

Curriculum Vitae Maura Pavan

Personal information

- Born in Varese, Italy, on August 26, 1967
- Nationality: Italian
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Present position

- **Full Professor** Department of Physics, Università di Milano-Bicocca (Italy)
- **Teaching Classes** for the Bachelor and Master Degree in Physics: Laboratory of Physics (12 credits) - Elementary Particles III (2 credits)
- INFN Research Associated
- **coSpokesperson of the CUPID Experiment**
- **Member of CUORE**, **CUPID** and **KATRIN** collaborations
- **INFN Referee** for ICARUS-SBN, DUNE, Cygno experiments

Education and Academic Career

- from 2022 **Full Professor** Department of Physics, Università di Milano-Bicocca (Italy)
- 2012-2022 **Associated Professor** at Department of Physics, Università di Milano-Bicocca (Italy)
- 2002-2012 **Researcher** at the Department of Physics, Università di Milano-Bicocca (Italy)
- 1997-2002 **Technologist** at the Department of Physics, Università di Milano (Italy)
- 1995-1997 **Post Doc.** fellowships (INFN and Università di Milano, Italy)
- 1995 **Ph. D.** in Physics (Università di Milano, Italy)
- 1990 **Master Degree** in Physics (Università di Milano, Italy, 110/110 cum laude)

Institutional Responsibilities

- **from 2020 to present** **co-Spokeperson** of the CUPID collaboration
- **2016-2023** **member of the INFN Astroparticle Committee**, and INFN referee for the following experiments: Borex, Icarus, Dune, Ptolemy, Cygno
- **2019-2022** **Deputy Coordinator of Doctoral Program in Physics and Astrophysics**, Università di Milano-Bicocca (Italy)
- **2012-2015** **Deputy Director of the Department of Physics**, Università di Milano-Bicocca (Italy)
- **2013-2018** **member of the INFN Conference Committee**
- **member of various public Competition Committees**, on local and national basis, for researcher and post-doc positions in both universities and INFN

Responsibility for Research Funds

- **2016-2023** Astroparticle committee funds allocated at Milano-Bicocca INFN Division
- **2019-2021** PRIN-2017 Project “Advanced techniques for a next generation cryogenic Double Beta Decay experiment”
- **2018-2020** national PI of the TRISTAN-KATRIN grup and INFN funds responsible
- **2016-2018** PI of the CUPID group and INFN funds responsible at Milano-Bicocca
- **2010-2015** PI of the CUORE group and INFN funds responsible at Milano-Bicocca
- **2012-2013** PI of the ABSURD group and INFN funds responsible at Milano-Bicocca

Research Responsibility and Coordination

- **from 2020** [coSpokeperson of the CUPID](#) collaboration
- **from 2019** Italian Spokeperson of the CUPID collaboration
- **2018-2020** [national responsible of the TRISTAN-KATRIN](#) INFN group
- **2016-2018** coordinator of the Milano – Bicocca (University and INFN) researchers working in the CUPID experiment
- **2010-2015** coordinator of the Milano – Bicocca (University and INFN) researchers working in the CUORE experiment
- **2012-2013** coordinator of the Milano – Bicocca (University and INFN) researchers working in the ABSURD experiment
- **2004-2013** Physics Coordinator of the CUORE experiment
- **2000-2008** Physics Coordinator of the MIDBD and CUORICINO experiment

Publications

- 198 articles on international peer-reviewed journals
- 83 indexed proceeding of international conferences
- [10 year track record \(2014-2024\)](#): 89 articles / h-index 27

Main research areas:

- **neutrino properties** lepton number violation and experimental measurement of neutrino mass
- **dark matter detection (WIMPS) and rare nuclear decays**
- **development of single particle thermal detectors** (devices based on dielectric single crystals, equipped with high sensitivity phonon sensors, operated at ~ 10 mK)
- **development of thermal detectors with light read-out** (thermal detectors with a simultaneous read-out of the phonon signal and the scintillation light or Cerenkov light)
- **study of ultra-trace contaminants** development of detector and techniques for the identification of radioactive contaminant in ultra-low concentrations
- **Monte Carlo simulations** for application in low energy particle physics and radiation dosimetry in medicine

