

# Victor R. Lee

Curriculum Vitae

## CONTACT INFORMATION

### Office:

2830 Old Main Hill  
Logan, UT 84322

E-mail: [victor.lee@usu.edu](mailto:victor.lee@usu.edu)  
Web: [www.victor-r-lee.com](http://www.victor-r-lee.com)

Office: (435) 797-7562  
Fax: (435) 797-2693

## APPOINTMENTS

- 2015 - Associate Professor, Department of Instructional Technology & Learning Sciences, Utah State University, Logan, Utah.
- 2009 - 2015 Assistant Professor, Department of Instructional Technology & Learning Sciences, Utah State University, Logan, Utah.

## EDUCATION

- 2008 **Northwestern University**. Evanston, Illinois.  
Ph.D., Learning Sciences
- 2001 **University of California, San Diego**. La Jolla, California.  
B.S. Cognitive Science (with specialization in Human Computer Interaction)  
B.A. Math/Applied Science  
Latin honors: *Magna Cum Laude*

## AWARDS AND HONORS

- 2019 Faculty University Service Award, Emma Eccles Jones College of Education and Human Services
- 2018 Outstanding Research Award, Council for Technology & Engineering Teacher Education (CTETE)
- 2015 Researcher of the Year, Department of Instructional Technology & Learning Sciences, Emma Eccles Jones College of Education and Human Services

- 2014 National Academy of Education/Spencer Postdoctoral Fellowship
- 2013 Jan Hawkins Award for Early Career Contributions to Humanistic Research and Scholarship in Learning Technologies
- 2011 National Science Foundation Early CAREER Award
- 2010 Early Career/Junior Researcher, International Conference of the Learning Sciences
- 2007 Best Student Paper Award, American Educational Research Association, SIG-LS/ATL (SIGs for Learning Sciences and Advanced Technologies for Learning).
- 2007 Dissertation Year Fellowship. Northwestern University Graduate School.
- 2005 Center for Curriculum Materials in Science Fellowship, National Science Foundation.
- 2002 Cognitive Science Fellowship. Northwestern University.
- 2001 University of California, San Diego Alumni Award for Outstanding Senior of the Year.
- 1997 University of California Regents Scholarship. UC San Diego.

## RESEARCH GRANTS

- 2019 *CSCL 2019 A Wide Lens: Combining Embodied, Enactive, Extended, and Embedded Learning in Collaborative Settings, Doctoral Consortium and Early Career Workshop Funding.* Katerine Bielaczyc (PI), Victor Lee (Co-PI). National Science Foundation. (\$25,000 requested)
- 2019-2022 *Measuring IMPACT: Integrated Mathematics Programming & Computational Thinking in Early Childhood.* Jody Clarke-Midura (PI), Jessica Shumway & Victor Lee (Co-PIs). National Science Foundation. (\$1,120,807 awarded).
- 2019-2021 *Research Experience for Undergraduates Supplement for T2S: Tabletops to Screens: Developing board games and learning materials to support connected learning around computational thinking and coding.* Victor Lee (PI), Jody Clarke-Midura & Mimi Recker (Co-PIs). National Science Foundation. (\$24,000 awarded).

- 2019-2021 *T2S: Tabletops to Screens: Developing board games and learning materials to support connected learning around computational thinking and coding.* Victor Lee (PI), Jody Clarke-Midura & Mimi Recker (Co-PIs). National Science Foundation. (\$299,999 awarded).
- 2018-2019 *Coding in Kindergarten: An Exploratory Study of Coding Toys in Kindergarten Classrooms.* Jody Clarke-Midrua (PI), Jessica Shumway & Victor Lee (Co-PIs). Utah State University Research Catalyst Grant. (\$20,000 awarded).
- 2017-2018 *Enhancing student learning through the use of computational simulations and agent-based models in nursing education.* Victor Lee (PI), Ilana Dubovi & Keith Kent (Co-PIs). Utah State University Academic and Instructional Services. (\$5,000 awarded).
- 2016-2019 *EAGER: MAKER: Tracking Youth Interest and Engagement in Makerspace Learning Activities Using Wearable Technology.* Victor Lee (PI). National Science Foundation. (\$299,911 awarded).
- 2016-2019 *Supporting The Development Of Public And School Librarians As Stewards Of Cross-Setting STEM Maker Programs Through Implementation Research.* Victor Lee (PI), Mimi Recker (Co-PI). Institute of Museum and Library Services. (\$481,997 awarded)
- 2015-2016 *CAP: Data Science, Learning and Youth: Connecting Research and Creating Frameworks.* Michelle Wilkerson (PI), Victor Lee, Tapan Parikh, & Joseph Polman (Co-PIs). National Science Foundation. (\$49,958 awarded)
- 2014-2016 *Understanding the role of immediate embodied experience in students' dynamic conceptualizations of motion.* Victor Lee (PI). Spencer Foundation. (\$55,000 awarded)
- 2013-2014 *Visualizing Body Movement: Body-centric instructional design to enhance classroom STEM learning.* Victor Lee (PI). Marriner S. Eccles Foundation. (\$10,000 awarded)
- 2013-2014 *Research Experience for Undergraduates Supplement for CAREER: Engaging elementary students in data analysis through study of physical activities.* Victor Lee (PI). National Science Foundation. (\$21,240 awarded)
- 2011-2018 *CAREER: Engaging elementary students in data analysis through study of physical activities.* Victor Lee (PI). National Science Foundation. (\$658,619 awarded)
- 2011-2013 *Collaborative Research: Understanding Impact: A Scaling and Replication Study of the Curriculum Customization Service.* Mimi Recker (PI), Victor Lee (Co-PI), Andrew Walker (Co-PI), National Science Foundation. (\$125,000 awarded)

- 2010 *Improving upon the 'average' mode of instruction: PAD devices and a redesign of elementary school statistics.* Victor Lee (PI). Utah State University Research Catalyst Grant. (\$20,000 awarded).
- 2007-2009 *Visualizations across the globe,* Barbara Tversky (PI), Jayashree Ramadas (Co-PI), Victor Lee (Co-PI). Gordon Research Conference Visionary Grants Program. (\$6,000 awarded).
- 2005-2006 *Learning with representations in science,* Victor Lee (PI). Northwestern University Graduate Research Grant, (\$1,500 awarded).

## BOOKS

- Lee, V. R. & Phillips, A. L. (Eds.). (2018). *Reconceptualizing Libraries: Perspectives from the Information and Learning Sciences.* New York, NY: Routledge.
- Lee, V. R. (Ed.). (2015). *Learning Technologies and the Body: Integration and Implementation in Formal and Informal Learning Environments.* New York, NY: Routledge.

## JOURNAL ARTICLES

\* Denotes equal contribution and alphabetical author listing

° Denotes a collaboration with a graduate student

^ Denotes a collaboration with an undergraduate student

- °Hamilton, M., Clarke-Midura, J., Shumway, J. F., & Lee, V. R. (under review). An Emerging Technology Report on Computational Toys in Early Childhood. *Technology, Knowledge and Learning.*
- Leary, H., Lee, V. R., & Recker, M. (under review). It's More Than Just Technology Adoption: Understanding Variations in Teachers' Use of an Online Planning Tool. *British Journal of Educational Technology.*
- Clarke-Midura, J., Lee, V. R., °Hamilton, M., & Shumway, J. (major revisions, in revision). Starting from Scratch: Examining the interface designs of early childhood coding toys. *Information and Learning Sciences.*
- Dubovi, I., & Lee, V. R. (under review) Instructional support for learning with agent-based models: A tale of vicarious and guided exploration learning approaches. *Computers & Education.*
- Lee, V. R., & Dubovi, I. (major revisions, resubmission under review). At home with data: Family engagements with data involved in Type 1 Diabetes management. *Journal of the learning sciences.*

