

CURRICULUM VITAE

Personal information

Name and Surname: Jacopo Nava

Birth Place and Date: Carate Brianza (MB), Italy, 14/06/1995

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Education and work experience

- 2022-present **PhD student** in Physics at *Università di Bologna*, Bologna (Italy), in Physics Beyond the Standard Model and Theoretical Astroparticle Physics. Supervisors: Prof. Silvia Pascoli and Dr. Filippo Sala
 - Apr-Aug 2024 **Visitor** at Fermilab, US, in the astrophysics theory department.
 - Oct 2020-Jan 2022 **Research Assistant** assistant employed by the Consejo Superior de Investigaciones Científicas (CSIC) at the Instituto de Física Corpuscular, Valencia, in the Astroparticle and High Energy Physics group (AHEP).
 - 2017-2019: **Master's degree in Physics**, *Università degli studi di Padova*, Padova (Italy), 110/110. Thesis title: *Flavour changing neutral currents and axions* Thesis supervisor: Prof. Stefano Rigolin
 - 2014-2017: **Laurea in Fisica**, *Università degli Studi di Milano-Bicocca*, Milano (Italy), 109/110. Thesis title: *Anomalies in quantum mechanics*. Thesis supervisor: Prof. Silvia Penati.
 - 2009-2014: Scientific high school degree at *Liceo Statale M.G. Agnesi* (LC) Italy, 100/100.
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Publications

- "Observable flavor violation from spontaneous lepton number breaking", P.Escribano, M.Hirsch, J.Nava, A.Vicente, JHEP 01 (2022) 098, <https://arxiv.org/pdf/2108.01101>.
- "Dark Matter in the Scotogenic model with spontaneous lepton number breaking", V.De Romeri, J.Nava, M.Puerta, A.Vicente, Phys.Rev.D 107 (2023) 9, 095019, <https://arxiv.org/pdf/2210.07706>.

- "Baryogenesis and Leptogenesis from Supercooled Confinement", M.Dichtl, J.Nava, S.Pascoli, F.Sala, JHEP 02 (2024) 059, <https://arxiv.org/pdf/2312.09282>
- "Relic Neutrino Background from Cosmic-Ray Reservoirs", A.Granelli, A.G. De Marchi, J.Nava, F.Sala, Phys.Rev.D 111 (2025) 2, 023023 <https://arxiv.org/abs/2405.04568>
- "Exploring the Cosmological Triangle in Search for Axion-Like Particles from a Reactor", D.Kim, G.Krnjaic, J.Nava and NEON Collaboration, Phys.Rev.Lett. 134 (2025) 20, 201002, <https://arxiv.org/abs/2406.06117>

Preprints

- "Did IceCube discover Dark Matter around Blazars?", A.Granelli, A.G. De Marchi, J.Nava, F.Sala, <https://arxiv.org/abs/2412.07861>
- "Diffuse astrophysical neutrinos from dark matter around blazars", A.Granelli, A.G. De Marchi, J.Nava, F.Sala, <https://arxiv.org/abs/2506.06416>
- "Boosted dark matter versus dark matter-induced neutrinos from single and stacked blazars", <https://arxiv.org/pdf/2507.12278>

Talks

- Dark Matter and Neutrino Workshop, 5-23 May 2025, Paris, "Neutrinos from Dark Matter scatterings around blazars"
- Dark Matter and Cosmic Rays Workshop, 11-12 November 2024, Naples, "Sub-GeV Boosted Dark Matter by Blazars"
- DESY Theory Workshop, 24-27 September 2024, Hamburg, "The Baryon Asymmetry from Supercooled Confinement"
- TeVPA 2024, 26-30 August 2024, Chicago, "Boosted Relic Neutrino Background by Cosmic Reservoirs"
- IRN Terascale, 15-17 April 2024, Frascati, "The Baryon Asymmetry from Supercooled Confinement", plenary
- TaSP Meeting, 18-19 January 2024, Turin, "The Baryon Asymmetry from Supercooled Confinement", plenary
- Convegno Nazionale di Fisica Teorica, 27-29 September 2023, Cortona, "Baryogenesis from Supercooled Confinement"

Teaching Experience

- 2024-2025: Teaching Assistance in General Physics aimed at second-year Mathematics students

Partecipation at international schools

- I partecipated as a student at the Summer School on Particle Physics, 19-30 June 2023, ICTP Trieste (Italy).
- I partecipated as a student at the TAE (Taller de Altas Energias) School, 5-18 September 2021, Benasque (Spain).
- I partecipated as a student at the ISAPP (International School on AstroParticle Physics) 22-30 July 2021, Valencia (Spain).

Computer skills

Advanced: \LaTeX , Mathematica

Intermediate: Microsoft Windows, Linux, SARAH, SPheno, MicrOmegas

Basic: C, C++, Root, MadGraph, Pythia

Languages

Italian Mothertongue

English Fluent

French Basic