

## **LuEttaMae (Lu) Lawrence, Ph.D.**

LuEttaMaeLawrence [at] gmail.com | LuEttaMae.com

### **APPOINTMENTS**

**Assistant Professor** | *August 2022*

Instructional Technology and Learning Sciences, Utah State University (USU)

**Postdoctoral Fellow** | *September 2021 - Present*

School of Education, University of California, Irvine (UCI)

Supervisors: June Ahn & Andres Bustamante

**Postdoctoral Fellow** | *August 2020 - August 2021*

Human-Computer Interaction Institute, Carnegie Mellon University (CMU)

Supervisors: Vincent Alevan, Ken Holstein, Bruce McLaren, & Nikol Rummel

### **EDUCATION**

**Ph.D. in Digital Environments for Learning, Teaching, and Agency** | *2020*

Curriculum & Instruction, University of Illinois Urbana-Champaign (UIUC)

Dissertation: The design process of a collaborative orchestration tool and its implications for instructor uptake

**M.A. in Digital Environments for Learning, Teaching, and Agency** | *2018*

Curriculum & Instruction, University of Illinois Urbana-Champaign (UIUC)

Thesis: Food for Thought: How interface design fosters collaborative data discussions

**B.F.A. in Graphic Design** | *2015*

College of Design, Iowa State University

### **AWARDS**

**Best Design Paper Award**, Computer Supported Collaborative Learning | *2022*

**Best Design Paper Nomination**, Computer Supported Collaborative Learning | *2021*

**TIER-ED Graduate Research Award** (\$5,000) | *2019*

**Hardie Dissertation Award** (\$1,984) | *2019*

**Innovation in Energy Award**, Food for Thought App, Engineering Open House | *2019*

**Sustainable Solutions Award**, Food for Thought App, Engineering Open House | *2019*

**Graduate College Conference Travel Award** (\$350) | *2019, 2017*

**Hardie Conference Travel Support Award** (\$500) | 2019

**Block Grant Conference Travel Grant** (\$1,163) | 2018

**DELTA Travel Fellowship** (\$200) | 2017

**Janice Peterson Anderson Award Nominee** | 2015

**Bronze Award**, BrassRing100 Exhibition | 2014

**Harry Watts Scholarship Nominee** | 2014

## GRANTS

(I have led or significantly contributed to writing and developing the following funded grants)

4 **Supporting collaborative reflections by K-12 teachers with analytics from intelligent tutoring software**

National Science Foundation RETTL Award #2119501 (\$850,000) | *Awarded 2021*

Principal Investigators: Vincent Aleven & Nikol Rummel

3 **Parent-child collaborative problem solving in a museum exhibit**

University of Illinois Campus Research Board (\$20,000) | *Awarded 2018-2020*

Principal Investigator: Emma Mercier

2 **Designing interdisciplinary lessons around collaborative software for the middle school classroom**

O'Leary Learning Center Grant (\$1,000) | *Awarded 2017-2018*

Principal Investigators: Susan Kelly, Megan Kessler, **LuEttaMae Lawrence**, & Jenn White

1 **A new framework for implementing collaboration among designers and educational researchers**

O'Leary Learning Center Grant (\$1,000) | *Awarded 2017-2018*

Principal Investigators: **LuEttaMae Lawrence** & Amanda Henderson

## PUBLICATIONS

\* = Student mentee co-author

\*\* = Community partner co-author

## PEER REVIEWED ARTICLES

- 21 Aleven, V., Blankestijn, J., **Lawrence, L.**, Nagashima, T., & Taatgen, N. (2022). A dashboard to support teachers during students' self-paced AI-supported problem-solving practice. In *17th European Conference on Technology Enhanced Learning, EC-TEL 2022*, Toulouse, France, September 12-16, 2022. Springer Nature, Cham. [Full paper; Acceptance rate 27%]

