

Maria Hwang

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Research Interests

Human Computer Interaction; Health Game and Application Technologies; Data-driven, User-centered Design; User Engagement and Motivation; Gamified Ubiquitous Learning; Tailored and Persuasive Interventions; Self-monitoring and Management Apps for Chronic Diseases.

Current Position

Columbia University Medical Center

New York, NY

Postdoctoral Fellow

Aug 2016–Present

Conduct research in the areas of human computer interaction, game-based motivational strategies, ubiquitous learning, and diabetes education;

Advising students — Sin, Margaret (MA, 2018); Lee, Brian (BS, 2017); Hwang, Eujoon (BS 2020); Jae, Yeonjae (BS, 2020); Kim, Dongwon (BA, 2022); Kim, Euichan (BA, 2018)

Education

Teachers College, Columbia University

New York, NY

Instructional Technology and Media Ed.D.

2011–2016

Dissertation: Effectiveness of Message Framing in a Digital Game Environment

Advisor: Charles Kinzer

Teachers College, Columbia University

New York, NY

Cognitive Studies in Education M.A.

2009–2011

Advisor: John Black

Wesleyan University

Middletown, CT

Neuroscience and Behavior B.A. & East Asian Studies B.A.

2004–2008

Advisor: Ellen Widmer

Professional Experience

World Scholars LLC

New Haven, CT

Co-Founder & CEO

Feb 2017–Present

Founded an international educational exchange company to provide inclusive, thought-provoking liberal arts educational experience for students. <http://worldscholars.global/>

Geumgang University

Nonsan, South Korea

Visiting Faculty

Nov 2015–Aug 2016

Taught 2 + assisted 3 courses in a mix of Korean and English; Intro to Game Design, Intro to Web Design + Intro to CS, Intro to OOP, and Computer Music; Formulated strategic plans for the new Information Science department by curriculum planning, and developing interdisciplinary studies.

Games for Learning Institute + TC Games Research Lab: Columbia U.

New York, NY

Lead Research Assistant

Mar 2013–May 2016

Worked with Prof. Charles Kinzer and Prof. Joey Lee on designing and evaluating game-based educational tools and applications; Monitored the progress of all research assistants' work; Mentored graduate students.

The Abraham Joshua Heschel School

New York, NY

Instructional Technology Integrator

Oct 2013–Dec 2015

Provided technology support for teachers and IT staff as the liaison between the two groups; Taught 9th graders Tech101 on technology tools as well as initiated discussions on 21st century issues such as cyber attacks, privacy, cloud computing, media literacy, & technology consumption vs. creation.

Dept. Math, Science, and Technology, Columbia U.*Teaching Assistant for the Doctoral Colloquium*

Planned and coordinated the doctoral colloquium curriculum and invited guest speakers; Led and facilitated discussions and conversations among doctoral students on current issues in educational technology.

New York, NY*Sep 2013–May 2014***The Lang School***Lead Math Teacher & Assistant Technology Teacher*

Taught kindergarten through middle school students (K-8) in mathematics and technology; Lesson-planned and coordinated technology-infused math and engineering instruction with co-teachers using programs such as Scratch, Greenfoot, Google SketchUp, Moodle, Alice, & LEGO Mindstorms.

New York, NY*Feb 2012–Dec 2012***The Green School***Student Teacher & Substitute Teacher*

Taught high school students (9-12) primarily in mathematics; Lesson-planned and coordinated instruction with co-teachers to focus on preparing students to achieve grade-level proficiency and meet Common Core standards for the Regents; Participated in mathematics departmental meetings to manage instruction across grades.

Brooklyn, NY*Feb 2011–Dec 2012***Center for Technology and School Change, Columbia U.***Research Intern*

Engaged with a curriculum design process, *Understanding by Design* (UbD, Wiggins & McTighe, 2005), to create a goal-oriented professional development plan and technology-infused course design for NY high school teachers.

New York, NY*Sep 2010–May 2011*

Publications

Hwang, M. & Mamykina, L. (2017, May). Monster Appetite: Effects of Subversive Framing on Nutritional Choices in a Digital Game Environment. In *Proceedings of the ACM CHI conference on Human Factors in Computing Systems* (CHI 2017), Denver, CO.

Hwang, M. & Mamykina, L. (2017). Monster Appetite: Effects of Message Framing on Nutritional Choices in a Digital Game Environment. In the Extended Abstract of *Annals of Behavioral Medicine*, San Diego, CA, (pp. S1519-S1520). Springer Press.

Hwang, M. (2016, April). Game based teaching for youth health: Testing a board game, Monster Appetite, for classroom implementation. *Proceedings of the American Educational Research Association* (AERA), Washington, D.C.

Kinzer, C., **Hwang, M.**, Chantes, P., Choi, A., & Hsu, S. (2015, July). Educational games: Insights for acceptance. *Proceedings of Games+Learning+Society* (GLS). Madison, WI, ETC Press.

Santolucito, M. & **Hwang, M.** (2014). Communalizing the interfaces of single player games. In the Extended Abstract of the 7th *Digital Games Research Association* (DiGRA). Salt Lake City, UT.

