

## Curriculum Vitae

### Virginia J. Flood

Department of Learning and Instruction  
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Director, Embodied Interaction in STEM (EIS) Lab  
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Co-Director, Visualizing Brilliance for Equity in STEAM (ViBES) with Video Lab  
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### Education

Ph.D.	University of California, Berkeley	Learning Sciences and Human Development ( <i>Education in Math, Science, and Technology</i> )	2020
M.S.T.	University of Maine	Teaching (STEM Education)	2012
B.S.	University of Southern Maine	Biochemistry ( <i>magna cum laude</i> )	2007

### Employment History

Assistant Professor, Department of Learning and Instruction, University at Buffalo, SUNY	2020 – current
Lecturer, Science Education, San José State University	2018

### Awards

STAR Research Award, Graduate School of Education	2022 – 2023
International Conference of the Learning Sciences Best Paper Award	2022
National Academy of Education/Spencer Dissertation Fellowship	2018 – 2019
The Berkeley Fellowship, UC Berkeley	2013 – 2018
Research in Cognition and Mathematics Education Fellowship, UC Berkeley	2013 – 2016

### GRANTS & FUNDING

*Visualizing Brilliance for Equity in STEAM (ViBES) with Video Lab*, Transformative Labs for Equity Grant, Graduate School of Education, University at Buffalo, **\$32,600** (awarded)

Principal Investigator, DiGEST-PHYSICS: *Dialogic gesture in collaborative sense-making in physics*, NSF ECR-EHR Core Research Award #2201821, **\$497,798** (awarded)

National Academy of Education/Spencer Dissertation Fellowship, **\$27,500** (awarded)

SUNY PRODiG (Promoting Recruitment, Opportunity, Diversity, Inclusion & Growth), **\$15,000** (awarded)

### PUBLICATIONS

#### Refereed Journal Articles (16)

[\* denotes student author]

**Flood, V. J.** & Harrer, B. W. (2023) Kinetically-held questions: Representational gesture post-stroke holds in whole class interactions in STEM. *Linguistics and Education*, 75, 101164.

- \*Fong, M., DeLiema, D., **Flood, V. J.**, & \*Walker van Aalst, O. (2023). Contesting sociocomputational norms: Computer programming instructors and students' co-operative stancetaking around refactoring. *International Journal of Computer-Supported Collaborative Learning*.
- Walkoe, J., Williams-Pierce, C., **Flood, V. J.**, & \*Walton, M. (2023). Towards professional development for multimodal teacher noticing. *Journal for Research in Mathematics Education*, 54(4), 279-285.
- DeLiema, D. Kwon, Y. A., Crisholm, A., Williams, I., Dahn, M. **Flood, V. J.**, Abrahamson, D., & Steen, F. (2022). A multi-dimensional framework for documenting students' heterogeneous experiences with programming bugs. *Cognition and Instruction*. Online First.
- Flood, V. J.**, & Harrer, B. W. (2022) Teachers' responsiveness to students' gestured candidate responses in STEM whole-class interactions. *Classroom Discourse*, 14(3), 281-301.
- Flood, V. J.** (2021). The secret multimodal life of IREs: Representational gesture in a familiar questioning sequence. *Linguistics and Education*, 63, 100913.
- Flood, V. J.**, Shvarts, A., & Abrahamson, D. (2020). Teaching with embodied learning technologies for mathematics: Responsive teaching for embodied learning. *ZDM Mathematics Education*, 52(7), 1307-1331.
- Abrahamson, D., **Flood, V. J.**, Miele, J., & Siu, Y.-T. (2019). Enactivism and ethnomethodological conversation analysis as tools for expanding Universal Design for Learning: The case of visually impaired mathematics. *ZDM Mathematics Education*, 51(2), 291-303.
- Flood, V. J.** (2018). Multimodal revoicing as an interactional mechanism for connecting scientific and everyday concepts. *Human Development*, 61(3), 145-173.
- Hoey, E., DeLiema, D., Chen, R., **Flood, V. J.** (2018). Imitation in children's locomotor play. *Research on Children and Social Interaction*, 2(1), 1-24.
- Bruce, M. R., Wilson, T. A., Bruce, A. E., Bessey, S. M., & **Flood, V. J.** (2016). A simple, student-built spectrometer to explore infrared radiation and greenhouse gases. *Journal of Chemical Education*. 93(11), 1908-1915.
- Bruce, M. R., Bruce, A. E., Avargil, S., Amar, F. G., Wemyss, T. M., & **Flood, V. J.** (2016). Polymers and cross-linking: A CORE experiment to help students think on the submicroscopic level. *Journal of Chemical Education*. 93(9), 1599-1605.
- Flood, V. J.**, Amar, F. G., Nemirovsky, R., Harrer, B. W., Bruce, M. R. M., & Wittmann, M. C. (2015). Paying attention to gestures when students talk chemistry: Interactional resources for responsive teaching. *Journal of Chemical Education* 92(1), 11-22.
- Wittmann, M. C., **Flood, V. J.**, & Black, K. E. (2013). Algebraic manipulation as motion within a landscape. *Educational Studies in Mathematics*, 82(2), 169-181.
- Harrer, B. W., **Flood, V. J.**, & Wittmann, M. C. (2013). Productive resources in students' ideas about energy: An alternative analysis of Watts' original interview transcripts. *Physical Review Special Topics - Physics Education Research*, 9(2), 023101.
- Scherr, R. E., Close, H. G., Close, E.W., **Flood, V. J.**, McKagan, S. B., Robertson, A. D., Seeley, L., Wittmann, M. C., & Vokos, S. (2013). Negotiating energy dynamics through embodied action in a materially structured environment. *Physical Review Special Topics - Physics Education Research*, 9(2), 020105.

