

Catherine C. Chase
Teachers College, Columbia University

525 West 120th St., Box 118
New York, New York 10027

chase@tc.columbia.edu
catherinechase.org

EDUCATION

- 2006-2011 **Ph.D. in Learning Sciences and Technology Design**
Stanford University, School of Education
- 2002-2003 **M.S.Ed. in Elementary Education**
Brooklyn College, City University of New York
- 1996-2000 **B.A.S. in Biology and Psychology**, with Honors
Stanford University

SELECTED PROFESSIONAL EXPERIENCE

- 2013- **Assistant Professor of Human Development**
Teachers College, Columbia University
(Maternity leaves taken in Fall 2013 and Fall 2016)
- 2011-2013 **Postdoctoral Scholar** in Psychology and Human Computer Interaction
Carnegie Mellon University
- 2003-2006 **Middle School Science Teacher.**
Packer Collegiate Institute, Brooklyn, NY.
- 2001-2003 **Elementary School Science Teacher.**
Public School 327, Brooklyn, NY.

AWARDS AND HONORS

- 2012 **Best paper award** at the International Conference of the Learning Sciences.
The interplay of chance and skill: Exploiting a common game mechanic to enhance learning and persistence.
- 2011-2013 Institute for Education Sciences Fellowship, Program in Interdisciplinary
Education Research
- 2010 Spencer Dissertation Fellowship Finalist
- 2006-2007 Myrtie M. Gifford Fellowship
- 2001-2003 New York City Teaching Fellowship

GRANT FUNDING

- 2016-2017 **Co-Principal Investigator**, Provost's Investment Fund grant with co-PI Nathan Holbert. *Can constructionist video games prepare students to engage in inquiry?* Award: \$20,000.
- 2013-2017 **Principal Investigator**, NSF Cyberlearning grant with co-PI Vincent Alevan. *Developing a tutor to guide students as they invent deep principles with contrasting cases.* Award: \$548,676.

GRANT PROPOSALS SUBMITTED

- 2017 NSF STEM+C grant with co-PI Vincent Alevan. *Student and teacher tools for learning STEM modeling as a computational thinking practice.*
- 2017 Spencer postdoc grant. *Leveraging social and self-motivations to promote effort, persistence, and resilience at learning: Generalizing and understanding the protege effect.*
- 2016 NSF DRK-12 grant with PI Vincent Alevan. *Technology support for guiding Invention in classrooms.*
- 2015 NSF Cyberlearning grant with co-PI Vincent Alevan. *Comparison-focused technologies to support STEM model-building competencies.*

IN PREPARATION

* indicates student co-author

Chesebrough, C.*, **Chase, C.C.**, & Wiley, J. (in prep). Aha! moments and learning.

Lee, A.*, **Chase, C.C.**, Black, J.B., & Russell, M.D.* (in prep). Metacognition and physics learning.

PUBLICATIONS [1166 Google Scholar citations]

* indicates student co-author

Chase, C.C., Malkiewich, L.M.*, Lee, A.*, Slater, S.*, Choi, A., & Xing, C.* (under review). Game over: When a game hurts learning and challenge-seeking. *IEEE Transactions on Learning Technologies.*

Lamnina, M.* & **Chase, C.C.** (under review). Finding the right level of uncertainty in instruction: Effects on curiosity, learning, and transfer.

