

MARY LOU MAHER

Professor, Software and Information Systems
Director, Center of Education Innovation and Research
Director, Integrated Critical Core
College of Computing and Informatics
University of North Carolina Charlotte
Web site: <http://maryloumaher.net>
email: m.maher@uncc.edu



SUMMARY

I am interested in human-centered design and evaluation of innovative, interactive and intelligent systems. My research draws on and contributes to human-computer interaction, Artificial Intelligence, computer-supported collaborative work, design science, and computational creativity. Some highlights of my recent research are ethical and trustworthy human-AI interaction, cognitive models of curiosity as a basis for education technology, interaction design to mitigate the effect of fake news, design and cognitive impact of AI-based co-creativity, and design patterns for active learning in CS education.

EMPLOYMENT

PROFESSOR IN DEPARTMENT OF SOFTWARE AND INFORMATION SYSTEMS AND SCHOOL OF DATA SCIENCE

My leadership roles include: Director of the Integrated Critical Core in which I mentor 18-20 faculty in practices for equity and inclusion for the core courses in the CS major. Director of the Center for Education Innovation and Research, a College-wide center that leads organizational and pedagogical change to broaden participation in computing. and Co-Director of the Human Centered Computing Lab which includes 6 faculty and 10-20 PhD students.

CHAIR, DEPARTMENT OF SOFTWARE AND INFORMATION SYSTEMS

College of Computing and Informatics, University of North Carolina Charlotte: 2012-2020. The Software and Information Systems Department is a pioneer in Information Technology research and education emphasizing on designing and deploying integrated, secure, reliable, and human-centered IT solutions. While I was Department Chair, faculty participation in writing proposals for external funding was 100%.

SENIOR RESEARCH SCIENTIST, COLLEGE OF INFORMATION STUDIES

University of Maryland, 2010-2012: Senior Research Scientist at the University of Maryland doing research in the Human Computer Interaction Lab. This is a multidisciplinary group of faculty from Computer Science, Information Studies, Engineering, and Humanities disciplines.

PROGRAM DIRECTOR, COMPUTER & INFORMATION SCIENCE & ENGINEERING

National Science Foundation, 2006-2010: I mentored faculty in universities throughout the US to prepare for a program I established called CreativeIT by organising workshops, funding exploratory research and developing a solicitation for funding in 2008-2010. I was part of the Human Centered Computing cluster focussing on research in HCI techniques, social computing, computer-supported collaborative work, virtual worlds, and multi-agent systems. I was co-chair of the Cyber-Enabled Discovery and Innovation Program in 2009, participated in the development of the Social Computational Systems solicitation, participated in the Science of Design program and its evolution into the Rethinking Software program area, assisted in the development of the Virtual Organizations as Socio-technical Systems solicitation, served as a technical coordinator

for the Spatial Information Science of Learning Center, and participated in the development of an action plan for Broadening Participation in CISE. As a member of the Senior Executive Service in 2009 I was the Deputy Director of the Division of Information and Intelligent Systems and served on the SWAT Team for improving the hiring processes in the Federal Government to make the government an employer of choice.

PROFESSOR OF DESIGN COMPUTING, jointly in ARCHITECTURE and COMPUTER SCIENCE

University of Sydney, 1990-2006, currently Honorary Professor: promoted to a personal chair as Professor of Design Computing in 1997. Highlights are: Developed a new interdisciplinary undergraduate degree Bachelor of Design Computing and served as Program Coordinator for 5 years; Program coordinator for Graduate Program in Design Computing for 10 years; Chair of Department of Architectural and Design Science for 2 years while the School was restructuring, Joint appointment with School of Information Technologies for 3 years; Research provider for Collaborative Research Centre for Construction Innovation and for National ICT Australia, Co-Director of the Key Centre of Design Computing for 15 years.

VISITING PROFESSOR IN DESIGN AND COMPUTATION

Massachusetts Institute of Technology, 2002: teaching and research in the Design and Computation Group in the School of Architecture on designing virtual worlds; collaborating with Active Worlds Inc. to develop agent models using their platform.

