Charles Stahl

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**EDUCATION**

**Cambridge University**, Cambridge, UK June 2019

Part III of Math Tripos

Coursework includes: Theories of Quantum Matter, String Theory, Supersymmetry

**Princeton University**, Princeton, NJ June 2018

A.B. Degree in Physics, with High Honors GPA: 3.86

Thesis: Operator and Entanglement Dynamics in Asymmetric Quantum Systems

Certificates: Applications of Computing, Applied and Computational Mathematics

**HONORS**

**Allen G. Shenstone Prize in Physics** June 2017 and June 2018

Princeton University award for excellence in course work and promise in independent research.

**Manfred Pyka Memorial Prize in Physics**  June 2016

Princeton University award for excellence in course work and promise in independent research.

**RESEARCH EXPERIENCE**

**Senior Thesis,** Physics Department, Princeton University 2017-2018

Studied asymmetric information velocities in various quantum systems. Used Python to numerically simulate time-independent Hamiltonian systems. Used analytic and numeric models to study quantum circuits.

**Research Assistant,** Astrophysics Department, Princeton University Summer 2017

Worked with Professor James Stone on Athena++, a hydrodynamics simulation code. Extended Athena++ using C++ to include thermal diffusion. Tested the code and the extension using analysis of the Kelvin-Helmholtz instability.

**Junior Independent Work,** Physics Department, Princeton University Spring 2017

Worked with Professor Herman Verlinde on the spectrum of the SYK model, a small quantum model. Performed matrix calculations using Python to find ground states and entropy of the model.

**Junior Independent Work,** Physics Department, Princeton University Fall 2016

Worked with Professor Suzanne Staggs on methods of determining sources of B-mode polarization in the Cosmic Microwave Background. Wrote code in Python to analyze data generated algorithmically with the scientific computing package CAMB. Differentiated between magnetic and other sources.

**Research Assistant,** Data-Intensive Computing REU, Clemson University Summer 2016

National Science Foundation funded program for undergraduates in data-intensive computing. Worked in the PERSIST lab, focusing on embedded systems and small computational devices. Extended a Java-based hardware simulator to make use of recorded natural conditions.

**SKILLS**

Computer: Java, C, Mathematica, Matlab, LaTeX, Python

Language: Working proficiency in writing and speaking Spanish

**ACTIVITIES**

**Tutor for Princeton Sophomore-level Physics and Computer Science courses** Fall 2017

**Princeton Varsity Men’s Cross Country, Indoor and Outdoor Track teams,** Member Fall 2014-Fall 2016