William K. DiClemente

CONTACT INFORMATION
wdic@sas.upenn.edu
(414) 617-2645

CURRENT ADDRESS
3200 Summer St. Unit 5
Philadelphia, PA 19104

OBJECTIVE

A summer teaching position that relates to my physics background.

EDUCATION

University of Pennsylvania, Philadelphia, PA
Doctor of Philosophy, Physics (Experimental Particle Physics), May 2019
Masters of Science, Physics, May 2015

Duke University, Durham, NC
Bachelor of Science, Physics (High Distinction), May 2013
Minors, Mathematics, May 2013

TECHNICAL SKILLS

Programming Languages: C++, Python
Data Analysis Frameworks: ROOT, PyROOT
Familiar: Java, Matlab, Fortran

EXPERIENCE

Research with the ATLAS Experiment (CERN)
University of Pennsylvania, Philadelphia, PA — 2014-2019
Duke University, Durham, NC — 2010-2013

Physics research with the ATLAS Collaboration at the CERN Large Hadron Collider (LHC) as a graduate and undergraduate student. Research involves using and writing analysis software to read through the large volumes of data collected by the experiment.

- Physics analysis (2011-2013, 2015-2019): Analysis of LHC data to identify and measure particular particle interactions and compare to theoretical predictions.
- Detector performance (2014-2019): Maintain high measurement quality by deriving and applying software-level corrections to account for physical movements of detector elements.

Physics Lab Teaching Assistant
University of Pennsylvania, Philadelphia, PA — 2013-2014

Taught the laboratory component of the undergraduate introductory physics courses: three mechanics and two electricity and magnetism labs across three semesters. Responsibilities included demos and guidance, teaching necessary content if not covered in lecture, lab report grading.

PUBLICATIONS

DiClemente, William K., *Measurement of Electroweak Production of Same-Sign W Boson Pairs with ATLAS*. PhD thesis, May, 2019. `http://cds.cern.ch/record/2674035`. Presented 21 Feb, 2019.

ATLAS Collaboration, *Observation of electroweak production of a same-sign WW boson pair in association with two jets in pp collisions at* $\sqrt{s} = 13$ *TeV with the ATLAS detector*. To be submitted to Physics Review Letters.

ATLAS Collaboration, *Prospects for the measurement of the* $W^{\pm}W^{\pm}$ *scattering cross section and extraction of the longitudinal scattering component in pp collisions at the High-Luminosity LHC with the ATLAS experiment*. CERN, Geneva, Dec, 2018. `http://cds.cern.ch/record/2652447`.

(Included in *Report on the Physics at the HL-LHC and Perspectives for the HE-LHC*, CERN, March, 2019.)

ATLAS Collaboration, *Measurement of the $W^{\pm}Z$ boson pair-production cross section in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector*. Phys. Lett. **B**762 (2016) 1-22, arXiv:1606.04017 [hep-ex].