ADJUNCT PROFESSOR IN SOCIAL POLICY

Columbia University, 2002: teaching in School of International and Public Affairs on computer-mediated communication in virtual worlds.

ASSOCIATE PROFESSOR, ASSISTANT PROFESSOR IN CIVIL ENGINEERING

Carnegie Mellon University, 1984-1989: teaching and research in computer-aided engineering in Civil Engineering.

EDUCATION

PhD Carnegie Mellon University, Civil Engineering Department, 1984. PhD thesis on artificial intelligence in design focussing on the synthesis of alternative design concepts for high rise buildings.

MS Carnegie Mellon University, Civil Engineering Department, 1981. Masters thesis on an intelligent tutoring system for teaching principles of structural design.

BS Columbia University, Civil Engineering Department, 1979.

TEACHING

My teaching has ranged from lecture-based teaching in engineering to teaching computing subjects in a studio environment for design computing, engineering, and computer science students. In my teaching I use flipped classroom methods and open-ended project-based learning to encourage students to be creative and to develop their knowledge and skills by actively engaging in the concepts through making and problem solving. I provided leadership in developing studio-based teaching for the Bachelor of Data Science at Charlotte. I teach the Graduate Teaching Seminar in which I mentor PhD students in their roles as Teaching Assistants and instructors in the College of Computing and Informatics. I have developed a CCI TA Training course in Canvas which all TAs in CCI are required to complete each semester. I have completed the Quality Matters certification for developing online courses. My teaching encourages independent thinking and collaboration. Listed here are descriptions of the most recent subjects I have taught at the Charlotte and a list of other subjects taught in the past 10 years.

Graduate Teaching Seminar, UNCC

This seminar is designed to prepare you for an academic teaching career and is repeatable for credit. The course examines the student experience, teaching techniques, and research in the field of Computer Science education. The course aims to help you develop your pedagogical skills, practice teaching strategies, and explore research topics in CS education. This semester we will focus on how to prepare TAs in a CS major, with a focus on roles, responsibilities, diversity, equity, and ethics.

CCI TA Training, UNCC

This TA training course is designed to prepare you for an effective teaching experience. Upon completing the training, you will (1) understand your role as a teaching assistant, (2) learn strategies for engaging students, (3) learn strategies for difficult situations and, (4) understand the practice of active learning.

Human Centered Design, UNCC

This course is a foundational course in design methods and techniques for human-computer interaction. A major focus of the course is the processes of need finding, early prototyping of interface designs, evaluating and improving a design. Students gain practical design and evaluation skills through a semester long project and in-class group activities that apply various need finding, design, and evaluation methods to specific interaction design contexts. Students learn about current research topics in HCI, human ethics in HCI research, and experiment design in HCI research. This course was redeveloped using the flipped classroom method in Fall 2014.

Web-Based Application Development, UNCC

This course covers basic concepts for developing interactive web based applications; including HTML, client side scripting, server side scripting, user interface design considerations, and system integration considerations. This course was redeveloped using the flipped classroom method in Spring 2013.

Interaction Design Studio, UNCC

This course provides an in depth design experience with a specific stakeholder and a focus on innovative solutions. Examples of topics and stakeholders include: tangible designs for creative thinking, smart appliance design for Electrolux, engaging elderly communities in creative activity, designing interactive sustainable buildings, interaction design for 3D printed prostheses.

Solving Problems in Information Management, Fall 2011, Spring 2012, UMD

Information Management Team Experience, Fall 2011, Spring 2012, UMD

Digital Design Studio. USYD

Collaborative Virtual Environments. USYD

Research Methods in Information Technology. USYD

Digital Image Design and Representation, USYD

Web Design Information Systems, USYD

Design Computing Studio, USYD

Computer Supported Collaborative Design, USYD

Agents in Design: Agent-Based Virtual Worlds, USYD

Designing Virtual Worlds, USYD

PhD Students

I am the Advisor for 30 PhD students: 7 current students and 23 that have completed their PhD.