- 20 \*Yang, K., Lu, Z., Echeverria, V., Sewall, J., **Lawrence, L.**, Rummel, N., & Alevén, V. (2022). An exploratory classroom study into orchestrating dynamic transitions between individual and collaborative AI-tutored problem solving. In *International Conference on Artificial Intelligence in Education*. Springer, Cham. [Short paper; Acceptance rate 20%]
- 19 Hmelo-Silver, C. E., Puntambekar, S., Glazewski, K., **Lawrence, L.**, Rummel, N., Alevén, V., ... Worsley, M. (2022). AI and ambitious learning practices. Symposium conducted at the *15th Annual Conference on Computer Supported Collaborative Learning*. International Society of the Learning Sciences. Hiroshima, Japan. [Symposium]
- 18 **Lawrence, L.** (2022). Examining design-based implementation research through linkographic analysis. Symposium conducted at the *16th Annual International Conference of the Learning Sciences*. International Society of the Learning Sciences. Hiroshima, Japan. [Symposium]
- 17 **Lawrence, L.**, \*Guo, B., \*Yang, K., Echeverria, V., \*Kang, Z., \*Bathala, V., \*Li, C., \*Huang, W., Rummel, N., & Alevén, V. (2022). Process to co-design AI-based orchestration tools to support dynamic transitions: Design narratives through Conjecture Mapping. Paper accepted at the *15th Annual Conference on Computer Supported Collaborative Learning*. International Society of the Learning Sciences. Hiroshima, Japan. **Best Design Paper**. [Full paper]
- 16 **Lawrence, L.**, Rummel, N., & Alevén, V. (2022). Ethical consideration for designing AI to support dynamic learning transitions. Symposium conducted at the *16th Annual International Conference of the Learning Sciences*. International Society of the Learning Sciences. Hiroshima, Japan. [Symposium]
- 15 Mercier, E., **Lawrence, L.**, Ahn, J., Wegemer, C., Benichou, M., Kali, Y., ... Cheng, B. (2022). Mapping the complexities and benefits of research-design partnerships. Symposium conducted at the *16th Annual International Conference of the Learning Sciences*. International Society of the Learning Sciences. Hiroshima, Japan. [Full paper]
- 14 **Lawrence, L.**, Holstein, K., Berman, S., Fancsali, S., McLaren, B. M., Ritter, S., & Alevén, V. (2021). Teachers' Orchestration Needs During the Shift to Remote Learning. In *Technology Enhanced Learning for a Free, Safe, and Sustainable World: 16th European Conference on Technology Enhanced Learning, EC-TEL 2021, Bolzano, Italy, September 20–24, 2021, Proceedings* (pp. 347-351). Springer Nature, Cham. [Short paper; Acceptance rate 27%]
- 13 \*Yang, K., **Lawrence, L.**, Echeverria, V., \*Guo, B., Holstein, K., Rummel, K., & Alevén, V. (2021). Surveying Teachers' Preferences and Boundaries Regarding Human-AI Control in Dynamic Pairing of Students for Collaborative Learning. In *Technology-Enhanced Learning for a Free, Safe, and Sustainable World: 16th European Conference on*

*Technology Enhanced Learning*, EC-TEL 2021, Bolzano, Italy, September 20–24, 2021, Proceedings (pp. 260-274). Springer Nature, Cham. [Full paper; Acceptance rate 27%]

