

Tomohiro Nagashima

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EDUCATION

2017 – 2022 (expected)	Ph.D. in Human-Computer Interaction Carnegie Mellon University, Pittsburgh, PA Advisor: Vincent Aleven
2017 – 2020	M.S. in Human-Computer Interaction Carnegie Mellon University, Pittsburgh, PA Advisor: Vincent Aleven
2016 – 2017	M.A. in Education (Learning, Design, and Technology) Stanford Graduate School of Education, Stanford, CA Advisor: Candace Thille
2010 – 2014	B.A. in Education International Christian University, Tokyo, JAPAN Advisor: Insung Jung

FELLOWSHIPS & AWARDS

2021	Presidential Fellowship , Carnegie Mellon University School of Computer Science
2021	Best Design Paper Nomination , International Society of the Learning Sciences (ISLS2021) for C3
2020	Fred Mulder Best Open Education Practice Award (\$1,300) , Global OER Graduate Network (GOGN) for C7 & C8
2020	Nova Southeastern Award for Outstanding Practice in Instructional Design (\$75) , Association for Educational Communications and Technology (AECT) for C7 & C8
2019	Doctoral Consortium Fellowship (\$1,000) (Travel fellowship for LAK19), Society for Learning Analytics Research
2018	Virtually Connecting Scholarship (\$500) (Travel scholarship for OpenEd18), Virtually Connecting
2018	Open Education Award of Excellence (Category: Open Courses), Open Education Consortium
2018	Open Education Award of Excellence Honorable Mention (Category: Open Policy), Open Education Consortium
2018	Creative Commons Summit 2018 Travel Scholarship (\$700) , Creative Commons
2017	Creative Commons Summit 2017 Travel Scholarship (\$700) , Creative Commons
2016	OER Research Fellowship (\$4,000) , Open Education Group
2016	Study Abroad Scholarship (\$30,000) , Rotary International
2016	Merit-based Tuition Fellowship (\$10,000) , Stanford Graduate School of Education
2013	Study Abroad Scholarship (\$90,000) , Japan Business Federation
2011-12	Dean's List , International Christian University

GRANTS RECEIVED

2020 - 2023	Japan Society for the Promotion of Science (Grant-in-Aid for Scientific Research: B) Title: Developing data-informed OER improvement system <i>Co-PI</i> with Katsusuke Shigeta, Toshiyuki Takeda, Daisuke Kaneko, and Hidefumi Yagi <i>Award Amount: JPY 15,990,000 (USD 145,327)</i>
2015 – 2019	Japan Society for the Promotion of Science (Grant-in-Aid for Scientific Research: B) Title: Leveraging learning analytics to improve teaching and learning with MOOC

Co-PI with Katsusuke Shigeta, Toshiyuki Takeda, Hideki Mori, Daisuke Kaneko, Yasuhiro Hayashi, and Hidefumi Yagi
Award Amount: JPY 13,260,000 (USD 120,518)

PEER-REVIEWED PUBLICATIONS (an asterisk (*) denotes a mentored student)

Journal Articles

- J1. **Nagashima, T.** & Hrach, S. (revise & resubmit). Motivating factors among university faculty for adopting Open Educational Resources: Incentives matter.
- J2. Shigeta, K., Yagi, H., **Nagashima, T.**, Hamada, M., Miyazaki, T., Kobayashi, K., & Shima, M. (2015). Cooperative liberal arts education and flipped classroom implementation with MOOC. *Journal of Digital Practices* 6(2), 89-96. (in Japanese)
- J3. **Nagashima, T.** (2014). What makes open education thrive? Examination of factors contributing to the success of open education initiatives. *International Journal for Innovation and Quality in Learning* 2(3), 10-21.

