

Marielle Simon

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Married with 1 child (born in 2018). The list of publications is available on my webpage.

Current position

from 2016 **JUNIOR RESEARCHER (CHARGÉE DE RECHERCHES) AT INRIA, Lille, France**

Past positions and Education

- 2019 **HABILITATION DIPLOMA, Université de Lille, France**
• TITLE: Microscopic derivation of degenerated diffusion phenomena.
- 2014-2015 **POST-DOC “CAPES BOLSA DE EXCELÊNCIA”, P.U.C Rio de Janeiro, Brazil**
- 2011-2014 **PHD, École Normale Supérieure de Lyon, France**
• DIRECTORS: Cédric Bernardin (Nice), Stefano Olla (Paris).
• TITLE: Diffusion problems for perturbed harmonic chains.
- 2011 **“AGRÉGATION DE MATHÉMATIQUES”, passed with rank 3**

Leadership and awards

- 2019 **PEDR (PRIME D'ENCADREMENT DOCTORAL ET DE RECHERCHE), during 4 years**
- 2018 **JUNIOR SCIENTIFIC LEADER OF THE SIMONS SEMESTER “PDES/SPDES AND FUNCTIONAL INEQUALITIES”, IMPAN, Warsaw, Pologne (1 MONTH)**
- 2013 **FOR WOMEN IN SCIENCE, L'Oréal France-UNESCO program for PhD students**

Coordination of research projects and grants

- 2020-2024 **ANR JCJC (FRENCH NATIONAL GRANT FOR YOUNG RESEARCHERS), 132 000 €**
• TITLE: Microscopic derivation of moving interfaces
- 2019-2020 **FAPESP-CNRS (FRANCE-BRAZIL), 20 000 €**
• TITLE: Approximation of partial differential equations by stochastic particle systems with weak and moderate interaction
• In partnership with C. OLIVEIRA (Unicamp, Campinas, Brazil)
- 2016 **PEPS CNRS JEUNES CHERCHEURS, 8000 €**
• TITLE: Mathematical derivation of the porous medium equation

Responsibilities

- 2018 **MEMBER OF THE JURY OF THE PHD THESIS OF J. ROUSSEL, École des Ponts (Marne-la-Vallée, France)**
- TITLE: Theoretical and numerical analysis of non-reversible dynamics in computational statistical physics
- 2015 - 2019 **MEMBER OF THE JURY OF THE FRENCH NATIONAL COMPETITION “AGRÉGATION DE MATHÉMATIQUES”**

Supervision

- 2020 **SUPERVISION OF A SECOND-YEAR MASTER THESIS (4 MONTHS), student from É.N.S. Lyon**
- 2013 **SUPERVISION OF A FIRST-YEAR MASTER THESIS (6 WEEKS), student from É.N.S. Rennes**

Teaching

- 2020 **TEACHING ASSISTANT FOR FIRST YEAR STUDENTS ESIREM, Dijon**
- TITLE: Analysis
 - DURATION: 28HTD
- Jan 2020 **MASTER CLASS IN PROBABILITY, IRMA, Université de Strasbourg**
- TITLE: Random walks on the integer line
 - DURATION: 9HTD
- 2019-2020 **LECTURE FOR FIRST YEAR STUDENTS OF THE MASTER “DATA SCIENCE”, École Centrale and Université de Lille**
- TITLE: Markov Chains and Applications
 - DURATION: 24HTD
- 2018-2019 **LECTURE FOR SECOND YEAR STUDENTS OF THE MASTER “RESEARCH IN APPLIED MATHS”, Université de Lille**
- TITLE: Introduction to Statistical Physics
 - DURATION: 56HTD
- 2015 **LECTURE AT THE SUMMER SCHOOL “SOVREMENNAYA MATEMATIKA”, Dubna, Russia**
- TITLE: Introduction to Statistical Mechanics
 - DURATION: 8HTD
- 2014-2015 **LECTURE FOR FIRST YEAR MASTER STUDENTS IN MATHEMATICS, P.U.C. Rio de Janeiro, Brazil**
- TITLE: Teoria da Probabilidade
 - DURATION : 32HTD

- 2011-2014 **TEACHING HOURS DURING THE PHD PROGRAM, *É.N.S. de Lyon***
- MATERIALS: Integration Theory, Probability Theory, Stochastic Processes, Statistics, Practice Sessions using MATLAB.
 - DURATION: 60HTD per year
- 2010-2014 **WEEKLY ORAL EXAMINATIONS IN MATHEMATICS IN POST SECONDARY PREPARATORY**
2016-2017 **CLASSES, *Lyon and Dijon***

Popularization of mathematics

- 2019 **POPULARIZATION SEMINAR FOR THE ANNUAL EVENT “FÊTE DE LA SCIENCE”, *Lycée Carnot, Dijon***
- 2018-2019 **PARTICIPATION IN THE POPULARIZATION PROGRAM “CHERCHEURS ITINÉRANTS”, *Highschools and middle schools in Lille and surroundings***
- 2016 - 2017 **COACHING OF A SMALL GROUP OF MIDDLE SCHOOLS STUDENTS FOR THE COMPETITION “C’GÉNIAL”, *Villeneuve d’Ascq***
- 2016 **POPULARIZATION SEMINAR FOR THE ANNUAL EVENT “SEMAINE DES MATHÉMATIQUES”, *E.S.P.E. Lille Nord de France***
- 2011-2014 **PARTICIPATION TO THE POPULARIZATION PROGRAM MATH@LYON, *Highschools and middle schools in Lyon and surroundings***

Selection of invited seminars

- 2019 **Interactions PDE/Probability: particle systems, hyperbolic conservation laws, *CIRM, Marseille, France***
- 2019 **1st SFB International Workshop “Taming Complexity in Partial Differential Systems”, *University of Vienna, Austria***
- 2018 **Particle Systems and PDEs, 7th edition, *Palermo, Italy***
- 2018 **Workshop of the Simons Semester “PDE/SPDEs, Functional Inequalities”, *Bedlewo Center, Poznan, Poland***
- 2016 **Oberwolfach Workshop: “Large scale stochastic dynamics”, *Oberfolwach, Germany***
- 2016 **Workshop in Stochastic Analysis, *CAMPINAS University, Sao Paolo, Brazil***
- 2016 **YEP XIII: Large Deviations for Interacting Particle Systems and Partial Differential Equations, *EURANDOM, Eindhoven, Netherlands***
- 2015 **Non-equilibrium statistical physics, *ICTS, Bangalore, India***