

Stefano Mereta

[CUNEF UNIVERSIDAD](#)
Almansa 101, 28040 Madrid Spain
stefano.mereta@cunef.edu
[CUNEF Website](#)
[Google Scholar](#)
[ORCID](#)

EMPLOYMENT

- Assistant Professor on Tenure Track, Dept. of Mathematics, CUNEF Universidad, January 2026
- Postdoctoral researcher at KTH, Stockholm (Sweden) September 2023 – August 2025, supervisor: Kathlén Kohn, partially funded by the WASP program
- Postdoctoral researcher at the Max Planck Institute for Mathematics in the Sciences, Leipzig (Germany), June 2022 – May 2023, part of the nonlinear algebra group of Bernd Sturmfels

EDUCATION

- PhD in Mathematics, joint program between the University of Swansea (UK) and Université Grenoble Alpes (FR), 2022
- Master degree in Pure Mathematics, Università degli Studi di Genova (IT), 2018
- Bachelor degree in Mathematics, Università degli Studi di Genova (IT), 2015

FIELDS OF INTEREST

Tropical geometry, especially applications towards differential algebra and machine learning

PUBLICATIONS

- Marchetti, Giovanni Luca, Vahid Shahverdi, Stefano Mereta, Matthew Trager and Kathlén Kohn. "An invitation to neuroalgebraic geometry." International Conference on Machine Learning (ICML) 2025.
- Giansiracusa, Jeffrey, and Stefano Mereta. "A general framework for tropical differential equations." Manuscripta mathematica 173.3 (2024): 1273-1304.

- Brzeziński, Tomasz, Stefano Mereta, and Bernard Rybołowicz. "From pre-trusses to skew braces." *Publicacions Matemàtiques* 66.2 (2022): 683-714.

WORKING PAPERS

- Mereta, Stefano, and Francesco Gallinaro. "The Fundamental theorem of tropical differential algebra over nontrivially valued fields and the radius of convergence of nonarchimedean differential equations." *arXiv preprint arXiv:2303.12124* (2023).
- Beyer, Moritz, Stefano Mereta, Érika Roldán and Peter Voran. "Higher-dimensional cubical sliding puzzles." *arXiv preprint arXiv:2307.14143* (2023).
- Giansiracusa, Jeffrey, Kevin Kuehn, Stefano Mereta, and Eduardo Vital. "Three lectures on tropical algebra." *arXiv preprint arXiv:2602.08664* (2026).
- Falkensteiner, Sebastian, and Stefano Mereta. "The fundamental theorem of tropical differential algebra for formal Puiseux series." *arXiv preprint arXiv:2312.10036* (2023).

SELECTED PRESENTATIONS

CONFERENCES

- 20/08/2025 - "**The geometry of the neuromanifold of ReLU networks**", *GeUmetric deep learning 2025*, Umeå University, Umeå, Sweden
- 08/07/2025 - "**The congruence spectrum of tropical polynomials as the spectrum of a ring**", *Geometry over Semirings*, Universitat Autònoma de Barcelona, Barcelona, Spain
- 30/7/2024 - "**The fundamental theorem of tropical differential algebra with nontrivially valued coefficients**", *MEGA*, MPI MiS & Leipzig University, Leipzig, Germany