Fayaz Suleyman, current, The effectiveness of integrating Design Thinking with Agile Development in Bank of America. UNC Charlotte.

Yash Tadimalla, current, The Effect of CS Pedagogy on Student Success: An Intersectional Analysis Perspective, UNC Charlotte.

Arghavan Ebrahimi, current, Designing Place-based Virtual Worlds for Engaged Online Education, UNC Charlotte.

Safat Siddiqui, current, Personalized Interaction-Focused Nudging Prompts For Mitigating The Negative Effects Of Fake News On Social Platforms, UNC Charlotte.

Maryam Mohseni, current, Computational Novelty In Research Publications Using Topic Modeling, UNC Charlotte.

Ali Almandan, current, Gauging Public Opinion with Stance Detection: Investigating the Implications of Stance Detection Methodologies on the Public Stance in Twitter Data, UNC Charlotte.

Jeba Rezwana, current, Interaction Modelling in a Co-Creative System, UNC Charlotte.

Jin Goog Kim, 2022, The Effect of an AI Model for Visual and Conceptual Similarity on Design Ideation in the Co-Creative Sketching Tool, UNC Charlotte, now Adjunct Professor at Loyola College in Louisiana

Sarah Abdellahi, 2021, Army: An Interaction Model Based on Emotional Feedback for an AI-Based Co-Creative Design System, UNC Charlotte, now UX Researcher at Bank of America.

Ahmad Al-Doulat, 2021, FIRST: Finding Interesting Stories About Students: An Interactive Narrative Approach to Explaining Learning Analytics, UNC Charlotte, now an Assistant Professor at East Tennessee State University.

Lina Lee, 2020, Reconceptualizing the Engagement of Older Adults in the Use of Interactive Technology, UNC Charlotte, now an Assistant Professor at Loyola College in Louisiana.

Nasrin Dehbozorgi, 2020, Sentiment Analysis on Verbal Data from Team Discussions as an Indicator of Individual Performance, UNC Charlotte, now an Assistant Professor at Kennesaw State University in Georgia.

Pegah Karimi, 2019, Studying The Impact Of An AI Model Of Conceptual Shifts In A Co-Creative Sketching Tool, UNC Charlotte, now working towards a second PhD at IUPUI.

Mohammad Mahzoon, 2018, Student Sequence Model: A Temporal Model For Exploring And Predicting Risk From Heterogeneous Student Data, UNC Charlotte, now working for a data analytics company in North Carolina.

Mercedes Paulini, 2013, Collective Intelligence in Online Innovation Communities, University of Sydney, now working as a consultant to web designers in Sydney Australia.

Kathryn Merrick, 2007, Modelling Motivation for Experience-Based Attention Focus in Reinforcement Learning, now Associate Professor at the University of New South Wales Australian Defence Force Academy in Australia.

Leman Figen Gul, 2007, Understanding Collaborative Design In Different Environments: Comparing Face-To-Face Sketching To Remote Sketching And 3D Virtual Worlds, now Professor at Istanbul Technical University.

Mi Jeong Kim, 2006, The Effects of Tangible User Interfaces on Designers' Spatial Cognition, now a Lecturer at Kyung Hee University in Korea.

Ning Gu, 2006, Dynamic Designs of Virtual Worlds Using Generative Design Agents, now a Professor at University of Adelaide in Australia.

Steven Clark, 2006, The Role of Place in a Virtual Learning Environment, now an Academic Fellow in the College of Fine Arts at the University of New South Wales in Australia.

Catherine Bridge, 2005, Case-Based Redesign For People with Ability Impairment, now Associate Professor at the University of New South Wales.

Andres Gomez de Silva Garza, 2000, An Evolutionary Approach to Design Case Adaptation, now a Professor at Instituto Tecnológico Autónomo de México.

Gerard Gabriel, 2000, Computer-Mediated Collaborative Design in Architecture, now the Facilities Information Manager for University of Sydney.

Anna Cicognani, 1998, Design Speech Acts: "How To Do Things With Words" In Virtual Communities, now the Chief Executive Officer at Orbx in Australia.

