

Jacopo Teneggi

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EDUCATION

Johns Hopkins University Baltimore, MD
PhD in Computer Science 2022—present

- Advisor: Prof. Jeremias Sulam
- Relevant coursework: (EN.601.674) ML: Learning Theory, (EN.553.730) Statistical Theory, (EN.553.740) Machine Learning I, (EN.601.682) ML: Deep Learning, (EN.580.709) Sparse Representations in CV and ML, (EN.553.739) High-Dimensional Probability, (EN.601.633) Intro Algorithms.

MSE in Biomedical Engineering 2020—2022

- Concentration: Biomedical Data Science
- GPA: 3.93/4.00
- Master’s Thesis: “*Multiple-Instance Learning as a Framework to Explain via the Shapley Value*”
Committee: Prof. Jeremias Sulam (Advisor), Prof. Soledad Villar, Prof. Adam Charles

Politecnico di Torino Torino, Italy
BS in Biomedical Engineering 2017—2020

- GPA: 3.93/4.00

PUBLICATIONS

1. [Teneggi, J.](#), [Tivnan, M.](#), [Stayman, J.W.](#) and [Sulam, J.](#), 2023. How to Trust Your Diffusion Model: A Convex Optimization Approach to Conformal Risk Control. arXiv preprint [arXiv:2302.03791](#). To appear in ICML.
2. [Teneggi, J.](#), [Yi, P.H.](#), [Sulam, J.](#) Weakly Supervised Learning Significantly Reduces the Number of Labels Required for Intracranial Hemorrhage Detection on Head CT. arXiv preprint [arXiv:2211.15924](#).
3. [Teneggi, J.*](#), [Bharti, B.*](#), [Romano, Y.](#) and [Sulam, J.](#), 2022. From Shapley back to Pearson: Hypothesis Testing via the Shapley Value. arXiv preprint [arXiv:2207.07038](#).
4. [Teneggi, J.](#), [Luster, A.](#), and [Sulam, J.](#), 2022. Fast Hierarchical Games for Image Explanations. IEEE Transactions on Pattern Analysis and Machine Intelligence. **Best Paper Award at IMLH, ICML 2021.**
5. [Athey, T.L.](#), [Teneggi, J.](#), [Vogelstein, J.T.](#), [Tward, D.J.](#), [Mueller, U.](#) and [Miller, M.I.](#), 2021. Fitting splines to axonal arbors quantifies relationship between branch order and geometry. *Frontiers in Neuroinformatics*, p.38.
6. [Teneggi, J.](#), [Chen, X.](#), [Balu, A.](#), [Barrett, C.](#), [Grisolia, G.](#), [Lucia, U.](#) and [Dzakpasu, R.](#), 2021. Entropy estimation within in vitro neural-astrocyte networks as a measure of development instability. *Physical Review E*, 103(4), p.042412.

TEACHING EXPERIENCE

Teaching assistant, (*EN.580.464*) *Advanced Data Science for Biomedical Engineering* Spring 2023
Instructors: Prof. Jeremias Sulam

Teaching assistant, (*EN.500.115*) *Gateway Data Science* Spring 2022
Instructors: Prof. Fadir Santosa, Prof. Jeremias Sulam

Teaching assistant, (*EN.553.285*) *Intro to Scientific Computing in Python* Intercession 2022
Instructors: Philip Kerger

INDUSTRY EXPERIENCE

Profluent , ML Scientist Intern	June 2023 - September 2023
ference, Inc. , Data Scientist Intern	June 2021 - September 2021
Distributed pretraining of large language models on biomedical corpora	

ENTREPRENEURSHIP

European Innovation Academy , Turin, Italy	2019
Developed a gut microbiome company idea to improve maternal health.	
Junior Enterprise Torino Politecnico (JEToP) , Turin, Italy	2017-2020
Lead an 100+ people organization as Vice President.	

AWARDS AND FELLOWSHIPS

- Mathematical Institute for Data Science (MINDS) fellowship 2023
- RSNA Trainee Research Prize in imaging informatics 2022
- Best Paper Award, Workshop in Interpretable Machine Learning in Healthcare (IMLH) 2021
- IEEE HKN Mu Nu Chapter 2019
- Politecnico di Torino *Young Talents* scholarship (full-ride, top 200 applicants) 2017

TALKS

- *Explainable ML: A Brief Overview with Practical Examples*, (EN.540.405) Modern Data Analysis and Machine Learning for ChemBEs 2023
- *h-Shap: Fast Hierarchical Games for Image Explanations*, Bern Interpretable AI Symposium 2023
- *Uncertainty Quantification in CT Denoising*, 57th Conference on Information Sciences and Systems 2023
- *h-Shap: Fast Hierarchical Games for Image Explanations*, QMUL Intelligent Sensing Winter School 2022
- *Weakly-Supervised Learning Substantially Reduces the Number of Labels Required for Intracranial Hemorrhage Detection on Head CT*, RSNA Annual Meeting 2022
- *Multiple-Instance Learning Substantially Reduces the Number of Labels Required for Intracranial Hemorrhage Detection on Head CT*, SIIM Conference of Machine Learning in Medical Imaging 2022
- *Interpreting ML Models with Shapley Values*, SIAM Conference on Mathematics of Data Science 2022
- *Fast Hierarchical Games for Image Explanations*, Princeton Machine Learning Theory Summer School 2022
- *Fast Hierarchical Games for Image Explanations*, Workshop in Interpretable Machine Learning in Healthcare 2021