Papers in Conference Proceedings

- C1. **Nagashima, T.**, *Yadav, G., & Alevin, V. (2021). A framework to guide technology-based educational studies in the evolving classroom environment. In *Proceedings of the Sixteenth European Conference on Technology Enhanced Learning (EC-TEL2021)*.
- C2. **Nagashima, T.**, Bartel, A. N., *Tseng, S., Vest, N.A., Silla, E. M., Alibali, M. W., & Alevin, V. (2021). Scaffolded self-explanation with visual representations promotes efficient learning in early algebra. In T. Fitch, C. Lamm, H. Leder, & K. Teßmar-Raible (Eds.), *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society* (pp. 1858-1864). Cognitive Science Society.
- C3. **Nagashima, T.**, Bartel, A. N., *Yadav, G., *Tseng, S., Vest, N. A., Silla, E. M., Alibali, M. W., & Alevin, V. (2021). Using anticipatory diagrammatic self-explanation to support learning and performance in early algebra. In E. de Vries, J. Ahn, & Y. Hod (Eds.), *15th International Conference of the Learning Sciences – ICLS 2021* (pp. 474–481). International Society of the Learning Sciences [acceptance rate: 33%]. **Best Design Paper Nominee.**
- C4. **Nagashima, T.**, *Yadav, G., & Alevin, V. (2021). Rethinking technology-based educational studies in the evolving classroom environment: An interview study with US teachers. In E. de Vries, J. Ahn, & Y. Hod (Eds.), *15th International Conference of the Learning Sciences – ICLS 2021* (pp. 933–934). International Society of the Learning Sciences.
- C5. Bartel, A. N., Silla, E. M., Vest, N.A., **Nagashima, T.**, Alevin, V., & Alibali, M. W. (2021). Reasoning about equations with tape diagrams: insights from math teachers and college students. In E. de Vries, J. Ahn, & Y. Hod (Eds.), *15th International Conference of the Learning Sciences – ICLS 2021* (pp. 685–688). International Society of the Learning Sciences [acceptance rate: 30%].
- C6. Yang, K., **Nagashima, T.**, Yao, J., Williams, J.J., Holstein, K., & Alevin, V. (2021). Can crowds make a good thing better, with minimal expert guidance? A step-by-step analysis of a teacher-guided crowd revision pipeline. *ACM Conference on Computer-Supported Collaborative Work and Social Computing (CSCW2021)*.
- C7. **Nagashima, T.**, Bartel, A. N., Silla, E. M., Vest, N. A., Alibali, M. W., & Alevin, V. (2020). Enhancing conceptual knowledge in early algebra through scaffolding diagrammatic self-explanation. In M. Gresalfi & I. S. Horn (Eds.), *14th International Conference of the Learning Sciences* (pp. 35-43). Nashville, TN: International Society of the Learning Sciences. [acceptance rate: 38%].
- C8. **Nagashima, T.**, *Yang, K., Bartel, A. N., Silla, E. M., Vest, N. A., Alibali, M. W., & Alevin, V. (2020). Pedagogical Affordance Analysis: Leveraging teachers' pedagogical knowledge for eliciting pedagogical affordances and constraints of instructional tools. In M. Gresalfi & I. S. Horn (Eds.), *14th International*