Josiah Poon, 1997, Design Exploration as Co-evolutionary Models, now a Senior Lecturer at University of Sydney.

Milad Saad, 1994, Shared Understanding in Synchronous Collaborative Design, now a Consultant for Computer Supported Facilities Management in Australia.

Dong Mei Zhang, 1994, A Hybrid Design Process Model Using Case-Based Reasoning, now a Project Coordinator at Northern Settlement Services in Australia.

Heng Li, 1994, Learning Design Concepts to Assist Preliminary Design, now a Professor at Polytechnic University in Hong Kong.

Fang Zhao, 1991, A Knowledge-Based Representation for Creative Design, was a Professor at Florida International University, passed away after fighting cancer.

Weiguang Zhang, 1990, Chunking Structural Design Knowledge as Design Prototypes, now a software developer for CAD companies.

GRANTS

My research grants have been awarded in Australia and the United States. In Australia the research grants do not include overhead or the salaries for the principal investigators. My

most influential grants in terms of publications and impact are on the following topics: models of design such as case-based reasoning and co-evolution; AI-based models of surprise and novelty, explainable AI using creative storytelling, and pedagogical change for broadening participation in computing. My research grants provide an opportunity for PhD students to learn how to perform research on a funded project. I include the students in identifying the research methods, publishing review, position, and research papers, and in preparing new proposals.

I received 2 grants from NSF to commercialize the results of the research grant awarded 2016-2020 for a project called Pique. This project is being led by a female CEO of SmartGirlsHQ. The product is a website service for recommending STEM related activities to pre-high school girls using an AI-based model of curiosity. Two of my PhD students have gained entrepreneurial skills as Research Assistants on these grants.

Subject	Agency	Year(s)	Amount
SBIR Phase I: A Digital Platform That Engages Elementary Aged Girls In STEM Through Personalized Informal Learning	NSF SBIR	2021-2022	\$50K
Diagnostic Grant	Center for Inclusive Computing	2021-2022	\$50K
Collaborative Research: IUSE:EHR: The Effects of Course Structure and Sociality on the Success of Intersectional Groups of Students in Undergraduate Computing Education	NSF IUSE	2021-2024	\$357K
iLeap: Informal Learning Experiences to Encourage Curiosity in STEM Career Paths	NSF ICORPS	2020-2021	\$50K
CHS: Small: Promoting Unexpected Information Discovery: An Interactive Framework for Computational Serendipity	NSF IIS	2019-2022	\$496K
CS4ALL: Broadening Participation with the STEM Ecosystem: Developing a Scalable Model for CS using an RPP approach	NSF BPC	2018-2021	\$475K
An Interactive Learning Analytics Framework based on a Student Sequence Model for understanding students, retention, and time to graduation	NSF EHR	2018-2021	\$298K
CompCog: RI: Small: Pique: A cognitive model of curiosity for personalizing sequences of learning resources	NSF RI	2016-2020	\$449K
IUSE/PFE:RED: The Connected Learner: Design Patterns for Transforming Computing and Informatics Education	NSF RED	2015-2021	\$2.2M
Community-Driven Projects that Include Adaptable Technology for Environmental Learning in Nature Preserves	NSF AISL	2015-2021	\$889K
EAGER: Collaborative Research: A Computational Model for Evaluating the Quality of Citizen Science Contributions	NSF CHS	2014-2016	\$97K
Pathways for Women	NCWIT	2013-2015	\$8,000