- Lee, V. R.**, °Fischback, L., & Cain, R. (major revisions, in revision). A wearables-based approach to detect and identify engagement triggers in afterschool makerspace programs. *Contemporary Educational Psychology*.
- Phillips, A. L. & **Lee, V. R.**, (accepted). Whose Responsibility is It? A Statewide Survey of School Librarians on Responsibilities and Resources for Teaching Digital Citizenship. *School Library Research*.
- Lee, V. R.** (accepted with revisions). Free-range interviewing and the impact of discrepant experiences on student reasoning. *Journal for STEM Education Research*.
- Phillips, A. L., Recker, M., & **Lee, V. R.** (accept with revisions). A Framework for Characterizing 21st Century School Librarianship. *School Libraries Worldwide*.
- Lee, V. R.** (in press). The picture of smartphones at school is not a dire one, and the picture of student competence is a bright one. *Learning, Culture and Social Interaction*.
- Lee, V. R.** (2019). On researching activity tracking to support learning: a retrospective. *Information and Learning Sciences*, 120(1/2), 133-154. doi:10.1108/ILS-06-2018-0048
- Shumway, J. F., Clarke-Midura, J., **Lee, V. R.**, °Hamilton, M. M., & Baczuk, C. (2019). Coding toys in kindergarten. *Teaching Children Mathematics*, 25(5), 314-317.
- °Rogowski, A., Recker, M., & **Lee, V. R.** (2018). Designing online support guides for librarians managing STEM maker activities. *International Journal of Innovations in Online Education*, 2(4).
- Lee, V. R.**, & Recker, M. (2018). Paper circuits: A tangible, low Threshold, low cost entry to computational thinking. *TechTrends*, 62(2), 197-203. doi:10.1007/s11528-017-0248-3
- Lee, V. R.**, & Fields, D. A. (2017). A rubric for describing competences in the areas of circuitry, computation, and crafting after a course using e-textiles. *International Journal of Information and Learning Technology*, 34(5), 372-384.
- Lee, V. R.**, Thurston, T., & Thurston, C. (2017). A comparison of discovered regularities in blood glucose readings across two data collection approaches used with a type 1 diabetic youth. *Methods of Information in Medicine*, 56(open), e84-e92. doi:10.3414/ME16-02-0047
- °Bartholomew, S. R., Reeve, E., Veon, R., Goodridge, W., **Lee, V.**, & Nadelson, L. (2017). Relationships between access to mobile devices, student self-directed learning, and achievement. *Journal of Technology Education*, 29(1), 2-24.
- Lee, V. R.**, °Drake, J. R., & °Thayne, J. L. (2016). Appropriating quantified self technologies to support elementary statistical teaching and learning. *IEEE Transactions on Learning Technologies*, 9(4), 354-365. doi:10.1109/TLT.2016.2597142

- Lee, V. R.** (2015). Combining high-speed cameras and stop-motion animation software to support students' modeling of human body movement. *Journal of Science Education and Technology*, 24(2-3), 178-191. doi: 10.1007/s10956-014-9521-9
- Lee, V. R.**, °Drake, J., & ^Williamson, K. (2015). Let's get physical: K-12 Students using wearable devices to obtain and learn about data from physical activities. *TechTrends*, 59(4), 46-53. doi: 10.1007/s11528-015-0870-x
- Lee, V. R.** (2014). Students' digital photography behaviors during a multiday environmental science field trip and their recollections of photographed science content. *Education Research International*, 2014, 11 pages. doi: 10.1155/2014/736791
- Lee, V. R.**, Leary, H. M., °Sellers, L., & Recker, M. (2014). The role of school district science coordinators in the district-wide appropriation of an online resource discovery and sharing tool for teachers. *Journal of Science Education and Technology*, 23(3), 309-323. doi: 10.1007/s10956-013-9465-5
- Lee, V. R.** (2013). The Quantified Self (QS) movement and some emerging opportunities for the educational technology field. *Educational Technology*, 53(6), 39-42.
- Lee, V. R.** (2013). Knowing and learning with technology (and on wheels!): An introduction to the special issue. *Technology, Knowledge and Learning*, 18(1-2), 1-8. doi: 10.1007/s10758-013-9204-2
- Lee, V. R.**, & °Drake, J. (2013). Digital physical activity data collection and use by endurance runners and distance cyclists. *Technology, Knowledge and Learning*, 18(1-2), 39-63. doi: 10.1007/s10758-013-9203-3
- \*Berland, L. K., & **Lee, V. R.** (2012). In pursuit of consensus: Disagreement and legitimization during small group argumentation. *International Journal of Science Education*. 34(12), 1857-1882. doi: 10.1080/09500693.2011.645086
- Russ, R. S., **Lee, V. R.**, & Sherin, B. L. (2012). Framing in cognitive clinical interviews about intuitive science knowledge: Dynamic student understandings of the discourse interaction. *Science Education*, 96(4), 537-599. doi: DOI: 10.1002/sce.21014
- Sherin, B., Krakowski, M., & **Lee, V. R.** (2012). Some assembly required: How scientific explanations are constructed in clinical interviews. *Journal of Research in Science Teaching*, 49(2), 166-198. doi: 10.1002/tea.20455
- Lee, V. R.**, & °Thomas, J. M. (2011). Integrating physical activity data technologies into elementary school classrooms. *Educational Technology Research and Development*, 59(6), 865-884. doi: 10.1007/s11423-011-9210-9

\*Berland, M., & Lee, V. R. (2011). Collaborative strategic board games as a site for distributed computational thinking. *International Journal of Game-Based Learning*, 1(2), 65-81. doi: 10.4018/ijgbl.2011040105

Lee, V. R., & °DuMont, M. (2010). An exploration into how physical activity data-recording devices could be used in computer-supported data investigations. *International Journal of Computers for Mathematical Learning*, 15(3), 167-189.

Lee, V. R. (2010) How different variants of orbit diagrams influence student explanations of the seasons. *Science Education*. 94(6), 985-1007. doi: 10.1002/sce.20403.

Lee, V. R. (2010). Adaptations and continuities in the use and design of visual representations in middle school science textbooks. *International Journal of Science Education*. 32(8), 1099-1126.

\*USU ITLS Faculty (2009) What's in a name? An identity shift at Utah State University. *Educational Technology*, 49(4), 38-41. (Invited paper)

## COMMISSIONED PAPERS & REPORTS

Lee, V. R., & Wilkerson, M. (2018). *Data use by middle and secondary students in the digital age: A status report and future prospects*. Commissioned Paper for the National Academies of Sciences, Engineering, and Medicine, Board on Science Education, Committee on Science Investigations and Engineering Design for Grades 6-12. Washington, D.C.

Wilkerson, M., Lee, V. R., Shinohara, M., Brady, C., Marin, A., & Chaudhary, S. (2018). *OpenSciEd Design Specifications for Science and Engineering Practices of Interpreting and Analyzing Data and Using Mathematical and Computational Thinking*. Commissioned Paper for Carnegie Corporation. New York, NY.

## BOOK CHAPTERS & ENCYCLOPEDIA ENTRIES

° Denotes a collaboration with a graduate student

°Rogowski, A., Lee, V.R., Recker, M., & °Vincent, H. (to appear). Rethinking the (Maker)space for Rural Libraries. In M. Melo & J. Nichols (Eds.), *Re-Making the Library Makerspace: Critical Theories, Reflections, and Practices*: Library Juice Press.

Lee, V. R., & Shapiro, R. B. (to appear). A Broad View of Wearables as Learning Technologies: Current and Emerging Applications. In P. Diaz, A. Ioannou, K. K. Bhagat, & J. M. Spector (Eds.), *Learning in a Digital World - Perspectives on Interactive Technologies for Formal and Informal Education*.

Lee, V. R., Recker, M., & °Rogowski, A. (to appear). Researchers or Service Providers? A case of renegotiating expectations in a research-practice partnership. In T. Ruecker & V. Svihla (Eds.), *Research Interrupted*. New York, NY: Routledge.

- Lee, V. R.** (to appear). Supporting complex multimodal expression around representations of data: Experience matters. In P. Sengupta, B. Kim, & M.-C. Shanahan (Eds.), *Critical, Transdisciplinary and Embodied Approaches in STEM Education*: Springer.
- Phillips, A. L., **Lee, V. R.**, & Recker, M. (2018). Small Town Librarians as Experience Engineers. In V. R. Lee & A. L. Phillips (Eds.), *Reconceptualizing Libraries: Perspectives from the Information and Learning Sciences*. New York, NY: Routledge.
- Lee, V. R.** (2018). Libraries Will be Essential to the Smart and Connected Communities of the Future. In V. R. Lee & A. L. Phillips (Eds.), *Reconceptualizing Libraries: Perspectives from the Information and Learning Sciences* (pp. 9-16). New York, NY: Routledge.
- Phillips, A. L., **Lee, V. R.**, & Recker, M. (2018). Supporting School Librarian Learning: New Opportunities for Instructional Technology Collaboration with School Librarians. In R. M. Branch (Ed.), *Educational Media and Technology Yearbook* (Vol. 41, pp. 53-60). Cham, Switzerland: Springer.
- Lee, V. R.** (2018). Personal Analytics Explorations to Support Youth Learning. In R. Zheng (Ed.), *Digital Technologies and Instructional Design for Personalized Learning* (pp. 145-163). Hershey, PA: IGI Global.
- Lee, V. R.** (2018). A short history of the Learning Sciences. In R. West (Ed.), *Foundations of Learning and Instructional Design Technology* (1st ed.). Available at <https://lidtfoundations.pressbooks.com/>.
- °Drake, J., °Cain, R., & **Lee, V. R.** (2017). From wearing to wondering: Treating wearable activity trackers as tools for inquiry. In I. Levin & D. Tsybulsky (Eds.), *Optimizing STEM Education With Advanced ICTs and Simulations* (pp. 1-29). Hershey, PA: IGI Global.
- Lee, V. R.** (2017). Self-tracking. In K. Peppler (Ed.), *The SAGE Encyclopedia of Out-of-School Learning* (pp. 694-696). Thousand Oaks, CA: SAGE Publications.
- Lee, V. R.** (2017). Mobile devices. In K. Peppler (Ed.), *The SAGE Encyclopedia of Out-of-School Learning* (pp. 496-498). Thousand Oaks, CA: SAGE Publications.
- Fields, D. A., & **Lee, V. R.** (2016). Craft Technologies 101: Bringing making to higher education. In K. Peppler, E. Halverson, & Y. Kafai (Eds.), *Makeology* (Vol. 1, pp. 121-137). New York, NY: Routledge.
- Azevedo, F. S., & **Lee, V. R.** (2016). Ecologies of knowing: Lessons from the highly tailored practice of hobbies. In A. A. diSessa, M. Levin, & N. J. S. Brown (Eds.), *Knowledge and interaction: A synthetic research agenda for the learning sciences* (pp. 111-132). New York, NY: Routledge.



