
KATE TRETIAKOVA, University of Ottawa

"But How Do We Know?": Epistemological Trespass in the Math Classroom

What do mathematicians, TAs, and students assume it means to know something in mathematics, and why does it matter?

This talk introduces core epistemological perspectives that quietly shape mathematical teaching: correspondence, coherence, pragmatism, constructivism, and more. Rather than debating the truth, epistemological pluralism invites us to notice how different lenses highlight different aspects of the same classroom moment.

Through examples from undergraduate courses, I'll illustrate how instructors' implicit epistemologies influence what they emphasize and how these choices shape students' experiences. We then examine the promise and frustration of constructivist teaching: why mathematics education advocates for it, and why students who have grown up with high expectations of mathematical authority often encounter difficulties.

The session offers practical insights for TAs and future instructors seeking to design learning environments that align with both mathematical values and real students, while giving experienced educators room for re-interpreting familiar challenges and seeing their practice in a new light.