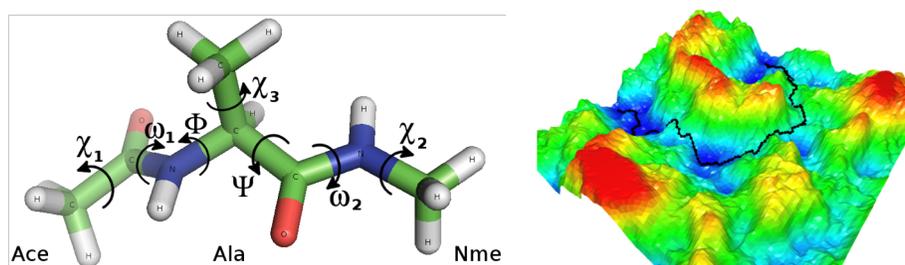


Computer Science Researchers Robotics Applied to Structural Biology

Dr. Kevin Molloy (computer science) is seeking a motivated student to work as a paid undergraduate research assistant. This project involves applying robotic motion planning algorithms, coupled with some machine learning, to study molecular systems, specifically proteins. This includes the prediction of biologically feasible pathways between structures and determining the impact of sequence mutations on critical structural re-arrangements.

Students must be motivated and able to work independently. No biology experience is necessary, but students will be required to familiarize themselves with some basic concepts, and some background will be offered in the areas of robotic motion planning and basic biology/physics. Experience in C++ and/or Python is required (both preferred).



Students can expect to:

- Perform software development in Python and C++ to evaluate/design robotic motion planning inspired approaches to the study of molecular systems
- Design and run explorations/constructions of energy-landscapes and evaluate the results
- Present these results to other research groups

Interested student's should email me at molloykp@jmu.edu. Include a resume/CV along with your interests and any background/past experience that would make you a good candidate for this job. Potential independent study projects (CS 497) are also possible. Conference travel is possible, but is dependent on future funding.