

Eliane Stampfer Wiese

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University of Utah
3264 MEB
Salt Lake City, Utah 84112

ACADEMIC POSITIONS – University of Utah, Kahlert School of Computing

Assistant Professor from July 2020.

Research Assistant Professor 2018 – 2020.

EDUCATION

Postdoctoral Scholar 2015 – 2018

Graduate School of Education, University of California, Berkeley. CA.

Advisor: Marcia Linn

Ph.D. Human-Computer Interaction 2015

Carnegie Mellon University, Pittsburgh, PA

Advisor: Ken Koedinger

Fellow, Program in Interdisciplinary Education Research 2010-2015

Competitive fellowship funded by the Institute of Education Sciences.

B.A. Computer Science Cum Laude May 2009

Barnard Education Program May 2009

Columbia University, New York, NY

HONORS AND AWARDS

2023 Best Paper, ICSE-SEET

2022 Nomination, School of Computing Outstanding Teacher Award

2021 Nomination, Microsoft Research Faculty Fellowship

**2019 Workshop Travel Award, Narratives and Evaluation: How to Write
Competitive NSF CS Education Proposals**

National Science Foundation, through Clemson University

2014 Conference Travel Grant, Cognitive Science Society

Robert J. Glushko & Pamela Samuelson Foundation

Conference Travel Grant, Intelligent Tutoring Systems

National Science Foundation

Nomination, University-Wide Graduate Student Teaching Award

Carnegie Mellon University

- 2013 Conference Travel Grant, Cognitive Science Society**
Robert J. Glushko & Pamela Samuelson Foundation
- Conference Travel Grant, Artificial Intelligence in Education**
National Science Foundation
- Inaugural Excellence in Teaching Award**
Human-Computer Interaction Institute, Carnegie Mellon University
- Nomination, University-Wide Graduate Student Teaching Award**
Carnegie Mellon University
- 2010 Five-Year Competitive Graduate Research Fellowship**
Program in Interdisciplinary Education Research

GRANTS AWARDED – PI

- 2020 EAGER: SaTC-EDU: Teaching Security in Undergraduate AI with Transparency and Contextualization**
NSF (2041960), \$300,000. PI, with Co-PIs Suresh Venkatasubramanian and Mu Zhang.
- 2020 CRII: CHS: Improving Code Readability with Scalable Feedback on Students' Code Structure**
NSF (1948519), \$175,000. PI.

GRANTS AWARDED – Senior Personnel

- 2023 REU Site: Trust and Reproducibility Education for Undergraduates (TREU): Intelligent Computation for Science and Engineering**
NSF (2244492), \$387,566. Senior Personnel, with PI Ganesh Gopalakrishnan and Co-PI Mary Hall.
- 2019 IUSE: CUE: Ethics: A Curricular Design Community for Broadening Participation through Computing in the Arts**
NSF (521373-UT), \$68,836 (sub-award from College of Charleston). Senior Personnel, with PI Erin Parker, and SPs David Johnson and Wendy Wischer.

JOURNAL PAPERS

Student mentee

- J4** **TOCE** Brown, N., Xie, B., Sarder, E., Fiesler, C., & **Wiese, E.S.** (2024). Teaching Ethics in Computing: A Systematic Literature Review of ACM Computer Science Education Publications. *ACM Transactions on Computing Education (TOCE)* Vol. 24, No. 1, Article 6, pp 1-36. March 2024. ACM. <https://doi.org/10.1145/3634685>
- J3** **TOCHI** **Wiese, E.S.** & Linn, M.C. (2021). "It Must Include Rules": Middle School Students' Computational Thinking with Computer Models in Science. *ACM Transactions on Computer-Human Interaction (TOCHI)*, Vol 28, No. 2, Article 10, pp 1-41. April 2021. ACM. <https://doi.org/10.1145/3415582>
- J2** **IJAIED** **Wiese, E.S.** & Koedinger, K.R. (2017). Designing grounded feedback: Criteria for using linked representations to support learning of abstract symbols. *International Journal of Artificial Intelligence in Education (IJAIED)*, Vol. 27, No. 3, 448-474. January 2017. Springer. <https://doi.org/10.1007/s40593-016-0133-9>
- J1** **TOCHI** Yannier, N., Hudson, S.E., **Wiese, E.S.**, & Koedinger, K.R. (2016). Adding physical objects to an interactive game improves learning and enjoyment: Evidence from EarthShake. *ACM Transactions on Computer-Human Interaction (TOCHI)*, Vol. 23, No. 4, Article 26, pp1-31. September 2016. ACM. <https://doi.org/10.1145/2934668>