### Book Chapters (6)

- Flood, V. J.** (In Press). Embodiment in Education. In L. Shapiro & S. Spaulding, (Eds.), *The Routledge Handbook of Embodied Cognition*. Routledge.

**Flood, V. J.** (Accepted). Mathematical enskilment: Embodied apprenticeship in mathematical taskscapes. In Edwards, L. D. & Krause, C. M. *The body in mathematics: Theoretical and methodological lenses*. Brill.

Swidan, O., Schacht, F., Ludwig, M., **Flood, V. J.** (2024). Instrumental orchestration with emerging digital technology. In B. Pepin, G. Guedet, & J. Choppin (Eds.), *Handbook of Digital Resources in Mathematics Education*. Springer.

Abrahamson, D., Tancredi, S., Chen, R. S. Y., **Flood, V. J.**, & Dutton, E. (2023). Embodied design of digital resources for mathematics education: Theory, methodology, and framework of a pedagogical research program. In B. Pepin, G. Gueudet, & J. Choppin (Eds.), *Handbook of Digital Resources in Mathematics Education*. Springer.

**Flood, V. J.**, Shvarts, A., & Abrahamson, D. (2022). Responsive teaching for embodied learning with technology. In S. Macrine & J. Fugate (Eds.), *Movement matters: How embodied cognition informs teaching and learning*. MIT Press.

DeLiema, D., Dahn, M., **Flood, V. J.**, Asuncion, A., Abrahamson, D., Enyedy, N., Steen, F. F. (2020). Debugging as a context for collaborative reflection on problem-solving processes. In E. Manolo (Ed.), *Deeper Learning, Communicative Competence, and Critical Thinking: Innovative, Research-Based Strategies for Development in 21st Century Classrooms* (pp. 209-228). Routledge.

### Refereed Conference Proceedings (17)

\*Zirek, C., **Flood, V. J.**, Harrer, B. W., (In Press). Laminated layers of abstraction in physics students' gesture. In *Proceedings of the International Conference of the Learning Sciences, 2024*. Buffalo, NY: International Society of the Learning Sciences.

\*Booth, E. T., **Flood, V. J.**, Harrer, B. W., (In Press). The enactment of an instant: A study of gesture in introductory physics. In *Proceedings of the International Conference of the Learning Sciences, 2024*. Buffalo, NY: International Society of the Learning Sciences.