- 12 \*Jang, J., \*Lee, J., Echeverria, V., **Lawrence, L.**, & Aleven, V. (2021). Explorations of designing spatial classroom analytics with virtual prototyping. In *Proceedings of the 11th International Learning Analytics & Knowledge Conference (LAK21)*, April 12–16, 2021, Irvine, CA, USA. ACM, New York, NY, USA, (pp. 518-524). <https://doi.org/10.1145/3448139.3448192>. [Full paper; Acceptance rate 29%]
- 11 \*Yang, K., Wang, X., Echeverria, V., **Lawrence, L.**, Holstein, K., Rummel, K., & Aleven, V. (2021). SimPairing - Exploring policies for dynamically teaming up students through log data simulation. In Hsiao I., Sahebi S., Bouchet F., & Vie J.J. (Eds.), *Proceedings, Fourteenth International Conference on Educational Data Mining (EDM 2021)* (pp. 183-194). Educational Data Mining Society. [Full paper; Acceptance rate 27%]
- 10 **Lawrence, L.**, Shehab, S., & Tissenbaum, M. (2021). Human-centered design taxonomy: Case study application with novice, multidisciplinary designers. Symposium conducted at the *15th Annual International Conference of the Learning Sciences*. International Society of the Learning Sciences. (pp. 860-861). Bochum, Germany. [Symposium; Acceptance rate 27%]
- 9 **Lawrence, L.**, \*Tucker, T., & Mercier, E. (2021). Examining the influence of instructor interventions on group collaboration. In *Proceedings of the 14th International Conference on Computer-Supported Collaborative Learning-CSCL 2021*. International Society of the Learning Sciences. (pp. 161-164). Bochum, Germany. **Best Design Paper Nominee**. [Short paper; Acceptance rate 27%]
- 8 \*Tucker, T., **Lawrence, L.**, & Mercier, E. (2021). Investigating the effectiveness of an orchestration tool on the nature of students' collaborative interactions during group work. *Proceedings of the 2021 ASEE Virtual Annual Conference Content Access, Virtual Conference*. <https://peer.asee.org/38174> [Full paper; Impact factor 0.40]
- 7 Shehab, S., **Lawrence, L.**, & Tissenbaum, M. (2021). Integrating human-centered design in a food science capstone course: A case study. Symposium conducted at the *15th Annual International Conference of the Learning Sciences*. International Society of the Learning Sciences. (pp. 861-862). Bochum, Germany. [Symposium; Acceptance rate 27%]
- 6 Shehab, S., Tissenbaum, M., **Lawrence, L.**, Lewis, D. R., Easterday, M., Carlson, S., ... & Sawyer, K. (2021). Towards bringing human-centered design to K-12 and post-secondary classrooms. *Symposium conducted at the 15th annual International Conference of the Learning Sciences*. International Society of the Learning Sciences. (pp. 859-866). Bochum, Germany. [Full paper; Acceptance rate 27%]
- 5 Shehab, S., **Lawrence, L.**, Mercier, E., \*\*Margotta, A., \*\*Livingston, L., \*\*Silva, M., & Tucker, T. (2020). Towards the effective implementation of collaborative problem solving in

undergraduate engineering classrooms: Co-designing guidelines for teaching assistants. *Proceedings of the 2020 ASEE Virtual Annual Conference Content Access, Virtual Online*. <https://doi.org/10.18260/1-2--35396> [Full paper; Impact factor 0.49]

- 4 **Lawrence, L.** & Mercier, E. (2019). Co-design of an orchestration tool: Supporting engineering teaching assistants as they facilitate collaborative learning. *Interaction Design and Architecture(s) Journal*, (42), 111-130. [Journal]
- 3 **Lawrence, L.**, & Mercier, E. (2019). A review of the evolving definition of orchestration: Implications for research and design. In *A wide lens: Combining Embodied, Enactive, Extended, and Embedded Learning in Collaborative Settings*. 13th International Conference on Computer-Supported Collaborative Learning (pp. 829-830). Lyon, France. [Poster; Acceptance rate 30%]
- 2 Kelly, S. B., **Lawrence, L.**, & Mercier, E. (2017). Engaging everyday science data to help make sense of data. In *Making a Difference—Prioritizing Equity and Access in CSCL: The 12th International Conference on Computer Supported Collaborative Learning*. (pp. 581-584). Philadelphia, USA. [Short paper; Acceptance rate 35%]
- 1 **Lawrence, L.** & Mercier, E. (2017). Designing visualizations to monitor collaboration in engineering discussion sessions. In Vogel, C. & Muratovski, G. (Eds.), *Re: Research*. Cincinnati, OH: International Association of Societies of Design Research. <https://doi.org/10.7945/C25Q4P> [Full paper; Acceptance rate 60%]

## BOOK CHAPTERS & VIGNETTES

- 2 **Lawrence, L.**, \*Szura, J. W., Begolli, K., \*\*Minko, J., Bustamante, A., & Ahn, J. (accepted). Tiered levels of engagement for teacher partnerships. *RPP brokers handbook: A guide to brokering in education research-practice partnership*. Houston, TX: National Network of Education Research-Practice Partnerships (NNERPP).
- 1 Cromley, J. G., & **Lawrence, L.** (2018). Multimedia simulations that foster deep learning: Findings from a review of the literature. R. Zheng (Ed.). *Strategies for Deep Learning with Digital technology: Theories and practices in education*. 93-110. Hauppauge, NY: Nova Science Publishers.

