“Unpacking the relationship between our beliefs about teaching and learning and our instructional practices”

In this era of instructional transformation of STEM courses at the postsecondary level, the focus has been on educating science faculty about so-called evidence-based instructional practices, i.e. practices that have been empirically proven to enhance student learning outcomes. However, the literature on professional development has demonstrated a tight interconnectedness between one’s beliefs about teaching and learning and one’s instructional practices and the need to attend to faculty’s beliefs when engaging them in instructional change processes. Within the last few years, discipline-based education researchers have provided meaningful insights into the instructional practices of STEM faculty. However, much less attention has been given to capturing the state of STEM faculty’s beliefs about teaching and learning. During this presentation, we will reflect on our instructional belief system and its relationship to our practices. We will then learn from the results of a qualitative study that characterized the interplay between beliefs and instructional practices of nineteen novice chemistry faculty who had participated in the Cottrell Scholars Collaborative New Faculty Workshop.