

EDUCATION

RENSSELAER POLYTECHNIC INSTITUTE

MS IN COMPUTER SCIENCE

Expected May 2018 | Troy, NY

Department of Computer Science

GPA: 3.34 / 4.0

BS IN APPLIED PHYSICS

May, 2016 | Troy, NY

Conc. in Computational Astrophysics

Department of Physics, Applied Physics,

and Astronomy

Dean's List (7/8 Semesters)

GPA: 3.27 / 4.0

COURSEWORK

GRADUATE

Robotics I

Computer Operating Systems

Parallel Computing

Computer Graphics

Design and Analysis of Algorithms

Graph Theory

UNDERGRADUATE

COMPUTER SCIENCE:

Data Structures

Programming in Java

Parallel Computing for Engineers

Foundations of Computer Science

Computer Organization

PHYSICS:

Quantum Physics I/II

Electromagnetic Theory

Theoretical Mechanics

Observational Astronomy

Astrophysics

SKILLS

PROGRAMMING

Fluent:

C/C++ • Python • \LaTeX

Familiar:

Java • SQL • JS • LUA • IDL • Assembly

Extensions:

OpenCL • CUDA • OpenMP • MPI

AMATEUR ASTRONOMY

Experience with several telescopes, tracking software, and imaging with DSLR, QSI 600, and SBIG 800 series CCDs.

Used Python and IDL for astronomical data reduction, including quasar detection and asteroid tracking.

EXPERIENCE

RENSSELAER POLYTECHNIC INSTITUTE | GRADUATE TA

January 2017 – Present | Troy, NY

Graduate Teaching Assistant for Stars, Galaxies, and the Cosmos, Intro to Astronomy and Astrophysics, and Observational Astronomy. Assisted with course preparation and execution (Grading, proctoring, leading recitation, running night labs).

AUTOZONE | SHIFT MANAGER

March 2016 - Aug 2016 | Troy, NY

AIMS COMMUNITY COLLEGE | ROBOTICS INSTRUCTOR

May 2013 - Aug 2014 | Longmont, CO

Taught elementary through middle school students robotics using the LEGO Mindstorms robotics platform. Used both NXT and EV3 kits, and facilitated a learning environment appropriate for the age group.

WOODWARD INC. | ENGINEERING INTERN

May 2013 - Aug 2013 | Fort Collins, CO

RESEARCH

MILKYWAY@HOME | RESEARCHER

Aug 2014 – Present | Troy, NY

Work with Dr. Heidi Newberg on MilkyWay@Home, a distributed computing project with a user base of over 20,000 active users, simulating dwarf galaxy tidal stream formation. Research focused on parallelizing large-scale n-body calculations to run on GPU compute devices using OpenCL.

EXTRACURRICULAR

HIRSCH OBSERVATORY | OPERATOR

Jan 2016 – Present | Troy, NY

Operator/Keyholder of the Hirsch Observatory. General responsibilities include operation of the 16" telescope, several smaller telescopes, and Observatory dome during public observing. Special responsibilities include CCD operation, data collection and reduction, and training members on CCD and telescope operation.

RENSSELAER SPORTS CAR ASSOCIATION | PRESIDENT

Aug 2014 – Aug 2016 | Troy, NY

Presided over an institute-funded club which hosted autocross events and car meets on campus. Managed several officers in the club, as well as oversaw event planning and operation.

RENSSELAER STUDENT AUTO SHOP | MANAGER

Aug 2014 – Dec 2017 | Troy, NY

Managed shifts at a student-run on-campus auto shop. Helped customers diagnose, repair, and prevent future problems. Frequent operation of heavy equipment such as a 10,000lb automotive lift, and machining tools. Large scale project planning and execution was also common.

PROJECTS

COMPETITIVE ROBOTICS

VRC TEAM CAPTAIN Captain of VRC team from 2008-2011. Qualified for, and attended World Championships during all three seasons. Received Build Award at World Championships for the 2011 season.

AVC TEAM CAPTAIN Captain of team competing in SparkFun's Autonomous Vehicle Challenge. Constructed 1/10 scale RC buggy capable of autonomous navigation using GPS, Compass, and tactile feedback.