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- Present **University of Michigan, Ann Arbor, MI, USA**
Ph.D. - Information Science (expected)
Advisor: Barbara Ericson

09/2019 - 12/2020 **Carnegie Mellon University (CMU), PA, USA**
MS - Human-Computer Interaction Institute, School of Computer Science
GPA: 4.17/4.33
Advisor: Kenneth R. Koedinger; Bruce M. McLaren

09/2015 - 07/2019 **Nanjing University (NJU), Nanjing, China**
BA - Sociology, School of Social and Behavioral Sciences
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 - Present **Graduate Student Research Assistant**
University of Michigan - Ann Arbor
Ericson Research Group, Supervisor: Barbara Ericson; Xu Wang

09/2020 - 7/2021 **Graduate Research Assistant**
Carnegie Mellon University
Aleven Lab, Supervisor: Vincent Aleven; Tomohiro Nagashima

05/2020 - 7/2021 **Graduate Research Assistant**
Carnegie Mellon University
Learn Lab, Supervisor: Kenneth R. Koedinger; Paulo Carvalho

10/2019 - 12/2020 **Independent Study Research Assistant**
Carnegie Mellon University
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