## OTHER PUBLICATIONS

- 2 **Lawrence, L.**, Shehab, S., \*\*Livingston, L., & \*\*Margotta, A. (2019). Collaborative teaching sequence: A guide for teachers. CoLearnLab Resources. <https://www.colearnlab.org/resources>
- 1 Kelly, S., **Lawrence, L.**, & Mercier, E. (2017). Food for Thought: User and resource guide. CoLearnLab Resources. <https://www.colearnlab.org/resources>

## UNDER REVIEW & IN PREPARATION

- 4 Cromley, J., Chen, R., & **Lawrence, L.** (under review) Meta-analysis of STEM learning using virtual reality: Benefits across the board.
- 3 Echeverria, V. \*Yang, K., Wang, X., **Lawrence, L.**, Rummel, N., & Alevan, V. (revise and resubmit). Designing human-AI orchestration tools to support dynamic classroom transitions.
- 2 **Lawrence, L.**, Shehab, S., & Tissenbaum, M. (under review). The development and implementation of a taxonomy for teaching and learning human-centered design.
- 1 **Lawrence, L.**, Tucker, T., Bosch, N., Paquette, L., & Mercier, E. (in preparation). Accuracy and effectiveness of models for predicting collaboration on instructors' strategies and groups' collaboration.

## RESEARCH EXPERIENCE

### **Postdoctoral Fellow** | *September 2021 – Present*

Fraction Ball

Principal Investigators: Andres Bustamante, June Ahn, Drew Bailey, Kreshnik Begolli, Katherine Rhodes, & Linsey Richland  
EF+Math Program

### **Postdoctoral Fellow** | *September 2021 – Present*

Co-Designing Technology with Latinx Families to Promote Playful Learning in the City  
Principal Investigators: Andres Bustamante, June Ahn, Sarah Lytle, & Shelly Kessler  
Heising Simons Foundation

### **Postdoctoral Fellow** | *August 2020 – August 2021*

Enhancing Student Learning with an Orchestration Tool for Personalized Teacher-Student Interactions in Classroom Using Intelligent Tutoring Software  
Principal Investigators: Vincent Alevan & Bruce McLaren  
Institute of Education Sciences (R305A180301)

### **Postdoctoral Fellow** | *August 2020 – August 2021*

Human/AI Co-Orchestration of Dynamically-Differentiated Collaborative Classrooms  
Principal Investigators: Vincent Alevan, Nikol Rummel, & Ken Holstein  
National Science Foundation (1822861)

### **Graduate Research Assistant** | *January 2019 – August 2020*

Human Centered Design Assessment  
Principal Investigators: Mike Tissenbaum  
Siebel Center for Design

**Design Research Consultant** | August 2018 – August 2020  
Parent-Child Collaborative Problem Solving in a Museum Exhibit  
Principal Investigator: Emma Mercier  
Campus Research Board (RB18110)

**Graduate Research Assistant** | August 2017 – August 2020  
Improving Collaborative Learning in Engineering Classes Through Integrated Tools for Instructors and Students  
Principal Investigators: Emma Mercier & Luc Paquette  
National Science Foundation (1628976)

**Graduate Research Assistant** | May 2017 – December 2018  
Meta-Analysis to Support an Integrated Theory of Multimedia Learning  
Principal Investigator: Jennifer Cromley  
National Science Foundation (1661231)

**Graduate Research Assistant** | December 2015 – Aug 2017  
Fostering Collaborative Drawing and Problem Solving through Digital Sketch and Touch  
Principal Investigators: Emma Mercier, Joshua Peschel, & Geoffrey Herman  
National Science Foundation (1441149)

**Graduate Research Assistant** | December 2015 – May 2017  
Computer Supported Collaborative Learning for the Development of Environmental Literacies  
Principal Investigator: Emma Mercier  
Campus Research Board (RB15253)

## PRESENTATIONS

### INVITED PRESENTATIONS, PANELS, & WORKSHOPS

- 15 Dimitriadis, Y., Martinez-Maldonado, R., Campos, F., Sarmiento, J. P., **Lawrence, L.**, Hernandez-Leo, D., Barreiros, C., Nicholson, R., & Buckingham S. (2022). Human-centered learning analytics. Workshop presented at the *Learning Analytics Summer Institute*, Virtual, June 13-17, 2022. [Invited Workshop]
- 14 **Lawrence, L.**, (2022). Playful STEM Learning: Fraction Ball. Committee for Education and Culture of the Bavarian Parliament, Irvine, CA, May 4, 2022. [Invited Speaker]
- 13 **Lawrence, L.**, (2022). Co-designing AI-based orchestration tools to support dynamic transitions. University of Pittsburgh, Virtual, March 28, 2022. [Invited Speaker]
- 12 **Lawrence, L.**, (2021). Playful STEM Learning: Fraction Ball. University of Massachusetts Amherst, Virtual, *October 20, 2021*. [Invited Speaker]