HCC: Small: Designing Tangible Computing for Creativity	NSF HCC	2012-2015	\$499,982
VOSS: Crowdsourcing interaction design for citizen science virtual organizations	NSF VOSS	2012-2014	\$399,872
Curious Places: Agent-Mediated Self-Aware Worlds	ARC Discovery Grants	2006-2009	\$255,000
3D Electronic Institutions	ARC Discovery Grants	2004-2006	\$40,000
Pervasive and Mobile Computing in Design and Construction	CRC CI	2005-2007	\$65,000
Modelling Design Knowledge using Swarm Intelligence	University of Sydney	2004	\$18,000
Team Collaboration in High Bandwidth Virtual Environments	CRC CI	2003-2006	\$790,000
Information Flows in Virtual Environments	CRC CI	2001-2003	\$120,000
Case-Based Reasoning in Construction Processes	CRC CI	2003-2005	\$72,000
Intelligent Virtual Architecture	ARC Large Grant	2001-2003	\$120,000
Object Design in Virtual Architecture	University of Sydney	2001	\$25,000
Virtual Architecture	ARC Small Grants	1999-00	\$40,000
Knowledge Discovery from Multimedia Design Libraries	ARC Large Grants Scheme	1998-00	\$200,000
Coevolutionary Models of Design	ARC Large Grants Scheme	1997-9	\$185,000
Understanding Virtual Design Studios	ARC Large Grants Scheme	1996-8	\$144,000
Multimedia Case-Based Design Tool for Teaching Architectural Science	Commonwealth Advancement of University Teaching (CAUT)	1996	\$42,508
Computer-supported Collaborative Design	ARC Large Grants Scheme	1993-5	\$116,000
Representation of Design Knowledge Based on Decomposition and Analogy	ARC Large Grants Scheme	1992-4	\$119,000
Indexing and Retrieving Multimedia Design Documents	University Research Grants Scheme	1994	\$12,000
Evolving Design Knowledge-bases Using Machine Learning	ARC Large Grants Scheme	1991-3	\$104,000
Interdisciplinary Computer-based Design Teaching Centre	NSW Education and Training Foundation	1991	\$125,000
Incremental Learning Techniques for Design	University Research Grants Scheme	1990	\$7,000
Synthesis of Preliminary Designs	CMU Engineering Design Research Center	1986-1990	\$120,000
Development of a Shell for Engineering Design	Digital Equipment	1989	\$37,000
Knowledge Representation for Preliminary Structural Design	NSF Presidential Young Investigator Award	1997-1991	\$100,000
Knowledge Representation for Preliminary Structural Design	Industry Matching for NSF PYI	1989	\$37,000
Robotic Applications for Coal Mines	US Bureau of Mines	1986-1988	\$500,000

AWARDS and INVITATIONS

Received the 2023 NCWIT Harrold and Notkin Award.

Invited Distinguished Speaker in Creative Technologies at Aalto University, Helsinki, Finland, October 2022.

Outstanding Research Award, College of Computing and Informatics, UNC Charlotte, May 2022

Top 2% of the world for the number of citations in the field of AI and Visualization:
(<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000918>).

Best Paper Award, 2022 International Conference on Computer Science Education:
Siddiqui, S.; Maher, M.; Najjar, N.; Mohseni, M. and Grace, K. (2022). Personalized Curiosity Engine (Pique): A Curiosity Inspiring Cognitive System for Student Directed Learning. In Proceedings of the 14th International Conference on Computer Supported Education - Volume 1: CSEDU, ISBN 978-989-758-562-3, pages 17-28. DOI: 10.5220/0010883200003182

Keynote Speaker for Design 2020. <https://www.designconference.org/keynotes>, October 2020

Keynote Speaker at the NSF Engineering Design and Systems Engineering Workshop, Purdue University, October 2019.

Invited speaker for the Distinguished Speaker Series, Faculty of Architecture, Istanbul Technical University, October 2019.

Invited Speaker, Faculty of Computer Science, University of Helsinki, August, 2019.

Keynote Speaker, CogSci 2019 in Montreal, Canada, July 2019.

Invited Speaker at Grace Hopper Celebration on Engaging Pedagogies. September 2018.

Sanders Series Speaker at Toronto User Experience Group (TUX). February 2018. "Designing for Gesture and Tangible Interaction.

Tee Sasada Award, Presented at CAADRIA 2014.

Best Paper Award, 2014 International Conference Design Computing and Cognition:
Grace, K., Maher, M. L., Fisher, D. & Brady, K. (2014). Modelling expectation for evaluating surprise in design creativity. In Gero, J.S. and Hanna, S (eds) Proceedings of Design Computing and Cognition 2014, University College London.