\*Lee, S., \*Scheuneman, S. M., **Flood, V. J.**, Harrer, B. W., (In Press). Gesture in synthesizing student contributions in whole-class discussion of graphical representations of energy. In *Proceedings of the International Conference of the Learning Sciences, 2024*. Buffalo, NY: International Society of the Learning Sciences.

\*Scheuneman, S. M., **Flood, V. J.**, Harrer, B. W., (2023). Characterizing representational gestures in collaborative sense-making of vectors in introductory physics. In *Proceedings of the Physics Education Research Conference 2023*. D. Jones, Q. Ryan, and A. Pawl. (Eds.), Sacramento, CA: American Association of Physics Teachers, pp. 290–295.

**Flood, V. J.** & Harrer, B. W. (2023). How kinetically-held gestures support collaborative problem solving in physics. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023* (pp. 1522-1525). International Society of the Learning Sciences.

Wang, X. C., **Flood, V. J.**, & Xing, G. Y. (2023). Preschoolers' embodied and shared self-regulation through computational thinking. In Blikstein, P., Van Aalst, J., Kizito, R., & Brennan, K. (Eds.), *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023* (pp. 1470-1473). International Society of the Learning Sciences.

**Flood, V. J.**, Wang, X. C., & \*Sheridan, M. (2022). Embodied responsive teaching for supporting computational thinking in early childhood. In C. Chinn, E. Tan, C. Chan, & Y. Kali (Eds.), *International Collaboration Towards Education Innovation For All, International Conference of the Learning Sciences (ICLS) 2022* (pp. 855-862). Hiroshima, Japan: International Society of the Learning Sciences. **\*\*Winner of the ICLS Best Paper Award\*\***

Wang, X. C., **Flood, V. J.**, & \*Cady, A. (2021). Computational thinking through body and ego syntonicity: Young children's embodied sense-making using a programming toy. In de Vries, E., Hod, Y., Ahn, J. (Eds.), *Reflecting the Past and Embracing the Future, International Conference of the Learning*

*Sciences (ICLS) 2021* (pp. 394-401). Bochum, Germany: International Society of the Learning Sciences. **\*\*Nominated for the ICLS Best Paper Award\*\***

