WILLIAM NASH

(413) · 539 · 3599 ◇ email: wnash@ucla.edu ◇ website: wnash.io
1409 S Saltair Ave ◇ Los Angeles, California, 90025

WORK EXPERIENCE

UCLA Physics Department / CERN July 2016 - Present
PhD Candidate under Jay Hauser (hauser@physics.ucla.edu) *Los Angeles, CA*

- Conducting petabyte-scale data analysis utilizing LHC data and Monte Carlo simulation
- Developed mathematical techniques used for evaluation of systematic uncertainties
- Developed pattern recognition algorithm which improves muon position resolution by a factor of two

Mevion Medical Systems September 2015 - July 2016
Software Engineer I: Physics and Algorithms *Littleton, MA*

- Designed and wrote data acquisition, data analysis and control system software
- Developed algorithms used for real-time position modulation of proton beams

Mevion Medical Systems June 2014 - September 2015
Physics Assistant *Littleton, MA*

- Optimized and developed components of a 250 MeV proton synchrocyclotron
- Commissioned and verified radiation fields produced by models installed in hospitals
- Simulated and tested 800 ampere water-cooled dual-axis magnet prototype

CERN February 2013 - September 2013
Researcher under Lucie Linssen (lucie.linssen@cern.ch) *Geneva, Switzerland*

- Wrote particle tracking code used to calibrate novel W-DHCAL hadronic calorimeter
- Wrote algorithm which matched muon data to simulation over full energy range of $10 - 300$ GeV

EDUCATION

UCLA *Expected May 2021*
PhD in Physics
GPA: 3.57

Boston University *May 2014*
BA in Physics (*cum laude*)
Member of Sigma Alpha Mu

ACTIVITIES

Sigma Alpha Mu April 2011 - April 2012
Scholarship Chair *Boston, MA*

- Regularly met with underperforming members to develop strategies for their academic success

TECHNICAL STRENGTHS

Computer Languages Python, C/C++, Unix, Markdown, LaTeX, Java
Programs numpy, git (w/ CI), matplotlib, tensorflow, ROOT, Qt, gimp

PUBLICATIONS

CMS Author from Feb 24, 2019 - Present
W. Nash, C. Grefe, "Beam Profiling through Wire Chamber Tracking", LCD-Note-2013-009, 2013