Keynote Speaker at European Conference of Technology Enhanced Learning (EC-TEL 2012), September 2012, www.ec-tel.eu

Invited Speaker at the Distinguished Lecture Series, Computer Engineering Department at ITAM, April 2012, <http://ingcomputacion.itam.mx/>

Keynote Speaker at 6th International ASCAAD Conference February 2012:
<http://www.ascaad.org/conference/2012/index.htm>

Invited Speaker at ISPE Concurrent Engineering 2011: <http://www.ce2011.org/>

Invited Panelist at the International Conference on Design Creativity: <http://www.org.kobe-u.ac.jp/icdc2010/>

Invited Speaker in 2010 at the 1st International Conference on Computational Creativity:
<http://creative-systems.dei.uc.pt/icccx/>

Keynote Speaker at Collaborative Technologies 2009: <http://www.collabtech.org/>

Keynote Speaker at the 2009 College of Information Science and Technology Graduate Symposium at Penn State University
<http://gradsymp.ist.psu.edu/2009/speakers>

Keynote Speaker at the 2nd International Workshop on Social Computing, Behavior Modeling, and Prediction 2009
<http://www.public.asu.edu/%7Ehuanliu/sbp09/index.html>

9th International Conference on Construction Applications of Virtual Reality 2009
<http://www.convr2009.com/>

Director's Award in 2008 at the National Science Foundation for novel approaches to panel review of potential transformative research

Senior Executive Service in 2008 at the National Science Foundation

Keynote Speaker Design Computing and Cognition 2008
<http://mason.gmu.edu/~jgero/conferences/dcc08/>

Keynote Speaker at International Visual Literacy Association 2008
www.ivla.org/pdf_files/IVLA_Final_Program_really.pdf

Keynote Speaker at Australian and New Zealand Architectural Science Association 2008
http://www.newcastle.edu.au/conference/anzasca2008/keynote_speakers.html

SERVICE

Leadership Service:

College of Computing and Informatics (CCI), UNC Charlotte (2012-present)
Department Chair, Software and Information Systems (2012-2020)
Director of the Center for Education Innovation and Research (2013-present), lead a diverse group of faculty in STEM and CS education research to broaden participation in computing and technology.
Director of the Integrated Critical Core (2020-present): mentor 20 faculty in equitable teaching practices in 7 courses in the undergraduate Computer Science program.
Member of the Equity and Inclusion Committee (2020-2022): advise and track diversity activities in the College.
CCI Faculty President and member of the UNCC Faculty Executive Committee (2021-2022).
Lead PI on NSF funded Research Practice Partnership project: work with Middle School teachers to develop an ecosystem for including computational thinking in a minority majority school.
Lead PI on NSF funded IUSE project: work with computer science faculty in learning the impact of inclusive teaching practices on students through an intersectional lens.

Lead PI on NSF funded RED project: The Connected Learner project initiated organizational change practices for collaborative active learning in CS education.

Sydney University (1990-2006)

Head of Department of Architectural and Design Science (2003-2005)

Co-Director of the Key Centre of Design Computing

Lead the creation of a new degree: Bachelor of Design Computing

Service to the Profession:

National Science Foundation (2006-2020)

Lead Program Director for CreativeIT

Lead Program Director for Cyber-enabled Discovery and Innovation

Member of Senior Executive Service

Deputy Division Director for Information and Intelligent Systems

Committee for Broadening Participation of under-represented groups in CISE

Member of proposal review panels:

National Science Foundation

European Commission

Australian Research Council

Research Council for Natural Sciences and Engineering of the Academy of Finland

Collaborative Research Centre for Construction Innovation in Australia

Member of the Society of Women Engineers and participated in a workshop for high school girls as part of the Women in Technology program.

