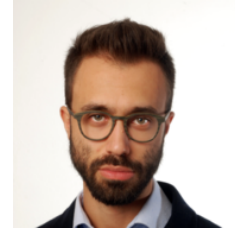


# Matteo D'Achille

Curriculum Vitae



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Personal webpage: <https://www-lipn.univ-paris13.fr/~dachille>

Birthplace: Monza, Italy

Nationality: Italian

## Research interests

Statistical and mathematical physics, especially in connection with finite-dimensional disordered systems and the Monge-Kantorovich problem

## Current positions

2020- Research and Teaching Assistant, LAMA, Paris-Est University  
2019 - Associated Member, LIPN, Sorbonne Paris Nord University

## Education

2020 PhD Paris-Saclay University  
Thesis title: *Statistical Properties of the Euclidean Random Assignment Problem*  
Advisors: William Jalby, Olivier Rivoire and Andrea Sportiello  
Thesis committee: Charles Bordenave (referee), Massimiliano Gubinelli (referee), Michel Ledoux (president), Guilhem Semerjian (examiner), Lenka Zdeborová (examiner)

2016 MSc University of Milan  
Thesis title: *On two linear assignment problems: random assignment and Euclidean bipartite matching*  
Advisor: Sergio Caracciolo

2012 BSc, University of Milan  
Thesis title: *La teoria di Schwarz-Christoffel e il Biliardo Quantistico Poligonale*  
Advisor: Luca Guido Molinari

## Visiting positions

2018 Visiting PhD student, Polish Academy of Sciences (IM PAN), Warsaw, Poland (18/2-4/3)

## Publications

### In preparation

[7] “The Euclidean Random Assignment Problem at non-integer Hausdorff dimension  $d_H \in (1, 2)$ ”, with A. Sportiello

[6] “Anomalous scaling of the optimal cost in the one-dimensional Euclidean Random Assignment Problem: some rigorous results”, with A. Sportiello

### Preprints

[5] “Random Assignment Problems on  $2d$  manifolds”, with D. Benedetto, E. Caglioti, S. Caracciolo, G. Sicuro and A. Sportiello, submitted  
arXiv: [2008.01462v1](https://arxiv.org/abs/2008.01462v1) [[math-ph](#)]

### Published

2020 [4] “The Dyck bound in the concave 1-dimensional random assignment model”, with S. Caracciolo, V. Erba and A. Sportiello, *Journal of Physics A: Mathematical and Theoretical* **53** (6), 064001  
doi: [10.1088/1751-8121/ab4a34](https://doi.org/10.1088/1751-8121/ab4a34)

2018 [3] “Anomalous scaling of the optimal cost in the one-dimensional random assignment problem”, with S. Caracciolo and G. Sicuro, *Journal of Statistical Physics* **174** (4), 846–864  
doi: [10.1007/s10955-018-2212-9](https://doi.org/10.1007/s10955-018-2212-9)

2017 [2] “Random Euclidean matching problems in one dimension”, with S. Caracciolo and G. Sicuro, *Physical Review E* **96** (4), 42102  
doi: [10.1103/PhysRevE.96.042102](https://doi.org/10.1103/PhysRevE.96.042102)

[1] “Finite-size corrections in the random assignment problem”, with S. Caracciolo, E.M. Malatesta and G. Sicuro, *Physical Review E* **95** (5), 52129  
doi: [10.1103/PhysRevE.95.052129](https://doi.org/10.1103/PhysRevE.95.052129)

### Invited talks

2020 14-1 Combinatorics seminar CALIN, Sorbonne Paris-Nord University ([website](#))

### Teaching activities

2020- Teaching assistant (Mathematics), Paris-Est University (90h eq. TD at L3 level in French)

2019-2020 Lecturer (Mathematics), Paris-Saclay University (15h eq. TD at L1 level in French)

2018-2019 Tutor (Mathematics), Paris-Saclay University (65h eq. TD at L1 level in French)

### Attended schools, conferences, and workshops

- 2020 “Integrable Probability Online Summer School”, Clay Mathematics Institute & Heilbronn Institute for Mathematical Research, remote Zoom sessions ([website](#))
- “Combinatorics days of Bordeaux (JCB2020)”, LaBRI, Université de Bordeaux, Bordeaux, France ([website](#))
- 2019 “Combinatorics and Arithmetic for Physics: special days” Meeting, Centre de Conférences Marilyn et James Simons, IHES, Le Bois-Marie, Bures-sur-Yvette, France ([website](#))
- “Journées MathSTIC 2019 – Probabilités et Combinatoire” Workshop, Bâtiment Galilée, *Université Paris 13*, Villetaneuse, France ([website](#))
- 2018 “Paths in Statistical Physics” Conference, Physics Department, *Université Paris Diderot*, Paris, France ([website](#))
- “Information transmission in biological systems” Conference, Simons Semester on Mathematical Biology, *The Mathematical Research and Conference Center in Będlewo*, Będlewo, Poland ([website](#))
- 2016 “Optimal Transport and Applications” Conference, *Scuola Normale Superiore*, Pisa, Italy ([website](#))
- 2014 “Mathematical Physics, Analysis and Stochastics” Summer School, *Ruprecht Karls Universität*, Heidelberg, Germany ([website](#))

### Membership in scientific societies

- 2019– *Italian Society of Statistical Physics*, voting member
- 2017– *European Physical Society*, individual member
- 2013– *Italian Physical Society*, voting member

### Service to the profession

- 2017– *American Physical Society*, referee for Physical Review journals and Reviews of Modern Physics

### Other memberships

- 2019– Member of the WIMS EDU association ([website](#))