- 11 **Lawrence, L.**, (2021). Designing your research: Academic poster design. Learning Sciences Graduate Student Conference, Virtual, October 3, 2021. [Invited Workshop]
- 10 **Lawrence, L.**, (2021). How do we engage in equitable design processes to design learning analytics. *Equitable Learning Analytics - Why should everyone care?* Learning Analytics & Knowledge Conference, Virtual, April 18, 2021. [Invited Panelist]
- 9 **Lawrence, L.**, (2021). Exploring the design process and use of a teacher orchestration tool. Ruhr-University Bochum (RUB), Bochum, Germany, Virtual, February 4, 2021. [Invited Speaker]
- 8 **Lawrence, L.**, (2020). Human-centered design: A case study application with novice, multidisciplinary designers. Siebel Center for Design, Champaign, IL, December 3, 2020. [Invited Speaker]
- 7 **Lawrence, L.**, (2020). Designing AI-based orchestration tools to support the sudden shift to remote learning. Digital Environments for Learning, Teaching, and Agency, Champaign, IL, October 20, 2020. [Invited Speaker]
- 6 **Lawrence, L.**, (2020). Exploring the design process and use of a teacher orchestration tool. Human-Computer Interaction Institute, Carnegie Mellon University, September 4, 2020. [Invited Speaker]
- 5 **Lawrence, L.**, (2020). Mapping design features to learning outcomes. Playful Journey Lab, MIT, Boston, MA, February 18, 2020. [Invited Workshop]
- 4 **Lawrence, L.**, (2018). Designing technology to educate students on the environmental impact of food. Food Science and Human Nutrition Graduate Student Association, Champaign, IL, October 29, 2018. [Invited Speaker]
- 3 **Lawrence, L.**, (2018). Educational game design. Playful by Design Spring Symposium, Champaign, IL, April 7, 2018. [Invited Panelist]
- 2 **Lawrence, L.**, (2018). Designing your research: Academic poster design. Special Education Graduate Student Organization, Champaign, IL, September 28, 2018. [Invited Workshop]
- 1 **Lawrence, L.**, (2018). Design for collaborative learning. Physics Education Research Group, Champaign, IL, June 7, 2018. [Invited Speaker]

#### **TUTORIALS & WORKSHOPS ORGANIZED (PEER REVIEWED)**

- 5 Dimitriadis, Y., Martinez-Maldonado, R., Campos, F., Sarmiento, J. P., **Lawrence, L.**, Hernandez-Leo, D., Barreiros, C., Nicholson, R., & Buckingham S. (2021). *Human-centered learning analytics*. Workshop presented at the European Conference on Technology Enhanced Learning, Virtual, September 20-22, 2021.



- 4 Echeverria, V., **Lawrence, L.**, Tsai, Y. S., Fernandez-Nieto, G. M., Singh, S., & Martinez-Maldonado, R. (2021). *A tutorial on data storytelling for learning analytics dashboards*. Workshop presented at the Learning Analytics and Knowledge Conference, Virtual, April 12-13, 2021
- 3 Martinez-Maldonado, R., Dimitriadis, Y., Holstein, K., Wise, A., Prieto-Alvarez, C., Campos, F., Sarmiento, J. P., Ahn, J., **Lawrence, L.**, & Buckingham S. (2021). *Human-centered learning analytics*. Workshop presented at the Learning Analytics and Knowledge Conference, Virtual, April 12-13, 2021.
- 2 Shehab, S., **Lawrence, L.**, O'Bryan, L., & Switzky, R. (2019). *Bringing the human-centered design approach to the K-12 classrooms*. Workshop presented at the Illinois New Teacher Collaborative summer conference, Champaign, IL, USA, June 25-26, 2019.
- 1 **Lawrence, L.** (2017). *Communicating your research: Poster design*. LSGSC 2017 Conference Proceedings. Workshop presented at the meeting of the Learning Sciences Graduate Students Conference, Bloomington, IN, USA, October 18-19, 2017.

