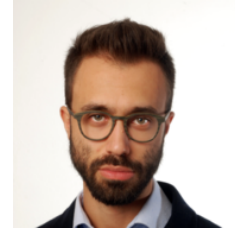


Matteo D'Achille

Curriculum Vitae



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

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

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](#))