- Conference of the Learning Sciences* (pp. 1561-1564). Nashville, TN: International Society of the Learning Sciences.
- C9. Shigeta, K., Takeda, T., Mori, H., Yagi, H., **Nagashima, T.**, Kaneko, D., & Hayashi, Y. (2019). A practice of group-based learning support in online learning based on learner motivation and goal setting. *Workshop paper, Information Processing Society of Japan* (in Japanese).
- C10. Takeda, T., Hayashi, Y., Shigeta, K., Mori, H., Kaneko, D., Yagi, H., & **Nagashima, T.** (2018). Visualizing relationships among content topics and learning activities of online courses. In *Proceedings of EdMedia: World Conference on Educational Media and Technology*. Amsterdam, Netherlands: Association for the Advancement of Computing in Education (AACE).
- C11. Shigeta, K., Yagi, H., Takeda, T., Mori, H., Hayashi, Y., Kaneko, D., & **Nagashima, T.** (2017). A study on improving learning materials utilizing comments on MOOC discussion boards. In *Proceedings of the Annual Conference for Japan Society for Educational Technology*, Shimane. (in Japanese)
- C12. Hayashi, Y., Takeda, T., **Nagashima, T.**, Yagi, H., Mori, H., Kaneko, D., & Shigeta, K. (2016). Development of the dashboard system for teachers to perform effective indication of the learning data analysis. In *Proceedings of the 5th International Conference on Knowledge Creation and Intelligent Computing*. Manado, Indonesia.
- C13. **Nagashima, T.**, Yagi, H., & Shigeta, K. (2015). The value of delivering MOOC as OER. In *Proceedings of the Annual Conference for Japan Association for Educational Media*, Tokyo. (in Japanese)
- C14. Yagi, H. **Nagashima, T.**, & Shigeta, K. (2015). Improvement model of lectures and teaching materials developed by OER and MOOC. In *Proceedings of the Annual Conference for Japan Association for Educational Media*, Tokyo. (in Japanese)
- C15. Yagi, H., **Nagashima, T.** Hamada, M., Shima, M., Kobayashi, K., & Shigeta K. (2015). Flipped classroom using interactive distance learning system: An experimental class in liberal arts education among national universities in Hokkaido. In *Proceedings of the Annual Conference for Japan Society for Educational Technology*, Tokyo. (in Japanese)
- C16. Yagi, H., **Nagashima, T.**, Hamada, M., Shima, M., Kobayashi, K., & Shigeta K. (2015). Development of educational videos for liberal arts education among national universities in Hokkaido: How instructional designers and video content specialists can develop a collaborative workflow in a small team. In *Proceedings of the Annual Conference for Japan Society for Information and Systems in Education*, Tokyo. (in Japanese)
- C17. **Nagashima, T.** (2013). Open educational resources in higher education: A global perspective. In *Proceedings of the International Conference for Media in Education*, Aichi.

Conference Abstracts

- A1. Bartel, A. N., Silla, E. M., Vest, N. A., **Nagashima, T.**, Aleven, V., & Alibali, M. W. (2020). Reasoning about equations with tape diagrams: Do visual features matter? In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*, Toronto, Canada.

Doctoral Consortia

- D1. **Nagashima, T.** (2021). Towards fostering strategic choices in using diagrams in early algebra. In *Proceedings of the 12th International Conference on the Theory and Application of Diagrams (Diagrams 2021)*.
- D2. **Nagashima, T.** (2019). Towards enhancing conceptual knowledge in algebra through diagrammatic self-explanation. In *Companion Proceedings of the 9th International Learning Analytics and Knowledge Conference (LAK19)*. Tempe, AZ.
- D3. **Nagashima, T.** (2018). Contextualized instruction in data science and its effect on transfer of learning. In

Proceedings of the 13th European Conference on Technology Enhanced Learning (EC-TEL). Leeds, UK.

Manuscripts in Preparation

- M1. **Nagashima, T.**, Bartel, A. N., Silla, E. M., Vest, N. A., *Yang, K., Alibali, M. W., & Alevén, V. (in preparation). Redesigning instructional tools through Pedagogical Affordance Analysis.

OTHER PUBLICATIONS

- O1. **Nagashima, T.** (2018). Recent trends in open textbook adoption and research. *SIG Report. Game Learning and Open Education Special Interest Group*. Japan Society for Educational Technology. (in Japanese)
- O2. Wiens, K., Tarkowski, A., Watanabe, T., **Nagashima, T.**, Allen, N., Appleyard, B., Botero, C., Juliana, M., Mora, L., Smith, J., Salem, N., & Browne, D. (2016). Global Open Policy Report 2016. *Open Policy Network*.
- O3. Shigeta, K. & **Nagashima, T.** (2016). Envisioning the future of open education: a perspective from the non-English-speaking world. *FutuOER*.
- O4. **Nagashima, T.** (2016). OER research initiatives around the world. *SIG Report. Game Learning and Open Education Special Interest Group*. Japan Society for Educational Technology. (in Japanese)
- O5. **Nagashima, T.** (2015). How should we approach openness in MOOC? *SIG Report. Game Learning and Open Education Special Interest Group*. Japan Society for Educational Technology. (in Japanese)
- O6. Watanabe, T., Shigeta, K., **Nagashima, T.**, & Tanaka, K. (2014). Implication of EU's open education policy on educational system in Japan: Global competitiveness, employment, and digital divide. *Report by Innovation Nippon*. (in Japanese)

