Lorenzo Masoero

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Born July 20, 1992—Turin, Italy
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Education

2019-current PhD student, Electrical Engineering and Computer Science, Massachusetts Institute of Technology
2017 - 2019 MSc in Electrical Engineering and Computer Science, Massachusetts Institute of Technology [1]
2015 - 2016 MA in Statistics and Applied Mathematics, with distinction, Collegio Carlo Alberto
2015 - 2016 MA in Quantitative Finance, 110/110 magna cum laude, Università degli Studi di Torino
2012 - 2014 BA in Economics, 110/110 cum laude, Università degli Studi di Torino

Scholarships and Awards

2020 SBSS Best Student Paper Award (ASA)
2020 Bayes Comp Travel Award
2018 BNP@NeurIPS Award
2017 Andrew (1956) and Erma Viterbi Fellowship
2016 Best Graduate Student of the Year (ATLEC)
2015 - 2016 Graduate Allievi Honors Program Scholarship, Collegio Carlo Alberto, Moncalieri
2012 - 2014 Undergraduate Allievi Honors Program Scholarship, Collegio Carlo Alberto, Moncalieri

Other Relevant Experience

2020 Applied Research Intern, Amazon CoreAI under the supervision of Professor Guido Imbens, Professor Thomas Richardson and Dr. James McQueen

Research and Theses

- "**More for Less: Predicting and maximizing genetic variant discovery via Bayesian nonparametrics**"; to appear in Biometrika. Featured in 2020 ASHG, AABI 2019 [poster]; ArXiv: *https://arxiv.org/pdf/1912.05516.pdf*; (M., Camerlenghi, Favaro and Broderick)
- "**Independent finite approximations for Bayesian nonparametric inference: construction, error bounds, and practical implications**", *https://arxiv.org/pdf/2009.10780.pdf*; (Nguyen, Huggins, M., Mackey and Broderick)
- "**Posterior representations of hierarchical completely random measures in trait allocation models**" (M., Camerlenghi, Favaro and Broderick), **Spotlight**, *BNP@NeurIPS2018* [poster]

[1] **Completed coursework**: Dynamic Programming and Stochastic Control (6.231) [final project], Fundamentals of Probability (6.436), Inference and Information (6.437), Algorithms for Inference (6.438), Algorithmic aspects of Machine Learning (18.408) [final project], Bayesian modeling and inference (6.882), Advanced stochastic processes (6.265), Mathematical Statistics: A Non-Asymptotic Approach (9.S914), Learning-Augmented Algorithms (6.890)

- "**Sensitivity of Bayesian inference to data perturbations**" (M., Stephenson and Broderick), *AABI 2018* [poster]
- "**Generic finite approximations for practical Bayesian nonparametrics**" (Huggins, M., Mackey and Broderick), **Spotlight**, *NIPS 2017 Workshop on Advances in Approximate Bayesian Inference* [poster]
- "**An asymptotic analysis of Gibbs-type priors**" - Master's thesis in Bayesian nonparametrics, Supervisors: prof. Pierpaolo de Blasi and prof. Igor Prünster
- **"Econometrics of the Big Data"** - Undergraduate thesis in Econometrics. Supervisor: prof. Alessandro Sembenelli

Skills

- Proficient in Python (numpy, scipy, pandas, matplotlib, scikit-learn), LaTeX
- Past experience in C++, Matlab, R, RStudio

Talks, Poster sessions and Conference Presentations

2020

- American Society of Human Genetics meeting, "More for less: predicting and maximizing genomic diversity via Bayesian nonparametrics" [Poster session]
- Learning under complex structure, MIFODS workshop, *Cambridge (MA)*, "More for less: predicting and maximizing genomic diversity via Bayesian nonparametrics" [Poster session]
- Learning under complex structure, MIFODS workshop, *Cambridge (MA)*, "More for less: predicting and maximizing genomic diversity via Bayesian nonparametrics" [Poster session]
- Bayes Comp 2020, *Gainesville (FL)*, "More for less: predicting and maximizing genomic diversity via Bayesian nonparametrics" [Poster session]

2019

- Advances in Bayesian Nonparametric Methods and Its Applications, *Denver (CO), JSM 2019*, "Genomic variety prediction via Bayesian nonparametrics" [Topic-contributed session]
- Advances in Approximate Bayesian Inference, *Vancouver, Canada*, "More for less: Predicting and maximizing genetic variant discovery via Bayesian nonparametrics"
- Statistics and Data Science Conference 2019, *Cambridge (MA)*. "Genomic variety prediction via Bayesian nonparametrics"
- MLxMIT, *Cambridge (MA)*, "Genomic variety prediction via Bayesian nonparametrics"
- LIDS & Stats seminar, *Cambridge (MA)*, "Genomic variety prediction via Bayesian nonparametrics"
- CSAIL-MSR Trustworthy and Robust AI (TRAC) Workshop, *Cambridge (MA)*, "Getting the most bang for your buck: Predicting and maximizing the number of new genetic variants in a future experiment"

2018

- BNP@NeurIPS 2018, Montreal (Canada) "Posterior representations of hierarchical completely random measures in trait allocation models" [**Spotlight**]

Professional Service

2020 Reviewer for AAAI 2020, AISTATS 2020
2019 Reviewer for AISTATS 2019, NeurIPS 2019, AABI 2019
2018 Reviewer for BNP@NeurIPS2018