

Donato Cerciello, Marie Curie Ph.D.

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Employment History

- September 2025 – **Marie Curie Ph.D** in AIDA research group in the Universidad Politécnica de Madrid (UPM).
- September 2024 – August 2025 **Researcher Fellow** in M.O.D.A.L. research group in the University of Naples Federico II – Mathematical mOdelling and Data AnaLysis research group, Naples, conducting research on generative algorithms, exploring advanced methods and their applications in Time Series Generation (TGS).
- November 2023 – May 2024 **Thesis Researcher Fellow** in M.O.D.A.L. research group in the University of Naples Federico II – Mathematical mOdelling and Data AnaLysis research group, Naples, conducting an in-depth study of generative algorithms, focusing on their application in drug discovery, specifically for generating molecules targeting specific ligand receptors.

Education

- 2021 – 2024 **Master Degree in Mathematical Engineering** (110/110 cum laude) University of Naples Federico II.
Thesis title: *Generative Artificial Intelligence for Drug Discovery through Conditional Variational Autoencoder*
- 2018 – 2021 **Bachelor Degree in Mathematics** (109/100) University of Naples Federico II
Thesis title: *First-Order Partial Differential Equations*.

Research Publications

Journal Articles

- 1 F. Piccialli, S. Amitrano, **D. Cerciello**, A. Borrelli, E. Prezioso, and M. Canzaniello, "A digital twin framework for urban parking management and mobility forecasting," *Nature Communications*, 2025.
- 2 F. Piccialli, D. Chiaro, S. Sarwar, **D. Cerciello**, P. Qi, and V. Mele, "Agentai: A comprehensive survey on autonomous agents in distributed ai for industry 4.0," *Expert Systems with Applications*, p. 128 404, 2025.
- 3 V. Romanelli, D. Annunziata, C. Cerchia, **D. Cerciello**, F. Piccialli, and A. Lavecchia, "Enhancing de novo drug design across multiple therapeutic targets with cvae generative models," *ACS omega*, vol. 9, no. 43, pp. 43 963–43 976, 2024.

Conference Proceedings

- 1 S. Cuomo, **D. Cerciello**, F. Piccialli, and V. Vocca, “Solving soil microbiota growth problem by pinns,” in *International Conference on Parallel Processing and Applied Mathematics*, Springer, 2024, pp. 249–260.

Under consideration

- 1 F. Amato, **D. Cerciello**, A. Borrelli, D. Annunziata, D. Camacho, and F. Piccialli, “Divas-fl: Diffusion-based implicit voice editing via autoencoder-guided style transfer in federated learning for consumer devices,” Under review.

Skills

Languages	■ Strong reading, writing and speaking competencies for Italian, English.
Coding	■ Python, R, $\LaTeX$
Misc.	■ Academic research, teaching, training, consultation, $\LaTeX$ typesetting and publishing.

References

Available on Request