

## **"Strategic Applications of Chemical Theory and Computations to Organic Synthesis and Material Science"**

Abstract: "The Cheong group applies and develops state-of-the-art computational tools to discover and explain fundamental and practical principles that underlie organic synthesis and material science. In this seminar, our latest discoveries in the mechanism and origins of stereoselectivity in peptide-catalyzed reactions will be disclosed. In addition, our recent foray into inorganic material science will be discussed. Specifically, a rapid method to predict aqueous metal cluster stabilities & electronic properties and a computational method to predict the structure and electronic properties of amorphous materials will be disclosed."