Stanford

Caterina Vernieri

Associate Scientist, SLAC National Accelerator Laboratory

Bio

HONORS AND AWARDS

- Early Career Award, Department of Energy (2021-2026)
- Panofsky Fellow, SLAC (2018-present)
- Distinguished Researcher, LPC at Fermilab (2017-2018)

EDUCATION AND CERTIFICATIONS

- PhD, Scuola Normale Superiore, Pisa, Italy , Physics (2014)

PROJECTS

- ATLAS Experiment at the LHC, CERN
- Snowmass 21 (2020 - 2022)

LINKS

- SLAC Public Lecture - A Camera for the Invisible: https://youtu.be/kjIfRFrHW5M?t=1
- Higgs physics at future colliders: https://ep-news.web.cern.ch/higgs-physics-future-colliders
- List of Talks: https://www.dropbox.com/s/i6llctj31vwl11r/list-talks.pdf?dl=0

Professional

PROFESSIONAL INTERESTS

- Higgs Physics and Tracker detectors at Future colliders

- Measurements of Higgs boson properties at LHC

- Searches for Beyond the Standard Model particles at LHC

- Application of machine learning techniques for signal extraction

- Development of b-quark identification algorithms

- Evaluation of the damage induced by radiation to silicon pixel sensor

- Construction of silicon pixel detector for the ATLAS experiment at HL-LHC

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Co-convener of the Higgs Boson properties and couplings group (EF01), Particle Physics Community Planning Exercise (Snowmass) by the American Physical Society, DPF (2020 - present)
- Coordinator of the HH physics studies for HL-LHC, ATLAS experiment (2019 - present)

- L3 Manager of loading and integration for the silicon pixel detector, US ATLAS experiment upgrade for the HL-LHC (2018 - present)