Editorial Board Member:

Automation in Construction

AI EDAM

Computers in Industry

CoDesign

Design Studies

International Journal of Design Creativity and Innovation

International Journal of Human Computer Studies

International Journal of Architectural Computing

Journal of Computer Information and Science in Engineering

Journal of Engineering Design

Knowledge Based Systems

Research in Engineering Design

Program Committee for the following conference series:

C&C (Creativity and Cognition) 2019, General Chair

ICCC (Int'l Conference on Computational Creativity) 2019,

General Chair, 2012 and 2013, Program Chair

Aml (Ambient Intelligence) 2011: Program Co-Chair (with David Keyson)

ACADIA: Association for Computer Aided Design in Architecture

CAADRIA: Computer Aided Architectural Design and Research in Asia

CAADFutures

Computer Supported Collaborative Work

Collaborative Design, Visualization and Engineering

Computer Supported Collaborative Design

Computer Aided Innovation
Design Computing and Cognition
SIGCHI: ACM Special Interest Group on Computer Human Interaction
International Conference on Intelligent Environments
International Conference on Design Creativity
International Conference on Engineering Design
IVA, International Conference on Intelligent Virtual Agents
SIGraDi: Iberoamerican Society of Digital Graphics

Publications (2005-2023)

I have an h-index of 57 with over 12,000 citations and i10 of 202 using the results from Google Scholar in 2022. My most highly cited book is Case-Based Reasoning in Design, published in 1997, my most highly cited magazine article is Process Models for Design Synthesis in AI Magazine in 1990, my most highly cited journal article is Modeling Design Exploration as Co-evolution in 1996. My most recent books are Designing for Gesture and Tangible Interaction in 2017, Design Grammars for Designing Adaptive Virtual Worlds in 2014, and Motivated Reinforcement Learning: Curious Characters for Multiuser Games published in 2009. Below is a list of my most recent publications. A complete list is available on <https://sites.google.com/uncc.edu/maryloumaher/publications>.

2023

- Mickelson, R.A., Maher, M.L., Ghasemi, A., Zhang, D., Dou, W., Fan, L., Markant, D., & Rorrer, A. (2023). Resisting Resurgent Authoritarianism with Trustworthy and Human-Centric AI. Paper to be presented at the XX ISA World Congress of Sociology (June 25-July 1, 2023), Melbourne Australia.
- Kim, J. And Maher, M.L. (2023). The Effect of AI-based Inspiration on Human Design Ideation, *International Journal of Design Creativity and Innovation*, 11:1.
- Mary Lou Maher, Justin D. Weisz, Lydia B Chilton, Werner Geyer, and Hendrik Strobel. 2023. HAI-GEN 2023: 4th Workshop on Human-AI Co-Creation with Generative Models. In *28th International Conference on Intelligent User Interfaces (IUI '23 Companion)*, March 27–31, 2023, Sydney, NSW, Australia. ACM, New York, NY, USA 3 Pages. <https://doi.org/10.1145/3581754.3584166>