- Chase, C.C.**, Harpstead, E., & Alevan, V. (under review/revision). Promoting transfer beyond the game: Adapting contrasting cases for educational games. *Journal of the Learning Sciences*.
- Marks, J.* & **Chase, C. C.** (in press). The impact of a brief design thinking intervention on students' design knowledge, iterative dispositions, and attitudes towards failure. *Journal of Engineering Education*.
- Malkiewich, L.M.* & **Chase, C.C.** (in press). What's your goal? The importance of shaping the goals of engineering tasks to focus learners on the underlying science. *Instructional Science*.
- Lamnina, M.* & **Chase, C.C.** (in press). Developing a thirst for knowledge: How uncertainty in the classroom influences curiosity, affect, learning, and transfer. *Contemporary Educational Psychology*.
- Chase, C.C.**, Marks, J.* & Malkiewich, L.M.* & Connolly, H* (2019). How teacher talk guidance during Invention activities shapes students' cognitive engagement and transfer. *International Journal of STEM Education*, 6(14), 1-22. <https://doi.org/10.1186/s40594-019-0170-7>
- Chase, C.C.**, Connolly, H.* & Lamnina, M.* & Alevan, V. (2019). Problematizing helps! A classroom study of a computer-based guidance for Invention activities. *International Journal of Artificial Intelligence in Education*, 29(2), 283-316. <https://doi.org/10.1007/s40593-019-00178-y>
- Malkiewich, L.M.* & **Chase, C.C.** (2019). The process of focusing on deep structures in an engineering design task. *International Journal of Science Education*, 1-21. <https://doi.org/10.1080/09500693.2019.1613583>
- Chase, C.C.**, Malkiewich, L.M.* & Kumar, A.* (2019). Learning to notice science concepts in engineering activities and transfer situations. *Science Education*, 103(2), 440-471. <https://doi.org/10.1002/sce.21496>
- Fusco, J. Martin, W. Lane, H. C. & **Chase, C.C.** (2017). Virtual peers and coaches: Social and cognitive support for learning. In J. Roschelle, W. Martin, J. Ahn, & P. Schank (Eds.), *Cyberlearning Community Report: The State of Cyberlearning and the Future of Learning With Technology* (pp. 31-35). Menlo Park CA: SRI International.
- Chase, C.C.**, & Klahr, D. (2017). Invention versus direct instruction: In some contexts it's a tie. *Journal of Science Education and Technology*, 26(6), 582-596. <https://doi.org/10.1007/s10956-017-9700-6>
- Marks, J.* & Bernett, D.* & **Chase, C.C.** (2016). The Invention Coach: Integrating data and theory in the design of an exploratory learning environment. *International Journal of Designs for Learning*, 7(2), 74-92. <https://doi.org/10.14434/ijdl.v7i2.20126>

- Shemwell, J.T., **Chase, C.C.**, & Schwartz, D.L. (2015). Seeking the general explanation: A test of inductive activities for learning and transfer. *Journal of Research in Science Teaching*, 52(1), 58-83. <https://doi.org/10.1002/tea.21185>
- Chase, C.C.** (2013). Motivating expertise: Equipping novices with the motivational tools to move beyond failure. In J.J. Staszewski (Ed.), *Expertise and skill acquisition: The impact of William G. Chase* (pp. 59-83). New York: Psychology Press. <https://doi.org/10.4324/9780203074541>
- Chi, M.T.H., Roscoe, R., Slotta, J., Roy, M. & **Chase, C.C.** (2012). Misconceived causal explanations for emergent processes. *Cognitive Science*, 36(1), 1-61. <https://doi.org/10.1111/j.1551-6709.2011.01207.x>
- Schwartz, D.L., **Chase, C.C.**, & Bransford, J.D. (2012). Resisting overzealous transfer: Coordinating previous successful routines with needs for new learning. *Educational Psychologist*, 47(3), 204-214. <https://doi.org/10.1080/00461520.2012.696317>
- Schwartz, D.L., **Chase, C.C.**, Oppezzo, M.A., & Chin, D.B. (2011). Practicing versus inventing with contrasting cases: The effects of telling first on learning and transfer. *Journal of Educational Psychology*, 103(4), 759-775. <https://doi.org/10.1037/a0025140>
- Chin, D.B., Dohmen, I.M., Cheng, B.H., Oppezzo, M.A., **Chase, C.C.**, & Schwartz, D.L. (2010). Preparing students for future learning with Teachable Agents. *Educational Technology Research and Development*, 58(6), 649-669. <https://doi.org/10.1007/s11423-010-9154-5>
- Chase, C.C.**, Chin, D.B., Oppezzo, M.A., & Schwartz, D.L. (2009). Teachable Agents and the Protégé Effect: Increasing the effort towards learning. *Journal of Science Education and Technology*, 18(4), 334-352. <https://doi.org/10.1007/s10956-009-9180-4>
- Schwartz D.L., **Chase C.C.**, Chin D.B., Oppezzo M.A., Kwong H., Okita S., Biswas G., Roscoe R.D., Jeong H., & Wagster J.D. (2009). Interactive metacognition: Monitoring and regulating a teachable agent. In D.J. Hacker, J. Dunlosky, & A.C. Graesser (Eds.), *Handbook of metacognition in education* (pp. 340-358). New York: Taylor and Francis. <https://doi.org/10.4324/9780203876428>

