

Xinying Hou

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URL: <https://xinyinghou.github.io/>

Research Interests

Topics: HCI, Computer Science Education, Educational Technology,
AI-empowered Programming Learning, Educational Games

Methodologies: Mixed Methods (qualitative + quantitative); Data Mining

Education

09/2021- **University of Michigan, Ann Arbor, MI, USA**

Present Ph.D. in Information Science (expected)

Advisor: Barbara Ericson

09/2019 - **Carnegie Mellon University (CMU), PA, USA**

12/2020 MS, Human-Computer Interaction Institute, School of Computer Science

GPA: 4.17/4.33

Advisor: Kenneth R. Koedinger; Bruce M. McLaren

09/2015 - **Nanjing University (NJU), Nanjing, China**

07/2019 BA in Sociology

GPA: 3.99/4.0, Ranking: Top 1%

Advisor: Yuxiao Wu

Outstanding Graduate, Outstanding Undergraduate Thesis

Publications

Heavily-reviewed Journal Manuscripts (J)

J.03 **The Impact of Gender in Learning with Games: A Consistent Effect in a Math Learning Game.**

Huy A. Nguyen, **Xinying Hou**, J Elizabeth Richey, Bruce M McLaren

IJGBL: International Journal of Game-Based Learning, 12(1), pp. 1–29.

- J.02 How instructional context can impact learning with educational technology: Lessons from a study with a digital learning game.**

Bruce M McLaren, J. Elizabeth Richey, Huy A Nguyen, and [Xinying Hou](#)
C&E: Computers & Education, 178, pp. 1–20.

- J.01 Assessing the Effects of Open Models of Learning and Enjoyment in a Digital Learning Game.**

[Xinying Hou](#), Huy A Nguyen, J. Elizabeth Richey, Erik Harpstead, Jessica Hammer, Bruce M McLaren
IJAIED: International Journal of Artificial Intelligence in Education, pp. 1–31.

Heavily-reviewed Conference Proceedings (C)

- C.03 Using Adaptive Parsons Problems to Scaffold Write-Code Problems.**

[Xinying Hou](#), Barbara Jane Ericson, Xu Wang (2022).
ICER 2022: ACM Conference on International Computing Education Research

- C.02 Moving beyond Test Scores: Analyzing the Effectiveness of a Digital Learning Game through Learning Analytics.**

Huy A Nguyen, [Xinying Hou](#), John Stamper, Bruce M. McLaren
EDM 2020: International Conference on Educational Data Mining

- C.01 Exploring How Gender and Enjoyment Impact Learning in a Digital Learning Game.**

[Xinying Hou](#), Huy A Nguyen, J. Elizabeth Richey, Bruce M. McLaren
AIED 2020: International Conference on Artificial Intelligence in Education.

Peer-reviewed Conference Poster (P)

- P.03 Design a Dashboard for Secondary School Learners to Support Mastery Learning in a Gamified Learning Environment.**

[Xinying Hou](#), Tomohiro Nagashima, Vincent Aleven
EC-TEL 2022: European Conference on Technology Enhanced Learning.

- P.02 Drinking Our Own Champagne: Analyzing the Impact of Learning-by-doing Resources in an E-learning Course.**

[Xinying Hou](#), Paulo F Carvalho, Kenneth R Koedinger
LAK 2021: International Conference on Learning Analytics & Knowledge.

P.01 **Increasing Children's Knowledge of Pattern Detection and Skip Counting Using a Tablet-based Math Activity.**

Cheyeon Ha, [Xinying Hou](#), Huy A Nguyen, Judith Odili Uchidiuno

ICLS 2020: International Conference of the Learning Sciences

Research Experiences

09/2021 - **University of Michigan - Ann Arbor**

Present

Graduate Student Research Assistant

Ericson Research Group, Supervisor: Barbara Ericson; Xu Wang

09/2020 - **Carnegie Mellon University**

7/2021

Graduate Research Assistant

Aleven Lab, Supervisor: Vincent Aleven; Tomohiro Nagashima

05/2020 - **Carnegie Mellon University**

7/2021

Graduate Research Assistant

Learn Lab, Supervisor: Kenneth R. Koedinger; Paulo Carvalho

10/2019 - **Carnegie Mellon University**

12/2020

Independent Study Research Assistant

McLearn Lab, Supervisor: Bruce M. McLaren; J Elizabeth Richey

Invited Presentations & Service

08/2022 **ICER 2022**: Using Adaptive Parsons Problems to Scaffold Write-Code Problems.

07/2020 **AIED 2020**: Exploring How Gender and Enjoyment Impact Learning in a Digital Learning Game.

07/2020 **EDM 2020**: Moving beyond Test Scores: Analyzing the Effectiveness of a Digital Learning Game through Learning Analytics.

07/2020 **Session Chair**

13th International Conference on Educational Data Mining

Honors And Awards

2022 Rackham Conference Travel Grant (\$1150)

2019 Carnegie Mellon University Merit Scholarship Recipient

Nanjing University Outstanding Graduate

Nanjing University Outstanding Undergraduate Thesis Award

2017 National Scholarship Recipient (0.2%)

Skills and Tools

Data Science Python, R, STATA, SPSS, Data Mining, Applied Machine Learning

Development HTML5/CSS3, JavaScript, Bootstrap, Vue.js, D3.js, Django, AJAX, C#, Unity (3D)

Qualitative methods Cognitive Task Analysis, Backward Design, Contextual Inquiry, Affinity Diagramming, Usability Testing, Survey Design, User Interview

Quantitative methods Statistics testing, A/B Testing, Experiment Design

Design Figma, Vioceflow
Sketching, Personas, Storyboarding, Prototyping