

Wei Shi

CONTACT INFORMATION

CERN Build. 32-4-A05
1211 Geneva 23

+33 689534550
weishi@rice.edu
<https://github.com/weishi10141993>

EDUCATION

Rice University, Houston, TX

Ph.D. Physics and Astronomy, June 2020 (estimate)

M.S. Physics and Astronomy, June 2017

- Proposal: *An Application of Multivariate Analysis to the EMTF p_T Look-Up-Table and Improvements to Dark Sector Searches*

Zhejiang University, Hangzhou, China

B.S. Physics, May 2015

- Thesis: *New Chalcogenide/sulphide Materials Research*
- GPA: 3.50/4

EDUCATION EXPERIENCE

Rice University

Graduate Student

05/2016-Now

- Application of machine learning to multivariate analysis of transverse momentum assigned in the EMTF
- Offline studies of EMTF p_T resolution and track building performance
- Timing synchronization of local charged tracks in CSC chambers
- Offline studies of the CSC trigger primitive timing from collision data

Research Assistant

05/2016-Now

- Monte Carlo of NMSSM and DarksSUSY samples using bash and MadGraph (2016 data)
- Scale factor study of muon ID using Tag & Probe for MC and experimental data (2016 data)

Teaching Assistant

01/2016-06/2017

- PHYS 526 Statistical Mechanics
- PHYS 201 Modern Physics
- PHYS 126 Optics and Waves experiment

Zhejiang University

Undergraduate Student

08/2011-06/2015

- Quantum transport of 2D electron gas and fabrication in superclean room
- Superconducting Quantum Circuit Quantum Nondemolition Measurement

ADDITIONAL EXPERIENCE

CERN

Employee

06/2017-Now

- Level-1 DOC
- EMTF on-call expert
- Muon trigger algorithm development & prompt analysis

UC Davis Crocker radiation laboratory

Research Assistant

05/2017

- Total irradiation dose test of Muon Port Card (PROM and SPI Flash memory, and FPGA) used in the CMS experiment
- SEU test of optical receiver

Texas A&M

Visiting scholar

10/01/2016-09/30/2017

Citizens School Program

Teacher & Organizer

01/2017-05/2017

- Involved in designing one-semester-long "Fun with physics" program with other three physics PhD students; teach middle school students fundamental science law via hands-on experiments using scientific method
- Gave a 75-minute lecture on the waves topic for a class of 25 students; designed and carried hands-on experiments such as string phone, bending light using total reflection, and Doppler rocket

Rice Chinese Students and Scholars Association

Treasurer

05/2016-05/2017

- Funding & Grant application for the association
- Reimbursement and Audition of all expenses

PROGRAMMING
LANGUAGESProficient: ROOT, C, Bash, L^AT_EX
Familiar: Python, MATLAB, LabVIEW