TECHNOLOGY DEVELOPMENT

- 2017 **The Invention Coach.** An adaptive, intelligent environment that supports middle school students as they invent equations for physical science phenomena. Role: lead developer. <https://inventioncoachproject.com>
- 2013 **RumbleBlocks.** An educational game about the physics of stability, designed for elementary aged children. Role: learning science specialist. <http://rumbleblocks.etc.cmu.edu>

2011 **Mendel's Galaxy**. An educational game on genetics and probability for middle schoolers. Role: lead developer.

REFEREED CONFERENCE PROCEEDINGS

* indicates student co-author

Chase, C.C., Malkiewich, L.M.*, & Kumar, A.* (2018, July). Contrasting cases enhance transfer of physics knowledge from an engineering design task. *Proceedings of the annual meeting of the Cognitive Science Society* (pp. 196-201).

Chase, C.C., Connolly, H.*, Lamnina, M.*, & Alevin, V. (2018, June). The design and evaluation of optimal computerized guidance for Invention activities: The Invention Coach. In Kay, J. and Luckin, R. (Eds.). (2018). *Rethinking Learning in the Digital Age: Making the Learning Sciences Count*, 13th International Conference of the Learning Sciences (ICLS) 2018, Volume 2, pp. 304-311. London, UK: International Society of the Learning Sciences.

Alevin, V., Connolly, H.*, Popescu, O., Marks, J.*, Lamnina, M.*, & **Chase, C. C.** (2017, June). An Adaptive Coach for Invention Activities. In *International Conference on Artificial Intelligence in Education* (pp. 3-14). Springer, Cham.

Lamnina, M.*, Connolly, H.*, Alevin, V., & **Chase, C.C.** (2018). The Invention Coach: A computer-based environment that supports the transfer of STEM concepts. In Ding, L., Traxler, A., & Cao, Y. (Eds.), *Physics Education Research Conference Proceedings*, 228-231. Cincinnati, OH: Physics Education Research Topical Group.

Chase, C.C., Harpstead, E., & Alevin, V. (2017). Inciting out-of-game transfer: Adapting contrast-based instruction for educational games. In A. Barany, S. Slater, & C. Steinkeuhler (Eds.), *GLS Conference Proceedings 2017* (pp. 29-38). Pittsburgh: ETC Press.

Lee, A.*, Malkiewich, L.J.*, Slater, S.*, & **Chase, C.C.** (2017). Understanding the gap: Gender similarities and differences in persistence and self-efficacy in a coding game. In A. Barany, S. Slater, & C. Steinkeuhler (Eds.), *GLS Conference Proceedings 2017* (pp.153-162). Pittsburgh: ETC Press.

Malkiewich, L.J.*, Lee, A.*, Slater, S.*, & **Chase, C.C.** (2017). Tenacious assessments: Using in-game behaviors to measure students' persistence and challenge navigation. In A. Barany, S. Slater, & C. Steinkeuhler (Eds.), *GLS Conference Proceedings 2017* (pp. 9-18). Pittsburgh: ETC Press.

Malkiewich, L.J.*, Lee, A.*, Slater, S.*, Xing, C.*, & **Chase, C.C.** (2016). No lives left: How common game features can undermine persistence, challenge-seeking, and learning to program. *Proceedings of the 2016 International Conference of the Learning Sciences, Vol 1*, 186-193.

Chase, C.C., Marks, J.*, Bernett, D.*, & Alevén, V. (2015). The design of an exploratory learning environment to support Invention. *Proceedings of the Workshops at the 17th International Conference on Artificial Intelligence in Education, AIED 2015*.

Chase, C.C., Marks, J.*, Bernett, D.*, Bradley, M.*, & Alevén, V. (2015). Towards the development of an exploratory learning environment: A study of naturalistic teacher guidance of Invention. *Proceedings of the 17th International Conference on Artificial Intelligence in Education, AIED 2015*, (pp. 558-561). Amsterdam: IOS Press.

Chase, C.C. (2012). The interplay of chance and skill: Exploiting a common game mechanic to enhance learning and persistence. *Proceedings of the 2012 International Conference of the Learning Sciences*. [**Won best paper award**].

