

Martino Zanetti

30 January 1998, Milan
M.Sc. in Physics

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EDUCATION

Guest research assistant at Atominstitut (TU-Wien)
Philipp Haslinger's group, <https://www.haslingerlab.com>

(Vienna, Austria, March 2025 - ongoing)

PhD student in Experimental Quantum Physics - University of Vienna

(Vienna, Austria, 2023 - ongoing)

Thomas Juffmann's group, Quantum optics and microscopy <https://imaging.univie.ac.at>

Current research project: *Quantum-Computer Enhanced Electron Microscopy*, <https://qcem.info>

Contributing project: *Electron wavefront shaping with light in free space, using a modified Scanning Electron Microscope*.

Supervisor of 2 internships, 2 Master's and 3 Bachelor's thesis projects.

Master's Degree in Plasma Physics - University of Milan

(Milan, Italy, 2020 - 2023)

Thesis project with Prof. G. Maero: *Formation and dynamics of vortex structures in a Penning-Malmberg trap*. 110/110 cum Laude.

Bachelor's Degree in Physics - University of Milan

(Milan, Italy, 2017 - 2020)

Thesis with Prof. L. Miramonti: *Simulation of cosmogenic isotope production in the seabed*, 108/110.

- Strong competencies and skills: electron microscopy hardware; electron and light optics; vacuum design and maintenance; CAD design and manufacturing of mechanical parts (including milling and lathing) and electrical engineering; analog electronics; measuring instrumentation and data analysis; programming for handling laboratory equipment and for simulations.
- Other competencies and interests: Monte Carlo methods applied to statistical physics, complex systems dynamics and other physical systems; fluid dynamics; machine learning; environmental physics; statistical physics and stochastic processes.

TALKS, CONFERENCES AND WORKSHOPS

Poster contribution at EBSN conference

(Barcelona, Spain, October 2025)

Title: *Low-energy single-electron detector with sub-micron resolution*

Contributed talk at Microscopy Conference

(Karlsruhe, Germany, September 2025)

Title: *Towards shaping electron wavefront with light in free space*

Attended QEM summer school, with poster contribution

(Port Barcares, France, May 2025)

Title: *Reaching 10^{-11} mbar at the specimen in a Jeol TEM*

Invited talk at IBM-Research Zurich

(Zurich, Swiss, 2025)

Title: *Shaping electron wavefront with light in free space*

Invited talk at A. Konecna group

(Brno, Czekia, December 2024)

Title: *Shaping electron wavefront with light in free space*

Poster contribution at 14th ASEM workshop

(Graz, Austria, April 2024)

Title: *Electron Beam Shaping With Light*

Contributed talk at UniMi Complex Systems Community Day

(Milan, Italy, June 2023)

Title: *Forced and free dynamics of fluid vortices using magnetized electron plasmas*

Attended 13th International Workshop on Non-Neutral Plasmas

(Milan, Italy, September 2022)

PUBLICATIONS

L. A. Ixquiac Mèndez, M. Zanetti, T. Kraeft, T. Juffmann, **Low-energy single-electron detector with sub-micron resolution**, (submitted, October 2025)

SOFTWARE AND PROGRAMMING

●●●●●: Office Package, C, C++, C#, Python, LaTex, Markdown
●●●○○: Git, MATLAB, Bash, Linux OS
●●○○○: Makefile, CSS, HTML, YAML

LANGUAGES

Italian: ●●●●●
English: ●●●●●
French: ●●○○○○
German: ●○○○○

PROFESSIONAL EXPERIENCES

Main coordinator of a 3-day festival in Bagolino, Italy

(2019-ongoing)

Related competences: planning and coordination, recreational creativity, and caring for people.

Executive Committee Member at Cultural Association *Lato B – L’altro lato di Milano*

(2019 - 2021)

Volunteers' recruitment, training, and shift organisation. Management of technical equipment use and maintenance. Design and installation of sound systems, including both ambient and onstage applications.

Related skills: teamwork, team management and leadership.

Project manager at Cultural Association *Lato B – L’altro lato di Milano*

(2020 - 2023)

Planning, implementation and reporting of annual theatre project *Lunedì Teatrali*. Under my leadership, we received funding of approximately 10,000 € per year for the first time through the "8 per mille" program of the Waldensian Church. Since then, the project has continuously received increased funding.

Related skills: successful grant writing and funding acquisition, successfully trained and mentored team members to ensure knowledge transfer and project continuity.

Tutoring in Maths, Physics, Chemistry

(2017 - 2023)

OTHER EXPERIENCES

Student representative, Department of Physics

(2022 - 2023)

Tinkering

Repairs of domestic electrical and hydraulic systems, domestic furniture and appliances, wood craftsmanship and steel welding, bicycles and sailing boats. I'm generally inclined towards innovative and creative problem-solving, even in the absence of dedicated tools.

Karate at *Yama Karate Club – Milano*

(2005 - 2018)

Gained the black belt in 2012. Member of the Italian National Team (2015 - 2018).

Participated in the WSKA World Championships in 2017.

Italian Team Kata Champion in 2018 (as team captain).

Volunteering at *Handicap – Su La Testa! ONLUS*

(2015 - 2023)

PERSONAL INTERESTS

High-altitude alpinism and ski-alpinism, rock and ice climbing, long-distance wild trekking, bike solo travelling. Sailing and windsurfing. Music. Photography. Welding, woodworking, tree-climbing and gardening.