Christina (Stina) Krist

EDUCATION

Northwestern University, Evanston IL 2011-2016

Ph.D., Learning Sciences

Dissertation title: "Meaningful engagement in scientific practices: How classroom communities develop authentic epistemologies for science"

2015 NAEd/Spencer Dissertation Fellow

Grinnell College, Grinnell IA 2005-2009

B.A., Biology, with honors.

Iowa Initial Teaching License, 5-12 Biological Sciences.

PROFESSIONAL APPOINTMENTS

University of Illinois at Urbana-Champaign, Urbana IL 2017-2024

Assistant professor, Curriculum & Instruction (100%)

Affiliate faculty, Infection Genomics for One Health (IGOH) Research Theme, Carl R. Woese Institute for Genomic Biology (IGB) (0%)

University of Maryland, College Park MD 2016-2017

Postdoctoral research associate, "Research on Practice using STEM Inquiry Embedded with Computational Thinking in Elementary School"

AWARDS and FELLOWSHIPS

Early Career Research Award, NARST 2023

Reviewer of the Year, *Journal of the Learning Sciences* 2020

Hardie Faculty Fellow, University of Illinois College of Education 2020

National Academy of Education/Spencer Foundation, Postdoctoral Fellow 2018-2020

Outstanding Dissertation Award*,* NARST (Finalist) 2017

National Academy of Education/Spencer Foundation, Dissertation Fellow 2015-2016

Sandra K. Abell Institute for Doctoral Students, Participant, Boulder CO	2015
Graduate Research Fellowship, National Science Foundation (Honorable Mention)	2013
University Fellowship, Northwestern University	2011-2012

ACTIVE RESEARCH GRANTS

[1] **Krist, C.** (PI), Hug, B., Ko, M., & Suárez, E. (co-PIs). *A professional development model for high school teachers to adapt curricula toward students' knowledges and resources*. National Science Foundation, DRL-DRK12 2300743. 08/01/2023 – 07/31/2027 (estimated).

[2] Sanders-Smith, S. (PI) & **Krist, C.** (co-PI). *Primary and secondary programs at Yew Chung Secondary School Hong Kong.* China Education Development (Investment & Management) Co. Limited (Gift fund). 2023–2026.

[3] Kuo, E. (PI), Lundsgaard, M., & **Krist, C.** (co-PIs). *Designing integrated structural support for epistemology, growth mindset, and sense of belonging in introductory physics.* National Science Foundation, IUSE 2235516. 05/01/2023 – 04/30/2026 (estimated).

[4] **Krist, C.** (PI). *Conceptualizing responsive teaching identity development*. Campus Research Board Award, RB23037. 01/01/2023 - 07/31/2024.

[5] Ko, M. (PI), Hug, B., & **Krist, C**. (co-PIs). *EMPOWER: Enacting Materials to Promote Ownership, Engagement and Relevance*. National Institutes of Health, Science Education Partnership Award (SEPA) 1R25GM142056-01. 11/01/2022 – 08/30/2027 (estimated).

[6] **Krist, C.** (PI), Hug, B., Whitaker, R., Smith, R., Moodie, E., Nguyen, T., Dariotis, J., Krist, D., Vill, B., Suárez, E., & Ko, M. *Establishing a community-based curriculum materials collaborative for health justice science education.* Chancellor's Call to Action to Address Racism & Social Injustice Research Program, H00523. 07/01/2022 – 09/30/2023.

[7] Hug, B. (PI) & **Krist, C.** (co-PI). *A school-university partnership for building elementary preservice teachers' culturally sustaining science teaching practices.* Provost's Initiative on Teaching Advancement (PITA), matched by the College of Education. 06/2022 – 06/2024.

[8] Hug, B. (PI), **Krist, C.,** (co-PI), & Poel, J. (URA). *Sustainable World Network.* UIUC Student Sustainability Committee. 01/2022 – 12/2023.

[9] **Krist, C.** (PI), D'Angelo, C., Dyer, E., Rosenberg, J., & Bosch, N. (Co-PIs). *Advancing computational grounded theory for audiovisual data from STEM classrooms.* National Science Foundation, ECR:Core 1920796. 09/01/2019 – 08/31/2024 (estimated).

PAST RESEARCH GRANTS

[1] Lindgren, R. (PI), Cottle, D., **Krist, C.,** & Hug, B. (co-PIs). *Initiation Grant: Exploring the Collection and Use of 360-degree Classroom Videos for Teacher Education*. BRIDGE Strategic Partnership Initiative. 07/01/2022 – 08/30/2023.

[2] Dornfeld Tissenbaum, C. L. (PI), **Krist, C.** (Co-PI), & Lane, M. (GRA). *The role of online museum experiences in supporting at-home science learning in the era of COVID-19*. UIUC Bureau of Educational Research COVID-19 Seed Grants. 07/02/2020 – 12/31/2020.

[3] **Krist, C.** (PI), Kuo, E., & Rosenberg, J. (Co-PIs). *Propelling teacher professional development through FAAST feedback on student epistemic views.* TIER-ED Pilot Projects Program 2020-21. 05/29/2020 – 12/31/2021.

[4] **Krist, C.** (PI). *Learning to open up space for epistemic agency: Towards a model of teacher learning.* University of Illinois Hardie Faculty Fellows Program. 04/15/2020 – 05/15/2021.

[5] **Krist, C.** (Fellow). *The role of trust in building science knowledge: Exploring the relational dimension of epistemological development.* National Academy of Education/Spencer Foundation Postdoctoral Fellowship Program. 09/01/2018 – 08/31/2021.

[6] Hug, B. (PI), & **Krist, C**. (Co-PI). *Sustainable world: Developing a global perspective storyline for elementary preservice teachers.* Center for East Asian and Pacific Studies (CEAPS) Russian, East European and Eurasian Center (REEEC) and European Union Center (EUC). 08/16/2018 – 08/15/2022.

[7] **Krist, C.** (PI). RB18139: *Learning to teach for epistemic agency: Sustaining reform-based pedagogies in the context of the Next Generation Science Standards.* University of Illinois at Urbana-Champaign Campus Research Board Research Award. 06/30/2018 - 01/31/2021.