#### CONFERENCE PRESENTATIONS (PEER REVIEWED)

\* = Student mentee co-author

- 16 **Lawrence, L.**, \*Guo, B., \*Yang, K., Echeverria, V., Rummel, K., & Alevan, V. (2022). Co-designing an AI-based orchestration tool to support dynamic transitions between individual and collaborative learning. Paper accepted at the *American Educational Research Association*, San Diego, CA, USA, April 21-26, 2022.
- 15 **Lawrence, L.**, Shehab, S., Tissenbaum, M., \*Rui, T., & \*Hixon, T. (2021). *Human-centered design taxonomy: Case study application with novice, multidisciplinary designers*. Paper accepted at the *American Educational Research Association*, Virtual Conference, April 9-12, 2021.
- 14 Shehab, S., **Lawrence, L.**, Tissenbaum, M., \*Rui, T., & \*Hixon, T. (2021). *Integrating human-centered design in higher education courses: Evaluating the first iteration*. Paper accepted at the *American Educational Research Association*, Virtual Conference, April 9-12, 2021.
- 13 **Lawrence, L.** (2020). Design discourse: Interactions of an interdisciplinary research team and what it means for design-based research. *Learning Sciences Graduate Student Conference, LSGS Conference 2020*. Madison, WI: Learning Sciences Graduate Students Conference.
- 12 **Lawrence, L.**, Shehab, S., & Mercier, E. (2020). *Examining the use of a supportive orchestration tool by teaching assistants during collaborative problem solving*. Paper accepted at the *American Educational Research Association*, San Francisco, CA, USA, April 17-21, 2020. Accepted, but canceled due to COVID-19.

- 11 Shehab, S., **Lawrence, L.**, Tissenbaum, M., \*Rui, T., & \*Hixon, T. (2020). *Integrating human-centered design in post-secondary courses: Evaluating the first iteration*. Paper accepted to the *International Congress of Qualitative Inquiry*, Champaign, IL, Accepted, but canceled due to COVID-19.
- 10 Mercier, E., Paquette, L., Bosch, N., **Lawrence, L.**, & Shehab, S. (2020). *The development and implementation of an orchestration tool based on live action log data*. Paper accepted at the *American Educational Research Association*, San Francisco, CA, USA, April 17-21, 2020. Accepted, by canceled due to COVID-19.
- 9 Jung, J., Mercier, E., & **Lawrence, L.** (2019). *Interrogating the tool design processes: Impact of practical needs in theory-driven tool design*. Paper presented at the *Association for Educational Communities & Technology*, Las Vegas, NV, October 21-25, 2019.
- 8 **Lawrence, L.** (2019). Exploring the design process of an interdisciplinary team building a collaborative orchestration tool. *LSGS Conference 2019 Contexts, Complexity, and Communities: Reflecting on and Reshaping Research on Learning*. Chicago, IL: Learning Sciences Graduate Students Conference.
- 7 **Lawrence, L.** & Shehab, S. (2019). *Integrating technology to support teachers' monitoring and intervention strategies during collaborative activities*. Paper presented at the *Graduate Student Conference*, Champaign, IL, March 8, 2019.
- 6 Cromley, J. G., & **Lawrence, L.** (2018). *Meta-analysis of learning from hypermedia: Surprising effects on knowledge, inferences, and transfer*. Poster presented at the biennial meeting of the *European Association for Learning and Instruction*, Aachen, Germany, August 12-16, 2019.
- 5 **Lawrence, L.**, Henderson, A. K., & Mercier, E. (2018). Exploring collaboration between designers and educational researchers to improve interdisciplinary research methods. *LSGS Conference 2018 Expanding Apprenticeship*. Bloomington, IN.
- 4 **Lawrence, L.**, & Mercier, E. (2018). *Designing for collaborative problem solving on multitouch tables*. Paper presented at the *American Educational Research Association*, New York, NY, USA, April 13-17, 2018.
- 3 **Lawrence, L.** (2018). *Comparing visual design for teaching data literacy with multi-touch tables*. Paper presented at the *Graduate Student Conference*, Champaign, IL, March 9, 2018.
- 2 Kelly, S., Mercier, E., & **Lawrence, L.** (2017). *Student collaboration to build joint understanding of data*. Paper presented at the annual meeting of the *American Educational Research Association*, St. Antonio, TX, USA, April 28-May 1, 2017.

