

Mark Farino

Office
369 Jadwin Hall

Email address
mfarino@princeton.edu

Phone number
412-979-8240

Education

2022 – Present	Princeton University Physics Doctoral Program
2018 – 2022	University of Pittsburgh Bachelor of Philosophy in Physics and Mathematics, both with honors Minor in French GPA: 3.95

Research Experiences

2019 – 2022	University of Pittsburgh Search for Decays of B Mesons to Charmed Baryons in Belle Data Mentor: Professor Vladimir Savinov Analysis project searching for decays $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^0$ and $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^{*0}$ in data collected at the Belle experiment. These decays are of particular interest as it has been posited that $\Omega_c^0 - \bar{\Omega}_c^0$ oscillations are theoretically plausible, making it possible to extend this search to baryon number-violating decays. Work done in C++ and ROOT.
June – August 2021	University of Michigan - UM-CERN NSF REU Data Compression Studies in the High Granularity Calorimeter Mentor: Dr. Cristina Mantilla Suárez Worked with researchers at Fermilab as a participant in the CERN Summer Student Programme. Helped to develop and improve data compression algorithms (via Machine Learning) to be implemented in front-end electronics on the High Granularity Calorimeter as part of the HL-LHC upgrade. Work done in Python.

Awards and Societies

2022	NSF Graduate Research Fellowship - <i>Honorable Mention</i> <i>National Science Foundation</i>
	Dean's Scholar Award <i>University of Pittsburgh Dietrich School of Arts and Sciences</i>
	Peter F. M. Koehler Academic Achievement Award <i>University of Pittsburgh Department of Physics and Astronomy</i>

	Montgomery M. Culver Prize <i>University of Pittsburgh Department of Mathematics</i>
2021	Goldwater Scholarship <i>Barry Goldwater Scholarship and Excellence in Education Foundation</i> Sigma Pi Sigma ($\Sigma\Pi\Sigma$) Induction <i>American Institute of Physics</i>
2020	Brackenridge Fellowship <i>University of Pittsburgh Honors College</i> THINK Research Fellowship <i>University of Pittsburgh Honors College</i> NASA Pennsylvania Space Grant Consortium Scholarship <i>University of Pittsburgh Department of Physics and Astronomy</i>
2019	Summer Undergraduate Research Award <i>University of Pittsburgh Dietrich School of Arts and Sciences</i> NASA Pennsylvania Space Grant Consortium Scholarship <i>University of Pittsburgh Department of Physics and Astronomy</i> Outside the Classroom Curriculum Honor Society Induction <i>University of Pittsburgh</i> NRHH Outstanding Leadership Pin and Bronze Pin <i>Jonas Salk Chapter of the National Residence Hall Honorary</i>

Presentations

May 2022	Phenomenology Symposia 2022 (PITT PACC), Oral Presentation 'Search for New Decays of B Mesons to Charmed Baryons'
April 2021	APS April Meeting, Oral Presentation 'Search for Decays of B Mesons to Charmed Baryons'
March 2021	Department of Physics and Astronomy - Undergraduate Poster Session, Poster 'Search for Decays $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^0$ and $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^{*0}$ '
February 2021	University of Pittsburgh Honors College Research Fair, Poster 'Search for Decays $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^0$ and $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^{*0}$ '
June 2020, 2021	Belle General Meeting, Oral Presentation 'Search for Decays $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^0$ and $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^{*0}$ '
Sep 2019 – Jan 2022	BtoCharm/Phi3 Meetings, Oral Presentation Presented updates 13 times 'Search for Decays $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^0$ and $\bar{B}^0 \rightarrow \bar{\Lambda}^0 \Omega_c^{*0}$ Update'

Extracurricular Activities

2022 – Present	Princeton Physics Ambassadors - <i>Member</i>
2022 – Present	Princeton University Sinfonia - <i>Clarinetist</i>
2021 – 2022	Student Government Board (Pitt) - <i>Internal Communications Director</i>
2021 – 2022	Residence Life (Pitt) - <i>Resident Assistant</i>
2020 – 2022	Jonas Salk Chapter of the National Residence Hall Honorary (Pitt) - <i>President</i> Organization which has initiatives of service and recognition for those on campus
2019 – 2022	University of Pittsburgh Symphonic Band - <i>Principal Clarinetist</i>
2019 – 2022	Alpha Chapter of the Lambda Sigma National Honor Society (Pitt) - <i>Treasurer</i>
2018 – 2022	University of Pittsburgh Math Club - <i>Member</i>
2018 – 2022	Society of Physics Students (Pitt) - <i>Member</i>
2018 – 2019	Residence Hall Government (Pitt) - <i>Secretary</i>

Professional Conferences

May 2022	Phenomenology Symposia 2022 (PITT PACC) - <i>Presenter</i>
April 2021	APS April Meeting - <i>Presenter</i>
November 2019	PhysCon 2019 CAACURH Leadership Conference - <i>National Communications Coordinator Delegate</i>

Skills

C++

Python

ROOT

Adobe Illustrator, Photoshop

French, B1 level