JOURNAL ARTICLES ***postdoctoral scholar co-author(s) **student co-author(s) + award recipient/nominee***

[1] **Krist, C.** (*in press*). Striving for responsiveness: Teacher responsiveness to relational cues when eliciting students' science ideas: Towards relational equity in science knowledge building. *Cognition & Instruction.*

[2] Parr, E. D.,* Machaka, N.,** Dyer, E., & **Krist, C.** (2023) Understanding joint exploration: The epistemic positioning underlying collaborative activity in a secondary mathematics classroom. *Canadian Journal of Science, Mathematics, and Technology Education,* 23, pp. 479–496. https://doi.org/10.1007/s42330-023-00295-w

[3] **Krist, C.,**^ & Kubsch, M.^ (2023). Bias, bias everywhere: A response to Li et al. and Zhai & Nehm. *Journal of Research in Science Teaching, 60*(10), 2395-2399. https://doi.org/10.1002/tea.21913
^*Both authors contributed equally to this manuscript.*

[4] **Krist, C.,** & Shim, S. Y.* (2023). Which ideas, when, & why?: An experienced teacher's in-the-moment pedagogical reasoning about facilitating student sense-making discussions. *Journal of Research in Science Teaching,* 1-34. https://doi.org/10.1002/tea.21908

[5] **Krist, C**., Machaka, N.,** Voss, D., Kelly, S., Mathayas, N., & Shim, S. Y.* (2023). Teacher noticing for supporting students' epistemic agency in science sensemaking discussions. *Journal of Science Teacher Education, 34*(8), 799-819. https://doi.org/10.1080/1046560X.2022.2155355

[6] +Kubsch, M.,^ **Krist, C**.,^ & Rosenberg, J.^ (2023). 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, 60*(2), 423-447. http://doi.org/10.1002/tea.21803 ^*All authors contributed equally to this manuscript.*
+Recipient of the 2023 NARST RAISE RIG (Research Interest Group on Research in Artificial Intelligence-Involved Science Education) Research Worth Reading Award
+Recipient of the 2023 GDCP (German Society for the Teaching of Chemistry and Physics) Best Paper Award

[7] Shim, S. Y.,* & **Krist, C**. (2022). Expanding the interpretive functions of framing for understanding marginalized students' participation in collaboration and learning. *Cultural Studies in Science Education, 17,* 937–944. https://doi.org/10.1007/s11422-022-10122-7

[8] Rosenberg, J. M., & **Krist, C**. (2021). Combining machine learning and qualitative methods to elaborate students' ideas about the generality of their model-based explanations. *Journal of Science Education and Technology, 30,* 255–267. https://doi.org/10.1007/s10956-020-09862-4

[9] **Krist, C.** (2020). Examining how classroom communities developed practice-based epistemologies for science through analysis of longitudinal video data. *Journal of Educational Psychology, 112*(3), 420–443. https://doi.org/10.1037/edu0000417

[10] Ko, M., & **Krist, C.** (2019). Opening up curricula to re-distribute epistemic agency: A framework for supporting science teaching. *Science Education, 103*, 979-1010. https://doi.org/10.1002/sce.21511

[11] **Krist, C.,** Schwarz, C., & Reiser, B. J. (2019). Identifying essential epistemic heuristics for guiding mechanistic reasoning in science learning. *Journal of the Learning Sciences, 28*(2), 160-205.

[12] Yadav, A., **Krist, C.,** Good, J., & Caeli, E. N. (2018). Computational thinking in elementary classrooms: Measuring teacher understanding of computational ideas for teaching science. *Computer Science Education, 28*(4), 371-400.

[13] **Krist, C**., Novak, M., Tipton, K., & Brody, L. (Jan 2016). Cultivating a next-generation classroom culture. *Science Scope, 39*(5), 8-14.

[14] Berland, L., Schwarz, C., **Krist, C.,** Kenyon, L., Lo, A., & Reiser, B. J. (2016). Epistemologies in practice: Making scientific practices meaningful for students. *Journal of Research in Science Teaching, 53*(7), 1082-1112.

MANUSCRIPTS UNDERGOING REVIEW ** postdoc co-author(s) ** student co-author(s)*

[1] **Krist, C.,** & Suárez, E. (*revising to resubmit*). Theories of caring in science education: Current enactments and future directions. *Review of Educational Research.* Initial submission Aug 31, 2023.

[2] Mathayas, N., & **Krist, C.** (*revising to resubmit*). Examining a science teacher's strategic and progressive indexing of epistemic responsibility when cultivating a community characterized by epistemic agency. *Journal of Research in Science Teaching.* Initial submission Aug 4, 2023.

BOOKS

[1] Wulff, P., Kubsch, M., & **Krist, C.** (*full manuscript under review*) *Applying machine learning in science education research: When, how, and why?* Springer Nature.

PUBLISHED PROCEEDINGS ** postdoctoral scholar co-author(s) ** student co-author(s) +award recipient/nominee*

[1] Ouellette, E.,** Lewsirirat, S.,** Biju Sebastian, R.,** Lundsgaard, M., **Krist, C.,** & Kuo, E. (2023). Alignment between student epistemological views and experiences with course structures in introductory physics: A case study. In D. Jones, Q. Ryan, and A. Pawl (Eds.), *2023 Physics Education Research Conference*, Sacramento, CA, July 19-20, 2023.

[2] Suárez, E., & **Krist, C**. (2023). Designing for justice-oriented critical caring in science methods courses. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023* (pp. 553-560). International Society of the Learning Sciences. https://repository.isls.org//handle/1/10297

[3] Hall, K.** **Krist, C**., & Tissenbaum, M. (2023). Being a good student: Risks and reactive coping strategies encountered in a summer STEM makerspace for Black youth. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023* (pp. 688-695). International Society of the Learning Sciences. https://repository.isls.org//handle/1/10316

[4] **Krist, C**., Dyer, E., Rosenberg, J., Palaguachi, C.,** & Cox, E.** (2023). Leveraging computationally generated descriptions of audio features to enrich qualitative examinations of sustained uncertainty. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023* (pp. 1258-1261). International Society of the Learning Sciences. https://repository.isls.org//handle/1/9894

[5] **Krist, C**., Hall, K.,** Moodie, E., Hug, B., Smith, R., Dariotis, J., Whitaker, R., Nguyen, T. H., Vill, B.,** Krist, D.,** Suárez, E., & Ko, M. (2023). Understanding the assemblage of community desire: Progress, challenges, and tensions in establishing a community-based health justice science education curriculum collaborative. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023* (pp. 1266-1269). International Society of the Learning Sciences. https://repository.isls.org//handle/1/9896

[6] Hur, P.,** Machaka, N.,** **Krist, C.,** & Bosch, N. (2023). Informing expert feature engineering through automated approaches: Implications for coding qualitative classroom video data. *LAK2023: LAK23: 13th International Learning Analytics and Knowledge Conference,* pp. 630–636. New York, NY: ACM.

