

Résumé

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EDUCATION

2016 (Expected) **Doctor of Philosophy** in Physics
University of Wisconsin, Madison WI
 Thesis: *Searches and Discoveries with the $\gamma\gamma$ final state at ATLAS*
 Advised by Prof. Sau Lan Wu

2010 **Bachelor of Arts** in Physics, Honors
University of Chicago, Chicago IL
 Advised by Prof. Edward Blucher

EXPERIENCE

2011 - 2016	Graduate Research Assistant, Department of Physics, University of Wisconsin <ul style="list-style-type: none"> ■ Discovered Higgs boson, performed first measurements of couplings, spin, and mass ■ Contributed significantly to 19 papers & notes, author on 250+ ATLAS publications ■ Organizer for first $h \rightarrow \gamma\gamma$ coupling result, statistical expert for multiple analyses ■ Invented algorithm to spatially and temporally match CMOS chip hits at LBNL ■ Developed analysis software with C++, ROOT, & shell scripts ■ Optimized physics searches in large phase spaces using massive $O(10^9)$ datasets ■ Wrote and coordinated DoE funding reports for Wisconsin ATLAS Group
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2014 **Graduate Teaching Assistant**, *Department of Physics, University of Wisconsin*

- Led discussions and labs on classical mechanics, electrodynamics, thermodynamics
- Designed supplemental exercises and summary notes that boosted exam performances

2010 - 2011 **CERN Technologist**, *Enrico Fermi Institute, University of Chicago*

- Electronic calibration expert for the ATLAS Experiment hadronic calorimeter
- Developed & maintained calibration software package using python and SQL
- Documented, monitored and reported on detector status to collaboration

2009 - 2010 **Undergraduate Research Assistant**, *Enrico Fermi Institute, University of Chicago*

- Developed particle detector simulation in C++, ROOT, and Geant4
- Constructed μ particle modules, worked in machine shop, tested electronics

SKILLS

Scientific Physics, Statistics, Simulation, High Throughput Computing, Numerical Methods, Data Structures, Machine Learning, Collaborative Research, Public Presentation

Programming C++, Python, Java, L^AT_EX, Unix/Linux shell scripting, ROOT, Matlab, SQL, TensorFlow

Languages English (native), French (basic oral and written communication)

VOLUNTEERING & OUTREACH



- Newtonian physics demonstration for Chicago Public Library 2016
- US voter outreach & registration at CERN 2016
- Discussed research funding with U.S. lawmakers in Washington D.C. 2014 & 2015
- Created GIF visualizations of Higgs boson discovery data 2013
- Visited classrooms at the Chattanooga School for the Arts & Sciences 2012

AWARDS

2015 **Teaching Assistant Rookie of the Year**, Department of Physics, University of Wisconsin.
2013 & 2014 **Lighting Round Winner**, US LHC User's Association Annual Meeting