

*Texas State University*  
*Department of Mathematics Colloquium*  
*Friday, January 20, 2023*  
*3:30pm in Derrick 329*

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**Learning *through* uncertainties:  
Making the case for early field experiences  
with opportunities to wrestle with teaching dilemmas**



**Kristen Bieda**  
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**Abstract:** In this talk, I will share what I have learned with colleagues Dr. Fran Arbaugh (Pennsylvania State University), Dr. Michelle Cirillo (University of Delaware) and members of the UTEMPT Research Team about the development of pre-service teachers' (PSTs) pedagogical skill and reasoning through a novel early field experience model involving mediated teaching in a collegiate foundational mathematics course. Drawing upon data from PSTs' teaching in the course and post-lesson interviews, I will make the case that PSTs frame teaching dilemmas in unique ways that may be fundamentally different from the views of experienced teachers, providing warrant for the field of mathematics teacher education to consider how PSTs' frame teaching dilemmas in the design of curriculum to support PSTs in enacting ambitious teaching practices.

**Biography:** Dr. Kristen Bieda is an Associate Professor of Teacher Education and Mathematics Education at Michigan State University. She also serves as the Associate Director of Mathematics for the CREATE for STEM Institute. Dr. Bieda's research interests include the teaching and learning of justification at the secondary level, and the design of clinical experiences to support novice teachers in learning and reasoning about ambitious pedagogy. She has published her scholarship in journals such as the *Journal for Research in Mathematics Education*, the *International Journal of Research on Undergraduate Mathematics Education*, *Journal of Curriculum Studies* and *PRIMUS*. Recent projects supported with external funding include participatory action research to understand the role of justification in promoting equity in secondary mathematics, and investigating opportunities for teacher candidates to learn ambitious pedagogy through a novel early field experience in an undergraduate mathematics course.