PEER-REVIEWED PAPERS IN CONFERENCE PROCEEDINGS

Student mentee

- C21** **SIGCSE** Nurollahian, S., Rafferty, A.N., Brown, N., & **Wiese, E.S.** (2024, March) Growth in Knowledge of Programming Patterns: A Comparison Study of CS1 vs. CS2 Students. Accepted to *SIGCSE 2024: Full paper to be presented at SIGCSE 2024, Portland, OR.*
- C20** **ICER** Brown, N., South, K., & **Wiese, E.S.** (2023, August) Designing Ethically-Integrated Assignments: It's Harder Than it Looks. *ICER '23: Proceedings of the 2023 ACM Conference on International Computing Education Research – Volume 1*, (177-190) doi: 10.1145/3568813.3600126. Full paper presented at ICER 2023, Chicago, IL. **21% acceptance**
- C19** **ICSE** Nurollahian, S., Rafferty, A., & **Wiese, E.S.** (2023, May) Improving Assessment of Programming Pattern Knowledge through Code Editing and Revision *ICSE-SEET '23: Proceedings of the 45th International Conference on Software Engineering: Software Engineering Education and Training* (58-69) 10.1109/ICSE-SEET58685.2023.00012. Full paper presented at ICSE-SEET 2023, Melbourne, Australia. **Best Paper Award.**

- C18 SIGCSE** Nurollahian, S., Hooper, M., Salazar, A., & Wiese, E.S. (2023, March) Use of an Anti-Pattern in CS2: Sequential if Statements with Exclusive Conditions. *SIGCSE 2023: Proceedings of the 54th ACM Technical Symposium on Computer Science Education – Volume 1 (542-548)* doi: 10.1145/3545945.3569744. Full paper presented at SIGCSE 2023, Toronto, Canada.
- C17 ICER** Brown, N., South, K., & Wiese, E.S. (2022, August) The Shortest Path to Ethics in AI: An Integrated Assignment Where Human Concerns Guide Technical Decisions. *ICER '22: Proceedings of the 2022 ACM Conference on International Computing Education Research – Volume 1, (344-355)* doi: 10.1145/3501385.3543978. Full paper presented at ICER 2022, Lugano, Switzerland. **17% acceptance**
- C16 SIGCSE** Wiese, E.S., Rafferty, A.N., & Pyper, J. (2022, March) Readable vs. Writable Code: A Survey of Intermediate Students' Structure Choices. *SIGCSE 2022: The 53rd ACM Technical Symposium on Computer Science Education*. doi: 10.1145/3478431.3499413. Full paper presented at SIGCSE 2022, Providence, RI.
- C15 SIGCSE** Richard, T.S., Wiese, E.S., & Rakamarić, Z. (2022, March) An LGBTQ-Inclusive Problem Set in Discrete Mathematics. *SIGCSE 2022: The 53rd ACM Technical Symposium on Computer Science Education*. doi:10.1145/3478431.3499330. Full paper presented at SIGCSE 2022, Providence, RI.
- C14 ICPC** Wiese, E.S., Rafferty, A.N., & Moseke, G. (2021, May) Students' Misunderstanding of the Order of Evaluation in Conjoined Conditions. *2021 IEEE/ACM 29th International Conference on Program Comprehension (ICPC), (476-484)*. doi: 10.1109/ICPC52881.2021.00055. Full paper presented at ICPC '21, remote due to COVID. (37% conference acceptance)
- C13 ICSE** Wiese, E.S., Rafferty, A.N., & Fox, A. (2019, May) Linking Code Readability, Structure, and Comprehension among Novices: It's Complicated. *2019 IEEE/ACM 41st International Conference on Software Engineering (84-94)*. Full paper presented at ICSE '19, Montréal, Canada. (**24% acceptance** for the Software Engineering Education and Training track)
- C12 ICPC** Wiese, E.S., Rafferty, A.N., Kopta, D.M., & Anderson, J.M. (2019, May) Replicating Novices' Struggles with Coding Style. *2019 IEEE/ACM 29th International Conference on Program Comprehension (13-18)*. Short paper presented at ICPC '19, Montréal, Canada. (35% conference acceptance)

