Personal information

Name	Barbier Jean ![ORCID] 0000-0002-2652-6727
Birth	23 June 1989, French national
Main positions	Research Scientist (Associate Professor) at ICTP and Adjunct Professor at SISSA

Education

2012–2015	**Physics Laboratory of ENS**, Paris FR PhD in Theoretical Physics and Signal Processing, supervised by Pr. F. Krzakala Obtained with "Congratulations of the Jury" (top 10%)
2010–2012	University Paris-Sud, Politecnico di Torino, SISSA and ICTP, IT and FR International MSc in Physics of Complex Systems (double degree) Obtained with the highest honours

Current and previous positions

fall 2021	Simons Institute for the Theory of Computing, Berkeley US Invited long-term Scientist, program in Computational complexity of statistical inference
2020–present	International School for Advanced Studies (SISSA), Trieste IT Adjunct Professor in the Department of Data Science
2019–present	International Center for Theoretical Physics (ICTP), Trieste IT Associate Research Officer
2018–2019	Physics Laboratory of ENS, Paris FR Laplace Junior Professor in Data Science
2017–2018	Probability Group, Queen Mary University, London UK Permanent Lecturer in Statistical Machine Learning
2015–2018	Communication Theory Laboratory, Federal Institute of Technology (EPFL), Lausanne CH Postdoc in the group of Dr. Nicolas Macris

Scientific activity

High-dimensional statistics, probability, random matrix theory • Bayesian inference • information theory • mathematical and statistical physics (spin glasses) • statistical machine learning • probabilistic graphical models, message-passing • signal processing

Fellowships and grants

2022–2027	1.3 million euros ERC Starting Grant from the European Research Council obtained in PE1–Mathematics for the project CHORAL: Computational Hardness Of RepresentAtion Learning
fall 2021	Long-term visit fellowship from the Simons Institute for the Theory of Computing, Berkeley
2015	Awarded the chair of Laplace Junior Professor in Data Science, ENS Paris. Funding from "ENS-CFM Research Chair on Models and Science of Data" from Capital Fund Management
2012	VINCI PhD fellowship from the University Franco-Italienne (one/year in France): declined Selective PhD fellowship from the French Army Ministery (DGA): accepted

Supervision

2019–present	ICTP and SISSA, Trieste IT 4 MSc students, 1 PhD student (T. Hou) and 1 Postdoc (M. Sáenz)

2015–2018	EPFL, Lausanne CH
	2 MSc students (1 leading to publication with E. Biyik).
	Co-supervision with Dr. N. Macris of 3 PhD students (M. Dia, C-L. Chan and C. Luneau)

Teaching activities

2020–present	SISSA PhD programs in Mathematics, Physics and Data Science, Trieste IT
	Mean-field theory of high-dimensional Bayesian inference (25 hours, online)
2020	International MSc in Mathematics, Lahore PAK
	Machine learning (20 hours, online)
2019–present	ICTP, Trieste IT
	Statistical mechanics with python (30 hours) and Machine learning (20 hours)
2012–2013	Universities Paris 5 and 7, FR
	Probability (30 hours) and Classical mechanics (30 hours)

Organisational activity

2021	Area Chair for the Neural Information Processing Systems conference (NeurIPS)
2020 and 2021	Main organizer of a reccurent four days online conference
	Youth in high-dimensions: machine learning, statistics and inference for the new generation
2020 and 2021	Princeton US and EPFL, Lausanne CH. Program committee member
	Mathematical and Scientific Machine Learning conference (MSML)
2020	CSRC-ICTP one day online workshop
	Big data, machine learning and complexity research
2020	Two days online conference
	Mathematical methods and models in machine learning
2019	IEEE CAMSAP conference, Guadeloupe FR. Special session
	Statistical physics for signal processing and learning

Reviewing activities

American Math. Society Jrnls. (AMS) - Neural Info. Processing Systems Conf. (NeurIPS) - Math. and Scientific Machine Learning Conf. (MSML) - Intl. Conf. on Machine Learning (ICML) - Intl. Conf. on Learning Representations (ICLR) - Math. Statistics and Learning - IEEE Trans. on Info. Theory - IEEE Intl. Symposium on Info. Theory (ISIT) - IEEE Info. Theory Workshop (ITW) - Jrnl. of Phys. A - Jrnl. of Stat. Phys. - Jrnl. of Stat. Mech.

Major collaborations

N. Macris, F. Krzakala and L. Zdeborová (EPFL) - D. Panchenko (Toronto U) - W.K. Chen (Minnesota U) - P. Contucci (Bologna University) - F. Ricci-Tersenghi (Sapienza University) - L. Miolane and M. Gabrié (NYU) - C. Rush (Columbia) - G. Reeves (Duke) - M. Mézard (ENS) - E. Roldán and A. Ingrosso (ICTP) - S. Goldt (SISSA) - M. Mondelli (IST Austria)