Christel, M.G., Stevens, S. M., Maher, B.S., Brice, S., Champer, M., Jayapalan, L., Chen, Q., Jin, J., Hausmann, D., Bastida, N., Zhang, X., Alevén, V., Koedinger, K., **Chase, C.**, Harpstead, E., & Lomas, D. (2012, July). RumbleBlocks: Teaching science concepts to young children through a Unity game. *Proceedings of the 17th International Conference on Computer Games (CGAMES)*, p. 162-166.

Chase, C.C., Shemwell, J.T., & Schwartz, D.L. (2010). Explaining across contrasting cases for deep understanding in science: An example using interactive simulations. *Proceedings of the 2010 International Conference of the Learning Sciences, Vol 1*, 153-160.

INVITED TALKS

Problematizing helps! Designing and evaluating problematizing guidance with the Invention Coach (2019, July). New journal track session of the International Conference of Artificial Intelligence in Education.

The design and evaluation of computer-based guidance of Invention Activities. (2018, December). Colloquium, Department of Human Development, Teachers College, Columbia University, New York, NY.

Teaching rapid prototyping to reframe failure and drive iteration. (2017, December). Symposium. The success of failure: Perspectives from the arts, sciences, humanities, education, and law. Columbia University.

Supporting transfer from production activities. (2017, October). Colloquium, Department of Human Development, Teachers College, Columbia University, New York, NY.

Learning by Inventing: Understanding, guiding, and adapting the process of Invention. (2016, April). Panel on Learning and Cognition at the 2016 Inaugural Cross-Psychology Conference, Teachers College, Columbia University, New York, NY.

The Teachable Agent: A sociable technology for learning causal reasoning. (2016, February). Panel on Learning with technology at the 2016 NSF Science of Learning Centers Meeting, Arlington, VA.

Augmenting student production activities with contrasting cases. (2016, February). The Program for Interdisciplinary Educational Research (PIER) Speaker Series, Carnegie Mellon University, Pittsburgh, PA.

Scaffolding exploratory learning tasks with the Invention Coach. (2016, February). The Program for Interdisciplinary Educational Research (PIER) Speaker Series, Carnegie Mellon University, Pittsburgh, PA.

Noticing structure amidst variation: Contrast-based activities that support learning and transfer. (2014, April). Janet Metcalfe's lab, Department of Psychology, Columbia University, New York, NY.

Adapting contrast-based instruction for novel contexts: The case of RumbleBlocks, an educational game. (2014, February). Colloquium, Department of Human Development, Teachers College, Columbia University, New York, NY.

Learning and engagement within a gaming environment. (2012, November). Center for Advanced Technology in Schools (CATS) Seminar for Research on Games and Learning, Los Angeles, CA.

Positioning novices as relative experts: Motivating expert behaviors. (2009, June). The 36th Carnegie Symposium on Cognition, Carnegie Mellon University, Pittsburgh, PA.

PRESENTATIONS AND POSTERS

* indicate student co-author

Connolly, H.*, Lamnina, M.*, Chesebrough, C. B.*, **Chase, C. C.** (2019, April). Which Dispositions and Behaviors Characterize Productive Exploration in Invention Tasks? Poster presented at the 3rd Psychology @ TC Conference, Teachers College, Columbia University, New York, NY.

Connolly, H.*, Lamnina, M.*, Alevan, V., & **Chase, C.C.** (2018, June). Supporting transfer of physics knowledge from open-ended learning activities with the Invention Coach. Talk presented at the 11th annual Subway Summit on Cognition and Education, New York, NY.

Malkiewich, L. J.*, & **Chase, C.C.** (2018, June). How learning goals and contrasting cases aid transfer from engineering activities. Talk presented at the 11th annual Subway Summit on Cognition and Education, New York, NY.