- ° DeLiema, D., **Lee, V. R.**, Danish, J., Enyedy, N., & Brown, N. J. S. (2016). A microlatitudinal/microlongitudinal analysis of speech, gesture, and representation use in a student's scientific explanation of phase change. In A. A. diSessa, M. Levin, & N. J. S. Brown (Eds.), *Knowledge and interaction: A synthetic research agenda for the Learning Sciences* (pp. 133-159). New York, NY: Routledge.
- Russ, R. S., Sherin, B. L., & **Lee, V. R.** (2016). The intersection of knowledge and interaction: Challenges of clinical interviewing. In A. A. diSessa, M. Levin, & N. J. S. Brown (Eds.), *Knowledge and interaction: A synthetic research agenda for the learning sciences* (pp. 377-402). New York, NY: Routledge.
- Lee, V. R.**, °Yuan, M., Ye, L., & Recker, M. (2016). Reconstructing the influences on and focus of the Learning Sciences from the field's published conference proceedings In M. A. Evans, M. J. Packer, & R. K. Sawyer (Eds.), *Reflections on the Learning Sciences* (pp. 105-125). New York, NY: Cambridge University Press.
- DuMont, M., & **Lee, V. R.** (2015). Understanding the opportunities and challenges of introducing computational crafts to alternative high school students. In M. Orey & R. M. Branch (Eds.), *Educational Media and Technology Yearbook* (Vol. 39, pp. 83-99). New York, NY: Springer.
- Lee, V. R.** (2015). Technology meets body, body meets technology. In V. R. Lee (Ed.), *Learning Technologies and the Body: Integration and Implementation in Formal and Informal Learning Environments*, (pp. 1-20). New York, NY: Routledge.
- Lee, V. R.** (2015). Looking at how technology is used with the bodies over there to figure out what could be done with the technology and bodies right here. In V. R. Lee (Ed.), *Learning Technologies and the Body: Integration and Implementation in Formal and Informal Learning Environments*, (pp. 167-184). New York, NY: Routledge.
- Lee, V. R.**, Shelton, B. E., Walker, A., °Caswell, T., & °Jensen, M. (2012). ReTweeting History: Exploring the intersection of microblogging and problem-based learning for historical reenactments. In K. Seo, D. Pellegrino & C. Engelhard (Eds.), *Designing Problem-Driven Instruction Using Online Social Media* (pp. 23-40): Information Age Publishing.

## PEER-REVIEWED PUBLISHED CONFERENCE PROCEEDINGS

\* *Denotes equal contribution and alphabetical author listing*

° *Denotes a collaboration with a graduate student*

^ *Denotes a collaboration with an undergraduate student*

- °Potapov, K., **Lee, V. R.**, Vasalou, A., & Marshall, P. (to appear). Youth Concerns and Responses to Self-Tracking Tools and Personal Informatics Systems *Adjunct Proceedings of CHI 2019*. Glasgow, Scotland: ACM.

- Fields, D. A., **Lee, V. R.**, Litts, B. K., Mortensen, C. K., Ching, C. C., Danish, J. A., . . . Hall, R. (to appear). Personal Embodiment, Social Enactment: Collaborative Learning with Body Technology. *Proceedings of the 2019 Computer-Supported Collaborative Learning Conference*. Lyon, France: ISLS.
- Dubovi, I., & **Lee, V. R.** (to appear). Comparing the Effectiveness of Supports for Collaborative Dialogic Sense-Making with Agent-Based Models. *Proceedings of the 2019 Computer-Supported Collaborative Learning Conference*. Lyon, France: ISLS.
- Lee, V. R.**, & Vincent, H. (to appear). An Expansively-framed Unplugged Weaving Sequence Intended to Bear Computational Fruit of the Loom. In P. Blikstein & N. Holbert (Eds.), *Proceedings of FabLearn 2019*. New York, NY: ACM.
- Lee, V. R.**, Recker, M., & Phillips, A. L. (2018). Conjecture Mapping the Library: Iterative Refinements Toward Supporting Maker Learning Activities in Small Community Spaces. In J. Kay & R. Luckin (Eds.), *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, 13th International Conference of the Learning Sciences (ICLS) 2018* (Vol. 1, pp. 320-327). London, UK: ISLS.
- Dubovi, I., & **Lee, V. R.** (2018). Agent Based Models to Support Bioscience Learning in Nursing Education. In J. Kay & R. Luckin (Eds.), *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, 13th International Conference of the Learning Sciences (ICLS) 2018* (Vol. 2, pp. 1057-1060). London, UK: ISLS.
- ° Hamilton, M. M., Clarke-Midura, J., Shumway, J. F., & **Lee, V. R.** (2018). An Initial Examination of Designed Features to Support Computational Thinking in Commercial Early Childhood Toys. In J. Kay & R. Luckin (Eds.), *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, 13th International Conference of the Learning Sciences (ICLS) 2018* (Vol. 3, pp. 1739-1740). London, UK: ISLS.
- Schneider, K., °Christensen, L., & **Lee, V. R.** (2018). *Using Personal Activity Data in an Undergraduate Statistics Course*. Paper to be presented at the 10th International Conference on the Teaching of Statistics (ICOTS10), Kyoto, Japan.
- °Fischback, L., & **Lee, V. R.** (2017). How Time Gets Used in Afterschool Maker Programs. In P. Blikstein, M. Berland, & D. A. Fields (Eds.), *Proceedings of FabLearn 2017: 7th Annual Conference on Creativity and Making in Education*. Stanford, CA: ACM.
- Lee, V. R.**, °Lewis, W., Searle, K. A., Recker, M., °Hansen, J., & Phillips, A. L. (2017). Supporting interactive youth maker programs in public and school libraries: Design hypotheses and first implementations. In P. Blikstein & D. Abrahamson (Eds.), *Proceedings of IDC 2017* (pp. 310-315). Stanford, CA: ACM.
- Lee, V. R.**, Tzou, C., Bang, M., Bell, P., Stromholt, S., Price, N., . . . Barron, B. (2017). Libraries as emerging spaces for computer-supported collaborative learning in schools and communities. In B. K. Smith, M. Borge, K. Y. Lim, & E. Mercier (Eds.), *Proceedings of the*

*12th International Conference on Computer Supported Collaborative Learning*. Philadelphia, PA: ISLS.

- Cain, R., & Lee, V. R. (2016). Measuring Electrodermal Activity to Understand Engagement in Making. In P. Blikstein, M. Berland, & D. A. Fields (Eds.), *Proceedings of FabLearn 2016: 6th Annual Conference on Creativity and Making in Education* (pp. 78-81). Stanford, CA: ACM.
  
- Lee, V. R. (2016). A knowledge analytic comparison of cued primitives when students are explaining predicted and enacted motions. In C. K. Looi, J. L. Polman, U. Cress, & P. Reimann (Eds.), *Transforming Learning, Empowering Learners: The International Conference of the Learning Sciences (ICLS) 2016* (Vol. 1, pp. 170-177). Singapore: International Society of the Learning Sciences.
  