- C11**
CogSci **Wiese, E.S.**, Rafferty, A.N., & Linn, M.C. (2017, July) Eliciting Middle School Students' Ideas about Graphs Supports Their Learning from a Computer Model. In Gunzelmann, G., Howes, A., Tenbrink, T., & Davelaar, E. (Eds.), *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (3522-3527). Poster presented at CogSci, London, UK.
- C10**
L@S **Wiese, E.S.**, Yen, M., Chen, A., dos Santos, L.A., & Fox, A. (2017, April) Teaching Students to Recognize and Implement Good Coding Style. In Reich, J., Thille, C., & Urrea, C. (Eds.), *Proceedings of the Fourth Annual ACM Conference on Learning at Scale* (41-50). New York, NY: ACM. Full Paper presented at L@S, Cambridge, MA. **(14% acceptance)**
- C9**
CogSci **Wiese, E.S.**, Patel, R., & Koedinger, K.R. (2016, August) Why sense making through magnitude may be harder for fractions than for whole numbers. In Papafragou, A., Grodner, D., Mirman, D., & Trueswell, J.C. (Eds.), *Proceedings of the 38th Annual Conference of the Cognitive Science Society* (1229-1234). Poster presented at CogSci, Philadelphia, PA.
- C8**
CogSci **Wiese, E.S.**, Patel, R., & Koedinger, K.R. (2016, August) Benefits for grounded feedback over correctness in a fraction addition tutor. In Papafragou, A., Grodner, D., Mirman, D., & Trueswell, J.C. (Eds.), *Proceedings of the 38th Annual Conference of the Cognitive Science Society* (954-959). Poster presented at CogSci, Philadelphia, PA.
- C7**
CogSci **Wiese, E.S.**, Patel, R., Olsen, J., & Koedinger, K.R. (2015, July) Transitivity is not obvious: Probing prerequisites for learning. In D. C. Noelle, R. Dale, A. S. Warlaumont, J. Yoshimi, T. Matlock, C.D. Jennings, & P. P. Maglio, (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (2655-2660). Poster presented at CogSci, Pasadena, CA.
- C6**
CogSci **Wiese, E.S.** & Koedinger, K.R. (2014, July) Investigating scaffolds for sense making in fraction addition and comparison. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (1515-1520). Paper presented at CogSci, Quebec City, Canada (42% acceptance).
- C5**
ITS **Wiese, E.S.** & Koedinger, K.R. (2014, June) Toward sense making with grounded feedback. In S. Trausan-Matu, K. Boyer, M. Crosby, & K. Panourgia (Eds.), *Proceedings of the 12th International Conference on Intelligent Tutoring Systems* (695-697). Young Researcher Paper presented at ITS, Honolulu, Hawaii.
- C4**
CogSci **Stampfer, E.** & Koedinger, K.R. (2013, August) When seeing isn't believing: Influences of prior conceptions and misconceptions. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (1384-1389). Paper presented at CogSci, Berlin, Germany (28% acceptance).