- Lamnina, M.*, & Chase, C.C. (2018, June). Uncertainty and Expectations in Instruction Influence Curiosity, Affect, Learning, and Transfer. Poster presented at the 11th annual Subway Summit on Cognition and Education, New York, NY.
- Connolly, H.*, Lamnina, M.*, Alevan, V., & Chase, C.C. (2018, April). A study of the Invention Coach: A computer-based environment that promotes transfer of concepts through open-ended problem solving. Poster presented at the annual meeting of the American Educational Research Association (AERA), New York, NY.
- Lamnina, M.* & Chase C.C. (2018, April). How Different Types of Uncertainty Affect Learning, Transfer, Curiosity, and Affect. Poster presented at the annual meeting of the American Educational Research Association, New York, N.Y.
- Connolly, H.*, Lamnina, M.*, Alevan, V., & Chase, C.C. (2018, April). The Invention Coach: A computer-based environment that guides students through exploratory problem solving. Poster presented at the 2nd Psychology @ TC conference, New York, NY.
- Malkiewich, L. J.*, & Chase, C. C. (2018, April). The effect of goals and contrasting cases on learning and transfer from an engineering design task. Poster presented at the Second Psychology @ TC conference, New York, NY.
- Lamnina, M.* , & Chase, C.C. (2018, April). The Interplay of Uncertainty, Curiosity, and Affect Influences Learning and Transfer. Poster presented at the 2nd Psychology @ TC conference, New York, NY.
- Chase, C.C., Marks, J.* , Lamnina, M.* , Connolly, M.* , Popescu, O., & Alevan, V. (2017, April). An adaptive system for guiding open-ended problem solving: The Invention Coach. Poster presented at the annual CyberLearning meeting, Arlington, VA.
- Holbert, N., & Chase, C.C. (2017, April). *Constructionist games as preparation for future inquiry*. Talk presented at the annual meeting of the American Educational Research Association (AERA), San Antonio, TX.
- Lamnina, M.* & Chase, C.C. (2017, April) Increasing Curiosity through Invention. Talk presented at the annual meeting of the American Educational Research Association (AERA), San Antonio, TX.
- Malkiewich, L.J.*, Xing, C.*, Slater, S.*, Lee, A.*, & Chase, C.C. (2016, April). *Game over: Detrimental effects of game features on persistence and learning of computer programming*. Talk presented at the annual meeting of the American Educational Research Association (AERA), Washington, D.C.
- Malkiewich, L. J.*, Bernett, D.*, Kumar, A.* , & Chase, C. C. (2016, April). *Building to learn: Effects of contrasting cases during reflection on engineering design tasks*. Poster presented at the Inaugural Cross-Psychology Conference, Teachers College, Columbia University, New York, NY.

- Lee, A.*, Malkiewich, L. J.*, Slater, S., Xing, C., & **Chase, C. C.** (2016, April). *Whose game is it anyway?: How gender and game design affect persistence, learning, and motivation*. Poster presented at the Inaugural Cross-Psychology Conference, Teachers College, Columbia University, New York, NY.
- Chase, C.C.**, Marks, J. *, Bernett, D. *, Malkiewich, L. *, & Alevén, V. (2016, June). *Towards the development of the Invention Coach: A naturalistic study of teacher guidance for an exploratory learning task*. Poster presented at the annual CyberLearning meeting, Arlington, VA.
- Chase, C.C.** & Marks, J.* (2016, January). *Developing the Invention Coach with studies of naturalistic teacher guidance*. Roundtable at the annual CyberLearning meeting, Arlington, VA.
- Chase, C.C.**, Marks, J.*, Wille, J. *, Bradley, M. *, & Malkiewich, L.J.* (2015, April). *A naturalistic study of tutor guidance during Invention tasks*. Poster presented at the annual meeting of the American Educational Research Association (AERA), Chicago, IL.
- Bradley, M. *, Marks, J. *, Bernett, D. *, Alevén, V., & **Chase, C.C.** (2015, January). *Designing an intelligent learning environment for open-ended Invention tasks*. Poster presented at the 8th annual Subway Summit on Cognition and Education Research, New York, NY.
- Chase, C.C.** (2014, January). *Adapting instructional strategies for educational games: Contrasting cases in RumbleBlocks*. Talk presented at the 7th annual Subway Summit on Cognition and Education Research, Brooklyn, NY.
- Ashe, C. A., Yaron, D. J., Carter, W. C., **Chase, C.**, Adamson, D., & Bartolo, L. (2012, August). Advancing chemistry and interdisciplinary STEM education through interactive simulations, computer-facilitated collaborative chat, and novel instructional strategies. American Chemical Society National Meeting and Exposition (ACS), Washington, DC.
- Chi, Min., Dohmen, I., Shemwell, J.T., Chin, D.B., **Chase, C.C.**, & Schwartz, D.L. (2012, May). *Seeing the forest from the trees: A comparison of two instructional models using contrasting cases*. Talk presented at the annual meeting of the American Educational Research Association (AERA), Vancouver, Canada.
- Chase, C.C.** (2012, May). *Exploiting game mechanics to promote persistence and risk-taking in the face of failure*. Talk presented at the annual meeting of the National Council of Teachers in Mathematics (NCTM), Philadelphia, PA.
- Chase, C.C.**, Shemwell, J.T., & Schwartz, D.L. (2012, May). *Critical ingredients of contrasting case instruction*. Talk presented at the annual meeting of the American Educational Research Association (AERA), Vancouver, Canada.

