



Fabio Coppini

Born in Prato (PO), Italy, on the 24th of March 1992.

email: fabio.coppini@univ-paris-diderot.fr
phone: +33 (0)7 63 40 60 98
pa: Université Paris Diderot, Bâtiment Sophie Germain
75205 Paris Cedex 13
office: 5033
website: <http://pensierolibero.me/mathematics/>

Academic studies

- 2017** - Master in Mathematics in Università degli Studi di Firenze, 110/110 cum lauda.
Thesis: *Synchronisation Phenomena and Random Graphs*.
- 2014** - Bachelor in Mathematics in Università degli Studi di Firenze, 110/110 cum lauda.
Thesis: *Vibrating Strings and Irrational Numbers*.
- 2011** - High School diploma: Liceo Scientifico Nicolò Copernico di Prato, 100/100 cum lauda.
Thesis: *The language of knowledge*.

Mathematics

September 2018-August 2019 - Organiser of GTT (Groupe de Travail des Thésards) in LPSM with G. Conchon-Kerjan, B. Dembin, A. Lefebvre, N. Meyer, O. Safsafi, T. Touati:
<https://www.lpsm.paris/agenda/seminaires-gdt/gtt/>

September 2017-Today - PhD in Applied Mathematics, Paris Diderot P7, Paris
Marie Skłodowska-Curie Fellowship: <http://www.cofund-inspire.eu/>
Supervisor: Giambattista Giacomin <https://www.lpsm.paris/semoa/users/giacomin/index>
Subject: *Interacting Oscillators on Random Graphs*

Research interests

My research area covers:

- Relationship between mean field models (continuous and discrete) and models defined on (dense) random graphs;
- Weakly Interacting Particle systems: studying the long-time behaviour of a population described by differential equations (possibly on random graphs);
- Continuum limit of interacting particle systems on sparse random graphs;
- Large Deviations for Interacting Particle systems.

Articles/Preprints

5 Aug 2019 | Preprint *Long time dynamics for interacting oscillators on dense graphs*

<https://arxiv.org/abs/1908.01520>

31 Jul 2018 | *A Law of Large Numbers and Large Deviations for interacting diffusions on Erdős-Rényi graphs* with Helge Dietert and Giambattista Giacomin (to appear in SD)

<https://arxiv.org/abs/1807.10921>

Given Talks and Posters

6/2019 | Talk - *Les Probabilités de Demain* ([video](#))

4/2019 | Poster section - *Equilibrium and Non-equilibrium Statistical Mechanics A conference in honor of François Dunlop*, Villa Finaly (Florence)

12/2018 | Seminar of PhD students: *Weakly Interacting Particle Systems: a crash course* LPSM Paris 7 (FRANCE) | Language: English | Role: Speaker | Main subject: LLN, CLT and LDP for systems of WIPs defined by differential equations.

12/2016 | Seminar of PhD students: *Synchronisation Phenomena on Random Graphs*. LPSM (ex LPMA) Paris 7 (FRANCE) | Language: French | Role: Speaker | Main subject: Kuramoto model and the XY model.

Attended Conferences

2019

Random Graphs and Complex Networks: Structure and Function | Bocconi Summer School, 8-19 July, Como

High dimensional probability and algorithms | 1-5 July, PSL, Paris

Walking through the Brownian zoo | 3-7 June, Paris

Semaine d'Études Maths Entreprises SEME | 20-24 May, LMB, Besançon

Equilibrium and Non-equilibrium Statistical Mechanics | 8-10 April, Villa Finaly, Florence

Mathematics and culture | 29-31 March, Istituto Veneto di Scienze, Lettere ed Arti, Venice

2018

A spring day in Probability and Statistical Physics | 25 May, Università di Firenze

Spin Systems: Discrete and Continuous | Spring School, 19-23 March, TU Darmstadt

Teaching Experience

As teaching assistant:

2017 - L2 Math Info - Algèbre fondamentales (Université Paris 7)

2018 - L3 Math - Probabilités et Simulations Proba (Université Paris 7)

L2 Math - Analyse fondamentale (Université Paris 7)

2019 - L3 Math - Probabilités et Simulations Proba (Université Paris 7)

L2 Math Algèbre et Analyse fondamentale (Université Paris 7)

Experience abroad

2016 - Erasmus Traineeship / Stage

Paris (FRANCE) | Language: French and English | Duration: 3 months and a half

From September 2016 to mid December 2016 I did a research internship in Laboratoire de Probabilités et Modèles Aléatoires, in Paris (<http://www.lpma-paris.fr>). I worked with professor Giambattista Giacomini on the Kuramoto model and on synchronisation phenomena.

2016 - Erasmus Studio

Paris (FRANCE) | Language: French | Duration: 6 months

From January 2016 to July 2016, I finished the exams of the Master in Mathematics through the Erasmus program in Université Pierre et Marie Curie (<http://www.upmc.fr>).

2015 - Assistant Researcher / Visiting Student

Singapore (SINGAPORE) | Language: English | Duration: 2 months and a half

I worked in Singapore University of Technology and Design (<http://sutd.edu.sg/>) as a research assistant for professor Bikram Das. The main subjects were risk theory and (social) network analysis.

Languages and IT skills

Italian: Mother Tongue | **English:** Advanced C1/C2 | **French:** Advanced C1/C2.

IT languages: Fundamentals in C, Python, R, SciLab, LaTeX, HTML, PHP, CSS.

Applications: Adobe(Photoshop, Premiere), Office(Word, Excel), Spyder, Jupyter.

Web: Wordpress, Joomla and CMS in general.