Antoine Marchina

A.T.E.R. (research and teaching assistant)

Université de Paris-Est Marne-la-Vallée
LAMA UMR 8050
5 boulevard Descartes
77454 Marne-la-Vallée Cedex 2
✉ antoine.marchina@gmail.com
🖥 amarchina.perso.math.cnrs.fr

Current position

2017–2019   **A.T.E.R.**, *Université Paris-Est Marne-la-Vallée (UPEM) – Laboratoire d'Analyse et de Mathématiques Appliquées (LAMA)*, Champs-sur-Marne.

Education

2014–2017   **Ph.D. in Mathematics**, *Université de Versailles Saint-Quentin-en-Yvelines (UVSQ) – Laboratoire de Mathématiques de Versailles (LMV)*, Versailles.

Ph.D. advisor: **Emmanuel Rio**

Title: Concentration inequalities for functions of independent random variables

Defended on the 8th of December 2017

| *Referees:* | **Radosław Adamczak** | University of Warsaw | |
| | **Yannick Baraud** | Université de Nice Sophia Antipolis | |

Jury:	**Yannick Baraud**	Université de Nice Sophia Antipolis	Referee
	Bernard Bercu	Université de Bordeaux	President
	Catherine Donati-Martin	Université de Versailles	Member
	Claire Lacour	Université Paris-Sud	Member
	Emmanuel Rio	Université de Versailles	Ph.D. advisor
	Paul-Marie Samson	Université Paris-Est Marne-la-Vallée	Member

2013–2014   **Master's Degree in Probability and Statistics**, *Université Paris-Sud*, Orsay.

Master thesis supervised by **Emmanuel Rio** (LMV).

2013   **Agrégation of mathematics**, *Université Paris-Sud*, Orsay.

(french competitive exam to teach in high schools)

2008–2011   **Bachelor's Degree in mathematics**, *UVSQ*, Versailles.

Research interests

○ Concentration inequalities, deviation inequalities
○ Empirical processes
○ Nonparametric estimation
○ Model selection
○ Martingales
○ Markov chains

Papers

Publications

[3] **About the rate function in concentration inequalities for suprema of bounded empirical processes**.
Stochastic Processes and their Applications, to appear, 2019.

[2] **Comparison inequalities for suprema of bounded empirical processes**.
Electronic Communications in Probability, Vol. 23, n° 33, 1-7, 2018.

[1] **Concentration inequalities for separately convex functions**.
Bernoulli, Vol. 24 4A, 2906-2933, 2018.

Preprints

2018 **An exponential inequality for suprema of empirical processes with heavy tails on the left**.
Submitted.

2018 **Left deviation inequalities for suprema of empirical processes**.
Preprint on HAL <hal-01875795>.

2017 **Concentration inequalities for suprema of unbounded empirical processes**.
Preprint on HAL <hal-01545101>.

Scientific activities

Talks

11/03/2019 **PhD students seminar**, *Sorbonne Universite – LPSM*, Paris.
Concentration inequalities for functions of independent random variables

15/01/2019 **Sequel Seminar**, *Inria Lille*, Lille.
Concentration inequalities for unbounded empirical processes

13/03/2018 **Probability and Statistics seminar**, *UNS – LJAD*, Nice.
Inégalités de concentration pour des suprema de processus empiriques non bornés

21/11/2017 **Probability and Statistics seminar**, *UVSQ – LMV*, Versailles.
À propos de la fonction de taux dans les inégalités de concentration pour les suprema de processus empiriques bornés

10/05/2016 **Probability and Statistics seminar**, *UVSQ – LMV*, Versailles.
Inégalités de concentration pour des fonctions séparément convexes de variables aléatoires indépendantes

20/04/2016 **Colloque Jeunes Probabilistes et Statisticiens**, Les Houches.
Inégalités de concentration pour des fonctions séparément convexes de variables aléatoires indépendantes

19/11/2015 **PhD students seminar**, *UVSQ – LMV*, Versailles.
Inégalités de concentration

Conferences

7 mars 2019 **3rd Nonstationary Day**, *IHP*, Paris.

13 feb 2019 **2nd Nonstationary Day**, *ESSEC*, Paris La Défense.

12 dec 2018 **1st Nonstationary Day**, *Télécom Paristech*, Paris.

29–31 août 2018 **Journée MAS 2018**, *Université de Bourgogne*, Dijon.

25–29 juin 2018 **Information Theory: Inequalities, Distances, and Analysis**, *Institut Henri Poincaré*, Paris.

18–22 april 2016 **Colloque Jeunes Probabilistes et Statisticiens**, Les Houches.

06–17 july 2015 **45th Probability Summer School of Saint-Flour**, Saint-Flour.

11–13 may 2015 **Conference Paul Doukhan – Dependence, Limit theorems and Applications**, *Institut Henri Poincaré*, Paris.

30 jan 2015 **3rd event YSP (Young Statisticians and Probabilists)**, *Institut Henri Poincaré*, Paris.

8–10 oct 2014 **From martingales to dynamical systems**, *Université Paris-Est Marne-la-Vallée*, Champs-sur-Marne.

Responsabilities

2015–2016 **Organizer of the PhD students seminar of the Laboratoire de Mathématiques de Versailles**, Versailles.

2015–2016 **Alternate member of the Hadamard Doctoral School of Mathematics (EDMH) council**.

Teaching

2017–2018 **Teaching assistant (A.T.E.R.) at Université Paris-Est Marne-la-Vallée**.
Statistics, 3rd year students.
Methodology of mathematics, 1st year students.
Analysis, 1st year students.

2014–2017 **Teaching assistant (Ph.D. student) at Université de Versailles Saint-Quentin**.
Probability, 2nd year students.
Probability and statistics, 1st year students.

Additionnal skills

Languages **Français**, **Anglais**

Computer skills **LATEX**, **Matlab**, **R**