- C3** Li, N., **Stampfer, E.**, Cohen, W.W., & Koedinger, K.R. (2013, August)
CogSci General and efficient cognitive model discovery using a simulated student. M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (894-899). Paper presented at CogSci, Berlin, Germany (28% acceptance).
- C2** **Stampfer, E.**, & Koedinger, K.R. (2013, July) Conceptual scaffolding to
AIED check one's procedures. In H.C. Lane, K. Yacef, J. Mostow, & P. Pavlik (Eds.), *Proceedings of the 16th International Conference on Artificial Intelligence in Education* (916-919). Young Researcher Paper presented at AIED, Memphis TN.
- C1** **Stampfer, E.**, Long, Y., Alevan, V., & Koedinger, K.R. (2011, July) Eliciting
AIED intelligent novice behavior with grounded feedback in a fraction addition tutor. In G. Biswas, S. Bull, J. Kay, & A. Mitrovic (Eds.), *Proceedings of the 15th International Conference on Artificial Intelligence in Education* (560-562). Poster presented at AIED, Auckland, New Zealand.

BOOK CHAPTERS

- 2015** Koedinger, K.R. & **Wiese, E.S.** (2015) Accounting for socializing intelligence with the knowledge-learning-instruction framework. In L.B. Resnick, C. Asterhan, and S.N. Clarke, (Eds.), *Socializing Intelligence through Academic Talk and Dialogue*. Washington, DC: American Educational Research Association
- 2014** Roll, I., **Wiese, E.S.**, Long, Y., Alevan, V., & Koedinger, K.R. (2014) Tutoring self- and co- regulation with intelligent tutoring systems to help students acquire better learning skills. In R. Sottolare, A. Graesser, X. Hu, & B. Goldberg (Eds.) *Design Recommendations for Intelligent Tutoring Systems - Volume 2: Instructional Management*

REFEREED WORKSHOP PAPERS

Student mentee

- W9** Motahar, T., Brown, N., **Wiese, E.S.**, & Wiese, J. (2023, April) Building "Design Empathy" for People with Disabilities: An Unsolved Challenge in HCI Education. EduCHI '23: Proceedings of the 5th Annual Symposium on HCI Education (68-71). <https://doi.org/10.1145/3587399.3587409>
- W8** Brown, N., Patel, N., Davis, X., & **Wiese, E.S.**, (2023, April) Students' Self-Evaluations of Contextual Inquiry Techniques. EduCHI '23: Proceedings of the 5th Annual Symposium on HCI Education (96-100). <https://doi.org/10.1145/3587399.3587411>

- W7** **Wiese, E.S.** (2022, August) Action Research on Teamwork Skills in CS. Presented at the *Work in Progress Workshop at the 18th ACM Conference on International Computing Education Research (ICER)*.
- W6** **Wiese, E.S.**, Wiese, J., Kogan, M., & Dawson, J. (2022, May) Lightweight Methods for Developing Pedagogical Content Knowledge for HCI. Presented at the *4th Annual ACM SIGCHI Workshop on HCI Education (EduCHI2022) in conjunction with the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)*.
- W5** **Wiese, E.S.**, South, K., & Martin, K. (2021, May) Using Group Norms as a Teamwork Technique in an HCI Class. Presented at the *3rd Annual ACM SIGCHI Workshop on HCI Education (EduCHI2021) in conjunction with the ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)*.
- W4** MacLellan, C., Harpstead, E., **Wiese, E.S.**, Zou, M., Matsuda, N., Aleven, V. & Koedinger, K.R. (2015, June) Authoring tutors with complex solutions: A comparative analysis of example tracing and SimStudent. Presented at the *2nd Workshop on Simulated Learners in conjunction with the 17th International Conference on Artificial Intelligence in Education (AIED)*. Madrid, Spain.
- W3** Roll, I., **Wiese, E.S.**, Long, Y., Aleven, V., & Koedinger, K.R. (2014, June) Supporting self- and co-regulation in intelligent tutoring systems to help students acquire better learning skills. In J. Polman, E. Kyza, D. O'Neill, I. Tabak, W. Penuel, A. Jurow, K. O'Conner, T. Lee & L. D'Amico (Eds.), *Proceedings of the 11th International Conference of the Learning Sciences* (1356-1357). Paper presented as part of symposium Enhancing Self-Regulated Learning through Metacognitively-Aware Intelligent Tutoring Systems at ICLS, Boulder, CO.
- W2** MacLellan, C., **Wiese, E.S.**, Matsuda, N. & Koedinger, K.R. (2014, June) SimStudent: authoring expert models by tutoring. Presented at the *Second Annual GIFT User Symposium (GIFTSym2)*. Pittsburgh, PA.
- W1** MacLellan, C., **Wiese, E.S.**, Matsuda, N. & Koedinger, K.R. (2014, June) SimStudent: improving tutor quality and reducing authoring costs. Presented at the *Workshop on Intelligent Tutoring System Authoring Tools at the 12th International Conference on Intelligent Tutoring Systems (ITS)*. Honolulu, HI.

