

# Yingyue ZHU

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## Summary

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Solid background in physics

GPA 3.86/4.0 in Stony Brook University

GPA 87.1/100 in Xi'an Jiaotong University

Research experience in **High Energy Physics, Condensed Matter Physics and Electrical Engineering**

Skilled in programming and data analysis

## Education

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Sep. 2014 ~ Jun. 2018

Undergraduate, Physics, Xi'an Jiaotong University, China

Aug. 2016 ~ Jun. 2018

International exchange program, Physics, State University of New York, Stony Brook, US

## Research Experience

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### ***Analysis of exotic Higgs decay $H \rightarrow b\bar{b}\mu\mu$ based on particle flow jet***

- State University of New York, Stony Brook, Jan. 2017 ~ Present
- Developing analysis code capable of doing large scale data analysis in C++
- Selecting signal events out of backgrounds
- Testing the code over Monte-Carlo sample in both signal and background regions
- Producing histograms with ROOT
- Producing cut flow table and yields table
- Comparing results from particle flow jet with that from Calorimeter jet, studying on the advantages and disadvantages of particle flow jet based on the results
- Observing actual gains in signal event finding efficiency in signal region
- Presenting the work by giving a talk in high energy group with the title of "Analysis of  $H \rightarrow b\bar{b}\mu\mu$  based on particle flow jet"

### ***Web-based Eyescan test for ATCA carrier boards in ATLAS Phase I Upgrade***

- State University of New York, Stony Brook, Sep. 2016 ~ Dec. 2017
- Building up an interface between the testing web page and the testing code through C in Xilinx SDK to allow command and data exchange for a web-based test
- Testing data transmitting and receiving abilities of the GbE, XAUI and GBT channels on the ATCA carrier board
- Plotting eye diagram of each channel by running "Eyescan" test in Xilinx Vivado

### ***Strain glass state and second order phase transition in ferroelastic material***

- Frontier Institute of Science and Technology, Xi'an Jiaotong University, Mar. 2016 ~ Jul. 2016
- Fabricating ferroelastic Co-Cu-Cr-O samples from raw materials through standard fabrication process
- Testing samples with XRD, DSC, DMA and analyzing the results to prove the existence of a second order phase transition and a short-term ordered strain glass state

## Skills

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- C, C++
- Fortran, MATLAB, Python, ROOT, Linux, Latex

## Honors

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- MCM/ICM : the Mathematical Contest in Modeling 2017 -- Meritorious Winner
- Siyuan Scholarship, Xi'an Jiaotong University, Oct. 2016
- Pengkang Scholarship, Xi'an Jiaotong University, Oct. 2015
- University-level Outstanding Student Cadres, Xi'an Jiaotong University, Oct. 2015

## Language

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- English: TOEFL (108), GRE (320+3.5)
- Chinese: Native language