- Flood, V. J., & Harrer, B. W.** (2021). Responding to STEM students' gestured candidate responses. In de Vries, E., Hod, Y., Ahn, J. (Eds.), *Reflecting the Past and Embracing the Future, International Conference of the Learning Sciences (ICLS) 2021* (pp. 973-974). Bochum, Germany: International Society of the Learning Sciences.
- Flood, V. J. & Harrer, B. W.** (2020). How physics students re-use gestures in collaborative knowledge building. In D. Keifert (Chair), Analytical designs: Goodwin's substrates as a tool for studying learning. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, International Conference of the Learning Sciences (ICLS) 2020, Volume 3* (pp. 1475-1476). Nashville, TN: International Society of the Learning Sciences.
- Fong, M., Walker-van Aalst, O., **Flood, V. J.**, & DeLiema, D. (2020). When features become bugs: Stance-taking around refactoring in a coding classroom. In Y. Kafai (Chair), Turning bugs into learning opportunities: Understanding debugging processes, perspectives, and pedagogies. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, International Conference of the Learning Sciences (ICLS) 2020, Volume 1* (p. 378). Nashville, TN: International Society of the Learning Sciences.
- Flood, V. J., DeLiema, D., & Abrahamson, D.** (2018). Bringing static code to life: The instructional work of animating computer programs with the body. In Kay, J. and Luckin, R. (Eds.), *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, International Conference of the Learning Sciences (ICLS) 2018, Volume 2* (pp. 1085-1088). London, UK: International Society of the Learning Sciences.
- Flood, V. J., DeLiema, D., Harrer, B. W. & Abrahamson, D.** (2018). Enskilment in the digital age: The interactional work of learning to debug. In Kay, J. & Luckin, R. (Eds.), *Rethinking learning in the digital age: Making the Learning Sciences count, International Conference of the Learning Sciences (ICLS) 2018, Volume 3* (pp. 1405-1406). London, UK: International Society for the Learning Sciences.
- Flood, V. J., Harrer, B. W., & Abrahamson, D.** (2016). The interactional work of configuring a mathematical object in a technology-enabled embodied learning environment. In Looi, C.-K., Polman, J. L., Cress, U., & Reimann, P. (Eds.), *Transforming Learning, Empowering Learners, International Conference of the Learning Sciences (ICLS) 2016, Volume 1* (pp. 122-129). Singapore: International Society for the Learning Sciences.
- Flood, V. J., Neff, M., & Abrahamson, D.** (2015). Boundary interactions: Resolving interdisciplinary collaboration challenges using digitized embodied performances. In Lindwall, O., Häkkinen, P., Koschman, T. Tchounikine, P. Ludvigsen, S. (Eds.), *Exploring the Material Conditions of Learning: The Computer Supported Collaborative Learning (CSCL) Conference 2015, Volume 1* (pp. 94-101). Gothenburg, Sweden: International Society of the Learning Sciences.
- Flood, V. J., Schneider, A., & Abrahamson, D.** (2014). Gesture enhancement of a virtual pedagogical agent: Forms and functions for proportions. In Polman, J. L., Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T. & D'Amico, L. (Eds.), *Learning and Becoming in Practice: The International Conference of the Learning Sciences (ICLS) 2014, Volume 3* (pp. 1593-1594). Boulder, CO: International Society for the Learning Sciences
- Harrer, B. W., **Flood, V. J.**, & Wittmann, M. C. (2012). How students talk about energy in Project-Based Inquiry Science. In the *AIP Conference Proceedings 1513: 2012 Physics Education Research Conference Proceedings*. Philadelphia, PA.
- Other Publications (2)**
- Flood, V. J.** (2020). *Gesture as a Dialogic Resource in STEM Instructional Interactions* (Publication No. 27996938) [Doctoral dissertation, University of California, Berkeley]. ProQuest Dissertations & Theses Global.

**Flood, V. J.** (2012). "A Phenomenological Approach to Understanding the Role of Bodily Activity in Chemical Imagining." *Electronic Theses and Dissertations*. 1848.  
<https://digitalcommons.library.umaine.edu/etd/1848>

