1. Water contamination in lakes, rivers and streams is very difficult to predict because we don't understand all processes that are responsible for fate and transport of contaminants. In order to decipher some of the patterns of water contamination in space and time, we apply advanced statistical methods to large datasets. This project requires at least a basic knowledge of statistics and a programming language such as R or MatLab. Familiarity with ArcGIS is an advantage.

2. We develop advanced biomaterials that can respond to change in their environment by changing their shape. We see such materials as the future of soft deformable machines and devices. The student will work in a lab to synthesize these materials and conduct series of electrochemical experiments to test their properties. This project requires at least one chemistry lab course; any additional chemistry or biology lab courses are an advantage.