- Azevedo, F. S., Ahn, J., Mann, M. J., Dorph, R., Cannady, M. A., Lee, V. R., . . . Bell, P. (2016). Moving ahead in the study of STEM interests and interest development: A new research agenda. In C. K. Looi, J. L. Polman, U. Cress, & P. Reimann (Eds.), *Transforming Learning, Empowering Learners: The International Conference of the Learning Sciences (ICLS) 2016* (Vol. 2, pp. 1098-1105). Singapore: International Society of the Learning Sciences.
  
- Lee, V. R., °Drake, J., °Cain, R., & °Thayne, J. (2015). Opportunistic Uses of the Traditional School Day Through Student Examination of Fitbit Activity Tracker Data. In M. U. Bers & G. Reville (Eds.), *Proceedings of the 2015 ACM SIGCHI Interaction Design and Children Conference* (pp. 209-218). Boston, MA: ACM.
  
- Lee, V. R., & ^Briggs, M. (2014). Lessons learned from an initial effort to bring a quantified self "meetup" experience to a new demographic. In *Proceedings of the 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjunct Publication* (pp. 707-710). Seattle, Washington: ACM. doi: 10.1145/2638728.2641321
  
- Lee, V. R. (2014). What's happening in the Quantified Self movement? In J. L. Polman, Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T., D'Amico, L. (Ed.), *Learning and Becoming in Practice: The International Conference of the Learning Sciences (ICLS) 2014* (Vol. 2, pp. 1032-1036). Boulder, CO: ISLS.
  
- Moher, T., Ching, C. C., Schaefer, S., Lee, V. R., Enyedy, N., Danish, J., . . . Rubin, A. (2014). Becoming reflective: Designing for reflection on physical performances In J. L. Polman, Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T., D'Amico, L. (Ed.), *Learning and Becoming in Practice: The International Conference of the Learning Sciences (ICLS) 2014* (Vol. 3, pp. 1273-1282). Boulder, CO: ISLS.
  
- Leary, H., Lee, V. R., & Recker, M. (2014). More than just plain old technology adoption: Understanding variations in teachers' use of an online planning tool. In J. L. Polman, Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T., D'Amico, L. (Ed.), *Learning and Becoming in Practice: The International Conference of the Learning Sciences (ICLS) 2014* (Vol. 1, pp. 110-117). Boulder: CO.

- °Yuan, M., °Kim, N. J., °Drake, J., °Smith, S., & **Lee, V. R.** (2014). Examining how students make sense of slow-motion video. In J. L. Polman, Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T., D'Amico, L. (Ed.), *Learning and Becoming in Practice: The International Conference of the Learning Sciences (ICLS) 2014* (Vol. 3, pp. 1617-1618). Boulder, CO: ISLS.
- °Drake, J., & **Lee, V. R.** (2014). Keeping up: Shifting access to resources in a cycling community of practice. In J. L. Polman, Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T., D'Amico, L. (Ed.), *Learning and Becoming in Practice: The International Conference of the Learning Sciences (ICLS) 2014* (Vol. 3, pp. 1659-1660). Boulder, CO: ISLS.
- Lee, V. R.**, & °Drake, J. (2013). Quantified recess: Design of an activity for elementary students involving analyses of their own movement data. In J. P. Hourcade, E. A. Miller & A. Egeland (Eds.), *Proceedings of the 12th International Conference on Interaction Design and Children 2013* (pp. 273-276). New York, NY: ACM.
- Lee, V. R.**, & °Drake, J. (2012). Physical activity data use by technoathletes: Examples of collection, inscription, and identification. In J. van Aalst, K. Thompson, M. J. Jacobson & P. Reimann (Eds.), *The Future of Learning: Proceedings of the 10th International Conference of the Learning Sciences (ICLS 2012)* (Vol. 2, pp. 321-325). Sydney, NSW, Australia: International Society of the Learning Sciences.
- Lee, V. R.**, °Ye, L., & Recker, M. (2012). What a long strange trip it's been: A comparison of authors, abstracts, and references in the 1991 and 2010 ICLS Proceedings. In J. van Aalst, K. Thompson, M. J. Jacobson & P. Reimann (Eds.), *The Future of Learning: Proceedings of the 10th International Conference of the Learning Sciences (ICLS 2012)* (Vol. 2, pp. 172-176). Sydney, NSW, Australia: International Society of the Learning Sciences.
- °DuMont, M., & **Lee, V. R.** (2012). Material pets, virtual spaces, isolated designers: How collaboration may be unintentionally constrained in the design of tangible computational crafts *Proceedings of the Tenth International Conference for Interaction Design and Children (IDC)* (pp. 244-247). Bremen, Germany: ACM.
- Lee, V. R.** (2010). What students include in hand-drawn diagrams to explain seasonal temperature variation. In A. Goel, M. Jamnik & N. H. Narayanan (Eds.), *Diagrammatic Representation and Inference, LNAI 6170* (pp. 313-315). Heidelberg, Germany: Springer.
- \*Berland, L. K., & **Lee, V. R.** (2010). Anomalous graph data and claim revision during argumentation In K. Gomez, L. Lyons & J. Radinsky (Eds.), *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010)* (Vol. 2, pp. 314-315). Chicago, IL: International Society of the Learning Sciences.
- Berland, M. W., **Lee, V. R.**, & °DuMont, M. (2010). Small groups, big mistakes: The emergence of faulty rules during a collaborative board game. In K. Gomez, L. Lyons & J. Radinsky

(Eds.), *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010)* (Vol. 2, pp. 397-398). Chicago, IL: International Society of the Learning Sciences.

**Lee, V. R., & °DuMont, M.** (2010). Students' investigations with physical activity data devices. In K. Gomez, L. Lyons & J. Radinsky (Eds.), *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010)* (Vol. 2, pp. 344-345). Chicago, IL: International Society of the Learning Sciences.

°Caswell, T., °Jensen, M., **Lee, V. R.**, & Shelton, B. E. (2010). From Gettysburg to the Cuban Missile Crisis: Designing for historical reenactments with *Twitter*. In K. Gomez, L. Lyons & J. Radinsky (Eds.), *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010)* (Vol. 2, pp. 427-428). Chicago, IL: International Society of the Learning Sciences.

diSessa, A., Hammer, D., Louca, L., Parnafes, O., Sherin, B., **Lee, V.R.**, Krakowski, M., & Edelson, D. (2008). How to study learning processes? Reflection on methods for fine-grain data analysis. *Proceedings of The Eight International Conference of the Learning Sciences*. (CD-ROM)

**Lee, V. R.**, Russ, R. S., & Sherin, B. (2008). A functional taxonomy of discourse moves for conversation management during cognitive clinical interviews about scientific phenomena. In V. Sloutsky, B. Love & K. McRae (Eds.), *Proceedings of the 30th Annual Meeting of the Cognitive Science Society* (pp. 1723-1728). Austin, TX.

Kanter, D., Sherin, B., & **Lee, V.** (2006). Changing conceptual ecologies in task-structured science curricula. In S. A. Barab, K. E. Hay & D. T. Hickey (Eds.), *Proceedings of The Seventh International Conference of the Learning Sciences* (Vol. 1, pp. 293-299). Mahwah, NJ: Lawrence Erlbaum Associates.

**Lee, V. R.**, & Sherin, B. (2006). Beyond transparency: How students make representations meaningful. In S. A. Barab, K. E. Hay & D. T. Hickey (Eds.), *Proceedings of The Seventh International Conference of the Learning Sciences* (Vol. 1, pp. 397-403). Mahwah, NJ: Lawrence Erlbaum Associates.

**Lee, V. R.**, & Sherin, B. L. (2004). What makes teaching special? In Y. Kafai, W. Sandoval, N. Enyedy, A. Nixon & F. Herrera (Eds.), *Proceedings of the Sixth International Conference of the Learning Sciences* (pp. 302-309). Santa Monica, CA: Lawrence Erlbaum Associates.

## PEER-REVIEWED CONFERENCE PAPERS & PRESENTATIONS

\* Denotes equal contribution and alphabetical author listing

° Denotes a collaboration with a graduate student

^ Denotes a collaboration with an undergraduate student

Dubovi, I., & Lee, V. R. (to appear). *Vicarious learning with agent-based models: When is it effective?* Paper presented at the EARLI 2019, Aachen, Germany.

°Rogowski, A., Phillips, A., Recker, M., & Lee, V.R. (to appear/2019) *Design Capacity for Informal Learning within Schools: An Analysis of School Librarians and Maker Activities*. Paper presented at the American Educational Research Association Conference, Toronto, ON, CA

Lee, V. R., °Rogowski, A., Phillips, A. L., & Recker, M. (2018). *Using a "light touch" to support middle school libraries with implementing STEM-oriented Maker activities*. Paper presented at the 2018 AECT International Convention, Kansas City, MO.