[7] Shim, S. Y.,* **Krist, C.,** Ko, M. L., Jarosewich, T., Hall, K.,** & Hug, B. (2022). Teacher sensemaking of potential educative features in science curricular materials. In Chinn, C., Tan, E., Chan, C., & Kali, Y. (Eds.), *Proceedings of the 16th International Conference of the Learning Sciences - ICLS 2022,* pp. 1489-1492. Hiroshima, Japan: International Society of the Learning Sciences.

[8] Machaka, N.,** Parr, E. D.,* Dyer, E., & **Krist, C.** (2022). Shifts in positions, epistemic authority, and epistemic agency in a secondary mathematics classroom. In Chinn, C., Tan, E., Chan, C., & Kali, Y. (Eds.), *Proceedings of the 16th International Conference of the Learning Sciences - ICLS 2022*, pp. 2148-2149. Hiroshima, Japan: International Society of the Learning Sciences.

[9] Bell, A., Lee, S., Haverly, C., Pierson, A., Keifert, D., Johnson, H., Salgado, M., Shim, S. Y.,* **Krist, C.,** Nation, J., & Kang, H. (2022). Navigating making space: Attending to multiple learning pathways in science learning. In Chinn, C., Tan, E., Chan, C., & Kali, Y. (Eds.), *Proceedings of the 16th International Conference of the Learning Sciences - ICLS 2022,* pp. 1691-1698. Hiroshima, Japan: International Society of the Learning Sciences.

[10] Dyer, E. B., Parr, E. D.,* Machaka, N.,** & **Krist, C.** (2021). Understanding joint exploration: The epistemic positioning underlying collaborative activity in a secondary mathematics classroom. Research Report. *43rd Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education. PME-NA 2021*.

[11] Parr, E. D.,* Machaka, N.,** Dyer, E., **Krist, C**. (2021). Making space for joint exploration: The embodiment of social and epistemic positioning in student-teacher interaction. Paper included in the symposium "Movement, authority, and knowledge: Examining the relationships in embodied and social positioning for STEM learning," de Vries, E., Hod, Y., & Ahn J. (Eds.), *Proceedings of the 15th International Conference of the Learning Sciences - ICLS 2021. Bochum, Germany: International Society of the Learning Sciences*, pp. 843-850.

[12] Kelly, S.,** & **Krist, C**. (2021). Revisiting positioning: How a teachers' physical movements amplify socioepistemic messages in the classroom. Paper included in the symposium "Movement, authority, and knowledge: Examining the relationships in embodied and social positioning for STEM learning," de Vries, E., Hod, Y., & Ahn J. (Eds.), *Proceedings of the 15th International Conference of the Learning Sciences - ICLS 2021. Bochum, Germany: International Society of the Learning Sciences*, pp. 843-850.

[13] Kubsch, M., Rosenberg, J., & **Krist, C.** (2021). Beyond supervision: Human / machine distributed learning in learning sciences research. In de Vries, E., Hod, Y., & Ahn J. (Eds.), *Proceedings of the 15th International Conference of the Learning Sciences - ICLS 2021. Bochum, Germany: International Society of the Learning Sciences*, pp. 897-898.

[14] D'Angelo, C., Dyer, E., **Krist, C.,** Rosenberg, J., & Bosch, N. (2020). Advancing computational grounded theory for audiovisual data from mathematics classrooms. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 4,* pp. 2393-2394). Nashville, Tennessee: International Society of the Learning Sciences.

[15] +Kelly, S.,** Mathayas, N.,** Machaka, N.,** Chis, J.**, & **Krist, C.** (2020). Variations in teachers' practical conceptions of epistemic agency. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 4,* pp. 2030-2037. Nashville, Tennessee: International Society of the Learning Sciences.
+Nominated for Best Student Paper.

[16] **Krist, C.** (2020). Building trust: Supporting vulnerability for doing science in school. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 1* (pp. 270-277), pp. 270-277. Nashville, Tennessee: International Society of the Learning Sciences.

[17] **Krist, C.,** & Suárez, E. (2018). Doing science with fidelity to persons: Instantiations of caring participation in science practices. *Proceedings of the 13th International Conference of the Learning Sciences, June 23-27, 2018*, pp. 424-431. London.

[18] Ko, M.^, & **Krist, C.**^ (2018). Redistributing epistemic agency: How teachers open up space for meaningful participation in science. *Proceedings of the 13th International Conference of the Learning Sciences, June 23-27, 2018*, pp. 232-239. London. ^*Both authors contributed equally to this manuscript and are listed in alphabetical order.*

[19] Keifert, D., **Krist, C.,** Scipio, D. A., & Phillips, A. M. (2018). Epistemic agency as a members' experience. *Proceedings of the 13th International Conference of the Learning Sciences, June 23-27, 2018*, pp. 192-199. London.

[20] **Krist, C.** (2016). How a 6th grade classroom develops epistemologies for building scientific knowledge. In C. Looi, J. Polman, U. Cress, & P. Reimann (Eds.), *Transforming Learning, Empowering Learners: Proceedings of the 12th International Conference of the Learning Sciences (1)*, pp. 306-313. Singapore.

[21] **Krist, C.**, & Rosenberg, J. (2016). Finding patterns in and refining characterizations of students' epistemic cognition: A computational approach. In C. Looi, J. Polman, U. Cress, & P. Reimann (Eds.), *Transforming Learning, Empowering Learners: Proceedings of the 12th International Conference of the Learning Sciences (2)*, pp. 1223-1224. Singapore.

