



# Enzo Tartaglione

## Curriculum Vitae

### Bio

Enzo Tartaglione is Maître de Conférences at Télécom Paris, he is an Hi!Paris chair holder and ELLIS member. He received the MS in Electronic Engineering at Politecnico di Torino in 2015, cum laude. The same year, he also received a magna cum laude MS in electrical and computer engineering at the University of Illinois at Chicago. In 2016 he was also awarded the MS in Electronics by Politecnico di Milano, cum laude. In 2019 he obtained a Ph.D. in Physics at Politecnico di Torino, cum laude, with the thesis “From Statistical Physics to Algorithms in Deep Neural Systems”. His principal interests include compression, sparsification, pruning, and watermarking of deep neural networks, computer vision, deep learning for medical imaging, privacy-aware learning, data debiasing, and regularization for deep learning. His expertise mainly focuses on the themes of efficient deep learning, with articles published in top conferences and journals in the field.

### Education

- Nov. 2015 - **PhD. in Physics, cum laude**, *Politecnico di Torino*, Torino (Italy), Thesis title: “From Statistical Physics to Algorithms in Deep Neural Systems”.
- Jul. 2019
- Sep. 2013 - **Master of Science in Electronic Engineering (Embedded Systems)**, *Politecnico di Torino*, Torino (Italy), *110/110 cum Laude*.
- Jul 2015
- Jan. 2014 - **Master of Science in Electrical and Computer Engineering**, *University of Illinois at Chicago*, Chicago (USA), *Magna cum Laude—GPA 3.87*.
- Aug 2015
- Jan. 2014 - **Master of Science in Electronic Engineering**, *Politecnico di Milano*, Torino (Italy), *110/110 cum Laude*.
- Dec 2016
- Sep. 2013 - **Alta Scuola Politecnica Diploma**, *Joint program of excellence on design, business and society dynamics*, Politecnico di Torino and Politecnico di Milano, Italy.
- Dec 2015
- Sep. 2010 - **Bachelor of Science in Electronic Engineering**, *Politecnico di Torino*, Torino (Italy), *108/110*.
- Oct. 2013

### Experience

Maître de Conférences at Télécom Paris - Institut Polytechnique de Paris (Oct 2021 - now)

Description Officially tutor of seven Ph.D. students, task leader for the project ELIAS funded through Horizon Europe (start: Sep 2023, task on the development of sustainable AI). Participation in several local, national, and international projects and collaborations.

Role Assistant/Associate Professor

Postdoc at Università degli Studi di Torino (Torino) (Jan 2019-Sep 2021)

Description Work in the context of the DeepHealth project, funded from the European Union’s Horizon 2020 research and innovation program under grant agreement No 825111.

Technology	PyTorch, Python, Julia
Role	Researcher
	<a href="#">Invited Researcher at Télécom Paris (Feb 2020- Mar 2020)</a>
Technology	PyTorch, wxMaxima (Mathematica)
Role	Invited Researcher
	<a href="#">Research Assistant at UIC(Chicago) (Jan 2015-Jul 2015)</a>
Description	Development and simulation of polynomial-time algorithms for scheduling and binding under latency constraint. This project was supported by a US 2015 grant.
Technology	C++, Bash
Role	Designer, Developer and Tester

## Awards

- 2023 Caianiello best paper award, ICIAP 2023
- 2021 Outstanding reviewer award, CVPR 2021 <https://cvpr2021.thecvf.com/node/184>
- 2016 Winner of the prize “Ermanno Borio” for the best Master thesis in Electronic Engineering

## (Co-)Encadrements

- 2020- (Mar)2024 Melan Vijayaratnam (Ph.D.) - 25%
- 2022-2025 Victor Quétu (Ph.D.) - 80%
- 2022-2025 Imad Eddine Marouf (Ph.D.) - 75%
- 2022-2025 Rémi Nahon (Ph.D.) - 25%
- 2022-2025 Ael Quélenec (Ph.D.) - 25%
- 2022-2025 Zhu Liao (Ph.D.) - 25%
- 2022-2025 Yinghao Wang (Ph.D.) - 25%
- 2022-2023 Marta Milovanović (Research Engineer)
- 2023-2024 Ivan Luiz de Moura Matos (PRIM student- 300h)
- 2023-2024 André Pereira e Ferreira (PRIM student- 300h)
- 2023 Thierry Xu (M1 stagiaire - 2.5 months)
- 2022-2023 Paul Mortamet (PRIM student- 300h)
- 2022-2023 Henri d’Andria (PRIM student- 300h)
- 2022 Chenxi Deng (M1 stagiaire -3 months)
- 2022 Giuseppe Stallone (Master thesis) “Rilevamento di COVID-19 da radiografia toracica attraverso Deep Learning”
- 2021 André Tuninetti (Bachelor thesis) “Strumenti di Preprocessing Applicati a Radiografie Toraciche”
- 2021 Davide Di Luccio (Master thesis) “Segmentazione semantica di tessuto istopatologico mediante Deep Learning”
- 2021 Davide Rubinetti (Bachelor thesis) “Generazione di tessuto istopatologico mediante Generative Adversarial Network”
- 2021 Nicolas Destefanis (Master thesis) “Classification of non-small cell lung carcinoma with PET imaging using convolutional neural networks and radiomics”
- 2020 Carlo Alberto Barbano (Master thesis) “Diagnosi del COVID-19 da radiografie polmonari mediante intelligenza artificiale”