## PRESENTATIONS

### Invited Presentations (14)

- "Gesture in Teaching and Learning." **Flood, V. J.** Guest lecture for Cultivating Cognitive Development Seminar, Graduate School of Education, UC Berkeley. March, 2024.
- "Embodiment in Education." **Flood, V. J.** Guest lecture for Learning Theories Doctoral Seminar, Department of Learning and Instruction, Graduate School of Education, University at Buffalo, SUNY, December, 2023.
- "Gesturing together in collaborative problem solving in physics: Co-constructing explanations." **Flood, V. J.**, \*Booth, E.T., & Harrer, B. W. Data workshop & presentation for Co-Operative Action Laboratory (CoAL), Marjorie H. Goodwin (Director). UCLA, January, 2024.
- "Exploring gesture as a dialogic resource in STEM education." **V. J. Flood.** Cognitive Science Colloquium, University at Buffalo, SUNY, December, 2021.
- "Tuning in to conversations of gesture in STEM." **V. J. Flood.** Maine Center for Research in STEM Education (RiSE) Colloquium, University of Maine, Orono, ME, April, 2021.
- "Computational thinking through body and ego syntonicity: Young children's embodied sense making using a tangible programming toy." X. C. Wang, **V. J. Flood**, & A. Cady\*. Research Talk Friday, Department of Learning and Instruction, GSE, University at Buffalo, SUNY, April, 2021.
- "Gesture in IRE Sequences." **V. J. Flood.** Guest lecture & data workshop. EDUC 203: Cultivating Cognitive Development: From sensorimotor intelligence to embodied STEM concepts, Graduate School of Education, UC Berkeley. April, 2021.
- "Embodied meaning-making in technology-rich STEM learning environments." **V. J. Flood.** Invited seminar presentation at the Department of Teaching and Learning, Policy and Leadership, University of Maryland, College Park, MD, 2019.
- "Exploring embodied meaning-making in STEM learning & teaching." **V. J. Flood.** Invited seminar presentation at the Department of Educational Psychology, University of Utah, Salt Lake City, UT, 2019.
- "Beyond words: The role of gesture in STEM learning and teaching." **V. J. Flood.** Invited seminar presentation at the Natural History Museum of Utah, Salt Lake City, UT, 2019.
- "Studying the fine details of multimodal learning interactions." B. W. Harrer & **V. J. Flood.** Invited seminar presentation at the Wisconsin Ideas in Education Series (WIES), University of Wisconsin-Madison, Madison, WI, 2018.
- "Multimodal analysis of the interactional work of transforming participation structures in a middle-school classroom." B. W. Harrer & **V. J. Flood.** Plenary presentation at the Physics Education Research Conference (PERC), Sacramento, CA, 2016.
- "The handiwork of imagining the submicroscopic: Embodied performances as interactional resources for learning chemistry." **V. J. Flood.** Invited presentation at the Science Education Seminar, San José State University, San José, CA, 2015.
- "Using gesture analysis to explore embodied cognition in chemistry." F. G. Amar, **V. J. Flood**, R. Nemirovsky, M. C. Wittmann, M. R. M. Bruce, & T. Wemyss. Invited presentation at the Transforming Research in Undergraduate STEM Education (TRUSE), St. Paul, MN, 2012.

**Conference Presentations (27)**

- “Laminated layers of abstraction in physics students’ gesture.” Zirek, C., **Flood, V. J.**, Harrer, B. W. (2024) Graduate School of Education Student Research Symposium. University at Buffalo, Buffalo, NY.
- “How kinetically-held gestures support collaborative problem solving in physics.” **Flood, V. J.** & Harrer, B. W. International Conference of the Learning Sciences (ICLS) 2023, Montreal, Canada
- “Embodied responsive teaching for supporting computational thinking in early childhood.” **V. J. Flood, X. C. Wang,** & M. Sheridan.\* International Conference of the Learning Sciences Online in Hiroshima, Japan 2022.
- “We-Syntonicity: Preschoolers’ Collective Embodied Computational Thinking in a Teacher-Guided Programming Session.” Wang, X. C., **V. J. Flood,** A. Cady\*. In “Embodied, Personal, and Artistic: Reasoning with Gestures and Representations” Roundtable Session. AERA, San Diego, 2022
- “Computational thinking through body and ego syntonicity: Young children’s embodied sense-making using a programming toy.” X. C. Wang, **V. J. Flood,** & A. Cady. International Conference of the Learning Sciences (ICLS), online in Bochum, Germany, 2021.
- “How physics students re-use gestures in collaborative knowledge building.” **V. J. Flood** & B. W. Harrer. International Conference of the Learning Sciences (ICLS), online in Nashville, TN, 2020.
- “When features become bugs: Stance-taking around refactoring in a coding classroom.” M. Fong, O. Walker–van Aalst, **V. J. Flood,** & D. DeLiema. International Conference of the Learning Sciences (ICLS), online in Nashville, TN, 2020.
- “How instructors use gestures during Initiation-Response-Evaluation/Follow-Up (IRE/F) sequences.” **V. J. Flood.** Roundtable Session at the AERA Annual Meeting San Francisco, CA, 2020. <http://tinyurl.com/yx5gbwab> (In-person conference canceled)
- “Teacher noticing professional development: Re-embodying the dis-embodied.” J. Walkoe, C. Williams-Pierce, E. Shokeen, M. Walton, & **V. J. Flood.** Roundtable Session at the AERA Annual Meeting San Francisco, CA, 2020. <http://tinyurl.com/yx5gbwab> (In-person conference canceled)
- “Bringing Static Code to Life: The instructional work of animating computer programs with the body.” **V. J. Flood,** D. DeLiema, & D. Abrahamson. International Conference of the Learning Sciences (ICLS), London, UK, 2018.
- “Peer conversations about refactoring computer code: Negotiating reflective abstraction through narrative, affect, and play.” O. Walker–van Aalst, D. DeLiema, **V. J. Flood,** & D. Abrahamson. Paper presented at the annual meeting of the Jean Piaget Society (JPS), Amsterdam, Netherlands, 2018.
- “Imitation in children’s locomotor play.” E. Hoey, D. DeLiema, R. Chen, & **V. J. Flood.** Paper presented in Ethnomethodology and Conversation Analysis: CA, Multimodality, and Lab Study at the 113th annual meeting of the American Sociological Association (ASA), Philadelphia, PA, 2018.
- “Measuring debugging: How late elementary and middle school students handle broken code.” D. DeLiema, D. Abrahamson, N. Enyedy, F. Steen, M. Dahn, **V. J. Flood,** J. Taylor, & L. Lee. Symposium conducted at the annual meeting of the American Educational Research Association (AERA), New York City, 2018.
- “Scaffolding debugging: The interactional work of finding and fixing errors.” **V. J. Flood.** 17th Annual Graduate School of Education Research Day, Berkeley, CA, 2018.
- “Productive physical intuitions about patterns of motion: Eliciting and refining intuitions with breaching artifacts.” B. W. Harrer & **V. J. Flood.** American Association of Physics Teachers Winter Meeting, San Diego, CA, 2018.
- “The interactional work of configuring a mathematical object in a technology-enabled embodied learning environment.” **V. J. Flood,** B. W. Harrer, & D. Abrahamson. International Conference of the Learning Sciences (ICLS), Singapore, 2016.