OTHER PEER-REVIEWED CONFERENCE PRESENTATIONS

These conferences do not have proceedings.

Student mentee

- O11 Wiley, K., **Wiese, E.S.**, & Linn, M. (2018, April) Teaching Energy Transformation in Photosynthesis to Middle School Students. Paper presented as part of roundtable session Learner, Instructor, and Designer Roles at the *2018 Annual Meeting of the American Educational Research Association (AERA)*. New York City, NY.
- O10 McBride, E., **Wiese, E.S.**, & Linn, M. (2018, April) "The Aluminum Foil Attracts Heat": Student Non-Normative Ideas About Energy Transformation. Poster presented at the *2018 Annual Meeting of the American Educational Research Association (AERA)*. New York City, NY.
- O09 Weinman, N., **Wiese, E.S.**, Yen, M., Chen, A., Santos, L.A., & Fox, A. (2018, February) Scale-Driven Intelligent Tutoring to Improve Coding Style. Presented at *The Bay Area Learning Analytics Conference (BayLAN 2018)*. Berkeley, CA.
- O08 **Wiese, E.S.**, Gogel, H., Gerard, E., Vitale, J.M. & Linn, M. (2017, April) Probing middle-school students' understanding of computer models. Poster presented at the *2017 Annual Meeting of the American Educational Research Association (AERA)*. San Antonio, TX.
- O07 Chen, A., **Wiese, E.S.**, Yin, H., Choudhury, R., & Fox, A. (2016, October) Preliminary evidence for learning good coding style with AutoStyle. Presented at *Learning with MOOCS III (LWMOOCS'16)*. Philadelphia, PA.
- O06 **Wiese, E.S.**, & Koedinger, K.R. (2015, April) Grounded feedback in a fraction addition tutor. Paper presented as part of the symposium *Multiple Representations and Multimedia: Student Learning and Instruction at the 2015 Annual Meeting of the American Educational Research Association (AERA)*. Chicago, IL.
- O05 **Wiese, E.S.**, McLaughlin, E.A., Booth, J., & Koedinger, K.R. (2015, April) When and how do worked examples work? Use of worked examples in textbook homework assignments. Paper presented as part of the symposium *Scaling Up Cognitive Learning Principles to Redesign A Mathematics Curriculum for Improved Learning at the 2015 Annual Meeting of the American Educational Research Association (AERA)*. Chicago, IL.
- O04 **Wiese, E.S.** & Koedinger, K.R. (2014, March) How useful are fraction bars for understanding fraction equivalence and addition? Paper presented at the *Spring 2014 conference of the Society for Research on Educational Effectiveness (SREE)*. Washington, D.C.

- O3 Stampfer, E.** & Koedinger, K.R. (2012, September) Tradeoffs between immediate and future learning. Paper presented at the *European Association for Research on Learning and Instruction Conference (EARLI, Special interest groups 6 & 7, Learning and Instruction with Computers and Instructional Design)*. Bari, Italy.
- O2** Lomas, D., Ching, D., **Stampfer, E.**, & Koedinger, K.R. (2012, April) Battleship Numberline: a digital game for improving estimation accuracy on fraction number lines. Paper presented at the *2012 meeting of the American Educational Research Association (AERA)*. Vancouver, Canada.
- O1** Lomas, D., Ching, D., **Stampfer, E.**, Sandoval, M., & Koedinger, K.R. (2011, September) Battleship Numberline: a digital game for improving estimation accuracy on fraction number lines. Poster presented at the Fall 2011 conference of the *Society for Research on Educational Effectiveness (SREE)*. Washington, D.C.

