

Stephen Le

Curriculum Vitae

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Education

Bachelor of Science, Physics and Mathematics

08/2015 - 05/2019 **Dickinson College**, Carlisle, PA

Thesis *Numerical Analysis of Nonlinear Localized Modes in Vibrational and Magnetic Lattices.*

Advisor Dr. Lars English

US Particle Accelerator School

06/2018 **Michigan State University**, East Lansing, MI

Topic *Fundamentals of Accelerator Physics and Technology with Simulations & Measurements Lab.*

Description Participated as part of Lee Teng Undergraduate Fellowship Program. Awarded William Barletta Scholarship for best performance.

Experience

Research Assistant, *Dickinson College*

08/2018 - present Dr. Lars English, Department of Physics and Astronomy

Numerical Analysis of Nonlinear Localized Modes in Vibrational and Magnetic Lattices.

- Utilizes globally convergent Newton-Raphson and RK4 numerical analysis methods to investigate and simulate intrinsic localized modes on different lattices.
- Presented results at APS March Meeting 2019, won SPS Best Oral Presentation.

Lee Teng Undergraduate Fellow, *Fermilab*

05/2018 - 08/2018 Dr. Elvin Harms, Accelerator Division

Performance Characterization of LCLS-II Superconducting Radiofrequency Cavities.

- Developed data wrangling, visualization and nonlinear model fitting softwares in R to analyze LCLS-II cryomodule testing data.
- Processed over millions of data points and created detailed reports on behaviors of cryomodules and testing apparatuses while meeting strict deadlines.
- Assisted cryomodule testing process by terminating cables, installing new radiation detector system, processing SRF cavities, logging test logs and more.

Research Assistant, *Dickinson College*

07/2017 - 08/2017

Dr. Laura Watson, Department of Physics and Astronomy

Construction of a Comprehensive Catalogue of Possible Cosmic Topologies.

- Developed programs in C++ to generate visual maps representing various flat topological configurations and investigated their behaviors with changes in universal parameters.
- Examined, verified and corrected topologically characterizing terms for a catalog of flat topologies.

Awards & Honors

2019

SPS Best Oral Presentation Award, *American Physical Society*

2018

William Barletta Scholarship, *US Particle Accelerator School*

2018

Forrest E. Craver Memorial Prize in Mathematics, *Dickinson College*

2015

Benjamin Rush Scholarship, *Dickinson College*

ΦBK (General), IIME (Mathematics), ΣΠΣ (Physics)

Programming skills

Languages

Extensive knowledge of Python, R, Bash, LaTeX.

Familiar knowledge of C/C++, MATLAB, SQL.

Other

Data wrangling and analysis.

Numerical analysis and simulations.

Machine learning (sklearn, TensorFlow).

Object oriented programming.

Teaching Experience

Introductory Physics.

Calculus I/II/III.

Introduction to Relativistic and Quantum Physics.

Last updated: March 21, 2019