

Lorenzo Piccinini

Curriculum Vitae



Personal Information

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Birth 16.08.1999

Education

01/11/2023-Present **PhD in Mathematics (Second of a Three Year Program)**, *Supervisor: Professor Valeria Simoncini*, University of Bologna, Bologna, Italy

16-20/06/2025 **Cini HPC Summer School**, *CNR-IAC, Università degli studi di Napoli Federico II, Università degli studi di Napoli Parthenope*, Napoli, Italy

28-29/02/2024 **Parallel Programming - Leonardo**, *CINECA and Genova SIIT*, Genova, Italy
(CINECA is the main Italian High-Performance Computing center)

05-08/03/2023 **Introduction to Parallel Computing with MPI and OpenMP**, *CINECA*, Bologna, Italy

2021-2023 **Master of Science in Advanced Mathematics for Application: 110/110 Cum Laude**, *University of Bologna*, Bologna, Italy
Thesis title: "Least square methods for Sylvester-like linear matrix equations"

2018-2021 **Bachelor of Science in Mathematics**, *University of Bologna*, Bologna, Italy
Thesis title: "Metodi numerici per l'equazione matriciale di Sylvester"

Professional Experience

10/2022-Present **Tutor for the course Numerical Analysis (Calcolo Numerico)**, *prof. Valeria Simoncini, Department of Mathematics*, University of Bologna

03/2022-09/2022 **Tutor for the course Numerical Analysis and Geometrical Modelling**, *prof. Carolina Beccari, Department of Engineering*, University of Bologna

Talks and Conferences

07-12/07/2025 **Talk**, "*Tensor-oriented LSQR for Tensor Least Squares Problems*", at the PVD75 - Proper Value Decomposition workshop in honor of the seventy-fifth birthday of Paul Van Dooren, Hotel Sierra Silvana, Selva di Fasano (Br), Italy

10-11/01/2025 **Talk**, "*Truncated LSQR for Tensor Least Squares Problems*", at the "Joint GNCS-SIAM Chapters Meeting for Young Researchers in Numerical Analysis and Applied Mathematics", Pavia, Italy

20-21/01/2025 **Talk**, "*Truncated LSQR Least Squares Problems*", at the "Due Giorni di Algebra Lineare Numerica e Applicazioni", Pisa, Italy

- 21/10/2024 **Talk**, “*Truncated LSQR for Matrix and Tensor Least Squares Problems*”, at the PYSANUM group (University of Pisa and SNS), Pisa, Italy
- 16/09/2024-
20/09/2024 **Talk**, “*Truncated LSQR for Matrix and Tensor Least Squares Problems*”, at the CIRM Numerical Linear Algebra Conference in Luminy, Marseille (F)
- 06/2024 **Talk**, “*One day of numerical linear algebra*”, organized by prof. Laura Grigori and prof Daniel Kressner at the EPFL, Lausanne (CH)
- 13/05/2024-
17/05/2024 **Talk**, “*Truncated LSQR for Matrix Least Squares Problems*” at the SIAM LA24, Paris, Minisymposium “MS84 Matrix and Tensor Equations in Action: Simulation, Model Reduction and Scientific Machine Learning”
- 24/04/2024 **Talk**, “*Truncated LSQR for Matrix Least Squares Problems and Application to Dictionary Learning*”, University of Bologna, Cycle of seminars “SCUBE” organized by Davide Palitta and Valeria Simoncini

Long-term Scientific Visits

- 01/03/2025-
01/06/2025 **Visiting period**, hosted at the EPFL, Lausanne (CH), by professor Laura Grigori
- 28/05/2024-
29/06/2024 **Visiting period**, hosted at the EPFL, Lausanne (CH), by professor Laura Grigori
- 01/03/2023-
29/05/2023 **Visiting period**, hosted by professor Karl Meerbergen at the KU Leuven, Department of Computer Science, during the visiting period, I had the opportunity to work with prof. Karl Meerbergen and to follow seminars from the NUMA research group.

Publications

- (Published) *Truncated LSQR for matrix least squares problems*, Lorenzo Piccinini, Valeria Simoncini, 2024, Computational Optimization and Application, 1-28.
- (Accepted) *TT-LSQR For Tensor Least Squares Problems and Application to Data Mining*, Lorenzo Piccinini, Valeria Simoncini, 2025, arXiv:2502.01293. To appear in Numerical Algorithms.

Skills

- Programming
- o Matlab
 - o Python
 - o L^AT_EX
 - o C++ (basic)
 - o OpenMP
 - o MPI
- Languages
- o Italian (native)
 - o English (C2)
 - o Greek (A2)