Anthony Lyndon Shiver

Graduate Institution: University of California-San Francisco

Graduate Discipline: Bacterial Genetics, Complex Biological Systems

Hometown: Eugene, OR

Relevant SC Research: Biological and Environmental Research

Research Interest:

I'm interested in bacterial life, the use of bacteria in industrial processes, and the way bacterial life shapes our environment and health. Bacteria occupy some of the most remote, harsh, and barren landscapes. The adaptation of bacteria to these environments has resulted in a fascinating list of biological innovations and we are just now beginning to discover the true scale of bacterial diversity. I'm interested in investigating the mechanisms prokaryotic organisms use in adapting to different environments and how we can harness their innovation for our use.

My current work is motivated by recent attempts to evolve the model organism E. coli to grow in harsh conditions (such as high ethanol concentrations that arise during the production of bio-ethanol). I am studying a subset of the mutations that arose from these studies with the hope that I will be able to derive general principles for what these mutations are doing and why they occurred. If we can understand why these mutations worked, we may be able to design them in future work, speeding the rate at which we can improve the use of bacteria for industrial processes.

About Me:

I'm a graduate student in my 4th year at UC San Francisco and a member of the Graduate Student Association of UCSF. I plan on continuing my career as a researcher in bacterial genetics and biophysics. When not doing science, I enjoy exploring the national parks in the Bay Area, gardening, and volunteering at the Oakland SPCA shelter.