Nathaniel Roth

"Nathan"

Graduate Institution: University of California, Berkeley

Location: Berkeley, CA

Graduate Discipline: Astrophysics (Computational)

Hometown: Dresher, PA

Research Interests:

I develop and apply computer simulations to help answer questions in astrophysics and cosmology. Currently I am working with Professors Christopher McKee and Richard Klein at UC Berkeley to simulate the diverse physical processes that influence the formation of stars from the collapse of molecular clouds. Some of the questions we seek to answer include how turbulence in molecular clouds is maintained over long periods of time, what limits the mass of stars that can form, and what are the effects of ionizing radiation on the formation of massive stars. Prior to this I worked with Professor Richard Easther at Yale University to develop a simulation of one way in which the inflationary epoch of the very early universe could have come to an end.

About me:

This fall I will enter my second year of graduate study in physics at UC Berkeley. Over the summer I will be helping to organize Berkeley's Compass Project, an instructional and community-oriented program that brings together incoming undergraduates who have expressed an interest in scientific disciplines. Outside of physics, I have played piano since I was six years old and am now learning to play Berkeley's 61-bell carillon. I enjoy skiing and strategic board games, and I am especially interested in honing my skills at the game of go. I am a member of the American Physical Society and an alum of the Phi Beta Kappa Alpha Chapter of Connecticut.