Lee, V. R., °Cain, R., °Fischback, L., & °Chandel, A. (2018). *Electrodermal activity detection and the passive recording of arousal in Maker activities*. Paper presented at the 2018 AECT International Convention, Kansas City, MO.

°Hamilton, M., Clarke-Midura, J., Shumway, J. F., & Lee, V. R. (2018). *A Framework for Evaluating Computational Thinking Skills and Design Features of Early Childhood Toys*. Presentation at the 2018 SACNAS National Conference, San Antonio, TX.

Lee, V. R., & Dubovi, I. (2018). *Resolving ambiguity during anatomical identification work*. Paper presented at the EARLI SIG 20 & 26 Biennial Meeting, Jerusalem, Israel.

Lee, V. R., Recker, M., Phillips, A. L., & Rogowski, A. (2018). *Educative Maker Activity Materials for Small Town Librarians to Support Connected Learning*. Paper presented at the 2018 Connected Learning Summit, Cambridge, MA.

Lee, V. R., Recker, M., & Phillips, A. L. (2018). *An Asset-based Framework for Youth Maker Program Development in Libraries*. Paper presented at the 2018 Annual Meeting of the American Educational Research Association, New York, NY.

Lee, V. R., °Fischback, L. °Chandel, A., °Lam, K. & °Cain, R. (2018). *Peaking at Peaks: Looking at Aggregate Arousal Levels Across Youth in Afterschool Makerspace Activities*. Paper presented at the 2018 Annual Meeting of the American Educational Research Association, New York, NY.

°Cain, R., Phillips, A. L., & Lee, V. R. (2018). *Making Her Way, One Youth's Path to Well-Developed Interest in Digital Fabrication*. Paper presented at the 2018 NARST Annual International Meeting, Atlanta, GA.

Phillips, A. L., °Lewis, W., °Hansen, J., Lee, V. R., & Recker, M. (2017). *Bringing Making to Rural and Small Libraries: Design Hypotheses for Youth Maker Program Development*. Paper presented at the 2017 Digital Media and Learning Conference, Irvine, CA.

- Lee, V. R.** (2017). *Exploring use of wearable technologies to study engagement, interest and learning in Makerspaces*. Paper presented at the 2017 Meeting of the European Association for Research on Learning and Instruction, Tampere, Finland.
- Lee, V. R.** (2017). *Type 1 diabetes data and technologies as drivers of individual and family learning and development*. Paper presented at the Annual Meeting of the Jean Piaget Society, San Francisco, CA.
- Lee, V. R.** (2017). *School day routines as sense-making resources for interpreting activity tracker data*. Paper presented at the Annual Meeting of the Jean Piaget Society, San Francisco, CA.
- Lee, V. R.** (2017). *Micro-changes in scientific explanations as a result of kinesthetic and sensory experience*. Paper presented at the 2017 Annual Meeting of the American Educational Research Association, San Antonio, TX.
- Phillips, A., **Lee, V. R.**, Recker, M., & °Hansen, J. (2017). *That's going on at your library? Innovations at the Library*. Presentation at the Utah Library Association Annual Conference 2017, Sandy, UT.
- Lee, V. R.**, & °Cain, R. (2016). *Using wearables to capture features of engagement in youth makerspaces*. Paper presented at the aWear 2016: Wearable technologies, knowledge development, and learning, Stanford, CA.
- Lee, V. R.** (2016). *How can we support the use of Fitbit devices in the elementary classroom ecosystem?* Paper presented at the aWear 2016: Wearable technologies, knowledge development, and learning, Stanford, CA.
- Fields, D. A. & **Lee, V. R.** (2016). *Craft Technologies 101: Bringing making to higher education*. Presentation at the GLS 12: Games + Learning + Society, Madison, WI.
- °Drake, J. & **Lee, V. R.** (2016). *Analyzing depictions of science content in ESPN's SportScience*. Paper presented at the 2016 Annual Meeting of the National Association for Research in Science Teaching, Baltimore, MD.
- Lee, V. R.**, °Drake, J., °Thayne, J., °Cain, R. (2016). *From using wearable technology to improving with statistical reasoning*. Paper presented at the 2016 Annual Meeting of the American Educational Research Association, Washington, D.C.
- Lee, V. R.** & °Cain, R. (2016). *Does a jump count as a step? A case of a productive disciplinary engagement with recess activities*. Paper presented at the 2016 Annual Meeting of the American Educational Research Association, Washington, D.C.
- Lee, V. R.**, °Drake, J., & °Thayne, J. (2016). *The Quantified Self goes to school*. Paper presented at the 2016 Annual Meeting of the American Educational Research Association, Washington, D.C.

- °Thayne, J., & Lee, V. R. (2016). *When do self-data matter in technology-supported statistics learning?* Paper presented at the 2016 Annual Meeting of the American Educational Research Association, Washington, DC.
- °Thayne, J. & Lee, V. R. (2015). *Making Statistics Matter: Connecting Statistical Inquiry to the Life of the Students*. Paper presented at the 2015 Annual Meeting of the Association for Educational Communications and Technology, Indianapolis, IN.
- Lee, V. R., °King, W. L., & °Cain, R. (2015). *Grassroots or returning to one's roots? Unpacking the inception of a youth-focused community makerspace*. Paper presented at Fablearn 2015, Stanford, CA.
- Lee, V. R., & ^Briggs, M. (2015). *How equitable is the Quantified Self?* Paper presented at the Digital Media & Learning Conference 2015, Los Angeles, CA.
- Leary, H., Lee, V. R., & Recker, M. (2014). *A "use diffusion" perspective on teachers' adoption and use of a social teaching platform*. Paper presented at the 2014 Annual Meeting of the American Educational Research Association, Philadelphia, PA.
- Lee, V. R. (2014). *Using physical activity data technologies to capture pockets of immersive experience at school* Paper presented at the 2014 Annual Meeting of the American Educational Research Association, Philadelphia, PA.
- Lee, V. R. & Fields, D. A. (2013). *A clinical interview for assessing student learning in a university-level craft technology course*. Paper presented at the III Digital Fabrication in Education Conference (FabLearn 2013). Stanford, CA.
- Lee, V. R., Recker, M., & Sumner, T. (2013). *Variable appropriation of an online resource discovery and sharing tool* Paper to be presented at the CSCW in Education Workshop (CSCW-Ed), San Antonio, TX.
- °Drake, J., & Lee, V. R. (2013). *Dynamic Generation of Explanations about Bicycle Gearing Given the Resources of Immediate Physical Experiences*. Paper presented at the 2013 Annual Meeting of the American Educational Research Association. San Francisco, CA.
- Lee, V. R., Leary, H., °Sellers, L., Recker, M., & °Olsen, M. W. (2013). *Examining the Role of District Science Coordinators in the Implementation of a Web-based Lesson-planning Tool*. Paper submitted to the 2013 Annual Meeting of the American Educational Research Association. San Francisco, CA.
- Boxerman, J. Z., Lee, V. R., & °Olsen, J. (2013). *As seen through the lens: Students' encounters and engagement with science during outdoor field trips*. Paper presented the 2013 Annual Meeting of the American Educational Research Association. San Francisco, CA.



- °Sellers, L., Leary, H., °Olsen, M. W., **Lee, V. R.**, Recker, M., & Sumner, T. (2013). *Understanding How Teachers Opt In or Out of Using a Curriculum Planning Tool*. Paper presented at the 2013 Annual Meeting of the American Educational Research Association. San Francisco, CA.
- Leary, H., °Sellers, L., & **Lee, V. R.** (2012). *Understanding Teacher Perspectives and Practices: Experiences from the Curriculum Customization Service*. Paper presented at the 2012 meeting of the Association for Educational Communications and Technology, Louisville, KY.
- \*Brown, N. J. S., Danish, J. A., DeLiema, D., Engle, R. A., Enyedy, N., **Lee, V. R.**, & Parnafes, O. (2012). *Representations, interlocutors, and their influences on apparent knowledgeability*. Paper presented at the Annual Meeting of the American Educational Research Association, Vancouver, BC.
- Lee, V. R.** (2011). *Supporting elementary students' knowledge construction of measures of center: A PAD-based approach*. Paper presented at the 41st Annual Meeting of the Jean Piaget Society, Berkeley, CA.
- Berland, L. K., & **Lee, V. R.** (2011). *Analyzing argumentative discourse to identify factors underlying consensus-building processes*. Paper presented at the Annual Meeting of the American Educational Research Association. New Orleans, LA.
- Berland, M. W. & **Lee, V. R.** (2010). *Complex play and computational thinking in a collaborative board game*. Paper presented at Games, Learning, and Society Conference 6.0. Madison, WI.
- Russ, R. S., Sherin, B., & **Lee, V. R.** (2010). *Characterizing the nature of interviewer talk in cognitive clinical interview discourse interactions*. Presentation at the Twentieth Annual Meeting of the Society for Text & Discourse. Chicago, IL.
- Lee, V. R.** (2010). *A feasibility study of physical activity data technologies as investigative tools for high school students*. Paper presented at the 2010 Annual Meeting of the American Educational Research Association. Denver, CO.
- Lee, V. R.** (2010). *Misconstruals or more? The interactions of orbit diagrams and explanations of the seasons*. Paper presented at the 2010 Annual Meeting of the American Educational Research Association. Denver, CO.
- Berland, M. W. & **Lee, V. R.** (2010). *Using designer board games to understand distributed computational thinking*. Paper presented at the 2010 Annual Meeting of the American Educational Research Association. Denver, CO.
- Lee, V. R.** (2009). *Examining patterns of visual representation use in middle school science classrooms*. Paper presented at the 2009 Annual Meeting of the National Association for Research in Science Teaching. Garden Grove, CA.

