
STEFANO DAVINI - CURRICULUM VITAE, 17 MARZO 2023

INFN - Sezione di Genova

Profile

I am a Staff Researcher at INFN - Istituto Nazionale di Fisica Nucleare. I am collaborating in the Euclid Consortium for the study of the large scale structures of the Universe, in the DarkSide Experiment at Laboratori Nazionali del Gran Sasso for the detection of massive particle dark matter, and in the Borexino Experiment for the detection of solar neutrinos.

Research Experience

Ricercatore III livello, INFN; Genova, Italy — 2017-Present

Post Doc, GSSI; L'Aquila, Italy — 2015-2017

Research Associate, University of Houston; Houston, TX, US — 2012-2015

PhD Student, Università di Genova; Genova, Italy — 2009-2012

Education

Università degli Studi di Genova — Dottorato di Ricerca in Fisica - 2012

Università degli Studi di Genova — Laurea Specialistica in Fisica - 2008

Università degli Studi di Genova — Laurea Triennale in Fisica - 2006

Teaching Activities

Professore a contratto per il corso “Fisica Sperimentale con applicazioni al sistema terra” - Scienze Geologiche, UNIGE — da AA. 2018-19 a presente

Professore a contratto per il corso “Fisica Generale con Laboratorio” - Chimica, UNIGE — AA. 2020-21

Professore a contratto per il corso “Fisica Sperimentale” - Scienze Geologiche, UNIGE — A.A. 2018-19

Administrative Roles and Responsibilities

- Euclid: local responsible [2018 - present]
- DarkSide: local responsible [2017 - 2018]
- Co PI of PESCE - INFN Grant 19593 [2019 - 2022]
- DarkSide: L2 manager of the software infrastructure of the NOA facility (2022 -present)
- DarkSide: L2 manager of the slow control for the ReD detector (2018 - present)
- DarkSide: Chair of the Editorial Board (2017-2021)
- DarkSide-50: Analysis Coordinator of the neutron Veto (2014-2018)

Selected Recent Publications

- Borexino Collaboration. "Experimental evidence of neutrinos produced in the CNO fusion in the Sun". *Nature* 587 (2020) 577-582
- S. Davini et al. "A Proposal for Relative In-flight Flux Self-calibrations for Spectro-photometric Surveys". *Publications of the Astronomical Society of the Pacific* 133 (2021) 084501
- DarkSide Collaboration. "Calibration of the liquid argon ionization response to low energy electronic and nuclear recoils with DarkSide-50". *Physical Review D*, 104 (2021) 082005
- P.Agnes et al. "Performance of the ReD TPC, a novel double-phase LAr detector with silicon photomultiplier readout". *European Physical Journal C*, 81, (2021) 1014
- Borexino Collaboration. "Comprehensive geoneutrino analysis with Borexino". *Physical Review D*, 101 (2020) 012009
- Borexino Collaboration. "Simultaneous precision spectroscopy of pp, Be-7, and pep solar neutrinos with Borexino Phase-II". *Physical Review D*, 100 (2019) 082004
- M. Cadeddu et al. "Directional dark matter detection sensitivity of a two-phase liquid argon detector". *Journal of Cosmology and Astroparticle Physics*, 2019 (2019): 014 [arXiv: 1704.03741]
- Borexino Collaboration. "Comprehensive measurement of pp-chain solar neutrinos". *Nature*, 562 (2018) 505
- Borexino Collaboration. "The Monte Carlo simulation of the Borexino detector". *Astroparticle Physics*, 97 (2018), 136-159
- A. Caminata et al. "Search for geo-neutrinos and rare nuclear processes with Borexino". *International Journal of Modern Physics A*, 33 (2018), 1843009 [arXiv: 1704.03741]
- DarkSide Collaboration. "DarkSide-50 532-day Dark Matter Search with Low-Radioactivity Argon". *Physical Review D*, 98 (2018): 102006. [arXiv: 1802.07198]
- DarkSide Collaboration. "Low-mass Dark Matter Search with the DarkSide-50 Experiment". *Physical Review Letters*, 121 (2018): 081307. [arXiv: 1802.06994]
- DarkSide Collaboration. "Constraints on Sub-GeV Dark Matter-Electron Scattering from the DarkSide-50 Experiment". *Physical Review Letters*, 121 (2018): 111303. [arXiv: 1802.06998]
- DarkSide Collaboration. "Electroluminescence pulse shape and electron diffusion in liquid argon measured in a dual-phase TPC". *Nuclear Instruments and Methods A*, 904 (2018): 23-34. [arXiv: 1802.01427]
- Borexino Collaboration. "Limiting neutrino magnetic moments with Borexino Phase-II solar neutrino data". *Physical Review D*, 96 (2017) 091103
- Borexino Collaboration. "A Search for Low-energy Neutrinos Correlated with Gravitational Wave Events GW 150914, GW 151226, and GW 170104 with the Borexino Detector". *Astrophysical Journal*, 850 (2017), 21
- Borexino Collaboration. "Seasonal modulation of the Be-7 solar neutrino rate in Borexino". *Astroparticle Physics*, 92 (2017) 21-29
- DarkSide Collaboration. "Cryogenic Characterization of FBK RGB-HD SiPMs". *Journal of Instrumentation*, 12 (2017): P09030. [arXiv: 1705.07028]
- DarkSide Collaboration. "DarkSide-20k: A 20 Tonne Two-Phase LAr TPC for Direct Dark Matter Detection at LNGS". *The European Physical Journal Plus*, 133 (2018): 131 [arXiv: 1707.08145]