2022

- Siddiqui, S.; Maher, M.; Najjar, N.; Mohseni, M. and Grace, K. (2022). Personalized Curiosity Engine (Pique): A Curiosity Inspiring Cognitive System for Student Directed Learning. In *Proceedings of the 14th International Conference on Computer Supported Education - Volume 1: CSEDU*, ISBN 978-989-758-562-3, pages 17-28. DOI: 10.5220/0010883200003182 (Best Paper Award). <https://www.scitepress.org/PublicationsDetail.aspx?ID=cA8cJ/6ctDw=&t=1>
- Al Doulat, A., and Maher, M.L. (2022). FIRST: Finding Interesting Stories About Students - An Interactive Narrative Approach to Explainable Learning Analytics, *Proceedings of EduLearn 2022*. doi: doi.org/10.21125/edulearn.2022
- Latulipe, C., Tadimalla, S. Y., Maher, Mary Lou, Frevert, T., Mejias, M., Payton, J. Rorrer, A., Fiore, J., Bell, L., Kwatney, G., Rose, A. (2022). Developing CALI: An Inventory to Capture Collaborative Active Learning and Inclusive Practices in Introductory CS Courses, *Proceedings of 2022 IEEE Frontiers in Education (FIE) Conference*.
- Najjar, N., Ebrahimi, A., Maher, M.L. (2022). A Study of the Student Experience in Video Conferences and Virtual Worlds as a Basis for Designing the Online Learning Experience, *Proceedings of 2022 Frontiers in Education (FIE) Conference*
- Rezwana, J., & Maher, M. L. (2022). Designing Creative AI Partners with COFI: A Framework for Modeling Interaction in Human-AI Co-Creative Systems. *ACM Transactions on Computer-Human Interaction*. <https://doi.org/10.1145/3519026>
- Rezwana, J., and Maher, M.L. (2022). Understanding User Perceptions, Collaborative Experience and User Engagement in Different Human-AI Interaction Designs for Co-Creative Systems, *Proceedings of Creativity & Cognition*. <https://doi.org/10.1145/3527927.3532789>
- Rezwana, J. and Maher, M.L. (2022). Identifying Ethical Issues in AI Partners in Human-AI Co-Creation, *CHI 2022 Workshop on Generative AI and HCI*, <https://generativeaiandhci.github.io/>
- Maher, M.L., Magerko, B., Ventura, D., Fisher, D., Cardona-Rivera, R., Fulda, N., Gero, J., Lee, M., Wilson, D., Kaufman, J., Kunda, M., Muller, M., Bellamy, R. Ackerman, M., Chrysikou, E. (2022). A Research Plan for Integrating Generative and Cognitive AI for Human Centered, Explainable Co-Creative AI, *CHI 2022 Workshop on Generative AI and HCI*, <https://generativeaiandhci.github.io/>
- Almadan, A., Maher, M. L., Pereira, F. B., & Guo, Y. (2022, March). Will You Be Vaccinated? A Methodology for Annotating and Analyzing Twitter Data to Measure the Stance Towards COVID-19 Vaccination. In *Future of Information and Communication Conference* (pp. 311-329). Springer, Cham.

- Siddiqui, S. and Maher, M.L. (2022). Make the Truth Louder to Mitigate the Effect of Fake News by Design, CHI2022 Workshop on Designing mis/disinformation: A human Centretic approach.
https://sites.google.com/view/design4misinformation/home?utm_source=bit.ly/design4misinformation
- Siddiqui, S. and Maher, M.L. (2022). Active-Passive Framework for Developing Communication Strategies to Combat Misinformation, in Proceedings of 2022 ICWSM.
- Michael Muller, Lydia B Chilton, Anna Kantosalo, Mary Lou Maher, Charles Patrick Martin, and Greg Walsh. 2022. GenAICHI: Generative AI and HCI. In Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (CHI EA '22). Association for Computing Machinery, New York, NY, USA, Article 110, 1–7. <https://doi.org/10.1145/3491101.3503719>
- Mohseni, M. and Maher, M.L., 2022. A Framework for Exploring Computational Models of Novelty in Unstructured Text. In the 6th International Conference on Information System and Data Mining (ICISDM 2022). Association for Computing Machinery, New York, NY, USA, 36–45. <https://doi.org/10.1145/3546157.3546164>

2021

- Dehbozorgi, N., Maher, M.L., and Dorodchi, M. (2021). Emotion Mining from Speech in Collaborative Learning, Advances in Science, Technology and Engineering Systems Journal (ASTESJ) , Vol 6, No. 2. DOI: 10.25046/aj060512
- Dehbozorgi, N., Maher, M.L., and Dorodchi, M. (2021). Does Self-Efficacy Correlate with Positive Emotion and Academic Performance in Collaborative Learning? In Proceedings of 2021 Frontiers in Education.
- Siddiqui, S. and Maher, M.L. (2021). Reframing the Fake News Problem: Social media interaction design to make the truth louder. CHIRA2021: 5th International Conference on Computer-Human Interaction, Research, and Applications.
- Kim, J., Maher, M.L., and Siddiqui, S. (2021). Collaborative Ideation Partner: Design Ideation in Human-AI Co-Creativity. CHIRA2021: 5th International Conference on Computer-Human Interaction, Research, and Applications.
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