PEER-REVIEWED CONFERENCE PRESENTATIONS

- T1. **Nagashima, T.**, *Yadav, G., & Alevén, V. (2021). A framework for conducting remote classroom research. Presented at the CIRCLS'21 Convening. Center for Integrative Research in Computing and Learning Sciences.
- T2. Silla, E. M., Vest, N. A., **Nagashima, T.**, Bartel, A. N., Anthony, L. E., Alevén, V., & Alibali, M. W. (2021). Efficacy of tape diagrams: Evidence from an Intelligent Tutoring System. Lightning talk presented at the Annual Meeting of the Mathematical Cognition and Learning Society.
- T3. Silla, E. M., Tommasi, T., Vest, N. A., Bartel, A. N., Buehler, Z., Manhart, H., Petersdorff, M., **Nagashima, T.**, Alevén, V. & Alibali, M. W. (2021). Fostering conceptual understanding of equation solving via an Intelligent Tutoring System. Wisconsin Center for Education Research.
- T4. Vest, N. A., Silla, E. M., Bartel, A. N., **Nagashima, T.**, Alevén, V. & Alibali, M. W. (2021). Learning from worked examples: Conceptually rich explanations predict conceptual gains. The Society for Research in Child Development Biennial Meeting.
- T5. Bartel, A. N., Silla, E. M., Vest, N. A., **Nagashima, T.**, Tang, Y., Alevén, V. & Alibali, M. W. (2021). Do tape diagrams promote a focus on conceptual principles? Evidence from equation solving with an Intelligent Tutoring System. In Wong, T. (Chair), *Principle knowledge in mathematics: Its development, cognitive predictors, and potential interventions*, Symposium at the Annual Meeting of the Mathematical Cognition and Learning Society, Dublin, Ireland.
- T6. **Nagashima, T.**, Bartel, A., Silla, E., Vest, N., Alibali, M., & Alevén, V. (2020). Collaborative open educational practices: sharing evidence-based Open Educational Resources to facilitate meaningful adaptation. Open Education Conference.
- T7. **Nagashima, T.**, Xiong, Y., Bodily, R., & Stamper, J. (2018). Student engagement and learning in an

OER-based course: a longitudinal study. Open Education Conference, NY.

- T8. **Nagashima, T.** & Stamper, J. (2018). Contextualized instruction with OER: Examining the Remix Hypothesis. Open Education Conference, NY.
- T9. Cannanure, V., **Nagashima, T.**, Gordon, G., & Brown, T. (2018). QnA: a low-cost system for developing interactive OER in computer science. Open Education Conference, NY
- T10. Mori, H., **Nagashima, T.**, Takeda, T., Hayashi, Y., Kaneko, D., Kojima, K., Yagi, H., & Shigeta, K. (2018). Persistence decision model for learning in MOOC. Study Workshop by Japan Society of Educational Technology, Tokyo. (in Japanese)
- T11. Hrach, S., Gallant, J., & **Nagashima, T.** (2017). Motivating factors among faculty for adopting OER. Open Education Conference, Anaheim.
- T12. Kaneko, D., Kojima, K., Shigeta, K., Takeda, T., Mori, H., Hayashi, Y., Yagi, H., & **Nagashima, T.** (2017). Evaluation criteria for pedagogical practices in MOOC. Study Workshop by Japan Society for Information and Systems in Education. (in Japanese)
- T13. Kaneko, D., Kojima, K., Shigeta, K., Takeda, T., Mori, H., Hayashi, Y., Yagi H., & **Nagashima, T.** (2017). Applicable evaluation criteria for MOOC. Study Workshop by Japanese Society for Information and Systems in Education. (in Japanese)
- T14. Shigeta, K., Fujita, Y., Yagi, H., **Nagashima, T.**, Hamada, M., Sata, M., Matsumoto, T., Tanaka, H., Kobayashi, K., & Shima, M. (2016). Open education strategy at universities in Hokkaido region utilizing OER. Open Education Global 2016, Kraków.
- T15. Takeda, T., Hayashi, Y., Shigeta, K., Mori, H., Kaneko, D., Yagi, H., & **Nagashima, T.** (2016). Dashboard development for improving instruction on MOOC. Study Workshop by Japan Society of Educational Technology, Chiba. (in Japanese)
- T16. Shigeta, K., Matsukawa, H., Matsuda, T., Watanabe, Y., Kato, H., Yagi, H., & **Nagashima, T.** (2016). Developing classifying methods of course types through the analysis of syllabi. Study Workshop by Japan Society for Educational Technology, Kagawa. (in Japanese)
- T17. **Nagashima, T.**, Shigeta, K., & Bier, N. (2015). Tackling a lack of local OER: How international OER adoption enhanced the quality of learning on campus. Open Education Conference, Vancouver.
- T18. **Nagashima, T.** (2015). What do we really mean by “open”? SIG Session, Annual Conference for Japan Society for Educational Technology, Tokyo. (in Japanese)
- T19. **Nagashima, T.** (2015). Running open MOOC: Experience from Hokkaido University. Academic Exchange for Information Environment and Strategy Seminar, Sapporo. (in Japanese)