TEACHING

Instructor, CS 3540 Designing Human-Centered Experiences (named Human-Computer Interaction prior to 2022)

- Spring 2024 (78 students)
- Spring 2023 (43 students)
- Fall 2022 (80 students)
- Fall 2021 (68 students)
- Fall 2020 (67 students)

Creator and Instructor, CS 4960/6960 CS Education: Research and Practice

- Spring 2022 (15 students)
- Spring 2021 (16 students)

INVITED TALKS

- T20 2022** **Computing Education Research at Davis Seminar, UC Davis**
November 2022. Readable vs. Writable Code: How can Code Structure Choices Reveal CS Students' Understanding?
- T19 2022** **Computer Science Colloquium, New Mexico Tech**
November 2022. Beyond Passing Test Cases: How can Code Structure Choices Reveal CS Students' Understanding?
- T18 2022** **Seminar Series in Human Factors Engineering, Tufts University**
October 2022. CS-specific pedagogy: Human-Centered Design meets CS Education.

- T17** **STEM Education Film Series, Park City Film**
2022 September 2022. *After Yang*: Human-Centered Computing and Artificial Intelligence. (with Dr. Ana Marasović)
- T16** **Computer Science Seminar, Brigham Young University**
2022 March 2022. Beyond Passing Test Cases: How can Code Structure Choices Reveal CS Students' Understanding?
- T15** **AI and Society Symposium, Utah Informatics Initiative & Tanner**
2021 **Humanities Center**
September 2021. Avoiding "Ethics Washing" in CS Education.
- T14** **Keynote. Center of Academic Excellence in Cyber Defense, University of**
2021 **Tennessee at Chattanooga**
June 2021. Teaching Ethics and Security in Artificial Intelligence.
- T13** **Department of Computer Science, Rochester University** Rochester, NY
2020 December 2020. Computer Science Education Research in Classroom Contexts: Undergrad CS and Middle School Science.
- T12** **Centre for Design Informatics, University of Edinburgh** Edinburgh,
2019 Scotland
May 2019. Programming with Style: Code that Works vs. Code that's Nice to Work With.
- T11** **TELS and ACE labs, UC Berkeley** Berkeley, CA
2019 March 2019. Programming with Style: Moving Beyond Code that Works to Code that's Nice to Work With.
- T10** **Computer Science Department, Carleton College** Northfield, MN
2019 February 2019. Programming with Style: Moving Beyond Code that Works to Code that's Nice to Work With.
- T8** **School of Computing, University of Utah** Salt Lake City UT
2018 April 2018. Learning from Our Mistakes: Technology that Encourages Mistakes as Learning Opportunities.
- T7** **School of Interactive Computing, Georgia Tech** Atlanta GA
2018 March 2018. Learning from Our Mistakes: Technology that Encourages Mistakes as Learning Opportunities.
- T6** **MIND Lab, University of Utah** Salt Lake City UT
2015 May 2015. Defining Grounded Feedback and Implementing it in a Fraction Addition Tutor.
- T5** **Technology Enhanced Learning in Science Lab, UC Berkeley** Berkeley CA
2015 May 2015. Defining Grounded Feedback and Implementing it in a Fraction Addition Tutor.

- T4** **Guest Lecture, Harvard School of Public Health** Boston MA
2014 October 2014. Effective PowerPoint: Leveraging Principles of Human Memory and Attention for Slide Design.
- T3** **Cognitive Development Lab, The Ohio State University** Columbus OH
2014 October 2014. Toward Sense Making with Grounded Feedback
- T2** **Curry School of Education, University of Virginia** Charlottesville VA
2014 August 2014. Effective PowerPoint: Leveraging Principles of Human Memory and Attention for Slide Design.
- T1** **The Earth Institute, Columbia University** New York City NY
2012 October 2012. An Introduction to Contextual Design.