[22] Hjorth, A., & **Krist, C.** (2016). Unpacking social factors in mechanistic reasoning (or, why a wealthy person is not exactly like a grey squirrel). In C. Looi, J. Polman, U. Cress, & P. Reimann (Eds.), *Transforming Learning, Empowering Learners: Proceedings of the 12th International Conference of the Learning Sciences (2),* pp. 894-897. Singapore.

[23] Ramey, K. E., Champion, D. N., Dyer, E. B., Keifert, D. T., **Krist, C.,** Meyerhoff, P., & Villanosa, K. (2016). Qualitative analysis of video data: Standards and heuristics. In C. Looi, J. Polman, U. Cress, & P. Reimann (Eds.), *Transforming Learning, Empowering Learners: Proceedings of the 12th International Conference of the Learning Sciences (2),* pp. 1033-1040. Singapore.

[24] **Krist, C.,** & Reiser, B. (2014). Scientific practices through students' eyes: How sixth grade students enact and describe purposes for scientific modeling activities over time. *Proceedings of the International Conference of the Learning Sciences*, pp. 270-277. Boulder, CO

REFEREED PRESENTATIONS ** postdoctoral scholar co-presenter ** student co-presenter*

[1] Suárez, E., & **Krist, C.** (accepted). Designing for justice-oriented critical caring in science teacher education. *Paper to be presented at AERA 2024, Philadelphia PA.*

[2] Ko, M. L., Hug, B., Wingert, K. M., & **Krist, C.** (accepted). Re-tooling NGSS-aligned curricula to promote agency, ownership, and relevance. *Paper to be presented at NARST 2024, Denver CO.*

[3] **Krist, C.,** & Suárez, E. (accepted). A systematic review of theories of caring in science education. *Paper to be presented at NARST 2024, Denver CO.*

[4] Leonardi, N.,** Hug, B., & **Krist, C.** (accepted). "Oh yeah, that has happened to me": A teacher's strategic adaptation of a phenomenon. *Paper to be presented at NARST 2024, Denver CO.*

[5] Machaka, N.,** & **Krist, C.** (accepted). Pre-service science teachers' conceptualization of responsive teaching. *Paper to be presented at NARST 2024, Denver CO.*

[6] Machaka, N.,** & **Krist, C.** (accepted). Secondary pre-service science teachers' conceptualization of responsive teaching: Perceptions of constraints. *Paper to be presented at NARST 2024, Denver CO.*

[7] Shim, S., **Krist, C.,** Hall, K.,** Ko, M. L., Jarosewich, T., & Hug, B. (accepted). Flexible tool or verbatim script?: Teachers' framing and uses of educative features in curriculum materials. *Paper to be presented at NARST 2024, Denver CO.*

[8] Ouellette, E.,** Lewsirirat, S.,** Biju Sebastian, R.,** Lundsgaard, M., **Krist, C.**, & Kuo, E. (July 2023). Alignment between student epistemological views and experiences with course structures in introductory physics: A case study. *Contributed poster at the 2023 Physics Education Research Conference (PERC), Sacramento CA.*

[9] Ouellette, E.,** Lewsirirat, S.,** Biju Sebastian, R.,** **Krist, C.,** Lundsgaard, M., & Kuo, E. (July 2023). Framework for Unpacking Students' Experiences in Introductory Physics. *Contributed poster at the meeting of the American Association of Physics Teachers (AAPT) summer 2023, Sacramento CA.*

[10] Lewsirirat, S.,** Ouellette, E.,** Biju Sebastian, R.,** **Krist, C**., Lundsgaard, M., & Kuo, E. (July 2023). Framework for Unpacking Students' Experiences in Introductory Physics Part II: Beliefs, Motivations, and Emotions. *Contributed talk at the meeting of the American Association of Physics Teachers (AAPT) summer 2023, Sacramento CA.*

[11] Ouellette, E.,** Lewsirirat, S.,** Biju Sebastian, R.,** **Krist, C.,** Lundsgaard, M., & Kuo, E. (July 2023). Framework for Unpacking Students' Experiences in Introductory Physics Part I: Four Functions of Course Features. *Contributed talk at the meeting of the American Association of Physics Teachers (AAPT) summer 2023, Sacramento CA.*

[12] Cottle, D., Lindgren, R., Hampson-Stemp, H., **Krist, C**., & Lindstrom, N. (July 2023). 360 video in teacher education. *Presentation at the University of Birmingham School of Education Research Conference, Birmingham UK.*

[13] **Krist, C.,** & Mathayas, N.* (April 2023). Do we have the same definition? Variations in published transcripts showcasing students' epistemic agency. *Paper presented at NARST 2023, Chicago IL.*

[14] Ko, M., **Krist, C.,** Hug, B., & Machaka, N.* (April 2023). Conceptualizing teacher learning for supporting students' epistemic agency in science as an ideological process. *Paper presented at NARST 2023, Chicago IL.*

[15] **Krist, C.,** Rosenberg, J., Cox, E.,** & Dyer, E. (April 2023). Using computationally-assisted descriptive approaches (CADAs) for deepening a situated conceptualization of the role of sustained uncertainty in inquiry. *Paper presented at NARST 2023, Chicago IL.*

[16] Hall, K.,** Hug, B., & **Krist, C.** (April 2023). Using a computational grounded theory approach to examine the shift to NGSS alignment in AP Biology curriculum materials. *Paper presented at NARST 2023, Chicago IL.*

[17] **Krist, C.,** & Suárez, E. (April 2023). Designing for epistemic justice with an ethic of critical care in pre-service science methods courses. *Paper presented at AERA 2023, Chicago IL.*

[18] Dyer, E., **Krist, C**., Machaka, N.,** Parr, E. D.* (April 2023). How shifts in physical positions can indicate shifts in authority, agency, and power. *Paper presented at AERA 2023, Chicago IL.*

[19] Machaka, N.,** Parr, E.,* Dyer, E., & **Krist, C.** (April 2022). Shifts in positions, authority, and agency in a secondary mathematics classroom. *Paper presented at AERA 2022, San Diego CA.*

[20] Parr, E.,* Machaka, N.,** Dyer, E., & **Krist, C.** (April 2022). The role of physical positioning in collaborative groupwork in a secondary mathematics classroom. *Poster presented at AERA 2022, San Diego CA.*

[21] Mathayas, N., Kelly, S., Machaka, N.,** & **Krist, C.** (April 2022). Factors affecting science teachers' decision-making to support students epistemic agency. *Paper presented at AERA 2022, San Diego CA.*