15 more representative papers:

- Adams D.Q. et al., *Data-driven background model for the CUORE experiment*, 2024, Phys. Rev. D Vol. 110 Issue 5 N. 52003, [10.1103/PhysRevD.110.052003](#)
- Augier C. et al., *The background model of the CUPID-Mo $0\nu\beta\beta$ experiment*, 2023, EPJC Vol. 83 Issue 7 N. 675, [10.1140/epjc/s10052-023-11830-2](#)
- Adams D.Q. et al., *Search for Majorana neutrinos exploiting millikelvin cryogenics with CUORE*, 2022, Nature, Vol. 604 Issue 7904, [10.1038/s41586-022-04497-4](#)
- Aker M. et al., *KATRIN: status and prospects for the neutrino mass and beyond*, 2022, J Phys G Vol. 49 Issue 10 N. 100501, [10.1088/1361-6471/ac834e](#)
- Adams D.Q. et al., *Improved Limit on Neutrinoless Double-Beta Decay in Te 130 with CUORE*, 2020, Phys. Rev. Lett. Vol.124 Issue 12 N. 122501, [10.1103/PhysRevLett.124.122501](#)
- Armengaud E. et al., *The CUPID-Mo experiment for neutrinoless double-beta decay: performance and prospects*, 2020, EPJC Vol. 80 Issue 1 N. 44, [10.1140/epjc/s10052-019-7578-6](#)

- Azzolini O. et al., *Evidence of Single State Dominance in the Two-Neutrino Double- β Decay of Se 82 with CUPID-0*, 2019, Phys. Rev. Lett. Vol. 123 Issue 26 N. 262501, [10.1103/PhysRevLett.123.262501](https://doi.org/10.1103/PhysRevLett.123.262501)
- Alduino C. et al., *First results from CUORE: A search for lepton number violation via $0\nu\beta\beta$ decay of ^{130}Te* , 2018, Phys. Rev. Lett. Vol. 120 Issue 13 N. 132501, [10.1103/PhysRevLett.120.132501](https://doi.org/10.1103/PhysRevLett.120.132501)
- Azzolini O. et al., *First result on the neutrinoless double- β decay of ^{82}Se with CUPID-0*, 2018, Phys. Rev. Lett. Vol. 120 Issue 23 N. 232502, [10.1103/PhysRevLett.120.232502](https://doi.org/10.1103/PhysRevLett.120.232502)
- Alduino C. et al., *The projected background for the CUORE experiment*, 2017, EPJC Vol. 77 Issue 8 N. 543, [10.1140/epjc/s10052-017-5080-6](https://doi.org/10.1140/epjc/s10052-017-5080-6)
- Armengaud E. et al., *Development of ^{100}Mo -containing scintillating bolometers for a high-sensitivity neutrinoless double-beta decay search*, 2017, EPJC Vol. 77 Issue 11 N. 785, [10.1140/epjc/s10052-017-5343-2](https://doi.org/10.1140/epjc/s10052-017-5343-2)
- Alduino C. et al., *Measurement of the two-neutrino double-beta decay half-life of ^{130}Te with the CUORE-0 experiment*, 2017, EPJC Vol. 77 Issue 1 N. 13, [10.1140/epjc/s10052-016-4498-6](https://doi.org/10.1140/epjc/s10052-016-4498-6)
- Alfonso K. et al., *Search for Neutrinoless Double-Beta Decay of ^{130}Te with CUORE-0*, 2015, Phys. Rev. Lett. Vol. 115 Issue 10 N. 102502, [10.1103/PhysRevLett.115.102502](https://doi.org/10.1103/PhysRevLett.115.102502)
- Artusa D.R. et al., *Searching for Neutrinoless double-beta decay of ^{130}Te with CUORE*, 2015, Adv. High En. Phys. Vol. 2015 Issue N. 879871, [10.1155/2015/879871](https://doi.org/10.1155/2015/879871)
- Cremonesi O. and Pavan M., *Challenges in double beta decay*, 2014, Adv. High En. Phys. Vol. 2014 N. 951432, [10.1155/2014/951432](https://doi.org/10.1155/2014/951432)