- 1 **Lawrence, L.,** Mercier, E., & Kelly, S. (2017). *Designing for data literacy with collaboration and multi-touch technology*. Poster at the annual meeting of the American Educational Research Association, St. Antonio, TX, USA, April 28-May 1, 2017.

## TEACHING

### COURSES

**Course Developer & Module Lead, Justice, Equity, Diversity, and Inclusion (JEDI) in HCI** (Human-Computer Interaction Institute 05-589), Carnegie Mellon University | *Spring 2021*

**Curriculum Designer & Instructor, Summer Intensive Design Workshop**, University of Illinois at Urbana–Champaign | *June 2017*

**Curriculum Designer & Instructor, Summer Intensive Design Workshop**, University of Illinois at Urbana–Champaign | *June 2016*

**Teaching Assistant, Design Thinking for Non-Majors** (Art 301), University of Illinois at Urbana-Champaign | *Fall 2015*

### GUEST LECTURER AND CRITIC

**Guest Critic, Graphic Design Capstone** (Art and Design 471), University of Illinois at Urbana-Champaign | *Spring 2019*

**Guest Lecturer, Digital Environments for Learning, Teaching, and Agency Graduate Seminar** (Curriculum and Instruction 590), University of Illinois at Urbana–Champaign | *Fall 2019*

**Guest Critic, Graphic Design Capstone** (Art and Design 471), University of Illinois at Urbana-Champaign | *Spring 2018*

**Guest Lecturer, Mobile Learning Technologies** (Curriculum and Instruction 590), University of Illinois at Urbana–Champaign | *Spring 2017*

### APP DEVELOPMENT

**Food for Thought: Your food, your footprint.** © University of Illinois Board of Trustees | 2017  
<https://apps.apple.com/us/app/food-for-thought-your-food-your-footprint/id1200031349>

### MENTORSHIP

## GRADUATE STUDENT MENTORING

**Taylor Tucker**, UIUC, Education MS/PhD student | *Fall 2019 – Present*

**John Szura**, UCI, Education PhD student | *Fall 2021 – Winter 2022*

**Tomo Nagashima**, CMU, Computer Science PhD student | *Fall 2020 – Fall 2021*

**Kexin (Bella) Yang**, CMU, Computer Science PhD student | *Fall 2020 – Fall 2021*

## UNDERGRADUATE STUDENT MENTORING

**Stephanie Park**, UCI, Education Studies, Research Assistant | *Spring 2022 – Present*

**Yerin Ko**, UCI, Education Studies, Research Assistant | *Fall 2021 – Present*

**Ethan Lin**, UCI, Education Studies, Research Assistant | *Fall 2021 – Present*

**Tallie Gigi**, UCI, Education Studies, Research Assistant | *Fall 2021*

**Sabrina Valdez**, UCI, Education Studies, Research Assistant | *Fall 2021*

**Michelle Yang**, UCI, Education Studies, Research Assistant | *Fall 2021*

**Boyuan (Bill) Guo**, CMU, Computer Science, Research Assistant | *Spring 2021*

**Jessica Li**, CMU, Computer Science, Research Assistant | *Spring 2021*

**Veronica Halloway**, UIUC, Engineering, Research Assistant | *Fall 2019 – Spring 2021*

**Tingting Rui**, UIUC, Education, Research Assistant | *Summer 2019 – Summer 2020*

**Tyler Hixon**, UIUC, Philosophy, Research Assistant | *Summer 2019 – Summer 2020*

**Parth Patel**, UIUC, Computer Science, Developer | *Fall 2018 – Summer 2020*

**Ian Wells**, UIUC, Computer Science, Developer | *Summer 2017 – Summer 2018*

**Gregory Fabry**, UIUC, Engineering, Developer | *Spring 2015 – Spring 2017*

**Max Collins**, UIUC, Informatics, Developer | *Fall 2016 – Spring 2017*

**Kelly Cole**, UIUC, Engineering, Developer | *Spring 2015 – Summer 2016*

## UNDERGRADUATE GROUP PROJECT SUPERVISION OR CO-SUPERVISOR

**Zimmy Kang, Christina Li, William Huang, & Vikrant Bathala**, NSF REU | *Summer 2021*, CMU, Human/AI co-orchestration of collaborative classrooms, co-mentored with Vincent Alevan and Jonathan Sewall