[22] Suárez, E., Stroupe, D., Scipio, D., Mensah, F., Marin, A., Keifert, D., & **Krist, C.** (April 2022). Whose science? Interrogating the foundations of "nature of science," uncovering epistemic injustices in science education. *Symposium presented at AERA 2022, San Diego CA.*

[23] **Krist, C.,** Kelly, S., Machaka, N.,** & Voss, D. (March 2022). Teacher noticing for epistemic agency: What cues teachers to open up space for student sensemaking? *Paper presented at NARST 2022, Vancouver BC.*

[24] Hall, K.,** **Krist, C.,** & Kuo, E. (March 2022). Perspectives on generalizability in problem-solving from undergraduate physics students: Influences of a mastery homework approach. *Paper presented at NARST 2022, Vancouver BC.*

[25] Shim, S. Y.,* Hall, K.,** Jarosewich, T., **Krist, C.,** Ko, M. L., & Hug, B. (March 2022). Proposing a framework to analyze educative features in NGSS-aligned science curricular materials. *Paper presented at NARST 2022, Vancouver BC.*

[26] Machaka, N.,** & **Krist, C.** (March 2022). Changes in teacher thinking about enactment influenced by a PD about an NGSS-aligned storyline unit. *Paper presented at NARST 2022, Vancouver BC.*

[27] **Krist, C.,** Parr, E. D.,* & Dyer, E. (April 2021). Multiple ways qualitative techniques inform unsupervised computational analysis of video data applying computational grounded theory [Paper Session]. AERA Annual Meeting, held virtually.

[28] Ko, M. L., Hug, B., & **Krist, C**. (April 2021). Designing materials for student coherence, then revising for epistemic agency: A case for epistemic agency as an explicit design focus [Related Paper Set]. In **Krist, C.,** (session organizer), *How teachers navigate tensions between enacting coherent curriculum materials and supporting students' epistemic agency.* NARST 2021 Annual International Conference, held virtually.

[29] **Krist, C.,** Mathayas, N.,** & Machaka, N.** (April 2021). "Shutting down" now to "open up" later: Temporal tensions in pedagogical strategies for supporting epistemic agency [Related Paper Set]. In **Krist, C.,** (session organizer), *How teachers navigate tensions between enacting coherent curriculum materials and supporting students' epistemic agency.* NARST 2021 Annual International Conference, held virtually.

[30] Dyer, E. B., Rosenberg, J. M., Bosch, N., **Krist, C.,** & D'Angelo, C. (September 2020). Better together? Initial findings and implications from combining qualitative coding and computational methods to analyze classroom audiovisual data [Poster]. AERA Satellite Conference on Educational Data Science, Stanford, CA.

[31] Kelly, S. B.,** & **Krist, C.** (April 2020). Teacher as Learner: Supporting Students' Intellectual Authority in the Classroom [Paper Session]. AERA Annual Meeting, San Francisco, CA. http://tinyurl.com/wyuuybd (Conference Canceled)

[32] Mathayas, N.,** Kelly, S. B.,** & **Krist, C.** (April 2020). How Science Teachers Conceptualize Students' Epistemic Agency in Their Teaching: Two Teachers' Narratives [Paper Session]. AERA Annual Meeting, San Francisco, CA http://tinyurl.com/vzlanfw (Conference Canceled)

[33] Kelly, S. B.,** & **Krist, C.** (March 2020). Characterizing epistemic messages that support the development of student intellectual authority in the classroom [Paper Session]. NARST 2020 Annual International Conference, Portland OR. *Conference cancelled.*

[34] Yi, S.,** & **Krist, C.** (October 2019). At work and in games: Case study of sandbox video game behavior reflecting work behavior [Poster]. Connected Learning Summit, Irvine CA.

[35] **Krist, C.** (April 2019). The co-development of epistemologies and trust during question- and idea-generation [Structured Poster Session]. In J. S. Gouvea & D. Hammer (session chairs), *Designing for and engaging with heterogeneity in students' thinking in science.* AERA Annual Meeting, Toronto.

[36] **Krist, C.,** & Ko, M. (April 2019). Epistemic ripple effects: Strategically opening up space in curriculum materials to re-distribute epistemic agency [Structured Poster Session]. In J. Moon, S. Michaels, & D. Morrison (session chairs), *Using epistemic tools to support reasoning, student agency, and equity*. AERA Annual Meeting, Toronto.

[37] Kelly, S. B.,** & **Krist, C.** (April 2019). Building community knowledge: Teacher discourse moves that support interthinking [Poster]. AERA Annual Meeting, Toronto.

[38] **Krist, C.,** Elby, A., Good, J., Gupta, A., Sohr, E. R., & Yadav, A. (April 2017). Integrating computational thinking strategies that support science inquiry: A case study from a summer PD [Poster]. AERA Annual Meeting, San Antonio TX.

[39] **Krist, C.** (April 2017). How teachers respond to student problematizations to facilitate productive science knowledge building [Structured Poster Session]. In Watkins, J. (session organizer), *Examining Uncertainty as a Construct for Promoting Meaningful Science Engagement.* AERA Annual Meeting, San Antonio TX.

[40] Berland, L., Chan, W. Y., & **Krist, C.** (April 2017). Making connections between specific phenomena and general ideas to build scientific knowledge [Poster]. AERA Annual Meeting, San Antonio TX.

[41] **Krist, C.** (April 2017). Ending inquiries by listening, empathizing, and changing one's mind: Students' shared epistemic agency in an 8th grade classroom [Related Paper Set]. In **Krist, C.** (session organizer), *Epistemic Agency as a Members' Experience.* NARST Annual International Conference, San Antonio TX.

[42] **Krist, C.,** & Novak, M. (April 2016). Developing a culture of caring to support epistemic agency [Related Paper Set]. In Suarez, E., & **Krist, C**. (session organizers), *Investigating Epistemic Agency: Creating Space for Students and Teachers to Actively Construct Scientific Knowledge*. NARST Annual International Conference, Baltimore MD.

[43] **Krist, C.** (April 2016). How classrooms learn to use epistemic considerations for building scientific knowledge [Poster]. NARST Annual International Conference, Baltimore MD, as part of the Sandra K. Abell Institute invited poster session.