- “Animated-GIF libraries for capturing pedagogical gestures: An innovative methodology for virtual tutor design and teacher professional development.” **V. J. Flood**, M. Neff, & D. Abrahamson. Paper presented at the 7th annual meeting of the International Society for Gesture Studies (ISGS), Paris, France, 2016.
- “Boundary interactions: Resolving interdisciplinary collaboration challenges using digitized embodied performances.” **V. J. Flood**, M. Neff, & D. Abrahamson. International Conference on Computer Supported Collaborative Learning (CSCL), Gothenburg, Sweden, 2015.
- “Refining mathematical meanings through multimodal revoicing interactions: The case of ‘faster.’” **V. J. Flood** & D. Abrahamson. Paper presented at the Annual Meeting of the American Educational Research Association (AERA), Special Interest Group: Semiotics in Education: Signs, Meanings, Multimodality: Chicago, IL, 2015.
- “Multimodal revoicing interactions: Two new forms.” **V. J. Flood** & D. Abrahamson. Presentation at the 15th Annual Graduate School of Education Research Day, University of California, Berkeley, Berkeley, CA, 2015.
- “Moving targets: Overcoming challenges of representing and simulating choreographies of multimodal pedagogical tactics for a virtual agent mathematics tutor.” **V. J. Flood**, A. Schneider, & D. Abrahamson. In *The learning at hand: Gesture production in virtual pedagogical agents*. Symposium conducted at the annual meeting of the American Educational Research Association (AERA), Chicago, IL, 2015.
- “Monkeys and bananas: Middle school students’ productive ideas about energy.” B. W. Harrer & **V. J. Flood**. American Association of Physics Teachers Winter Meeting, San Diego, CA, 2015.
- “Gesture enhancement of a virtual pedagogical agent: Forms and functions for proportions.” **V. J. Flood**, A. Schneider, & D. Abrahamson. International Conference of the Learning Sciences (ICLS), Boulder, CO, 2014.
- “Towards gesture enhancement of a virtual tutor via investigating human tutor discursive strategies.” **V. J. Flood** & A. Schneider. 14th Annual Graduate School of Education Research Day, Berkeley, CA, 2014.
- “Paying attention to gesture in chemical explanations: What does it tell us?” F. G. Amar, **V. J. Flood**, R. Nemirovsky, M. R. M. Bruce, & M. C. Wittmann. American Chemical Society Meeting, San Diego, CA, 2012.
- “How students talk about energy in Project-Based Inquiry Science.” B. W. Harrer, **V. J. Flood**, & M. C. Wittmann. Physics Education Research Conference, Philadelphia, PA, 2012.
- “How students talk about energy in Project-Based Inquiry Science.” B. W. Harrer, M. C. Wittmann, & **V. J. Flood**. National Conference on Integrating STEM Education Research into Teaching: Knowledge of Student Thinking, Orono, ME, 2012.