SEMINAR TALKS & GUEST LECTURES

- 2023** **Ethics in Computing. School of Computing, U of Utah**
 April 2023. Ethics in CS – A Learning Scientist’s Perspective
- 2022** **Teaching CS in Higher Education. School of Computing, U of Utah**
 December 2022. Student Learning and Transfer
- Ethics in Data Science. School of Computing, U of Utah**
 October 2022. Ethics in CS – A Learning Scientist’s Perspective
- 2021** **Teaching CS in Higher Education. School of Computing, U of Utah**
 December 2021. Student Learning and Transfer
- Ethics in Data Science. School of Computing, U of Utah**
 October 2021. Ethics in CS – A Learning Scientist’s Perspective
- Research Forum. School of Computing, U of Utah**
 September 2021. Computer Science Education Research in Classroom Contexts: Undergrad CS and Middle School Science
- 2020** **School of Computing, U of Utah**
 April 2020. Computer Science Education Research in Classroom Contexts: Undergrad CS and Middle School Science
- 2018** **Association of Women in Mathematics, U of Utah**
 December 2018. An HCI Perspective on Math Education.
- 2017** **Ed Psych Learning and Cognition Seminar, U of Utah**
 March 2017. Eliciting Middle School Students’ Ideas About Graphs Supports Their Learning from a Computer Model.
- 2016** **Graduate School of Education Colloquium, UC Berkeley** Berkeley CA
 March 2016. Effective PowerPoint: Leveraging Principles of Human Memory and Attention for Slide Design.

2013 Pittsburgh Science of Learning Center Summer School Pittsburgh PA
Seminar Series, July 2013. Creating Effective Posters and Presentations.

Inter-Science of Learning Center Conference Philadelphia PA
Workshop Presenter, February 2013. How to Apply Principles of Learning to
Scientific Communication.

PRESS

- 2022**, Aug 11. Ko, Bits and Behavior. "ICER 2022 trip report: Together again, as bits and atoms" (<https://medium.com/bits-and-behavior/icer-2022-trip-report-together-again-as-bits-and-atoms-7ccf0440d1ec>)
- 2021**, June 28. Guzdial, Computing Education Research Blog. "Rules work as a way of communicating computation at a mechanistic level without teaching programming" (<https://computinged.wordpress.com/2021/06/28/rules-work-as-a-way-of-communicating-computation-at-a-mechanistic-level-without-teaching-programming/>)
- 2021**, May 16. Oleson, Bits and Behavior. "Trip Report: EduCHI 2021" (<https://medium.com/bits-and-behavior/trip-report-educhi-2021-2d051f1b4d8a>)
- 2018**, March 23. Guzdial, Computing Education Research Blog. "When more information leads to worse performance" (<https://computinged.wordpress.com/2018/03/23/when-more-information-leads-to-worse-performance/>)
- 2015**, Oct 5. Remake Learning. "If You Give a Student (a Fraction of) a Cookie..." (<https://remakelearning.org/blog/2015/10/15/if-you-give-a-student-a-fraction-of-a-cookie/>)
- 2015**, May 5. Sparks, Education Week. "Research Project Aims to Build Better Math Texts" (<https://www.edweek.org/ew/articles/2015/05/06/research-project-aims-to-build-better-math.html>)

Ph.D. STUDENTS

Current Noelle Brown (proposed dissertation)
Sara Nurollahian (passed qualifying exam)

Ph.D. COMMITTEES

Current Brandt Redd
Tamanna Motahar (proposed dissertation)
Joshua Dawson (proposed dissertation)
Kazi Sinthia Kabir (Graduated 2023)

M.S. STUDENTS

- 2023** Caleb Lundquist (chair)
2022 Matthew Hooper (chair; co-author)

UNDERGRADUATE MENTORSHIP

*Co-author on peer-reviewed conference or workshop paper

Undergraduate Theses [4 completed. 3 co-authors.]

