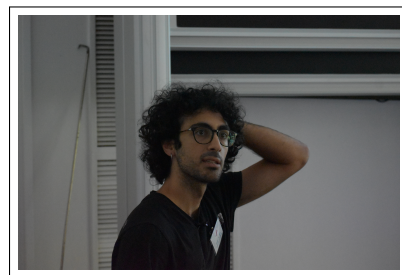


Lorenzo Piccinini



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

Scientific Dissemination

- 02-06/02/2026 **Workshop**, Randomized Numerical Linear Algebra workshop at ICERM, Providence
- 07-09/01/2026 **Talk**, "Randomized biorthogonalization through a two-sided Gram-Schmidt process", at METT XI, 11th Workshop on Matrix Equations and Tensor Techniques, Leuven, Belgium
- 07-10/10/2025 **Talk**, "Randomized Two-Sided Gram-Schmidt Process With Applications", at Workshop on Approximate Computing in Numerical Linear Algebra, Paris, France
- 31/08/2025-05/09/2025 **Poster**, "Randomized biorthogonalization through a two-sided Gram-Schmidt process", at the INdAM Workshop: Low-rank Structures and Numerical Methods in Matrix and Tensor Computations, Palazzone di Cortona, Cortona (Ar), Italy

- 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**, “*TNumerical Methods for Matrix and 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 for 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 (Reverse chronological order)

- (Submitted) M. Iannacito, L. Piccinini, and V. Simoncini. “*Randomized biorthogonalization through a two-sided Gram-Schmidt process*”, September 2025, ArXiv 2602.21974, <https://arxiv.org/abs/2602.21974>
- (Submitted) L. Grigori, L. Piccinini, and I. Simunec. “*Subspace gradient descent method for linear tensor equations*”, February 2026, ArXiv 2509.04386, <https://arxiv.org/abs/2509.04386>
- (Published) L. Piccinini, and V. Simoncini. “*TT-LSQR For Tensor Least Squares Problems and Application to Data Mining*”, Numerical Algorithms (2025), <https://doi.org/10.1007/s11075-025-02204-8>.
- (Published) L. Piccinini, and V. Simoncini. “*Truncated LSQR for matrix least squares problems*”, Computational Optimization and Application (COAP), v.91 (2025), pp.905-932. DOI: 10.1007/s10589-024-00629-w.

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)