INVITED TALKS

- IT1. **Nagashima, T.** (2021). Learning analytics and gamification. Presented at the Symposium on Digital Transformation in Higher Education. National Institute of Informatics. Tokyo, Japan. (in Japanese).
- IT2. **Nagashima, T.** (2021). Open Educational Resources and the COVID-19 pandemic: Opportunities and challenges. Hokkaido University, Sapporo (in Japanese).
- IT3. **Nagashima, T.** (2021). Co-design in open education practices. International Christian University, Tokyo.
- IT4. **Nagashima, T.** (2020). Pedagogical Affordance Analysis. AECT Annual Convention (as part of AECT awardees' presentations).
- IT5. **Nagashima, T.** (2020). Connecting education research with classroom practices through co-design. Keio University, Tokyo (in Japanese).

- IT6. **Nagashima, T.** (2020). Designing instruction by leveraging pedagogical affordances and constraints. International Christian University, Tokyo.
- IT7. **Nagashima, T.** (2019). Recent trends in learning analytics research. Hokkaido University, Sapporo. (in Japanese).
- IT8. **Nagashima, T.** (2016). Effective use of ICT in higher education: lessons learned at Hokkaido University. Academic Link Seminar. Chiba University, Chiba. (in Japanese)
- IT9. Allen, N., Beckett, M., Lesko, I., Wiens, K., Jacob, M., & **Nagashima, T.** (2015). Open Education: Policy and Practice [Invited panel]. OpenCon 2015, Brussels.

RESEARCH & PROFESSIONAL EXPERIENCES

2021	Institute for Policy Research , Northwestern University, Evanston, IL <i>Participant, Summer Research Training Institute on Improving Evaluations of R&D in STEM Education</i>
2019 - present	Cabinet Office, the Japanese Government , Tokyo, JAPAN <i>Data Science Consultant</i>
2018 - present	Human-Computer Interaction Institute , Carnegie Mellon University, Pittsburgh, PA <i>Graduate Researcher</i> with Vincent Alevan and Martha Alibali (University of Wisconsin-Madison)
2017 - 2019	Program in Interdisciplinary Education Research , Carnegie Mellon University, Pittsburgh, PA <i>Associate</i>
2017 - 2018	Human-Computer Interaction Institute , Carnegie Mellon University, Pittsburgh, PA <i>Graduate Researcher</i> with John Stamper
2018	LearnLab Summer School , Carnegie Mellon University, Pittsburgh, PA <i>Participant, Educational Data Mining track</i>
2016 - 2018	Open Education Group , Provo, UT <i>OER Research Fellow</i>
2015 - present	Center for Open Education , Hokkaido University, Sapporo, JAPAN <i>Research Collaborator</i>
2017	Open Learning Initiative , Stanford University, Stanford, CA <i>Learning Engineer Intern</i> with Candace Thille
2015 - 2016	Fujitsu/Hokkaido University , Sapporo, Japan <i>Research Fellow</i>
2015 - 2016	Open Policy Network , Creative Commons, Mountain View, CA <i>Researcher</i>
2014 - 2016	Center for Open Education , Hokkaido University, Sapporo, JAPAN <i>Instructional Designer / Project Manager</i>
2014 - 2015	Innovation Nippon , Tokyo, JAPAN <i>Research Assistant</i> with Tomoaki Watanabe
2013 - 2014	International Christian University , Tokyo, JAPAN <i>Research Assistant</i> with Masako Miyahara & Atsuko Watanabe
2013 - 2014	International Christian University , Tokyo, JAPAN