- Lee, V. R. & Berland, M. W. (2009). *Distributed rule reconstruction in a face-to-face designer game*. Presentation at Games, Learning, and Society Conference 5.0. Madison, WI.
- Russ, R.S., Lee, V. R., Sherin, B. (2009). *Framing in clinical interviews: Cues and interpretations*. Paper presented at the 2009 Annual Meeting of the American Educational Research Association. San Diego, CA.
- Russ, R. S., Lee, V. R., Sherin, B. (2009). *Understanding the role of the interviewer in cognitive clinical interviews*. Paper presented at the 2009 Annual Meeting of the American Educational Research Association. San Diego, CA.
- Lee, V. R. (2007). *Case examinations of middle school student sense making from diagrammatic representations*. Paper presented at the 5<sup>th</sup> annual Knowledge Sharing Institute of the Center for Curriculum Materials in Science. Washington, D.C.
- Sherin, B., Lee, V. R., Krakowski, M. (2007). *Using clinical interviews to study science knowledge and learning*. Paper presented at the 5<sup>th</sup> annual Knowledge Sharing Institute of the Center for Curriculum Materials in Science. Washington, D.C.
- Lee, V. R. (2007). *Exploring the products and processes of middle school student sense-making with science textbook graphics*. Poster presented at the 2007 Gordon Research Conference on Visualization in Science and Education. Bryant University, Rhode Island.
- Lee, V. R. (2007). *Trends, changes, and challenges in a half-century of textbook representations*. Paper presented at the 2007 Annual Meeting of the American Educational Research Association. Chicago, IL.
- Sherin, B., Krakowski, M., Lee, V. R., Bang, M., & Dam, G. (2006). *Conceptual dynamics in clinical interviews: An introduction*, Paper presented at the 2006 Annual Meeting of the American Educational Research Association. San Francisco, CA.
- Krakowski, M., Sherin, B., Lee, V. R., Bang, M., & Dam, G. (2006). *Modes and nodes: A cognitive framework for capturing conceptual dynamics*, Paper presented at the 2006 Annual Meeting of the American Educational Research Association. San Francisco, CA.
- Lee, V. R., Krakowski, M., Sherin, B., Bang, M., & Dam, G. (2006). *Methodological challenges for identifying and coding diverse knowledge elements in interview data*, Paper presented at the 2006 Annual Meeting of the American Educational Research Association. San Francisco, CA.
- Lee, V. R. (2006). *Moving beyond epistemic fidelity for evaluating curricular representations*, Poster presented at the 2006 Annual Meeting of the American Educational Research Association. San Francisco, CA.

Sherin, B., Bang, M., Krakowski, M., & Lee, V. R. (2005). *Seeing knowledge through a clinical interview*, The Sixteenth Annual Winter Conference on Discourse, Text and Cognition. Jackson Hole, Wyoming.

Sherin, B., & Lee, V. R. (2005). *On the interpretation of scientific representations*. Paper presented at the 2005 Annual Meeting of the American Educational Research Association, Montreal, Canada.

Lee, V. R. & Swarat, S. L. (2005). *Rethinking human subjects protection training: Examining and addressing the needs of an educational research community*. Poster presented at the 2005 Annual Meeting of the American Educational Research Association, Montreal, Canada.

## INVITED PRESENTATIONS

*Learning what's interesting*. Invited plenary presentation at the 2018 Quantified Self Conference, Portland, OR, September 23, 2018.

*Agent-based models and vicarious learning: Putting learning sciences to work*. Invited presentation at the 2018 Empowering Teaching Excellence Conference, Utah State University, August 15, 2018.

*It's like looking at those Magic Eye books: Seeing patterns of participation and engagement in afterschool makerspace programs*. Invited colloquium, Center for Research on Learning and Technology, Indiana University, February 5, 2018.

*Taking steps toward thinking about data in the classroom*. Invited colloquium, Center for Mathematics Education, University of Maryland, College Park, October 27, 2017.

*Initial steps toward identifying moments of situational interest in Maker activities*. Invited lecture, Department of Educational Psychology, University of Utah, March 24, 2017.

*Youth data and youth making: Opportunities for learning within two sociotechnical movements*. Invited colloquium, Donald E. Bren School of Information and Computing Sciences, University of California, Irvine, January, 17, 2017.

*An inward look at the Learning Sciences (by way of an ICLS proceedings analysis)*. Invited presentation during International Conference of the Learning Sciences presidential plenary session, Singapore, June 24, 2016.

*Recording bodily experience: Opportunities for learning sciences research and design with wearable technologies*. Invited colloquium, Harvard Graduate School of Education, Cambridge, MA, December 14, 2015.

*Quantifying with kids*. Invited plenary presentation, Quantified Self 2015 Conference and Exposition, San Francisco, CA. June 19, 2015.

*Learning mathematics and science through movement and records of physical activity.* Invited lecture, Science and Mathematics Teaching Center, University of Wyoming, Laramie, WY. April 7, 2015.

*Bodily activities and experiences as objects of personal investigation.* Invited colloquium, Learning Sciences Institute, Arizona State University, Tempe, AZ. November 21, 2014.

*Representing and modeling embodied experiences to support student science learning.* Keynote address for the 2014 meeting of the Swedish Association for Research in Science Education (FND), Karlstad, Sweden. November 5, 2014.

*Engaging bodies and minds in K-12 education.* Invited lecture for Utah State University Sunrise Session, Salt Lake City, UT. October 3, 2014.

*Looking across contexts to inform the design of learning experiences: A case from the world of physical activity data.* Invited talk for STEM Education Research Colloquium series presented to Department of Curriculum and Instruction, University of Texas, Austin. April 2014.

*How it is, how it is, and how it could be: A reflection on strategies for bringing body data technologies into designed learning environments.* Jan Hawkins Award lecture presented at the 2014 Annual Meeting of the American Educational Research Association, Philadelphia, PA. April 2014.

*Move, sweat, & learn: Conducting research and design with physical activity data technologies.* Invited talk presented to Department of Instructional Psychology & Technology, Brigham Young University, Provo, UT, January 2012.

*Instructional technologies “on the move”.* Invited talk presented to Emma Eccles Jones College of Education and Human Services Advancement Board, Utah State University, October 2011.

*How are textbook representations used in the teaching and learning of physical science?* Invited talk presented to Department of Physics, Utah State University, March 2011.

## **EDUCATIONAL MATERIALS AND TOOLS DEVELOPED**

*Deep Dive into Diabetes.* (2018), with I. Dubovi, a Camtasia-based module that introduces agent-based models to show the biopharmacology of diabetes using a vicarious learning paradigm.

*Making at the Library* ([library-making.usu.edu](http://library-making.usu.edu)). (2018), with M. Recker, A. Phillips, A. Rogowski, Library program guides for school and public libraries enacting Maker-oriented activities and programs.

*Stepping into Data.* (2014), with J. Drake & R. Cain. Multiweek statistics unit, lesson plans, and support materials aligned to Math Common Core designed for 6<sup>th</sup> grade using wearable activity tracker data.

*Fitbit Data Grabber* (<http://ecds.ed.usu.edu/fitbit/>) (2012) with J. Drake. Free online tool to extract detailed data from Fitbit activity tracker devices, produces file formats usable for a range of analysis software tools.

*MIAMI-PAD: Modified Instruction of "Average" Mathematical Ideas using Physical Activity Devices.* (2009). Multiweek mathematics and statistics unit and lesson plans for designed for 5<sup>th</sup> grade using pedometers and heart rate monitors.

*Where have all the creatures gone?* Middle school, technology-enhanced life science standards-based unit, lesson plans, and educative teaching materials focusing on ecosystems and invasive species. Published as part of the *Investigating and Questioning our World through Science and Technology (IQWST)* curriculum, It's About Time. Lead developers: J. Krajcik & B. Reiser.

