

WHO I AM

The adventure inherent in learning and problem solving has always been one of my greatest joys. I am particularly fascinated by the intersection of modern computational power and applied research, and I am driven to share my love of science with people of all backgrounds.

EDUCATION

Harvey Mudd College, Claremont, CA

Graduated: May 2015 Current GPA: 3.9 / 4.0

Major: B.S., Physics Major GPA: 3.9 / 4.0

Departmental Honors in Physics

Graduated with High Distinction

RELEVANT COURSEWORK AND SKILLS

Computer Science: Principles and Practice of Computer Science, Data Structures and Program Development, Computability and Logic, Introduction to Algorithms

Physics: Intro to Mechanics, Electromagnetic Theory and Optics, Theoretical Mechanics, Quantum Physics, Quantum Mechanics, Intro to Astrophysics (audit), Statistical Mechanics, Electronics, Optics

Languages: Python, C++, L^AT_EX, Dutch (B1)

SELECTED WORK EXPERIENCE

D. E. Shaw Research: An ambitious and privately-funded research company that strives to use molecular-scale simulations to advance basic biological research and the process of drug discovery.

Scientific Associate 2015-Present

- Generated and analyzed data on intramolecular forces in small molecules, in order to construct extremely accurate molecular models
- Introduced collaborative coding practices to my team, including the use of git and automated testing

Harvey Mudd: Physics grader, tutor 2012-15

- Guided discussions and lead review sessions for all core physics classes
- Provided qualitative and quantitative feedback to Special Relativity students

Fermilab: Intensity-frontier experiment *Muon g-2*
Simulations Engineer Summer 2011-2013

- Designed and implemented a new highly modular framework in C++ for the Muon g-2 experiment, which was used by the collaboration’s simulation effort starting October 2012

PROJECTS

Swarm Behavior

- Explore emergence of coordinated behavior from simple rules through simulation of cellular automaton “fireflies”

3D Printing

- Designed, prototyped, and printed a full board game (Settlers of Catan) on a Makerbot Replicator 2

HOBBIES

Ultimate Frisbee

- Proud member of Grand Army Ultimate 2016
- Claremont Greenshirts: Captain and Coach 2012-14
- Claremont Greenshirts: D-III National Champions in 2012
- Team USA: Silver medalists at World Junior Ultimate Championships in Dublin, 2012

Social Dance

- English country and contra dancing all around the East Coast
- Volunteer sound mixer and sound lead for live bands

SELECTED PUBLICATIONS AND PRESENTATIONS

Grace Hopper Celebration of Women in Computing

Oct. 2016

Accurate Physics-Based Models for Biomolecular Simulations on data science of molecular modeling

Attracted nearly 200 attendees

ArtG4: A generic framework for Geant4 simulations

2014

T. Arvanitis and A. Lyon, J. Phys. Conf. Ser. **513**, 022023 (2014).