[44] Rosenberg, J., & **Krist, C.** (April 2016). Characterizing students' epistemic considerations: An automated computational approach for embedded assessment responses [Poster]. NARST Annual International Conference, Baltimore MD.

[45] **Krist, C.** (April 2016). Meaningful engagement in scientific practices: How classroom communities develop authentic epistemologies for science [Poster]. AERA Annual Meeting, Washington DC, as part of the NAEd/Spencer Dissertation Fellows invited poster session.

[46] Berland, L., & **Krist, C.** (April 2016). A novel framework for characterizing scientific epistemic discourse [Structured Poster Session]. In Chinn, C., & Duncan, R. (session organizers), *Following the Epistemic Thread: Fostering High Quality Epistemic Discourse about Science*. AERA Annual Meeting, Washington DC.

[47] **Krist, C.** (April 2015). "Why was that so interesting?": A preliminary model for developing meaningful engagement in scientific practices [Paper]. AERA Annual Meeting, Chicago IL.

[48] **Krist, C.** (April 2015). Interest generators for scientific knowledge building [Roundtable]. In **Krist, C.** (session organizer), *Computational Methods for Qualitative Learning Sciences Research: Affording Materiality to Text-Based Data*. AERA Annual Meeting, Chicago IL.

[49] **Krist, C**. (April 2015). Students as epistemic agents: Leveraging shared epistemic considerations in curated spaces [Related Paper Set]. In Berland, L. (session organizer), *Personally and Scientifically Meaningful Engagement in the Scientific Practices.* NARST Annual International Conference, Chicago IL.

[50] Schwarz, C., **Krist, C**., Lee, M., Toyama, Y., & Anderson, C. (April 2015). The content generality and specificity of mechanistic reasoning across middle-school model-based explanation assessment items [Related Paper Set]. In Berland, L. (session organizer), *Personally and Scientifically Meaningful Engagement in the Scientific Practices.* NARST Annual International Conference, Chicago IL.

[51] Kim, J., Toyama, Y., **Krist, C**., Draney, K., Reiser, B., & Sussman, J. (April 2015). Students' increasing sophistication in their mechanistic responses [Related Paper Set]. In Berland, L. (session organizer), *Personally and Scientifically Meaningful Engagement in the Scientific Practices.* NARST Annual International Conference, Chicago IL.

[52] Lo, A., **Krist, C.,** Reiser, B., & Novak, M. (April 2014). Examining shifts in teachers' understanding of NGSS and their impact on planned instruction [Related Paper Set]. In Reiser, B. (session organizer), *New Models of Professional Learning to Support Teachers in Realizing NGSS in Classroom Teaching*. NARST Annual International Conference, Pittsburgh PA.

[53] **Krist, C**. (April 2013). Classroom participation structures and student/teacher positioning in establishing science knowledge-building practices [Poster]. AERA Annual Meeting, San Francisco CA.

[54] **Krist, C.,** & Ko, M. (April 2013). Connecting students' everyday ideas to scientific investigations and explanations [Related Paper Set]. In Ko, M., (session organizer), *The Impact of Classroom Discourse on Engagement in Scientific Practices and Student Learning*. NARST Annual International Conference, Rio Grande, Puerto Rico.

INVITED PRESENTATIONS

Michigan State University, East Lansing MI

Invited Presentation: CREATE for STEM Institute Nov 7, 2023

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

Weizmann Institute of Sciences, Rehovot, Israel.

Plenary Speaker:

Methodological Advances in Science Education Research (MASER) Conference Sept 11, 2023

"Enriching Qualitative Video Analysis with Computational Techniques: A Focus on Naturalistic Classroom Settings"

Pädagogische Hochschule Heidelberg (Heidelberg University of Education), Heidelberg, Germany.

Invited Presentation: Department of Natural Sciences July 10, 2023

"Teacher noticing for epistemic agency"

NARST 2022, Vancouver, BC, Canada

Discussant: Related paper set Mar 27, 2022

"*Applying epistemic heuristics to characterize student reasoning about mechanisms with computational tools*."

Stanford University, Palo Alto CA

Science Education Group Oct 30, 2020

"Supporting students in 'going public'": Attending to the interactional vulnerabilities involved when eliciting students' ideas"

University of Illinois at Urbana-Champaign, Champaign IL

Physics Education Research Group May 06, 2020

"A plan for continuing analysis of the iOLab video data", with Katie Ansell & Eric Kuo

Physics Education Research Group Oct 05, 2017

"Meaningful Participation in Science Practices"

Bureau of Education Research (BER) Research Forum Sept 11, 2017

"Epistemic Agency in Science Knowledge Building"

Purdue University, West Lafayette IN

Engineering Education Research Seminar March 05, 2020

"Building Trust: Attending to Interactional Vulnerabilities for Students in Constructivist STEM Classrooms"

National Academy of Sciences, Washington DC

National Academy of Education Annual Meeting/Spencer Fellows Retreat Nov 08, 2019

"The Role of Trust in Building Science Knowledge: Exploring the Relational Dimension of Epistemological Development"

National Academy of Education/Spencer Spring Retreat March 18, 2016

"Meaningful Engagement in Scientific Practices: How a 6th Grade Classroom Community Developed Authentic Epistemologies for Science"

GUEST LECTURES

University of Iowa, Iowa City IA

PSQF 6204: Foundations of the Learning Sciences Sept 02, 2021

"*Identifying essential epistemic heuristics for guiding mechanistic reasoning in science learning"*

University of Massachusetts - Amherst, Amherst MA

EDUC 693B: Math, Science, and Learning Technologies Seminar Feb 17, 2021

"*Identifying essential epistemic heuristics for guiding mechanistic reasoning in science learning"*

University of Illinois at Urbana-Champaign, Champaign IL

CI 590: DELTA Seminar

" Teacher Learning and Technology" Oct 21, 2020

Grinnell College, Grinnell IA

EDU 345: Research and Methods in Teaching and Learning in the Sciences Feb 08, 2019

"Doing Science with Fidelity to Persons: Instantiations of Caring Participation in Science Practices"

Vanderbilt University, Nashville TN

SCED 7400: Modeling in the Secondary Science Classroom Oct 10, 2018

"Modeling to Figure Out"

WORKSHOPS AND PROFESSIONAL DEVELOPMENT

[Workshop] How to use AI and center people in science education research.