- Chase, C.C., Chin, D.B., Oppezzo, M.A., & Schwartz, D.L.** (2011, September). *Learning for the sake of a digital protégé: An analysis of students' think-alouds as they engage with a Teachable Agent*. Poster presented at the Socializing Intelligence through Talk and Dialogue Conference, Pittsburgh, PA.
- Chase, C.C. & Schwartz, D.L.** (2010, July). *Inventing with contrasting cases: An instructional method that improves students' uptake of big ideas*. Poster presented at the Physics Education Research Conference (PERC), Portland, OR.
- Chase, C.C., Chin, D.B., Gresalfi, M., & Schwartz, D.L.** (2010, May). *Why instruction supports or hinders transfer in physics*. Talk presented at the annual meeting of the American Educational Research Association (AERA), Denver, CO.
- Chase, C.C., Chin, D.B., Oppezzo, M.A., Dohmen, I., & Schwartz, D.L.** (2009, November). *The Protégé Effect: Increasing the effort towards learning with Teachable Agents*. Poster presented at the National Science Foundation's annual Science of Learning Centers awardees meeting, Washington, D.C.
- Chase, C.C., Chin, D.B., Oppezzo, M.A., & Schwartz, D.L.** (2009, August). *Teachable Agents and the Protégé Effect: Increasing the effort towards learning*. Talk presented at the annual meeting of the European Association for Research on Learning and Instruction (EARLI), Amsterdam, Netherlands.
- Chase, C.C., Chin, D.B., Oppezzo, M.A., & Schwartz, D.L.** (2009, June). *Teachable Agents and the Protégé Effect: Increasing the effort towards learning*. Poster presented at the annual Institute of Education Sciences (IES) research conference, Washington, DC.
- Chin, D.B., Chase, C.C., Oppezzo, M.A., Kwong, H.Y., & Schwartz, D.L.** (2008, June). *Sociable Learning Technologies: Teachable Agents to enhance feedback, assessment, and future learning*. Poster presented at the annual Institute of Education Sciences (IES) research conference, Washington, DC.
- Chase, C.C., Chin, D.B., Cheng, B., Oppezzo, M.A., & Schwartz, D. L.** (2008, March). *Learning with Teachable Agents: A look at production feedback*. Talk presented at the annual meeting of the American Educational Research Association (AERA), New York, NY.
- Oppezzo, M.A., Chase, C.C., Chin, D.B., & Schwartz, D. L.** (2008, March). *Homework - work = future learning: Using informal learning structures to enhance formal education*. Talk presented at the annual meeting of the American Educational Research Association (AERA), New York, NY.
- Chase, C.C. & Schwartz, D. L.** (2008, February). *Teaching to learn: The impact of Teachable Agents on achievement goals and motivation*. Poster presented at the annual Inter-Science of Learning Center (ISLC) student and post-doc conference, Pittsburgh, PA.

