

Davide Collato – CURRICULUM VITAE

Last update: 05-07-2026

Born in Legnano (MI), Italy, Nov. 4, 2000
Italian Citizenship

CONTACT

Dipartimento di Scienze Matematiche (DISMA), Politecnico di Torino
Corso Duca degli Abruzzi, 24
10129 Torino, Italy
Email: davide.collato@polito.it
Personal website: <https://davidecollato.github.io/>
ORCID iD: 0009-0003-1655-7890
Google Scholar: <https://scholar.google.com/citations?user=3GBcuz8AAAAJ&hl=it>

EDUCATION

- Nov. 1, 2024 - present** PhD in Mathematical Sciences at Dipartimento di Scienze Matematiche “G. L. Lagrange”, Politecnico di Torino, Italy.
Project title: *Advanced numerical methods for wave propagation problems*.
Research area: numerical methods for PDEs, wave propagation, boundary integral equations.
Advisors: Prof. S. Falletta and Prof. L. Scuderi.
- Sept. 20, 2024** MSc in Mathematics, Università degli Studi di Milano-Bicocca, Italy.
Title of the thesis: *Disuguaglianze di Hardy multipolari per operatori di Schrödinger e Dirac*.
Supervisor: Prof. V. Felli.
Score: 110/110 cum laude.
- Nov. 24, 2022** BSc in Mathematics, Università degli Studi di Milano-Bicocca, Italy.
Title of the thesis: *Il problema di Riemann per i sistemi di leggi di conservazione iperbolici in dimensione uno*.
Supervisor: Prof. G. Guerra.
Score: 100/110.

PUBLICATIONS

Preprints

1. D. Collato, S. Falletta, G. Monegato, L. Scuderi. *CQ-collocation BEMs for 3D sound-hard scattering problems*, 2025. Preprint available at: <http://dx.doi.org/10.2139/ssrn.5984634>.

CONFERENCE TALKS AND SEMINARS

1. *TBA*, ICOSAHOM 2027, Politecnico di Milano (Italy), July 5 - 9, 2027 (invited).
2. *Towards a virtual element approximation of single-layer and hypersingular boundary integral operators in acoustic scattering*, YAMC 2026, Politecnico di Torino (Italy), Sept. 14 - 18, 2026 (invited).

3. *Solving 3D exterior Helmholtz problems in unbounded domains via VEM/BEM coupling*, IMSE 2026, Università della Basilicata (Italy), July 20 - 24, 2026 (invited).
4. *VEM/BEM coupling for 3D acoustic scattering problems*, GIMC SIMAI Young 2026, Università di Pisa (Italy), June 3 - 5, 2026.
5. *BEM and VEM/BEM coupling for 3D wave propagation problems*, PhD Day, Politecnico di Torino (Italy), Dec. 4, 2025 (invited).

Poster session

1. *VEM-BEM coupling for 3D exterior Helmholtz problem*, Summer School on *Waves: Modeling, Analysis, and Numerics*. Nijmegen (The Netherlands), Aug. 25, 2025.

ATTENDED SUMMER SCHOOLS, WORKSHOPS AND CONFERENCES

July 5 - 9, 2027 ICOSAHOM 2027 in Milan, Italy.

Sept. 14 - 18, 2026 YAMC 2026 *Young Applied Mathematicians Conference* in Turin, Italy.

July 20 - 24, 2026 IMSE 2026: *17th International Conference on Integral Methods in Science and Engineering* in Matera, Italy.

June 3 - 5, 2026 Workshop GIMC SIMAI Young 2026 in Pisa, Italy.

May 12, 2026 *Women in Mathematics Day 2026* in Turin, Italy.

Aug. 25 - 29, 2025 Summer School on *Waves: Modeling, Analysis, and Numerics* in Nijmegen, The Netherlands.

July 2 - 4, 2025 Workshop *PoWER²⁰²⁵ Propagation of Waves: European Researchers* in Vienna, Austria.

May 7, 2025 Workshop *LYNUM VII: Lombardy Young Numerical Analysts* in Pavia, Italy.

Feb. 5 - 7, 2025 Workshop *Software for Approximation 2025* in Torino, Italy.

VISITING PERIODS

Nov. 7, 2025 - Feb. 6, 2026 Office National d'Études et de Recherches Aéronautiques (ONERA), Toulouse (France) with S. Pernet and E. Arcese.

Oct. 13 - 17, 2025 Università degli Studi di Messina (Italy), with Prof. L. Desiderio.

TEACHING EXPERIENCE

A.Y. 2025-2026

- Lecturer and teaching assistant for the *Numerical Linear Algebra* part of the course ALGEBRA LINEARE E GEOMETRIA. BSc in Aerospace Engineering. Politecnico di Torino. (20+20 hours)
- Teaching assistant for the *Numerical Linear Algebra* part of the course ALGEBRA LINEARE E GEOMETRIA. BSc in Aerospace Engineering. Politecnico di Torino. (20 hours)

A.Y. 2024-2025

- Teaching assistant for the *Numerical Linear Algebra* part of the course ALGEBRA LINEARE E GEOMETRIA. BSc in Aerospace Engineering. Politecnico di Torino. (20+20 hours)

A.Y. 2023-2024

- Teaching assistant for the course ANALISI MATEMATICA 2. BSc in Statistical Sciences and Economics, Università degli Studi di Milano-Bicocca. (36 hours)

ATTENDED COURSES

A.Y. 2025-2026

- *Mathematical Aspects of Artificial Intelligence*, Prof. Anita Tabacco - Politecnico di Torino, Doctoral course

A.Y. 2024-2025

- *Numerical Methods for Non Linear Hyperbolic Equations*, Prof. Adriano Festa - Politecnico di Torino, Doctoral course (with final exam)
- *Solving PDEs on polygonal or polyhedral meshes*, Prof. Andrea Borio - Politecnico di Torino, Doctoral course (with final exam)
- *High Performance Scientific Computing 1*, Dr. Matteo Cicuttin - Politecnico di Torino, Doctoral course
- *Metodi Numerici Avanzati per Equazioni a Derivate Parziali*, Prof. Andrea Moiola - Università di Pavia, MSc course (with final exam)
- *Numerical methods for Boundary Integral Equations*, Prof. Alessandra Aimi - Università di Parma, Doctoral course (with final exam)

AWARDS, GRANTS AND PRIZES

- GNCS Project 2026 *Numerical resolution of wave problems in a domain decomposition framework*, member (P.I. Dr. G. Di Credico).
- Received a graduation award for the academic year 2023-2024 from Università degli Studi di Milano-Bicocca.
- Received a merit-based scholarship for the academic year 2023-2024 from Università degli Studi di Milano-Bicocca.
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