Matteo D'Achille

Curriculum Vitae

Born: December 6, 1990—Monza, Italy
Nationality: Italian
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Areas of specialization

Rigorous aspects in the statistical physics of disordered systems

Education and current position

2019 -	Membre associé, Équipe CALIN, Laboratoire d'Informatique de Paris Nord, Université de Paris Nord
2017 -	PhD Candidate at the Université Paris-Saclay, Thesis title: "*Statistical properties of the Euclidean Random Assignment Problem*", supervised by Andrea Sportiello (CNRS and LIPN), Olivier Rivoire (CNRS and CIRB Collège de France) and Prof. William Jalby (Université de Versailles Saint-Quentin-en-Yvelines)
2016	Master of Science ("Laurea Magistrale"), Theoretical Physics, Department of Physics of The University of Milan, Thesis title: "*On two linear assignment problems: random assignment and Euclidean bipartite matching*", under the supervision of Prof. Sergio Caracciolo, final grade: 110/110 "summa cum laude"
2012	Bachelor of Science ("Laurea Triennale") in Physics, Department of Physics of The University of Milan. Thesis title: "*La Teoria di Schwarz-Christoffel e il Biliardo Quantistico Poligonale*", under the supervision of Prof. Luca Guido Molinari, final grade: 110/110

Visiting positions

2018	Visiting PhD (18/2-4/3), hosted at the Banach Center (Prof. Jacek Miękisz) of the Institute of Mathematics of the Polish Academy of Sciences (IM PAN), Warsaw, Poland (website)

Publications

Work in progress

2019- [5] "Anomalous scaling of the optimal cost in the one-dimensional Euclidean Random Assignment Problem: some rigorous results", with A. Sportiello

In press

2019 [4] "The Dyck bound in the concave 1-dimensional random assignment model", with S. Caracciolo, V. Erba and A. Sportiello
to appear in the special issue "Disordered serendipity: a glassy path to discovery" of the Journal of Physics A: Mathematical and Theoretical. Preprint: arXiv:1904.10867 [cond-mat.dis-nn]

Published

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

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

[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

Teaching activities

2019-2020 Lecturer à l'Université Paris-Sud en Mathématiques en L1 dans l'UE de rémédiation (20h)

2018-2019 Moniteur Remediation "OUI-si", Licence MPI (35h eq. TD), Département de Mathématiques d'Orsay, Université de Paris-Sud
Calculus Math 151, DLPC (30h eq. TD), Département de Mathématiques d'Orsay, Université de Paris-Sud

Attended schools, conferences, and workshops

2019 "Combinatorics and Arithmetic for Physics: special days" Meeting, Centre de Conférences Marilyn et James Simons, Institut des Hautes Études Scientifiques, 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)

2017	"Computational approaches to investigating allostery" Workshop, *CECAM-HQ, Ecole Polytechnique Federale de Lausanne*, Lausanne, Switzerland (website) "26th VI-HPS Tuning Workshop", *Laboratoire Exascale Computing Research (ECR), Campus Ter@tec*, Bruyères-le-Châtel, France (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)

Scientific societies

2019-	*Società Italiana di Fisica Statistica*, 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 (1 referred paper in Physical Review X).

Others

2019-	Member of the WIMS EDU association (website)
2014-	Responsible of a participatory budgeting allocation (15k€) on behalf of the Municipality of Monza, Italy