

Diyaselis DELGADO

Ph.D. Student | Experimental High Energy Physics

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Graduate student and research associate in the Laboratory for Particle Physics and Cosmology (LPPC) at Harvard University, in Professor Carlos Argüelles-Delgado's group. Currently working in the IceCube Neutrino Observatory at the South Pole, with interests in neutrino phenomenology and Dark Matter studies.

EDUCATION

2020 - Present Ph.D. in Experimental High Energy Physics, **HARVARD UNIVERSITY**
2015 - 2020 B.Sc. in Theoretical Physics and Applied Mathematics, **University of Puerto Rico - Mayagüez**

PROFESSIONAL EXPERIENCE

Present
September 2020 | **Research Assistant | HARVARD UNIVERSITY, MA, USA**
➤ Under supervision of Professor Carlos Argüelles Delgado.
Neutrino Physics | Astrophysics | HEP - Phenomenology | BSM | Dark Matter

August 2019
May 2019 | **Research Assistant | CORNELL UNIVERSITY, NY, USA**
➤ Under the supervision of Professor Jim Alexander, as part of the CLASSE-REU program.
HEP - Experimental | Detector Physics | Hardware

December 2018
June 2018 | **Research Assistant | CERN, Geneva, Switzerland**
➤ Under the supervision of Dr. Kati Lassila-Perini, as part of the CERN Non-Member State Summer Student program.
➤ Working period of September to December was sponsored by the University of Michigan - Ann Arbor CERN REU program.
HEP - Experimental | Open-Data Analysis | Software Development

May 2020
August 2017 | **Research Assistant | UNIVERSITY OF PUERTO RICO - MAYAGÜEZ, PR, USA**
➤ Under the supervision of Professor Sudhir Malik.
HEP - Experimental | CMS | BSM | Analysis | Software Development | Machine Learning

AWARDS AND SCHOLARSHIPS

2022 **Scholarship**, Jens Aubrey Westengard Scholarship, HARVARD UNIVERSITY, MA, USA
2022 **Scholarship**, Leon Rosenfeld Foundation, NIELS BOHR INSTITUTE, COPENHAGEN, DENMARK
2022 **Grant**, International Conference on High Energy Physics (ICHEP), BOLOGNA, ITALY
2020 **Fellowship**, Harvard Graduate School of Arts and Sciences Prize Fellowship, MA, USA
2020 **Award**, Enrico Fermi Award, DEPARTMENT OF PHYSICS, U. PUERTO RICO, MAYAGÜEZ, PR, USA
2019 **Scholarship**, Retired Professor's Association (ACJ) Scholarship, MAYAGÜEZ, PR, USA
2017 **Scholarship**, Retired Professor's Association (ACJ) Scholarship, MAYAGÜEZ, PR, USA

COMMUNITY INVOLVEMENT AND OUTREACH

- **IceCube Diversity Taskforce Member**, IceCube Collaboration.
- **IAIFI Affiliate Member**, NSF AI Institute for Artificial Intelligence and Fundamental Interactions.
- **IceCube Collaboration MasterClass (English & Spanish)**, Outreach activity for students.
 - Los Amigos Middle School, Cambridge, MA (MAY 2022)
- **Women in Physics Member**, Harvard University Chapter
- **SACNAS Affiliate Member**, Society for Advancement of Chicanos/Hispanics & Native Americans in Science.
 - Outreach and Recruitment Involvement for Harvard University.

