Peyton Wells Rose

EDUCATION

University of California Santa Cruz
Ph.D. in Physics, December 2016
Advisor: Jason Nielsen
M.S. in Physics

The College of William and Mary
B.S. in Physics and Mathematics, May 2011, *Summa Cum Laude*
Honors in Physics
GPA: 3.90

HONORS AND AWARDS

NSF Graduate Research Fellowship Program Honorable Mention, March 2013

UCSC Physics Department Regent's Fellowship, Summer 2012

Phi Beta Kappa, College of William and Mary, November 2010

Cissy Patterson Prize for Mathematics,"An outstanding 2011 mathematics concentrator whose performance in mathematics courses places him among our very best students.", May 2011

E.G. Clark Memorial Scholarship for Physics,"An annual scholarship to a rising senior who has demonstrated an outstanding aptitude for the study of physics.", May 2010

James Monroe Scholar at the College of William and Mary,"The most academically distinguished undergraduates at W&M, representing the top 7% of the student body.", 2007-2011

Robert C. Byrd Honors Scholarship, 2007-2011

American Collegiate Hockey Association Academic All-American, 2010-2011

Kempsville High School Valedictorian, 2007

PAPERS

Search for Higgs boson production via weak boson fusion and decaying to $b\bar{b}$ in association with a high-energy photon in the ATLAS detector, ATLAS Collaboration, Conference paper presented at ICHEP (2016), https://cds.cern.ch/record/2206201

Search for the $b\bar{b}$ decay of the Standard Model Higgs boson in associated $(W/Z)H$ production with the ATLAS detector, ATLAS Collaboration, JHEP01(2015)069, `arXiv:1409.6212`

Simulation of the ATLAS SCT barrel module response to LHC beam loss scenarios, P Rose, A A Grillo, V Fadeyev, E Spencer, M Wilder and M Domingo, 2014 *JINST* **9** C03012

The Q_{weak} Experimental Apparatus, The Qweak Collaboration, Nucl. Instrum. Meth. A **781**, 105 (2015) `arXiv:1409.7100`

PRESENTATIONS

Search for VBF+gamma production of the Higgs boson in the H $\rightarrow$ bb channel with the ATLAS detector, Talk given at Higgs Couplings 2016 conference, November 2016

Simulation of the ATLAS SCT barrel module response to LHC beam loss scenarios, Poster presentation at the Topical Workshop on Electronics for Particle Physics 2013, September 2013

Optimization of drift chamber performance for the Q_{weak} experiment, Honors thesis defense presented to faculty members and students at the College of William and Mary, May 2011

Field control and alignment in optical scale accelerators, REU project presented to physics faculty members and fellow students at the University of California Los Angeles, August 2010

Construction of drift chambers for the Q_{weak} experiment, Poster presentation at the William and Mary summer research symposium, September 2008

RESEARCH EXPERIENCE

Graduate Research Student at UC Santa Cruz / SCIPP

- Analyzed ATLAS data in the search for the Higgs boson decay to bottom quarks, August 2013 - December 2016
- Provided support and upgrades to the Detector Control System for the ATLAS Semi-Conductor Tracker (SCT), August 2013 - May 2014
- Developed a SPICE simulation of the ATLAS SCT barrel module response to LHC beam loss scenarios, Summers 2012 and 2013

Undergraduate Research Student at the College of William and Mary

- Optimized drift chamber performance for the Q_{weak} experiment at Jefferson Lab, Honors Research, 2010-2011
- Constructed and tested drift chambers for the Q_{weak} experiment at Jefferson Lab, Summers 2008 and 2009, Spring 2010

Summer REU Student at UC Los Angeles

- R&D for field control and alignment in optical scale accelerators, Summer 2010

TEACHING EXPERIENCE

I was a TA for the following courses during the 2011-2012 and 2012-2013 academic years at UC Santa Cruz:

Upper division

- **Mathematical methods in physics II**, Spring 2013
- **Practical electronics**, Spring 2012
- **Intermediate laboratory**, Winter 2012

Lower division

- **Introductory physics I**, Spring 2013 and Winter 2013
- **Introductory physics III**, Fall 2012 and Fall 2011