**Anna He, Natasha Rippert, Yifan Xu, & Joshua Maruchek**, Summer Interns | *Summer 2021*, CMU, Cognitive Tutoring Authoring Tools, co-mentored with Vincent Alevan and Jonathan Sewall

**Jacqueline Zhang, Christine Kim, Eileen Lee, & Ji Soo Geum**, Capstone Project Human Computer Interaction Institute | *Spring 2021*, CMU, Human-centered approach to support collaborative learning, co-mentored with Vanessa Echeverria

**Joon Jang & Jaewook Lee**, NSF REU | *Fall 2020*, CMU, Human/AI co-orchestration of collaborative classrooms, co-mentored with Vincent Aleven and Vanessa Echeverria

**Stella Yan & Alex Chiu**, Independent Study | *Fall 2020*, CMU, Peer tutoring interface for Adaptive Peer Tutoring Assistant (APTA), co-mentored with Vincent Aleven and Johnathan Sewall

**Oliver Qin, Siddharth Paratkar, & Sarah Pethani**, Independent Study | *Fall 2020*, CMU, Designing an orchestration dashboard for K-12 teachers using AI tutor, co-mentored with Vincent Aleven and Johnathan Sewall

**Sihan Wu, Xiaoying Meng, Xinying Hou, & Jeff Chen**, Independent Study | *Fall 2020*, CMU, Designing gamified tutoring systems, co-mentored with Vincent Aleven and Tomo Nagashima

## ACADEMIC SERVICE

### ELECTED POSITION

**Chair**, Advanced Technologies for Learning Special Interest Group of AERA | *2021 - 2023*

### CONFERENCE SERVICE

**Co-chair for Online/Hybrid Experience**, Educational Data Mining Conference (EDM) | *2022*

**Program Committee** (Associate Papers and Pictorials Chair), ACM Conference on Design for Interactive Systems (DIS) | *2021*

**Program Committee** (Reviewing), Learning Sciences Graduate Student Conference (LSGSC) | *2019*

### UNIVERSITY SERVICE

**Graduate Student Representative**, Search Committee for Assistant Teaching Professor in Computer Science Education, UIUC | *2019 - 2020*

### CONFERENCE REVIEWING

ACM Designing Interactive Systems (DIS)

ACM CHI

American Educational Research Association Conference (AERA)  
International Association of Societies of Design Research Conference (IASDR)  
International Conference on Computer Supported Collaborative Learning (CSCL)  
International Conference on the Learning Sciences (ICLS)  
Learning Analytics and Knowledge Conference (LAK)  
Learning Sciences Graduate Student Conference (LSGSC)

## **JOURNAL REVIEWING**

Interaction Design and Architecture Journal  
International Journal of Artificial Intelligence in Education  
Journal of Computer Assisted Learning  
Journal of Mathematical Behavior  
Educational Psychology Review

## **BOOK REVIEWING**

Nova Science Publishers

## **MEMBERSHIPS**

American Educational Research Association (AERA)  
Center for Integrative Research in Computing and Learning Sciences (CIRCLS)  
Emerging Scholars Design Justice Network (DJN)  
European Associate for Technology  
Enhanced Learning (EA-TEL)  
International Society of the Learning Sciences (ISLS)  
Society for Learning Analytics Research (SoLAR)

## **PROFESSIONAL EXPERIENCE**

**Educational Design Consultant** | *November 2015 – Present*

**Freelance Designer** | *September 2012 – June 2018*

**Graduate Design Intern**, The Meyocks Group, West Des Moines, IA | *June – August 2015*

**Graphic Design Intern**, 818 - A Tiny Design Empire, Des Moines, IA | *March – June 2015*

**Graphic Designer Iowa State**, Department of Music, Ames, IA | *February 2014 – March 2015*

**Graphic Designer**, Juls Design, Ankeny, IA | *June – October 2014*

**Graphic Designer**, Monument Wealth Management, Alexandria, VA | *May 2013 – June 2014*

## **EXHIBITIONS**

**ADAI Exhibition** | *May 2015*

**Art & Design Annual Exhibition** | *November 2014*

**BrassRing100 Exhibition, \*Bronze Award** | *April 2014*

**ADAI Exhibition** | *April 2014*

**NASAD Exhibition** | *November 2012*