*Facilitated by Marcus Kubsch, **Christina Krist**, Peter Wulff, Joshua Rosenberg, Kevin Hall, Eugene Cox, Chris Palaguachi, & Paul Tschisgale*

NARST 2024 Pre-Conference Workshop, Denver CO Mar 17, 2024

[Workshop] Enriching qualitative video analysis with computational techniques: A focus on naturalistic classroom settings.

*Facilitated by **Christina Krist,** Paul Hur, Kevin Hall, & Chris Palaguachi*

MASER: Methodological Advances in Science Education Research

Weizmann Institute of Science, Rehovot, Israel Sept 11, 2023

[Professional Development Workshop] EMPOWER Year 1: Enacting Materials to Promote Ownership, Engagement, and Relevance for Middle Grades Science Teachers

*Facilitated by Barbara Hug, **Christina Krist**, & Nick Leonardi*

University of Illinois, NIH SEPA award #1R25GM142056-01 Jul 24-27, 2023

[Professional Development Workshop] EMPOWER Year 1: Enacting Materials to Promote Ownership, Engagement, and Relevance for High School Science Teachers

*Facilitated by **Christina Krist,** Barbara Hug, & Kevin Hall*

University of Illinois Urbana-Champaign, NSF DRK12 award #2300743 Aug 7-9, 2023

[Workshop] Better Together: Orchestrating Human and Machine Learning

*Facilitated by **Christina Krist,** Joshua Rosenberg, & Marcus Kubsch.*

Satellite to the Machine Learning and Computer-Based Text Analysis conference,
Kiel, Germany August 2021

[Workshop] Leveraging the Power of Visualization in the Analysis of Classroom Audiovisual Data

*Facilitated by Erika David Parr, Elizabeth Dyer, Joshua Rosenberg, Cynthia D'Angelo, & **Christina Krist***

ISLS 2021 Pre-Conference Workshop, Bochum, Germany June 2021

[Workshop] Analyzing Learning with Speech Analytics and Computer Vision Methods: Technologies, Principles, and Ethics

*Facilitated by Elizabeth Dyer, Cynthia D'Angelo, Nigel Bosch, **Christina Krist**, & Joshua Rosenberg*

ICLS 2020 Pre-Conference Workshop, Nashville TN June 20, 2020

[Workshop] Communicating Design-Based Research: A Workshop for Creating and Interpreting Design Arguments

*Facilitated by Pryce Davis, **Christina Krist**, Daniel Rees-Lewis, Mike Tissenbaum, Freydis Vogel, & Matthew Easterday*

ICLS 2020 Pre-Conference Workshop, Nashville TN June 19, 2020

[Professional Development Workshop] Taking the Next Step Into Three-Dimensional Teaching

*Facilitated by **Christina Krist**, Monica Ko, & Barbara Hug*

University of Illinois, Impact on Science Education Jul 22-25, 2019

[Workshop] Presenting at AERA

*Facilitated by **Christina Krist***

University of Illinois, Curriculum & Instruction Graduate Student Series Mar 28, 2019

[Professional Development Workshop] Integrating Computational Thinking into Elementary School Science and Mathematics, Year 2

*Facilitated by **Christina Krist**, Erin Sohr, Jennifer Radoff, Jon Good, Ayush Gupta, Aman Yadav, & Andrew Elby*

University of Maryland, NSF STEM+C award # 1543061 Aug 7-18, 2017

[Professional Development Workshop] Integrating Computational Thinking into Elementary School Science and Mathematics, Year 1

*Facilitated by **Christina Krist**, Erin Sohr, Jon Good, Ayush Gupta, Aman Yadav, & Andrew Elby*

University of Maryland, NSF STEM+C award # 1543061 July 5-15, 2016

UNIVERSITY TEACHING EXPERIENCE

University of Illinois at Urbana-Champaign, Champaign IL
**indicates inclusion on the List of Teachers Ranked Excellent (requires minimum enrollment of 6)*

Instructor, CI 402: "Teaching Diverse Middle Grades Students: Science"	Fall 18, 20*, 21*, 22, 23
Instructor, CI 450: "Teaching Elementary Science I"	Fall 18
Instructor, CI 451: "Teaching Elementary Science II"	Spr 18, 23*
Instructor, CI 538: "Qualitative Analysis of Video Data"	Spr 18*, Fall 20*, 22*
Instructor, CI 540: "Current Issues in Science Education"	Spr 21*
Instructor, CI 541: "Learning in Science"	Fall 21*

Instructor, CI 543: "Constructivism in STEM Education" Spr 22*

Northwestern University, Learning Sciences Program, Evanston IL

Teaching Assistant, "Science Methods and Techniques" Fall 2015

Instructor: Michael Novak

Teaching Assistant, "Advanced Research Methods" Spring 2014, 2015

Instructor: James Spillane (2014); Bruce Sherin (2015)

Teaching Assistant, "Foundations of the Learning Sciences" Fall 2013, 2014

Instructors: David Rapp & Brian Reiser (2013); Brian Reiser & Reed Stevens (2014)

K-12 AND OUT-OF-SCHOOL-TIME TEACHING EXPERIENCE

Girl Scouts of Greater Chicago and Northwest Indiana, Joliet IL 2010-2011

Staff-Initiated Program Coordinator, Pre-K-12 outreach

Grinnell Middle School, Grinnell IA Fall 2008

Student Teacher, 7th grade Life Science

Imagine Children's Museum, Everett WA Summer 2008

Museum Educator/Imagínate Intern

PROFESSIONAL SERVICE and DEVELOPMENT

Students and Mentorship:

- Doctoral Advisees and Graduates:
  - Emma Kirby (PhD, C&I, 2022-current; co-advised with Cat Dornfeld-Tissenbaum)
  - Bee Butler (PhD, C&I, 2022-current)
  - Nicholas Leonardi (PhD, C&I, 2021-current)
  - Kevin Hall (PhD, C&I, 2020-current)
  - Nessrine Machaka (PhD, C&I, 2019-current)
  - Susan Kelly (PhD, C&I; degree conferred 2020)
- Master's Thesis Advisees and Graduates:
  - Pooja Roy (MS, C&I, 2022-current; co-advised with Barbara Hug)
  - Bee Butler (MA, C&I, degree conferred 2022)