TEACHING & ADVISING

Courses Taught

HUDK 4080: Educational Psychology*
 HUDK 4029: Cognition and Learning
 HUDK 5505: Transfer of Learning*
 HUDK 6199: Learning through Play*
 HUDK 5324/6539: Research Practicum*

* *courses I developed or significantly re-designed*

Masters Student Advising

in progress Vivian Chang
 Lauren Kiesel
 2018 Kimberly Zambrano, MA in Cognitive Science in Education
 Sharmeen Islam, MA in Cognitive Science in Education
 2017 Christine Chesebrough, MA in Cognitive Science in Education
 2015 Deena Bernett, MA in Cognitive Science in Education

Doctoral Student Advising

in progress Helena Connolly
 Oren Ross
 Aakash Kumar
 2019 Marianna Lamnina, PhD in Cognitive Science in Education
 2018 Laura Malkiewich, PhD in Cognitive Science in Education
 2017 Jenna Marks, PhD in Cognitive Science in Education

SERVICE

Dissertation Committee Service

in progress Wendy Witterschein, PhD in Cognitive Science in Education
 Rosianne Lesperance, PhD in Developmental Psychology
 Jun Gao, PhD in Cognitive Science in Education
 2019 Nirmaliz Colon-Acosta, PhD in Cognitive Science in Education
 Xingchi Lu, EdD in Math Education
 2018 Ahram Choi, EdD in Instructional Technology and Media
 Ilya Lyashevsky, PhD in Cognitive Studies in Education
 Yuchen Shi, PhD in Cognitive Studies in Education
 2017 Alison Lee, PhD in Cognitive Studies in Education
 Jing Zhao, PhD in Cognitive Studies in Education
 William Tonissen, EdD in Music Education
 2016 Sorachai Kornkasem, PhD in Cognitive Studies in Education
 2015 Yumiko Murai, EdD in Communication and Education
 Yung-Yi (Juliet) Chou, PhD in Cognitive Studies in Education
 Cathy Jalali, PhD in Cognitive Studies in Education
 2014 Elizabeth Jewett, PhD in Developmental Psychology
 Azadeh Jamalian, PhD in Cognitive Studies in Education
 John McDonald, EdD in Educational Leadership Practice

Additional University Service

- 2017- Member, Psychology Faculty Coordinating Committee
- 2016-2017 Member, Faculty Search Committee, Cognitive Studies in Education
- 2014-2016 Member, Learning Sciences Committee
- 2013- Member, Institute for Learning Technologies
- 2016 Invited panelist at the Teachers College President's Advisory Council Meeting
- 2015 Invited speaker at the Roundtable on Technology and the Learning Sciences

Ad hoc Referee Service

Journals *Journal of Educational Psychology, Journal of Experimental Psychology: General, Educational Psychology: An International Journal of Experimental Educational Psychology, Cognition and Instruction, Cognitive Development, Cognitive Research: Principles and Implications, npj Science of Learning, Journal of the Learning Sciences, Learning and Instruction, Instructional Science, PLOS ONE, American Educational Research Journal, Learning: Research and Practice, Learning and Individual Differences, Science Education, Journal of Research in Science Teaching, Journal of Science Education and Technology, Journal of Mathematical Behavior, International Journal of Artificial Intelligence in Education, IEEE Transactions on Learning Technologies*

Conferences *American Educational Research Association (AERA), International Conference of the Learning Sciences (ICLS), ACM CHI Conference on Human Factors in Computing Systems*

Grant Panels *National Science Foundation, Cybearlearning program
National Science Foundation, Discovery Research K-12*

Additional Service to the Profession

- 2018- Dissemination work, Lead workshops to train fellows from the American Society of Clinical Oncologists in learning science principles
- 2018 Co-chair, *Subway Summit*, a conference on cognition and education research
- 2017 Participant, Play Data Consortium
- 2015 Member, Technology Advisory Group for the George Lucas Education Research Foundation
- 2012 Panelist, Center for Advanced Technology in Schools (CATS) Seminar for Research on Games and Learning

PROFESSIONAL AFFILIATIONS

American Educational Research Association (AERA)
International Society of the Learning Sciences (ISLS)
Center for Innovative Research in CyberLearning (CIRCL)
International Artificial Intelligence in Education Society (AIED)
Cognitive Science Society (COGSCI)
American Psychological Association (APA)

MEDIA COVERAGE

Levine, J. (2019). The importance of deeper noticing: Leveraging contrasts to reveal engineering activity's underlying principles. Retrieved from <https://www.tc.columbia.edu/articles/2019/march/the-importance-of-deeper-noticing/>

Giegerich, S. (2018). Interactive learning, via the subway. Retrieved from <https://www.tc.columbia.edu/articles/2018/september/interactive-learning-via-the-subway/>

The Invention Coach. (2016). Retrieved from <https://circlcenter.org/the-invention-coach/>