- 2023** Nate Lanza. *Code in the Hands of Non-Computer Scientists: An Investigation of Coding Practices in Scientific Research at the University of Utah*
- 2022** *Koriann South. *How to Stop AI from Ruining the World: Designing and Pilot Testing Integrated AI-Ethics Assignments.* (UROP+REU).
- 2021** *Matthew Hooper. *Augmenting Code Pattern Detection with Software Verification and Examining How Teaching Assistants Interact with Student Code Structure* (REU)
- 2020** *Jacquelyn MacHardy Anderson. *Addressing Novice Coding Patterns: Evaluating and Improving a Tool for Code Analysis and Feedback* (UROP)

Non-Thesis Student Researchers [15 at Utah, 4 Utah co-authors]

- 2022-2023** Kellan Wu (REU)
2023 Minh Tri Ho, Sathya Vaishnav Tadinada, Mohamad Husam Elgendy
- 2020-2022** *Adriana Salazar (REU), *Trysten Richard (co-mentored)
2022 Lauren Mickelson (REU), John Bovard (REU), Pooja Kotha (REU)
2021 Emily Burke (REU), *Kaylee Martin (REU)
2020 *Garrett Moseke (Honorable Mention, CRA Outstanding Undergraduate Researcher Award, REU)
2019 Hannah Potter, Gemma Grover, Aaron Carlisle
- UC Berkeley** *Antares Chen, Ross Teixeira

PROFESSIONAL ACTIVITIES

- 2024** • Associate Editor, ACM Transactions on Computing Education (TOCE)
• Program Committee Member, ICER 2024
- 2023** • Program Committee Member, EduCHI 2023
• Program Committee Member, ICER 2023
- 2022** • Associate Program Chair, SIGCSE 2023
- 2021** • NSF Panelist (twice)
• Panelist, International Conference on Program Comprehension. "Ask Me Anything" session on writing and presenting research
- 2017** • Conference Organizing Committee, Cognitive Science Society

Internal Service, School of Computing, University of Utah

- 2022** Organizer, CS Education Seminar (primarily for faculty). Participant and presenter since inception in 2019
- 2022-** Facilitator, Human-Centered Computing writing seminar
- 2022-** Creating inclusivity modules for undergraduate students with UCIC
- 2020-** Curriculum Committee (currently leading analysis of student program feedback)
- 2021, 2022** Workshop creator/presenter, *Writing a Statement of Purpose*, for the Graduate School Open House
- 2021- 2022** ACM chapter Faculty Liaison
- 2020** Lecturing Faculty Hiring Committee
- 2020, 2021** First-year CS student Mentor (separate from mentorship above)
- 2021** Panelist, Graduate Society of Women in Engineering Panel on Technical Reading and Writing
- 2021** Faculty Retreat Organizing Committee
- 2019** Presenter, Women in Computing Workshop on Imposter Syndrome
- 2019** Mentor, Northern Utah's Aspirations in Computing Award event, through the National Center for Women & Information Technology
- 2018** Admissions Committee

Hoc Journal Reviews

- 2021** International Journal of STEM Education
- 2020** The Journal of Systems and Software
- 2019** Journal of Science Education and Technology
- 2016** Mathematical Thinking and Learning
- 2016** Journal of the Learning Sciences
- 2014 - 2015** Journal of Learning Analytics

Conference Reviews

- 2022** **IDC:** ACM Interaction Design and Children Conference
- 2021** **SIGCSE:** Association of Computing Machinery Special Interest
- 2018, 2019** Group on Computer Science Education
- 2019** **CogSci:**
- 2014 - 2017** Cognitive Science Society
- 2019** **CHI:** Association of Computing Machinery
- 2014 - 2015** Conference on Human Factors in Computing Systems
- 2011**
- 2017** **ESERA:** European Science Education Research Association

2014 - 2015 EDM: Educational Data Mining

2013 - 2015 AIED: Artificial Intelligence in Education

Professional Societies

Member, Association of Computing Machinery Special Interest Group on Computer Science Education