- Master's Advisees and Graduates (online and F2F):
    - Michael Ruhl (EdM in progress)
    - Mari Miller (EdM in progress)
    - Andrew Cheun (EdM in progress)
    - Tara Birkmeyer (EdM in progress)
    - Katie Slowikowski (EdM, C&I)
    - Holly Robbins (EdM, C&I)
    - Karolina Maniewski (EdM, C&I)
    - Jessica Nuñez (EdM, C&I)
    - Nora Alomari (EdM, C&I)
    - Maria Waring (EdM, C&I)
    - Kevin Hall (EdM, C&I)
    - Olga Chong (EdM, C&I)
    - Annabelle Daily (EdM, C&I)
    - Ali Marten (EdM, C&I)
- Committee Member:
    - Elise McCarren (PhD, EPSY) – Qualifying Exam (2022)
    - Lynn Burdick (PhD, SPED) – Early Research Project (2022), Qualifying Exam (2023), Preliminary Defense (2023)
    - Runzhi Chen (PhD, EPSY) – Early Research Project (2022)
    - Kutasha Bryan Silva (PhD, C&I) – Dissertation (2022)
    - Yasemin Cicek (PhD, C&I) – Qualifying Exam (2021), Preliminary Defense (2021), Dissertation (2022)
    - Taehyun Kim (PhD, C&I) – Early Research Project (2021)
    - Karle Flanagan (PhD, C&I) – Early Research Project (2020), Qualifying Exam (2020), Preliminary Defense (2021), Dissertation (2022)
    - James Planey (PhD, C&I) – Early Research Project (2019), Qualifying Exam (2020 and 2021), Preliminary Defense (2022), Dissertation (2023)
    - Susan Kelly (PhD, C&I) – Early Research Project (2017), Qualifying Exam (2019)
    - Sahar Alameh (PhD, C&I) – Early Research Project (2018), Qualifying Exam (2018)
    - LuEttaMae Lawrence (MA, C&I, 2018) – Thesis
    - Saad Shihab (PhD, C&I) – Preliminary Defense (2018), Dissertation (2019)
    - Nitasha Mathayas (PhD, C&I) – Preliminary Defense (2018), Dissertation (2020)
    - Kate Curry (PhD, Ed Psych) – Early Research Project/Thesis (MA, 2019), Qualifying Exam (2020)
    - Katie Ansell (PhD, Physics) – Dissertation (2020)
    - Amari Simpson (PhD, EPOL) – Early Research Project (2020)
    - Muxin Zhang (PhD, Physics) – Preliminary Defense (2020), Dissertation (2023)

- Undergraduate Students:
    - Mercy Ratts (Elementary Education) – James Scholar student (2023)
    - Eliuth Martinez (Elementary Education) – James Scholar student (2023)
    - Oneida Byrd (Elementary Education) – James Scholar student (2023)
    - Olivia Lim (Middle Grades Education) – James Scholar student (2023)
    - Braedyn Bailis (Elementary Education) – James Scholar student (2023)
    - Esther Xu (Middle Grades Education) – James Scholar student (2022)
    - Peyton Carducci (Elementary Education) – James Scholar student (2021)
    - Jackie Chis (English) – URAP student, research group member (2019-present)
    - Andrei Popa (Middle Grades Education) – URAP student, James Scholar, research group member (2019)

Internal Service:

- *Campus:*
    - Inclusive Innovation STEM Education Committee, 2022-present
    - Illini Success Advisory Committee, 2020-2021
- *College:*
    - College Executive Committee, 2022-present
    - Dean Search Committee, 2021-2022
    - College Research Committee, 2020-2022
- *Department:*
    - Search Committee, Computer Science Education, 2023-present
    - Search Committee, Assistant to the Head, 2022
    - MSE Chair, 2020-current
    - Search Committee, Social Studies Education, 2020-2021
    - C&I Doctoral Proseminar Development Committee, 2020-2021
    - Search Committee, 0% Adjunct, 2019
    - Faculty Advisory Committee, 2018-2020
    - Research Methods Courses Committee (ad hoc), 2019; 2022
    - Coordinator, MSE Student Brown Bags (Nov 2018-May 2019)
    - Presenter, C&I Grad Student Professional Development Events: Presenting at AERA (March 28, 2019)
    - Presenter, MSE Brown Bag: Job Search Process (Jan 17, 2018)

External Service:

- External Advisor, "Project FEUL: Forschen mit epidemischer Unsicherheit Lernen (*Learning to do investigations with epistemic uncertainty*)," Kubsch, M. (PI). Joachim Herz Foundation. 2022-2025.

- Advisory Board Lead, "Improving Science Content Knowledge of Undergraduate Elementary Education Majors through Phenomenon-based Science Courses," Canipe, M. (PI). NSF IUSE-ESL. 2022-2024.
- Reviewer for *Journal of Chemical Education*, 2022-present
- Reviewer for *AERJ*, 2022-present
- Ad hoc reviewer, Austrian Science Foundation, 2021
- Reviewer for *Science & Education*, 2021-present
- Reviewer for *Journal of Literacy Studies,* 2021
- Panel reviewer, National Science Foundation, 2019
- Reviewer for *Computer Science Education*, 2019-present
- Reviewer for *Instructional Science*, 2019-present
- Reviewer for *Journal of Research in Science Teaching,* 2019-present
- Reviewer for *Cognition & Instruction*, 2018-present
- Reviewer for the *Journal of the Learning Sciences*, 2017-present
- Reviewer for *Science Education*, 2017-present
- Reviewer for *Journal of Curriculum Studies*, 2015
- JRST Award Selection Committee, 2014-2015
- Conference proposal reviewer for AERA, NARST, and ICLS (ongoing)

Public Engagement:

- OpenSciEd Pedagogy & Instruction Working Group, Digital Promise, 2021
- External advisor, OpenSciEd Cell Development Unit, 2020
- Professional Development advisor, Champaign Unit 4 Schools secondary science departments, 2018-2019; 2023-present
- Professional Development advisor, Urbana Middle School science department, 2019-2020
- Design Specification author, OpenSciEd, 2020

Professional Memberships: AERA, NARST, ISLS