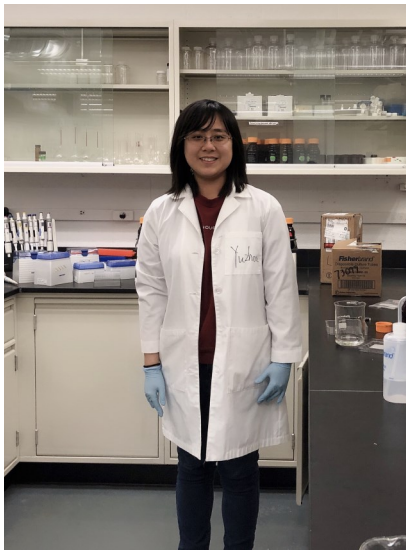
Environmental Science Graduate Program Student Seminar Series

Microcystin removal: Adsorption on PAC



- **Yuzhou Huang**

  Smith 3150 | 2 - 8 - 19 | 3:00 - 4:00 pm

This talk will cover eutrophication, or algal blooms, and how they are formed, providing examples of eutrophication in natural bodies of water around the world. There be will discussion of the role common algae plays and moreover the role of specific algae in producing algal toxins, namely microcystin. Types of microcystin will be defined with respect to their different structures and properties, and their impact on health and the environment with be evaluated.

There are a number of strategies to ameliorate algal blooms and microcystin. Chlorination, ozonation, and adsorption are just a few treatment options. Particular focus will be given to adsorption, of which powdered activated carbon (PAC) and granulated activated carbon (GAC) methodologies exist. The advantages and disadvantages of these different treatment options will be presented, though special attention will be provided to the properties of adsorption onto powdered activated carbon (PAC). Finally, there will be an introduction to goals and plans for the future.