



Please help CREATE for STEM welcome

Dr. Christina Krist

Curriculum & Instruction, University of Illinois Urbana-Champaign

Tuesday, November 7, 2023 12:00-1:15PM

CREATE Seminar space, Suite 115; light refreshments provided

Zoom registration required:

https://msu.zoom.us/webinar/register/WN_CSSOTRWPTf237DW74JQ_AA

"Enriching Qualitative Video Analysis with Theory-Driven Uses of AI-Based Tools"

Abstract:

Naturalistic video recordings are an important data source for studying learning, especially when learning is considered an emergent outcome of a complex interactional social-material-epistemic system. Video recordings allow researchers to analyze the dynamics of talk and interaction. However, current methodologies require Herculean efforts to conduct analyses that simultaneously attend to complexity and nuance at scale, especially those that focus on the auditory (e.g., tone) and visual-spatial (e.g., movement, gesture) aspects of the video recordings.

This talk will introduce existing AI-based techniques for extracting audio and visual-spatial features from data. It will also introduce a framework for how to integrate those techniques into existing qualitative workflows with an aim of "layering on" additional information to prioritize rich description and theoretically informed judgements over typical AI aims of automation and efficiency. Using a case of examining the power dynamics in navigating sustained uncertainty in small-group mathematics problem-solving discussions, I will highlight the possibilities as well as cautions and potential pitfalls of integrating AI into a methodological toolkit.



Biographical Info:

Dr. Krist is an assistant professor of science education in the department of Curriculum & Instruction at the University of Illinois Urbana-Champaign. Her research pairs a philosophical question with a design-oriented one: what does humanistic science education (research) look like? And how can we design to move science education (research) towards those visions? Her pursuit of these broad questions focuses on supporting student participation in science practices, teacher professional learning, and, recently, the use of AI in education. With respect to student learning, she examines the epistemological and ideological commitments shaping how students and teachers can embody and underlying ethic of care as they participate in science practices. This focus centers the relational work that students and teachers do to build trust and support intellectual risk-taking. Grounded in an anti-capitalist vision, Dr. Krist has also developed new research methods that leverage existing computational tools toward ethically-driven qualitative research. Dr. Krist was the recipient of NAEd/Spencer Dissertation Fellowship, Dr and her early career work has been supported by an NAEd/Spencer Postdoctoral Fellowship as well as grants from the National Science Foundation and the National Institutes of Health and has been published in leading science education and learning sciences journals.

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