Maria Hwang

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 www.mariahwang.com • github.com/mlhwang

Research Interests

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

Current Position

Fashion Institute of Technology (FIT)   **New York, NY**
Assistant Professor   *Aug 2018–Present*
Teach computer science courses on topics on machine learning, statistics, data mining, programming and mobile apps, and computer based developmental math; Develop new courses to expand the computer science track within the science and math department. http://www.fitnyc.edu/science-math/faculty/index.php

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: Dr. Charles Kinzer

Teachers College, Columbia University   **New York, NY**
Cognitive Studies in Education M.A.   *2009–2011*
Advisor: Dr. John Black

Wesleyan University   **Middletown, CT**
Neuroscience and Behavior B.A. & East Asian Studies B.A.   *2004–2008*
Advisor: Dr. Ellen Widmer

Professional Experience

Columbia University Medical Center   **New York, NY**
Postdoctoral Research Fellow   *Aug 2016–July 2018*
Conducted research in the areas of human computer interaction, game-based motivational strategies, ubiquitous learning, persuasive health interventions, and diabetes education; Advised students — Chantes, Pantiphar (2018, EdD), Chau, Michelle (PhD, 2021); Sin, Margaret (MA, 2018); Mao, Yishen (MA, 2018), Lee, Brian (BS, 2017); Jae, Yeonjae (BS, 2021); Kim, Dongwon (BA, 2021); Paek, Kichan (BS, 2020).

World Scholars LLC   **New Haven, CT**
Co-Founder & President   *Feb 2017–Present*
Founded an international educational exchange company to provide inclusive, thought-provoking, liberal arts educational experience for students. https://worldscholars.global/about.html

Geumgang University   **Nonsan, South Korea**
Visiting Faculty   *Nov 2015–Aug 2016*
Taught two + assisted three courses in a mix of Korean and English; Intro to Game Design, Intro to Web Design + Intro to Computer Science, Intro to Object Oriented Programming, 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.

Math, Science, and Technology Dept., Columbia U. — **New York, NY**
Teaching Assistant for the Doctoral Colloquium — *Sep 2013–May 2014*
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.

The Lang School — **New York, NY**
Lead Math Teacher & Assistant Technology Teacher — *Feb 2012–Dec 2012*
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.

The Green School — **Brooklyn, NY**
Student Teacher & Substitute Teacher — *Feb 2011–Dec 2012*
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 math departmental meetings to manage instruction across grades.

Center for Technology and School Change, Columbia U. — **New York, NY**
Research Intern — *Sep 2010–May 2011*
Engaged with a curriculum design process, *Understanding by Design* (Wiggins & McTighe, 2005), to create a goal-oriented professional development plan and technology-infused course design for NY high school teachers.

Concordia Language Villages — **Bemidji, MN**
Counselor, Language Teacher, Life Guard — *Summer 2007, 2009, 2010*
Ascertained group interests, and evaluated campers and their behaviors to find and adopt the most developmentally appropriate and nurturing activities that meet their needs; Prepared materials for class activities and taught in small groups through different methods to promote language acquisition.

Wesleyan University — **Middletown, CT**
Residential Advisor — *Aug 2006–May 2007*
Enforced rules and regulations to ensure the smooth and orderly operation of dormitory programs; Mediated interpersonal problems between residents; Made regular rounds to ensure that residents and areas are safe and secure; Hosted social events to increase community engagement and awareness.

Publications

Desai, P., Mitchell, E., **Hwang, M.**, Levine, M., Albers, D., & Mamykina, L. (2019, May). Personal Health Oracle: Explorations of Personalized Predictions in Diabetes Self-Management. In *Proceedings of the ACM CHI conference on Human Factors in Computing Systems* (CHI 2019), Glasgow, UK. http://mariahwang.com/research.html

Hwang, M., & Mamykina, L. (2018, Aug). Let Me Help You Learn from My Meal: User-Generated Meal Photos as a Benchmark for Nutritional Estimation. In the Extended Abstract of the *Connected Learning Summit* (CLS 2018). Boston, MA. http://mariahwang.com/research.html

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. http://mariahwang.com/game.html

Hwang, M. & Mamykina, L. (2017, April). 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. In A. Ochsner,...C. Steinkueler (Eds.), in *Proceedings of Games+Learning+Society* (GLS). Madison, WI, ETC Press.

Santolucito, M. & **Hwang, M.** (2014, Aug). 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, June). 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, June). 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, March). 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, May). 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

Santolucito, M., Hoffman, D., **Hwang, M.**, & Paek, S. (2019). Using Wearables for Data Driven Decision Making in Education. *Proc. ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT).* http://mariahwang.com/research.html

Awards and Honors

The Faculty Development Grants and Awards (FDGA)
ACM CHI 2019 Conference on Human Factors in Computing Systems 2019
Grant funding provided for faculty at Fashion Institute of Technology (FIT).

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

Retail Marketing Society., New York, NY *Mar 2019*
"How AI or Machine Learning is Changing the Fashion Industry"

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–Conferences and Journals
Games+Learning+Society (GLS);
ACM Conference on Human Factors in Computing Systems (SIGCHI);
Connected Learning Summit (CLS);
American Educational Research Association (AERA);
Health Informatics Journal;
European Journal of Pediatrics;
PLOS ONE;
Creativity and Cognition;

Community Service at Fashion Institute of Technology
Emerging Technologies Committee (Committee Member);
Flexible Learning Think Tank (Co-Chair);
Internal Review Board (Committee Reviewer);