TEACHING EXPERIENCE

Present
September 2022 | **Undergraduate Level Teaching Assistant | HARVARD UNIVERSITY, MA, USA**
➤ I was a teaching assistant of the following PHYSICS classes:
Introductory Electromagnetism and Statistical Physics

May 2020
January 2018

Undergraduate Level Teaching Assistant | UNIVERSITY OF PUERTO RICO - MAYAGÜEZ, PR, USA

> I was a teaching assistant of the following GENERAL SCIENCE classes:

Calculus

General and Advanced Physics

Probability and Statistics

Computational Techniques in Science and Engineering

CONFERENCES AND WORKSHOPS

INVITED TALKS AND SEMINARS

DARK GHOSTS, UNIVERSITY OF GRANADA, GRANADA, SPAIN Parallel Talk MARCH 2022

TALKS AND SEMINARS

TeVPA, QUEEN'S UNIVERSITY, KINGSTON, CANADA Parallel Talk AUGUST 2022

NBIA NEUTRINO SUMMER SCHOOL, NIELS BOHR INSTITUTE, COPENHAGEN, DENMARK Seminar Talk JULY 2022

APS APRIL MEETING, NEW YORK CITY, NY, USA Parallel Talk APRIL 2022

TeVPA (ONLINE), CHENGDU, CHINA Parallel Talk DECEMBER 2021

COMHEP (ONLINE), CHENGDU, CHINA Parallel Talk DECEMBER 2021

CMSDAS, FERMI NATIONAL LABORATORY (FERMILAB), BATAVIA, IL, USA Parallel Talk JANUARY 2020

PHYSICS SYMPOSIUM, UNIVERSITY OF PUERTO RICO, MAYAGÜEZ, PR, USA Plenary Talk SEPTEMBER 2019

JTM/PRISM CONFERENCE, UNIVERSITY OF PUERTO RICO, MAYAGÜEZ, PR, USA Parallel Talk MAY 2019

CERN STUDENT SYMPOSIUM, CERN, GENEVA, SWITZERLAND Parallel Talk DECEMBER 2018

POSTER SESSIONS

ICHEP, BOLOGNA, ITALY JULY 2022

NEUTRINO 2022 (ONLINE), SEOUL, SOUTH KOREA MAY 2022

ASTRODARK (ONLINE), KAVLI IPMU, TOKYO, JAPAN DECEMBER 2021

SPS PHYSCON, PROVIDENCE, RI, USA NOVEMBER 2019

APS APRIL MEETING, DENVER, CO, USA APRIL 2019

APS CUWIP MEETING, NORTHWESTERN UNIVERSITY, EVANSTON, IL, USA JANUARY 2019

CERN SUMMER STUDENT POSTER SESSION, CERN, GENEVA, SWITZERLAND AUGUST 2018

PEER-REVIEWED PUBLICATIONS

SELECTED PUBLICATIONS IN PARTICLE PHYSICS

SEARCHES FOR CONNECTIONS BETWEEN DARK MATTER AND HIGH-ENERGY NEUTRINOS WITH ICECUBE, PREPRINT ARXIV: 2205.12950. IceCube Collaboration. Submitted to JCAP.
CONTRIBUTION: Reviewed and edited plots and content for final draft submission.

SELECTED PUBLICATIONS IN ASTROPHYSICS AND ASTROPARTICLE PHYSICS

DARK MATTER DECAY TO NEUTRINOS, PENDING ARXIV. C.A. Argüelles, D. Delgado, A. Friedlander, A. Kheirandish, I. Safa, A.C. Vincent, and H. White.
CONTRIBUTION: Computed the galactic contribution from gamma-ray experiments; aided the galactic computation of the neutrino experiments.

SELECTED PUBLICATIONS IN STATISTICS, COMPUTING, AND EXPERIMENTAL METHODS

OPEN DATA PROVENANCE AND REPRODUCIBILITY: A CASE STUDY FROM PUBLISHING CMS OPEN DATA, EPJ WEB CONF. 245 (2020) 08014. T. Šimko, H. de Bittencourt, E. Carrera, Edgar, D. Delgado, C. Lange, K. Lassila-Perini, A. Lintuluoto, L. Lloret, T. McCauley, J. Ochraska, D. Prelicpcean, and M. Savaniakas.
CONTRIBUTION: Contributed to the development of the platform and implemented testing examples using CMS Open Data.