**John C.S. Myers**

DATA SCIENTIST, PARTICLE PHYSICIST

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**Education**

**University of Oregon**

*Eugene, OR*

DOCTORATE OF PHILOSOPHY IN PHYSICS

*June 2019*

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**Dissertation**: Search for Higgs Boson Pair Production in the bbWW Channel Using the ATLAS Detector

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**CERN (European Organization for Nuclear Research)**, Geneva, Switzerland —

*May 2015 - December 2018*

**The Ohio State University**

*Columbus, OH*

BACHELOR OF SCIENCE IN PHYSICS

*May 2013*

•

**Accelerated Lifetime Testing**, ATLAS electronics lab

**Experience**

**CERN**

*Geneva, Switzerland*

DATA SCIENTIST

*May 2015 - December 2018*

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Mined 100 TB of ATLAS data to search for indications of rare processes using a C++ framework and distributed computing

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Published results in the Journal of High Energy Physics and in 174-page dissertation

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Used predictive modeling to estimate background contribution and improved the statistical power by a factor of 3

with python scripting and plotting with matplotlib

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Improved signal-to-background separation by a factor of 2 using python pandas library

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Successfully validated Monte Carlo simulated data through the design and implementation of a background-rich data region

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Collaborated with an international team of 30 people across 9 time zones

SOFTWARE REPROCESSING COORDINATOR

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Developed and maintained infrastructure for large scale software validation following the Agile Software Development model

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Provided continuous software development support by training and coordinating a team of 15+ software validation experts

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Delivered 97% data taking efficiency during 2018 through collaborative problem solving across many disciplines

**University of Oregon**

*Eugene, OR*

RESEARCH AND TEACHING ASSISTANT

*July 2013 - May 2015*

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Taught undergraduate-level courses for classes of 30 or more students

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Reduced background acceptance by 50% through developing a new trigger algorithm to isolate regions of interest

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Reduced trigger thresholds by 10% by designing a filtering algorithm to remove noise from the data

**Publications & Awards**

**Search for Higgs boson pair production in the bbWW decay mode**

**at Sqrt(s) = 13 TeV with the ATLAS detector**

*April 2019*

J. HIGH ENERG. PHYS. VOLUME 4

**Ph.D. Thesis Award**

*May 2019*

UNIVERSITY OF OREGON

**Skills**

**Languages**

Python, C++

**Frameworks and Libraries**

SQL, pandas, numpy, scikit-learn, keras, matplotlib, ROOT Data Analysis Framework, Jupyter

**Computing and Software**

Linux, Git, Rucio, VIM, SSH, Windows Office Suite, HTML GIT, JIRA, Mattermost, TWIKI

**Competencies**

Big Data, Machine Learning, Project Management, Analysis, Algorithm Development,

Data Visualization