

**CHEMISTRY SEMINAR 291****Discipline-Based Education Research: A Case Study**Date: **3/6/2020**Time: **3:00—4:20 PM**Location: **COB1 267****Thomas Kim**Associate Dean, School of Arts and Sciences
St. John Fisher CollegeFor more information,
contact : **Erik Menke****emenke@ucmerced.edu****Abstract**

As denoted by the National Academies, discipline-based education research (DBER) "investigates learning and teaching in a discipline from a perspective that reflects the discipline's priorities, worldview, knowledge, and practices." One of the numerous pathways leading to DBER practice is that of the "border-crosser", a traditionally trained STEM researcher who makes the transition to DBER. This talk will describe one such transition in the context of research questions focused on students' use of chemical representations. Students' perceptions of these representations, contrasted against the perception of experts/instructors, provide a framework for examining student cognition and the ways in which canonical representations are misaligned with the needs of learners.

About the Speaker

Dr. Thomas Kim received his B.S. in Chemistry from Loyola College (now Loyola University Maryland) and his Ph.D. in Bioinorganic Chemistry from the University of Wisconsin-Madison. During previous faculty appointments at Youngstown State University and the Rochester Institute of Technology, his research in Biochemistry focused on nitric oxide signaling pathways in mammalian and bacterial cells. During his time at RIT, Dr. Kim transitioned to Chemistry Education research with particular focus on students' perception and use of visual chemical representations in the context of chemistry instruction and learning. Prior to his current position as Associate Dean of Arts and Sciences at St. John Fisher College, Dr. Kim served as a program director at the National Science Foundation within the Division of Undergraduate Education of the Directorate for Education and Human Resources (DUE/EHR). In addition to being a cognizant program director for the Improving Undergraduate STEM Education (IUSE) and Robert Noyce Teacher Scholarship programs, he served as the co-lead for the Scholarships in STEM (S-STEM) program.