Research Assistant with Insung Jung

TEACHING & MENTORING EXPERIENCES

Teaching

- 2021 **Carnegie Mellon University**, Pittsburgh, PA
Teaching Assistant with Raelin Musuraca and Motahhare Eslami
 Course Title: User-Centered Research and Evaluation (110 graduate and undergraduate students)
 - Teaching lab sessions (20-30 students), helping with grading assignments and students' research projects
- 2018 **Carnegie Mellon University**, Pittsburgh, PA
Teaching Assistant with John Stamper and Adam Perer
 Course Title: Interactive Data Science (70 graduate and undergraduate students)
 - Taught eight 70-min lectures on experimental design and data analysis, graded assignments, and helped students with data science projects
- 2014, 2018 **Open Education Lab**, Sapporo, JAPAN
Teaching Assistant with Katsusuke Shigeta, Toshiyuki Takeda, and Hideki Mori
 Course Title: Open Education and the Future of Learning (offered on Japanese MOOC; approx. 8,000 participants)
 - Designed assignments and quizzes, managed online discussions, helped learners with assignments
- 2015 **Hokkaido University**, Sapporo, JAPAN
Teaching Assistant with lead instructors Tamotsu Kozaki and Naoko Watanabe
 Course Title: Effects of Radiation: An Introduction to Radiation and Radioactivity (offered on edX; approx. 5,000 participants)
 - Co-developed lecture materials and assignments, facilitated discussions and helped with technical and content-related issues
- 2014 - 2016 **Hokkaido University**, Sapporo, JAPAN
Instructional Designer & Project Manager
 - Co-designed with university faculty over 200 educational materials (modules) in various domains, which were shared as Open Educational Resources (OER)
- 2014 - 2016 **Hokkaido University**, Sapporo, JAPAN
Teaching Assistant with Katsusuke Shigeta
 Course Title: Introduction to Information Science (30 undergraduate students)
 - Co-developed course materials (lectures and assignments), taught two 60-min lectures, facilitated classroom discussions, graded assignments

Student Mentoring Experiences

Student mentoring includes: regular communications to support their work, providing feedback on design and research, collaboratively writing papers and conducting user research. In all mentoring activities, I ensure that students learn valuable knowledge and skills in research and/or design (e.g., through setting goals and offering opportunities for students to take a lead and explore new aspects of the assigned task).

- 2021-present **Marcus Artigue** (Undergraduate student at Hope College)
REU¹ Intern for "Promoting Conceptual and Procedural Knowledge with ITSs"
- 2021-present **Elizabeth Ling** (Undergraduate student at Harvard)
Research Intern for "Promoting Conceptual and Procedural Knowledge with ITSs"

¹ The REU (Research Experiences for Undergraduates) program is a program by National Science Foundation that provides an opportunity for undergraduate students to work on a research project for the duration of 10 weeks.