Hwang, M., Chantes, P., & Santolucito, M. (2014). Raid the fridge!: Promoting healthy eating habits through the game Monster Appetite. In A. Ochsner,...C. Steinkueler (Eds.), in *Proceedings of Games+Learning+Society* (GLS). Madison, WI, (pp. 472-474). ETC Press.

Turkay, S., Hoffman, D., **Hwang, M.**, Chantes, P., Kinzer, C.,...Hsu, S. (2014, June). No hands needed: Investigating the affordances of using a Brain Computer Interface (BCI) as a game controller and its potential effect on learning and user experience. In A. Ochsner,...C. Steinkueler (Eds.), in *Proceedings of Games+Learning+Society* (GLS). Madison, WI, (pp. 235-241). ETC Press.

Hwang, M.,...de Luna, C. (2014, June). Play it with your mind: Investigating the affordances of using a Brain Computer Interface (BCI) as a game controller and its potential effect on learning and user experience. In *Proceedings of Teachers College Educational Technology Conference* (TCETC). New York, NY.

Hwang, M., Chantes, P., Tedaldi, G., & Lomboy, A. (2014, Jan). Monster Appetite: To eat or not to eat, that is the question. In R. Duncan, J. Bisz, F. Crocco, C. Hernandez, K. Offenholly,...M. Smalle. (Eds.). *Proceedings of the 1st Annual CUNY Games Festival*. New York, NY, (p. 23).

Hwang, M. (2013). Assessment of "Tale of the Tape." In N. Fletcher, A. Velamur, B. Waid, & A. Dimacali, (Eds.), *Mathematical modeling handbook II: The assessments*. Bedford, MA: COMAP.

Hwang, M., & Chantes, P. (2013). Monster Appetite: A board game targeting one nutritional aspect with one funky game mechanic. Presentation at the 9th *Annual Games for Health (G4H)*. Boston, MA.

Hwang, M., Chantes, P., Tedaldi, G., & Lomboy, A. (2013). Promoting healthy eating habits through Monster Appetite. In L. Gómez Chova, A. López Martínez, & I. Candel Torres (Eds.). In *Proceedings of the 7th annual International Technology, Education, and Development Conference (INTED)*, Valencia, Spain, (p. 2211).

Hwang, M., Chantes, P., Tedaldi, G., & Lomboy, A. (2012). Promoting Healthy Eating Habits through Monster Appetite. In *Proceedings of the Teachers College Educational Technology Conference (TCETC)*, p. 24). New York, NY.

Manuscripts in Preparation

Hwang, M., & Mamykina, L. (2018a). Feed Me Data: Overcoming the Cold Start Problem for Personal Analytics Solutions in Health. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.*

Hwang, M., Sin, M., Lee, J., & Mamykina, L. (2018b). Information Seeking Behavior for Online Snack Purchases in Relation to a Subversive Digital Health Game. *Proc. Connected Learning Summit*.

Awards and Honors

Games and Learning Early Career Award

Games and Learning Early Career Workshop at Games for Change (G4C) 2017
An invitation and funding to attend the 14th G4H festival and Early Career Workshop.

Early Career Development Symposium Award

Early Career Development Symposium at ACM CHI 2017 Conference 2017
An invitation and funding to attend the 2nd CHI Early Career Development Symposium.

Doctoral Dissertation Grant

Columbia University 2016
Dissertation funding support provided by Doctoral Application for Grant-In-Aid Funding at Columbia.

TC International Scholarship

Columbia University 2015, 2016
Stipend provided for doctoral students at Columbia.

Louis Gerstner Fund Scholarship

Columbia University 2014, 2016
Stipend provided for doctoral students at Columbia.

Finalist for Academic Festival Student Research Poster Conference

Columbia University April 2015
Awarded to students who, in the eyes of Teachers College, has conducted the best research in their respective departments.

Best of Show Poster Award

10th Annual Games+Learning+Society Conference (GLS)

June 2014

Awarded to the best team/individual with the poster that received the most votes from conference attendees on the day of the poster presentation.

TC General Scholarship

Columbia University

2011, 2012, 2013

Scholarship provided for master and doctoral students at Columbia.

Travel Funding

Various

Multiple

Travel Grants for attending conferences INTED 2013, G4H 2013, GLS 2013, DiGRA 2014, GLS 2014, SIGCHI 2017, G4C 2017, SIGCHI 2018.

Innovative Mobile Tech for Development Competition First Prize

Columbia University

2012

Awarded to the best team that received the most points from a panel of judges selected by the New Media Task Force at the School of International and Public Affairs, Columbia.

Invited Talks

SAT+ Summer Program with Culture Vision Education Inc., Woodbridge, CT

Aug 2017

"Iterative Design in Game Design Research"

Geumgang University, Nonsan, South Korea

June 2016

Commencement speech: "What is an Alma Mater?"

Service

Reviewer—Conference

Games+Learning+Society 2015; ACM SIGCHI 2017; ACM SIGCHI 2018

Reviewer—Journal

Health Informatics Journal; European Journal of Pediatrics