Stanford

Christina Krist

Associate Professor of Education

Graduate School of Education

Curriculum Vitae available Online

CONTACT INFORMATION

- **Administrative Support**

  Leslie Dinan

  Email ldinan@stanford.edu

Bio

BIO

Dr. Krist's work focuses on supporting meaningful student participation in science practices, teacher professional learning, and designing for more humanizing forms of science learning. Her current projects focus on bringing together various configurations of community organizations, teachers, families, and scientists to develop science learning experiences that promote communities' visions for thriving. She received her PhD in Learning Sciences from Northwestern University in 2016 and was a postdoctoral scholar at the University of Maryland from 2016-2017. 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 was recently recognized with NARST's Early Career Research Award.

ACADEMIC APPOINTMENTS

- Associate Professor, Graduate School of Education

Research & Scholarship

RESEARCH INTERESTS

- Curriculum and Instruction
- Equity in Education
- Professional Development
- Science Education
- Teachers and Teaching

PROJECTS

- Community Catalysts: Empowering Rantoul's youth and parents through a community-centered approach to educational transformation - University of Illinois Urbana-Champaign (7/1/2024 - 6/30/2025)
- A professional development model for high school teachers to adapt curricula toward students' knowledges and resources - Stanford University
- Primary and secondary programs at Yew Chung Secondary School Hong Kong - University of Illinois Urbana-Champaign
- Designing integrated structural support for epistemology, growth mindset, and sense of belonging in introductory physics - University of Illinois Urbana-Champaign
- EMPOWER: Enacting Materials to Promote Ownership, Engagement and Relevance - University of Colorado Boulder

Teaching

COURSES

2025-26

- Development of Scientific Reasoning and Knowledge: EDUC 267E (Aut)
- Science, Engineering and Technology Education Seminar: EDUC 359C (Win)
- Using Video as Data in the Learning Sciences: EDUC 450B (Win)

2024-25

- Development of Scientific Reasoning and Knowledge: EDUC 267E (Aut)
- Research in Science, Engineering, & Tech Ed: Teacher Learning With and From Curriculum Materials: EDUC 359B (Win)

STANFORD ADVISEES

Master's Program Advisor

Claire Sutton, Zhi Xiong Tay

Doctoral (Program)

Roberto Gutierrez, Julia Poel

Publications

PUBLICATIONS

- **Re-Indexing Epistemic Responsibility: A Grammatical Analysis of How a Teacher Made Space for Students' Epistemic Agency** *JOURNAL OF RESEARCH IN SCIENCE TEACHING*
  Mathayas, N., Krist, C.
  2025
- **Where Do We Start And Where Do We Go? Emerging Findings Informing the Design of Responsive Professional Learning With Secondary Science Teachers.** *International Conference on the Learning Sciences ...*
  Krist, C. S., Hall, K., Hoang, N., Hug, B., Ko, M. M., Logan, L. H., Leonardi, N., Suarez, E. H., Wingert, K.
  2025; 2025: 2877-2879
- **EMPOWER: Enacting Materials to Promote Ownership, Engagement, and Relevance.** *International Conference on the Learning Sciences ...*
  Ko, M. M., Krist, C., Hug, B., Wingert, K., Suarez, E., Lauren, L. H., Leonardi, N., Hall, K., Light, E.
  2024; 2024: 2303-2304
- **Striving for Relationality: Teacher Responsiveness to Relational Cues When Eliciting Students' Science Ideas** *COGNITION AND INSTRUCTION*
  Krist, C.
  2024; 42 (2): 207-242
- **Understanding Joint Exploration: the Epistemic Positioning Underlying Collaborative Activity in a Secondary Mathematics Classroom** *CANADIAN JOURNAL OF SCIENCE MATHEMATICS AND TECHNOLOGY EDUCATION*
  Parr, E., Dyer, E. B., Machaka, N., Krist, C.
  2023; 23 (3): 479-496
- **Which ideas, when, and why? An experienced teacher's in-the-moment pedagogical reasoning about facilitating student sense-making discussions** *JOURNAL OF RESEARCH IN SCIENCE TEACHING*
  Krist, C., Shim, S.
  2024; 61 (2): 255-288
- **Teacher Noticing for Supporting Students' Epistemic Agency in Science Sensemaking Discussions** *JOURNAL OF SCIENCE TEACHER EDUCATION*
  Krist, C., Machaka, N., Voss, D., Mathayas, N., Kelly, S., Shim, S.

2023; 34 (8): 799-819

- **Alignment between student epistemological views and experiences with course structures in introductory physics: A case study**
  Ouellette, E., Lewsirirat, S., Sebastian, R., Lundsgaard, M., Krist, C., Kuo, E.
  edited by Jones, D., Ryan, Q., Pawl, A.
  AMER ASSOC PHYSICS TEACHERS.2023: 260-265

- **Expanding the interpretive functions of framing for understanding marginalized students' participation in collaboration and learning (vol 17, pg 937, 2022)** *CULTURAL STUDIES OF SCIENCE EDUCATION*
  Shim, S., Krist, C.
  2022; 17 (4): 1193

- **Distributing epistemic functions and tasks-A framework for augmenting human analytic power with machine learning in science education research** *JOURNAL OF RESEARCH IN SCIENCE TEACHING*
  Kubsch, M., Krist, C., Rosenberg, J. M.
  2023; 60 (2): 423-447

- **Expanding the interpretive functions of framing for understanding marginalized students' participation in collaboration and learning** *CULTURAL STUDIES OF SCIENCE EDUCATION*
  Shim, S., Krist, C.
  2022; 17 (3): 937-944

- **Combining Machine Learning and Qualitative Methods to Elaborate Students' Ideas About the Generality of their Model-Based Explanations (November 10.1007/s10956-020-09862-4, 2020)** *JOURNAL OF SCIENCE EDUCATION AND TECHNOLOGY*
  Rosenberg, J. M., Krist, C.
  2021; 30 (2): 268

- **Combining Machine Learning and Qualitative Methods to Elaborate Students' Ideas About the Generality of their Model-Based Explanations** *JOURNAL OF SCIENCE EDUCATION AND TECHNOLOGY*
  Rosenberg, J. M., Krist, C.
  2021; 30 (2): 255-267

- **Examining How Classroom Communities Developed Practice-Based Epistemologies for Science Through Analysis of Longitudinal Video Data** *JOURNAL OF EDUCATIONAL PSYCHOLOGY*
  Krist, C.
  2020; 112 (3): 420-443

- **Opening up curricula to redistribute epistemic agency: A framework for supporting science teaching** *SCIENCE EDUCATION*
  Ko, M., Krist, C.
  2019; 103 (4): 979-1010

- **Identifying Essential Epistemic Heuristics for Guiding Mechanistic Reasoning in Science Learning** *JOURNAL OF THE LEARNING SCIENCES*
  Krist, C., Schwarz, C. V., Reiser, B. J.
  2019; 28 (2): 160-205

- **Computational thinking in elementary classrooms: measuring teacher understanding of computational ideas for teaching science** *COMPUTER SCIENCE EDUCATION*
  Yadav, A., Krist, C., Good, J., Caeli, E.
  2018; 28 (4): 371-400

- **Epistemologies in practice: Making scientific practices meaningful for students** *JOURNAL OF RESEARCH IN SCIENCE TEACHING*
  Berland, L. K., Schwarz, C. V., Krist, C., Kenyon, L., Lo, A. S., Reiser, B. J.
  2016; 53 (7): 1082-1112