#### Conference Poster Presentations (15)

- “The enactment of an instant: A study of gesture and time in undergraduate physics” Booth, E.T., **V. J. Flood**, & Harrer, B. W. Poster accepted at the Annual Conference on Language, Interaction, and Culture (CLIC), at the University of California, Los Angeles, 2024. [Conference canceled due to UCLA protests]
- “Characterizing representational gestures in collaborative sense-making of vectors in introductory physics.” Scheuneman, S. M., **Flood, V. J.**, Harrer, B. W. (2023). American Association of Physics Teachers (AAPT) Summer Meeting. Sacramento, CA
- “Layers of abstraction in problem solving gestures.” Zirek, C., **Flood, V. J.**, Harrer, B. W., (2023). American Association of Physics Teachers (AAPT) Summer Meeting. Sacramento, CA.
- “Distributed knowledge production in small-group whiteboard for collaborative sense-making in physics.” S. M. Scheuneman, **Flood, V. J.**, & B. W. Harrer. (2023). Graduate School of Education Student Research Symposium. University at Buffalo.

- “Responding to STEM students’ gestured candidate responses.” **V. J. Flood**, & B. W. Harrer. Poster presented at the International Conference of the Learning Sciences (ICLS), Bochum, Germany 2021.
- “Debugging failure: 5th-10th grade students’ journal reflections, coding, and artwork about broken code.” DeLiema, D., Dahn, M. Enyedy, N., Abrahamson, D., Steen, F., **Flood, V. J.**, & Taylor, J. (2019). In D. A.-L. Lui, D. DeLiema, J. Ryoo, & Y. Kafai (Chairs & Organizers), *Failure in the learning process: How learners experience and overcome obstacles through resources and supports*. Structured poster session conducted at the annual meeting of the American Educational Research Association, Toronto, 2019.
- “Enskilment in the digital age: The interactional work of learning to debug.” **V. J. Flood**, D. DeLiema, B. W. Harrer, & D. Abrahamson. Poster presented at the International Conference of the Learning Sciences (ICLS), London, 2018.
- “The multimodal organization of children’s locomotor play.” E. Hoey, D. DeLiema, R. Chen, & **V. J. Flood**. Poster presented at the 9th annual meeting of the International Society for Gesture Studies (ISGS), Cape Town, South Africa, 2018.
- “At work and at school: Parallel practices for configuring objects in technology-rich environments.” **V. J. Flood**. Poster presented at the 22nd Annual Conference on Language, Interaction, and Culture (CLIC), at the University of California, Los Angeles, 2016. **\*\*Best Poster Award\*\***
- “The joint accomplishment of a learnable in the case of ‘faster:’ Negotiating mathematical meanings through multimodal revoicing.” **V. J. Flood**. Poster presented at Social Policy and Research in Cognition and Mathematics Education Conference: A Focus on the Common Core, University of California Berkeley, Berkeley, CA, 2015.
- “Gesture enhancement of a virtual pedagogical agent: Forms and functions for proportions.” **V. J. Flood**, A. Schneider, & D. Abrahamson. Poster presented at the 11th International Conference of the Learning Sciences (ICLS), Boulder, CO, 2014
- “The role of gesture and the body in molecular geometry.” **V. J. Flood**, F. G. Amar, M. C. Wittmann, R. Nemirovsky, & M. R. M. Bruce. Transforming Research in Undergraduate STEM Education (TRUSE), St. Paul, MN, 2012.
- “Using lab-based analogies to facilitate meaningful understanding.” M. R. M. Bruce, S. Avargil, F. G. Amar, **V. J. Flood**, & A. Bruce. Transforming Research in Undergraduate STEM Education (TRUSE), St. Paul, MN, 2012.
- “Gesture analysis of chemical explanations: Students’ embodied apprehension of molecular scale phenomena.” F. G. Amar, **V. J. Flood**, T. Wemyss, R. Nemirovsky, M. R. M. Bruce, & M. C. Wittmann. Gordon Research Conference: Chemistry Education Research & Practice, Foundations and Frontiers, Davidson, NC, 2011.
- “How multimodal analysis helps us understand students’ ideas about atoms and molecules.” **V. J. Flood**, F. G. Amar, T. Wemyss, R. Nemirovsky, M. R. M. Bruce, & M. C. Wittmann. No Question Left Behind Conference, Orono, ME, 2011.

