Kai Klocke

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OBJECTIVE To obtain a PhD in physics and to pursue my interests in physics through research and computational modeling.

EDUCATION

Physics (major), Computer Science (minor) September 2015 - June 2019
California Institute of Technology

INTERESTS

- Particle and theoretical physics
- Computational modeling of dynamic systems
- Data analysis

SKILLS

- Programming: Python, C, C++, LabVIEW
- Biology wetlab techniques: dot blot, plasmid characterization, transfection, etc.
- General: LaTeX, Microsoft Office

COURSES

- CS 001 - Introduction to Computer Programming (Python)
- CS 002 - Introduction to Programming Methods (C++)
- CS 021 - Decidability and Tractability
- CS 038 - Introduction to Algorithms
- Ma 001abc - Calculus of One and Several Variables and Linear Algebra
- Ma 002 - Differential Equations
- Ph 001abc - Classical Mechanics and Electromagnetism
- Ph 011 - Research Tutorial
- Ph 020 - Computational Physics Laboratory I
- ACM 095a - Introductory Methods of Applied Mathematics for the Physical Sciences (audited)

EXPERIENCE

Research Intern/Volunteer May 2013 - September 2015
Oregon Health and Science University
Department of Molecular and Medical Genetics, Portland, OR

- Trained high school interns.
- Wrote computational biology scripts to expedite the groups' research.
- Coordinated the computational components of a project focused on the internal volumes of AAV and other parvoviruses.
- Investigated packaging capacity under capsid manipulations of AAV vectors for human gene therapy.

Ph11 Fellow May 2016 - September 2016
California Institute of Technology
Division of Physics, Mathematics and Astronomy

- Worked to develop a procedure for testing silicon photomultipliers for the DUNE collaboration.
- Programmed in LabVIEW for data acquisition and analysis.