

SIMONE BOMBARI

simone.bombari@ist.ac.at

EDUCATION

Institute of Science and Technology Austria · PhD candidate	2020 - current
Scuola Normale Superiore · Professional master program Final grade: 100/100 <i>cum laude</i>	2015 - 2020
University of Pisa · M.Sc. in physics Final grade: 110/110 <i>cum laude</i>	2018 - 2020
University of Pisa · B.Sc. in physics Final grade: 110/110 <i>cum laude</i>	2015 - 2018

EXPERIENCE

G Research · Quant NLP researcher intern	2023
Amazon Web Services · Applied scientist intern	2021-2022
University of California Los Angeles · Visiting graduate researcher	2020
Complex Science Hub · Research Intern	2018

PUBLICATIONS AND PRE-PRINTS

Towards understanding the word sensitivity of attention layers: a study via random features Simone Bombari and Marco Mondelli. *In International Conference on Machine Learning (ICML), 2024*

How Spurious Features are Memorized: Precise Analysis for Random and NTK Features. Simone Bombari and Marco Mondelli. *In International Conference on Machine Learning (ICML), 2024*

Beyond the universal law of robustness: sharper laws for random features and neural tangent kernels. Simone Bombari, Shayan Kiyani, and Marco Mondelli. *In International Conference on Machine Learning (ICML), 2023 - selected as oral*

Memorization and optimization in deep neural networks with minimum over-parameterization. Simone Bombari, Mohammad Hossein Amani, and Marco Mondelli. *In Advances in Neural Information Processing Systems (NeurIPS), 2022*

Sharp asymptotics on the compression of two-layer neural networks. Mohammad Hossein Amani, Simone Bombari, Marco Mondelli, Rattana Pukdee, Stefano Rini. *2022 IEEE Information Theory Workshop (ITW)*

Towards differential relational privacy and its use in question answering. Simone Bombari, Alessandro Achille, Zijian Wang, Yu-Xiang Wang, Yusheng Xie, Kunwar Yashraj Singh, Srikar Appalaraju, Vijay Mahadevan, Stefano Soatto. *arXiv preprint arXiv:2203.16701, 2022*

TALKS

ICML oral presentation	2023
UCLA-MPI MathML Seminar	2023
Austrian Computer Science Day	2023
DeepMath oral presentation	2022
Sharif University of Technology EE647: deep learning seminar	2022

MISCELLANEA

International Mathematical Games - HC · 5th position	2017
International Physics Olympiad · Silver Medal	2015
Italian National Karate Championship - Embu · Bronze Medal	2015

SOCIAL

Personal website · Scholar · LinkedIn · X · GitHub