## TEACHING EXPERIENCE

### Instructional Technology & Learning Sciences:

- 2018            **Instructor**, *Developmental eSports*  
An elective course for undergraduate students. Topics include competitive gaming, gaming cultures, gender equity in gaming, and student leadership.  
Utah State University, Undergraduate Level
- 2018, 2019    **Instructor**, *Instructional Design Process I*  
A required course for new Master's degree seeking students. Topics include ADDIE, Backwards Design, Successive Approximation Model, design thinking, and instructional design models  
Utah State University, Graduate Level
- 2014, 2016    **Instructor**, *Embodiment, Communication, and Technology*  
A special topics graduate seminar covering embodied cognition, nonverbal aspects of interpersonal communication, quantified self, and new embodied learning technologies.  
Utah State University, Graduate Level
- 2013-2014    **Instructor**, *Research in Instructional Technology and Learning Sciences*  
An advanced doctoral level course in discipline-specific research methods required for students in Instructional Technology and Learning Sciences. Topics include design-based research, computational thinking, technology integration in schools, online education, and learning across contexts.  
Utah State University, Graduate Level

- 2012-2013  
2017 **Instructor**, *Performance Systems*  
An elective course for MS and PhD students. Topics include human computer interaction, interaction design, user research, models of collaboration, and organizational performance analysis.  
Utah State University, Graduate Level.
- 2010-2014 **Instructor**, *Learning Theory*  
A required course for new MS students. Topics include behaviorism, cognitivism, models of knowledge representation, apprenticeship, and situated learning theories.  
Utah State University, Graduate Level.
- 2010-2011 **Instructor**, *Communication, Instruction, and the Learning Process*  
A required course for new online MEd students. Topics include behaviorism, cognitivism, apprenticeship, situated learning theories, and teacher learning.  
Utah State University, Graduate Level.
- 2010 - 2011 **Instructor**, *Strategies and Skills for Online Learning*  
A required online course for new MS and M.Ed. students beginning online education. Topics include distance learning tools, graduate level writing, and time management skills.  
Utah State University, Graduate Level.
- 2010 **Instructor**, *Small Technologies*  
A special topics graduate seminar on the innovative use of portable digital technologies in K-12 mathematics and science learning environments.  
Utah State University, Graduate Level.
- 2009-2011 **Instructor**, *Computer Applications for Instruction and Training*  
An introductory course for pre-service teachers exploring technology tools to be used to support teaching and training.  
Utah State University, Undergraduate Level.
- 2007 **Facilitator**, *Learning Sciences Journal Club*.  
An elective journal club course that focuses on acculturating new students to the practices of reading and critiquing recently published research in the Learning Sciences. Northwestern University, Graduate Level.
- 2006 **Teaching Assistant**, *Knowledge Representation for the Learning Sciences*.  
A graduate course on cognitive perspectives and approaches to study learning. Northwestern University, Graduate Level. Supervised by Dr. Bruce Sherin.
- 2004 **Teaching Assistant**, *Introduction to Design*.  
A graduate course on design processes, learning goals, and instructional design. Northwestern University, Graduate Level. Supervised by Dr. Daniel Edelson.

2003 **Teaching Assistant**, *Cognitive Science Foundations of the Learning Sciences*.  
A graduate course on cognitive and situative learning theories relevant to education. Northwestern University, Graduate Level. Supervised by Drs. Andrew Ortony & Penelope Peterson.

Teacher Education:

2017- **Instructor**, *Technology Integration and Innovation in Education*.  
An undergraduate course for pre-service teachers on best practices for integrating technology into lessons.

2007 **Instructor**, *NU-TEACH Alternative Teaching Certification Program*.  
A course for new teachers on student thinking and prior conceptions in science. Northwestern University, Graduate Level.

2005-2006 **Teaching Assistant**, *New Approaches in Science Teaching*.  
A course for MS Ed. students on inquiry approaches to teaching and curriculum. Northwestern University, Graduate Level. Supervised by Dr. Bruce Sherin.

Education (General):

2013-2015 **Instructor**, *Qualitative Research Methods I*  
An introductory research methods course for PhD students from a range of Education and Human Services departments. Topics include methods for collecting and analyzing qualitative data and epistemologies of qualitative research.  
Utah State University, Graduate Level.

Cognitive Science:

2000 **Teaching Assistant**, *Language and Reasoning*.  
An undergraduate course on cognitive linguistics, language processing, and decision-making. University of California, San Diego, Undergraduate Level. Supervised by Dr. Seana Coulson.

Mathematics:

2005-2006 **Instructor**, *Math Fundamentals II*.  
A developmental mathematics course for first year undergraduates focusing on introductory algebra and geometry.  
Illinois Institute of Art, Chicago, Undergraduate Level.

2000 **Instructor**, *Elementary Mathematics*.  
A multi-month course for sixth graders on fractions and rational numbers. SummerBridge San Diego, Elementary Level (Grades 5 and 6).

## **SUPERVISED STUDENTS AND POSTDOCTORAL RESEARCHERS**

Postdoctoral Fellows

Phillips, Abigail. 2016-2018, now Assistant Professor of Library and Information Sciences, University of Wisconsin, Milwaukee

Dubovi, Ilana. 2017-2018, now Postdoctoral Scholar, Ben-Gurion University of the Negev, Lecturer (Assistant Professor) at Tel-Aviv University in 2019.

PhD (Chaired):

DuMont, M. (2014). *Engaging Alternative High School Students Through the Design, Development, and Crafting of Computationally Enhanced Pets*. Unpublished doctoral dissertation. Utah State University, Logan, UT.

Thayne, J. (2016). *Making Statistics Matter: Connecting Statistical Inquiry to the Lives of the Students*. Unpublished doctoral dissertation. Utah State University, Logan, UT. Now Data Communications Coordinator at Education Research and Data Center, State of Washington.

Drake, J. (2018). *Riding to Learn: Informal Science in Adult Cycling Communities*. Unpublished doctoral dissertation. Utah State University, Logan, UT. Now Institutional Researcher and Evaluator for Brigham Young University-Idaho.

Cain, R. (in progress). Passed Dissertation Proposal. Now Lecturer/Assistant Professor of Teacher Education, Weber State University.

## **PROFESSIONAL MEMBERSHIPS**

Member, National Association for Research in Science Teaching (NARST)

Member, International Society of the Learning Sciences (ISLS)

Member, American Educational Research Association (AERA)

Member, AERA SIG-Advanced Technologies for Learning (SIG-ATL)

Member, AERA SIG-Learning Sciences (SIG-LS)

Member, AERA SIG-Instructional Technology (SIG-IT)

Member, Cognitive Science Society

Member, Jean Piaget Society

Member, European Association for Research on Learning and Instruction (EARLI)

Member, Association for Education & Communications Technology (AECT)

## **CONFERENCE LEADERSHIP AND REVIEWING**

Early Career Workshop Co-Chair, *CSCL* 2019

Demonstrations Co-Chair, *ACM Interaction Design & Children*, 2019

Program Committee Member, *International Conference on Computers in Education*, ICCE 2018

Associate Chair, *ACM Interaction Design & Children*, 2018

Program Committee Member, ICLS 2018

Full Papers Co-Chair, *FabLearn* 2017

Program Committee Member, *CSCL* 2017

Associate Chair, *ACM SIGCHI* 2017, Strand: Specific Applications.



