
Second Year Students in Biology
- 2018 Spring **Teaching Assistant in the Calculus Workshop**, *Simon Fraser University*, Burnaby.  
MATH 150-151-152-251
- 2017 Fall **Sessional Instructor in Calculus - Cours magistral en Calculus**, *Simon Fraser University*, Burnaby.  
MATH 150 (250 students)
- 2017 **30h International Teaching Assistants Seminar**, *Simon Fraser University*,  
Summer Burnaby.
- 2017 Spring **Exercices sessions teacher in Analysis - Chargée de TD en Analyse**, *Université François-Rabelais*, Tours.  
First Year Students in Mathematics
- 2016 Fall **Exercices sessions teacher in Statistics - Chargée de TD en Statistiques**, *Université François-Rabelais*, Tours.  
Second Year Students in Biology
- 2013 Fall **Tutoring 1<sup>st</sup> year students**, *Université François-Rabelais*, Tours.

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## Skills

- Computing Latex, Scilab, Maple, Notion of R
- Language French (native language), English (fluent)  
Basic knowledge of German