- 2020 Anna Furciniti (Bachelor thesis) “Deep learning on embedded devices: inference time in object detection”
- 2019 Andrea Bragagnolo (Master thesis) “Regolarizzazione tramite sensibilità neuronale per apprendere reti neurali sparse strutturate”
- 2019 Francesco Odierna (Master thesis) “Regolarizzazione dei Neuroni per l’apprendimento di Reti Neurali Sparse”

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## Scientific animation

- 2023 Workshop organizing chair “Simplification, Compression, Efficiency and Frugality for Artificial Intelligence” at the European Conference on Machine Learning <https://scefa.wp.imt.fr/>
- 2022 Special session chair “Simplification, Compression and Efficiency with Neural Networks and Artificial Intelligence” at the International Conference on Image Processing [https://cmsworkshops.com/ICIP2022/view\\_session.php?SessionID=1011](https://cmsworkshops.com/ICIP2022/view_session.php?SessionID=1011)
- 2022 Tutorial organizing chair “Pruning deep neural networks: towards efficient models on the edge” at the International Conference on Image Analysis and Processing <https://www.iciap2021.org/t7/>

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## List of selected publications

The complete list of publications can be found at [https://enzotarta.github.io/1\\_publications.html](https://enzotarta.github.io/1_publications.html)  
 Google scholar profile: <https://scholar.google.com/citations?user=uKuvN64AAAAJ&hl=it&oi=ao>

- 2023 Nahon, R., Nguyen, V. T., & **Tartaglione, E.** (2023). Mining bias-target Alignment from Voronoi Cells. (2023). IEEE International Conference on Computer Vision (ICCV).
- 2023 Laurent, O., Lafage, A., **Tartaglione, E.**, Daniel, G., Martinez, J. M., Bursuc, A., & Franchi, G. (2023, May). Packed-Ensembles for Efficient Uncertainty Estimation. In International Conference on Learning Representations (Spotlight paper, ICLR).
- 2023 Barbano, C. A., Dufumier, B., **Tartaglione, E.**, Grangetto, M., & Gori, P. (2023, May). Unbiased Supervised Contrastive Learning (ICLR).
- 2023 **Tartaglione, E.**, Gennari, F., Quéru, V., & Grangetto, M. (2023). Disentangling private classes through regularization. *Neurocomputing*, 126612.
- 2022 Bragagnolo, A., **Tartaglione, E.**, & Grangetto, M. To update or not to update? Neurons at equilibrium in deep models. *Advances in Neural Information Processing Systems*, 35, 22149-22160 (NeurIPS).
- 2022 **Tartaglione, E.**, Bragagnolo, A., Fiandrotti, A., & Grangetto, M. (2022). Loss-based sensitivity regularization: towards deep sparse neural networks. *Neural Networks*, 146, 230-237.
- 2021 **Tartaglione, E.**, Lathuilière, S., Fiandrotti, A., Cagnazzo, M., & Grangetto, M. (2021). HEMP: High-order entropy minimization for neural network compression. *Neurocomputing*, 461, 244-253.
- 2021 **Tartaglione, E.**, Bragagnolo, A., Odierna, F., Fiandrotti, A., & Grangetto, M. (2021). Serene: Sensitivity-based regularization of neurons for structured sparsity in neural networks. *IEEE Transactions on Neural Networks and Learning Systems*, 33(12), 7237-7250.
- 2021 **Tartaglione, E.**, Barbano, C. A., & Grangetto, M. (2021). End: Entangling and disentangling deep representations for bias correction. In *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition* (pp. 13508-13517) (CVPR).
- 2018 **Tartaglione, E.**, Lepsøy, S., Fiandrotti, A., & Francini, G. (2018). Learning sparse neural networks via sensitivity-driven regularization. *Advances in neural information processing systems*, 31 (NeurIPS).