Technical Program Committee Member, Wearable Technologies Track of *IEEE International Conference on Advanced Learning Technologies (ICALT)*, 2016  
 Publicity Co-Chair, *Interaction Design and Children*, 2015  
 Short Papers Co-Chair, *Conference on Creativity and Fabrication in Education (FabLearn)*, 2014, 2016  
 Workshops Co-Chair, *International Conference of the Learning Sciences*, 2014  
 Program Committee Member, *Cyberlearning Summit*, 2014  
 Senior Reviewer, *International Conference of the Learning Sciences*, 2014  
 Program Committee Member, *FabLearn* 2013  
 Reviewer for *AERA*, *ICLS*, *CSCL*, *CHI*, *IDC*, *CSCW*, and *NARST* Conferences, 2005-ongoing

## **JOURNAL EDITING AND REVIEWING**

### Guest Editor

*Technology, Knowledge and Learning* Special Issue on Bicycles and Computational Technology  
 (Volume 18, Issue 1-2)

### Editorial Board Member

*Cognition & Instruction*  
*Journal of the Learning Sciences*  
*Technology, Knowledge and Learning*  
*Educational Technology Research & Development*  
*Information and Learning Sciences*

### Manuscript Reviewer

*Discourse Processes*  
*Science Education*  
*International Journal of Computers for Mathematical Learning*  
*Journal of Research in Science Teaching*  
*Chemistry Education Review & Practice*  
*Journal of Science Education and Technology*  
*Technology, Knowledge and Learning*  
*Journal of the Learning Sciences*  
*International Journal of Environmental and Science Education*  
*Cognition & Instruction*  
*AERA Open*  
*Equity & Excellence in Education*  
*International Journal of Child-Computer Interaction.*  
*Sensors*  
*Learning, Culture, and Social Interaction*

## **OTHER NATIONAL/INTERNATIONAL SERVICE**

Elected Office

Board of Directors, International Society of the Learning Sciences, 2015-2021  
 Chair, AERA SIG-Advanced Technologies for Learning, 2010-2012

Professional Committee Service

Member, Expert Design Specification Team (Data Science and Computational Thinking), BSCS  
 OpenScienceEd Initiative, 2018  
 Co-Chair, Communications Committee, International Society of the Learning Sciences, 2015-  
 Member, AERA Division C Jan Hawkins Award selection committee, 2015, 2018  
 Member, AERA SIG-ATL/LS Best Student Paper Award Committee  
 Reviewer for AERA SIG-Instructional Technology (IT) Outstanding Young Researcher Award

Grant & Fellowship Reviewing

National Science Foundation, Division of Research on Learning in Formal and Informal Settings  
 (DRL)  
 National Science Foundation, Division of Information and Intelligent Systems (IIS)  
 Institute of Museum and Library Services  
 National Academy of Education/Spencer Foundation  
 Social Sciences and Humanities Research Council (Canadian)

**FUNDED PROJECT ADVISORY BOARDS**

Advisory Board Member, *Prospective Elementary Teachers Making for Mathematical Learning*,  
 NSF DRK-12 Project, Montclair State University (PI: Drs. Steven Greenstein & Eileen  
 Fernandez)  
 Advisory Board Member, *Supporting Intergenerational Participatory Design Groups for  
 Librarians and Youth for Design Thinking Around Digital Learning*, IMLS National  
 Leadership Grant, University of Washington (PI: Dr. Jason Yip, Co-PI: Jin Ha Lee, Sinem  
 Siyahhan)  
 Advisory Board Member, *UGame-ICompute*. NSF ITEST Project, University of Wyoming (PI:  
 Dr. Jaqueline Leonard)  
 Advisory Board Member, *GRIDS: Graphing Research on Inquiry with Data in Science*. NSF  
 DRK-12 Project, University of California, Berkeley (PI: Dr. Marcia Linn).  
 Advisory Board Member, *DIP: STEM Learning Through Infographics (SLI)*. NSF Cyberlearning  
 Project, University of Colorado, Boulder (PI: Dr. Joseph Polman)  
 Advisory Board Member, *EXP: BodyVis: Advancing New Science Learning and Inquiry  
 Experiences via Custom Designed Wearable On-Body Sensing and Visualization*. NSF  
 Cyberlearning Project, University of Maryland, College Park (PI: Dr. Jon Froehlich)

**BOOK AND VOLUME ADVISORY BOARDS AND REVIEWING**

Reviewer, Cambridge University Press.  
 Editorial Advisory Board Member for Peppler, K. (Eds.) (2017). *The SAGE Encyclopedia of  
 Out-of-School Learning*. Thousand Oaks, CA: SAGE.

Editorial Advisory Board Member for Zheng, R., & Gardner, M. (Eds.) (2016). *Handbook of research on serious games for educational applications*. Hershey, PA: IGI Global.

## UNIVERSITY SERVICE

- 2018- **Faculty Advisor**, USU Esports
- 2018- **Member**, Utah State University, Graduate council.
- 2017- **Member**, Utah State University Department of Instructional Technology and Learning Sciences Faculty Search Committee (Assistant/Associate tenure-track)
- 2017- **Member (2017-2018), Chair (2018-2019)**, Utah State University, Committee on Committees.
- 2016- **Faculty Senator**, Utah State University, representing College of Education and Human Services.
- 2016 **Co-Chair**, Utah State University Department of Instructional Technology and Learning Sciences Faculty Search Committee (Assistant/Associate tenure-track)
- 2016 - **Member**, Utah State University Department of Instructional Technology and Learning Sciences Curriculum Committee
- 2015 **Member**, Utah State University Department of Instructional Technology and Learning Sciences Business Manager Search Committee (Staff)
- 2015 **Member**, Utah State University Department of Instructional Technology and Learning Sciences Systems Administrator Search Committee (Staff)
- 2014- **Member**, Utah State University Libraries Institutional Repository Advisory Committee
- 2014 **Member**, Utah State University Department of Instructional Technology and Learning Sciences Faculty Search Committee (Assistant/Associate tenure-track)
- 2013 **Member**, Utah State University Department of Instructional Technology and Learning Sciences Faculty Search Committee (Assistant/Associate tenure-track)
- 2013 **Member**, Utah State University, Office of the Provost STE<sup>2</sup>M Center Director Search Committee (Tenured faculty/Administrator)
- 2011-2015 **Coordinator**, Utah State University Department of Instructional Technology and Learning Sciences Multimedia Minor program.

- 2011-2012 **Member**, Utah State University Department of Instructional Technology and Learning Sciences Faculty Search Committee (Assistant/Associate tenure-track)
- 2009-2012 **Member**, Utah State University Department of Instructional Technology and Learning Sciences Awards Committee
- 2009-2015 **Member**, Utah State University Department of Instructional Technology and Learning Sciences Marketing and Public Relations Committee
- 2009-2012 **Member**, Utah State University Department of Instructional Technology and Learning Sciences M.S./M.Ed. admissions committee
- 2006-2008 **Member**, Northwestern School of Education and Social Policy Technology Committee.

## MEDIA APPEARANCES

- 2018 *Herald Journal*, newspaper article about formation of USU Esports club team, describes advisor role and associated university course ([https://www.hjnews.com/news/education/usu-esports-gains-club-sport-team-status-new-privileges/article\\_9162dfa8-447c-5b0f-9f9c-e83a7ec8d556.html](https://www.hjnews.com/news/education/usu-esports-gains-club-sport-team-status-new-privileges/article_9162dfa8-447c-5b0f-9f9c-e83a7ec8d556.html))
- 2017 *MIT Technology Review*, magazine and web article involving expert comments about the current state of educational apps (<https://www.technologyreview.com/s/608951/can-an-app-really-teach-you-to-sing/>)
- 2017 *Herald Journal*, newspaper article about new paper co-authored by 9-year old boy with Type 1 Diabetes ([http://news.hjnews.com/allaccess/kid-co-author-providence-boy-with-type-diabetes-contributes-to/article\\_05a8eafe-0fd3-5f68-91a7-b96b7c6ee2a2.html](http://news.hjnews.com/allaccess/kid-co-author-providence-boy-with-type-diabetes-contributes-to/article_05a8eafe-0fd3-5f68-91a7-b96b7c6ee2a2.html))
- 2016 *EdSurge*, web article describing research involving wearable technologies and elementary student classroom learning research. (<https://www.edsurge.com/news/2016-11-17-wearable-tech-weaves-its-way-into-learning>)
- 2016 *Herald Journal*, newspaper article describing science communication to the public ([http://news.hjnews.com/allaccess/alan-alda-center-discusses-communicating-science-at-usu/article\\_35a0c6f1-88d3-5be5-8f1b-afb2c095d8ef.html](http://news.hjnews.com/allaccess/alan-alda-center-discusses-communicating-science-at-usu/article_35a0c6f1-88d3-5be5-8f1b-afb2c095d8ef.html))
- 2016 *TechCrunch*, web article describing new research project involving detection of youth engagement during Maker activities.

(<https://techcrunch.com/2016/06/22/national-science-foundation-allots-1-5m-to-kid-focused-maker-projects/>)

- 2016 *Herald Journal*, newspaper article describing research partnership with local libraries and the Maker Movement
- 2016 *CacheValleyDaily.com*, news article about work with rural libraries and the Maker Movement
- 2016 *KVNU Talk Radio*, interview about the future of rural libraries and the Maker Movement
- 2014 *Quantifiedself.com*, blog post and interview describing research on wearable technologies for education
- 2014 *Salt Lake Tribune*, newspaper article describing research involving fitness devices and their use in STEM education
- 2014 *Herald Journal*, newspaper article describing research involving fitness devices and their use in STEM education
- 2013 *Access Utah*, Utah Public Radio (NPR Affiliate), panel discussion on future of educational technology
- 2013 *iPhone Life* magazine, feature article on mobile apps and devices for health and wellness