## TEACHING

### Graduate Level Courses (7)

Embodiment in Education: The Body’s Role in Teaching, Learning, and Technology (LAI 689)

Instructional Strategies in Inclusive Classrooms: Mathematics (LAI 698 – Seminar)

Instructional Strategies in Inclusive Classrooms: STEM (LAI 698 – Seminar)

Instructional Strategies in Inclusive Classrooms: UBTR Mathematics Residents (LAI 698 – Modules)

Problem Posing and Problem Solving (LAI 545)

Implications of the History of Mathematics for Teaching (LAI 543)



Special Topics in Science Education (San José State University)

### Undergraduate Level Courses (1)

Knowing and Learning in Mathematics and Science – Teaching Assistant (UC Berkeley)

## SERVICE

### National Service

Panelist for National Science Foundation, Directorate for Education and Human Resources (EHR)

Reviewer for the *Proceedings of the International Society for the Learning Sciences* 2018 - present

Reviewer for the *Proceedings of the Physics Education Research Conference* 2023

Ad Hoc Reviewer:

<i>Instructional Science</i>	<i>Journal of Mathematical Behavior</i>
<i>Classroom Discourse</i>	<i>Mathematical Thinking and Learning</i>
<i>Linguistics and Education</i>	<i>Digital Experiences in Mathematics Education</i>
<i>Journal of Pragmatics</i>	
<i>Early Childhood Research Quarterly</i>	<i>Routledge</i>

### Graduate School of Education Service

GSE Executive Committee (LAI Representative) 2022 - 2025

Faculty Sponsor, Graduate School of Education Graduate Student Research Symposium 2021 - 2022

Co-chair UB GSE Spencer Dissertation Fellowship Workshop '20, '21

Learning Sciences Search Committee 2021

Math Education Search Committee 2023

### Department Service

Dissertation Committee Service (5):

Veronica Bass (Defended 2021)	Lauren Hennings (in progress)
Joe'l Staples (Defended 2021)	Serena Geokan (in progress)
Christina Mead (Defended 2024)	Alexandra Herb (in progress)

Research Components (2): Tina Lewis (May 2023); Dana Antonucci-Durgan (May 2023)

### PhD Advisement (3)

Minghui Zhu, Curriculum, Instruction, and the Science of Learning (CISL) 2023 - present

Seoyeon Lee, Curriculum, Instruction, and the Science of Learning (CISL) 2022 - present

Stacy Scheuneman, Curriculum, Instruction, and the Science of Learning (CISL) 2021 - 2023

### Masters Advisement (27)

Educational Studies in Mathematics EdM; current (13); graduated (1)

Professional Mathematics Education EdM current (8)

Initial/Professional Mathematics Education EdM; current (0); graduated (2)

Teacher Residency Mathematics; current (0); graduated (3)

#### **PROFESSIONAL MEMBERSHIPS**

National Council of Mathematics Teachers (NCTM) since 2021

International Society of the Learning Sciences (ISLS) since 2014

American Educational Research Association (AERA; currently lapsed due to COVID-19)