- 2021-present **Michelle Ma** (Undergraduate student at UCLA)
REU Intern for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2021-present **Bin Zheng** (Undergraduate student at CMU)
Research Intern for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2020-present **Jeff Chen** (Undergraduate student at CMU)
REU Intern & Research Assistant for “Gamification for ITSs”
- 2020-present **Xinying Hou** (Graduate student at CMU, currently a PhD student at the UMich)
Independent Study and Extern Research Assistant for “Gamification for ITSs”
- 2020-present **Xiaoying Meng** (Undergraduate student at CMU, currently a master’s student at CMU)
Research Assistant for “Gamification for ITSs”
- 2020-present **Stephanie Tseng** (Undergraduate student at CMU)
Research Assistant for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2019-present **John Britti** (Undergraduate student from Georgia Tech, now Master’s student at GT)
REU Intern & Research Assistant for “Gamification for ITSs”
- 2019-present **Xiran Wang** (Undergraduate student at CMU)
Research Assistant for “Gamification for ITSs”
- 2020 - 2021 **Sihan Wu** (Undergraduate student at CMU)
Independent Study for “Gamification for ITSs”
- 2020 **Ruitao Li** (Undergraduate student at CMU)
Research Assistant for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2020 **Jordan Love** (Undergraduate student at University of Kansas)
REU Intern for “Gamification for ITSs”
- 2020 **Gautam Yadav** (Graduate student at CMU, currently Learning Engineer at CMU HCII)
Research Collaborator for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2020 **Junhui Yao** (Graduate student at CMU, now Software Engineer at Huawei)
Research Assistant for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2020 **Alan Zhao** (Undergraduate student at Pomona College)
REU Intern for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2019 **Evan Fang** (Undergraduate student at CMU)
Research Assistant for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2019 **Emilie Guermeur** (Undergraduate student at CMU)
Independent Study for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2019 **Trula Rael** (Undergraduate student at Harvard University)
REU Intern for “Promoting Conceptual and Procedural Knowledge with ITSs”
- 2019 **Kexin Yang** (Graduate student at CMU, currently a PhD student at CMU HCII)
Research Assistant for “Promoting Conceptual and Procedural Knowledge with ITSs”

Other Mentoring Experiences

- 2020, 2021 **LearnLab Summer School**, Carnegie Mellon University, Pittsburgh, PA
Mentor, Intelligent Tutoring System track
- Mentored participant groups on their design and implementation of an intelligent

tutoring system

PRACTITIONER RESOURCES & OPEN EDUCATIONAL RESOURCES (OER)

- 2020 **Tape Diagram Template for Equations**
Tape diagram representation template made in Google slides, provided under CC-BY-NC
<https://tinyurl.com/tapetemplate>
- 2020 **Tape Diagram Generation Tool**
Automatic tape diagram generation tool available on MathTutor
<https://preview.ctat.cs.cmu.edu/home>

ACADEMIC SERVICE

- 2021 - present **Creative Commons Copyright Platform**
Member, Artificial Intelligence, Copyright, & Open Sharing Working Group
- 2021 - present **Creative Commons Copyright Platform**
Member, Beyond Copyright: The Ethics of Open Sharing Working Group
- 2018 - present **Japan Society for Educational Technology**, Tokyo, JAPAN
Organizing Member, Game Learning and Open Education Special Interest Group (JSET SIG-05)
- 2017 - present **Global OER Graduate Network**, The Open University, Milton Keynes, UK
Ph.D. Student Member
- 2016 - 08/2017 **The Rotary Club of Los Altos**, Los Altos, CA
Honorary Member
- 2014 - present **OER World Map**, Köln, GERMANY
Country Champion of Japan
- 2013 **International Christian University**, Tokyo, JAPAN
Organizer, Senior Thesis Poster Session Program
- 2012 - present **Creative Commons Japan (CommonSphere)**, Tokyo, JAPAN
Member (Education)

Editorial Board

- 2021 - present CIRCLS/ISLS Rapid Community Reports

Journal and Conference Reviewing

- 2018 - present ACM Conference on Human Factors in Computing Systems (CHI)
- 2021 - present ACM Interaction Design and Children Conference (IDC)
- 2020 - present Annual Meeting of the International Society of the Learning Sciences (ISLS)
- 2018 - present European Conference on Technology Enhanced Learning (EC-TEL)
- 2017 - present International Conference of the Learning Sciences (ICLS)
- 2017 - present International Learning Analytics and Knowledge Conference (LAK)
- 2016 - present International Review of Research in Open and Distributed Learning (IRRODL)
- 2021 - present Journal of Interactive Media in Education (JIME)
- 2019 - present Mathematical Cognition and Learning Society Conference (MCLS)
- 2019 - present Open Education Conference (OpenEd)

Conference Organizing

- 2020 Session Chair, Annual Meeting of the International Society of the Learning Sciences (ISLS)

MEMBERSHIP

2019 - present	Cognitive Science Society
2017 - present	International Society of the Learning Sciences
2014 - present	Japanese Society for Educational Technology