

Narges Mahyar

Assistant Professor

University of Massachusetts Amherst
Manning College of Information and Computer Sciences
Room: A211H LGRC

May 2023

Citizenship: Iranian-Canadian

Email: nmahyar@cs.umass.edu

Website: <http://groups.cs.umass.edu/nmahyar/>

Labs, Centers & Fellowships:

HCI-VIS Lab, Co-Director: <https://groups.cs.umass.edu>

Center for Data Science (CDS), Faculty Affiliate, UMass Amherst

Computational Social Science Institute (CSSI), Faculty Affiliate, UMass Amherst

Natural Language Processing Group (UMass NLP), Faculty Affiliate, UMass Amherst

Public Interest Technology Fellow, UMass Amherst, 2023

Incoming Harvard Radcliffe Fellow, 2023-2024

RESEARCH INTERESTS & MISSION

Human-Computer Interaction (HCI), Information Visualization, Social Computing, Crowdsourcing, Digital Civics, and Design Thinking.

My goal is to democratize data collection, analysis, and decision-making by empowering people to raise their voices in high-stake civic decision-making, understand and make sense of complex data, and advance civic technology that alleviates social inequality by including marginalized perspectives to address complex sociotechnical problems.

EDUCATION

- | | |
|------|---|
| 2014 | PhD in Computer Science , University of Victoria, Victoria, BC. |
| 2008 | Master of Information Technology , University of Malaya, KL, Malaysia. |
| 1998 | Bachelor of Electrical Engineering , Tehran Azad University, Tehran, Iran. |

ACADEMIC AWARDS, HONORS & FELLOWSHIPS

- | | |
|-----------|--|
| 2023-2024 | Harvard Radcliffe Fellow , Radcliffe Institute for Advanced Study at Harvard University |
| 2023 | Best Paper Award , Human Factors in Computing (<i>CHI</i>) |
| 2022 | Best Paper Award , Eurographics/IEEE VGTC Symposium on Visualization (<i>EuroVis</i>) |
| 2022 | Recognition of Service in Appreciation to Contribution to ACM, for serving as Paper Co-Chair, Creativity and Cognition 2021 Conference (<i>C&C</i>) |
| 2021 | Best Paper Honorable Mention Award , Designing Interactive Systems (<i>DIS</i>) |
| 2020 | Best Paper Award , Computer Supported Cooperative Work and Social Computing (<i>CSCW</i>) |
| 2017 | Outstanding Paper Award , Council of Educators in Landscape Architecture |
| 2016 | Best Paper Honorable Mention Award , Interactive Surfaces and Spaces (<i>ISS</i>) |
| 2016 | Best Poster Honorable Mention Award , Graphics Interface (<i>GI</i>) |
| 2014 | Best Paper Award , Visual Analytics Science and Technology (<i>VAST</i>) |
| 2014 | Best Research Note Honorable Mention , Graphics, Animation & New Media (<i>GRAND</i>) |
| 2010 | Best 4 Papers , Visual Analytics Science and Technology (<i>VAST</i>) |

RESEARCH POSITIONS

- | | |
|--------------|---|
| 2018-present | Assistant Professor , University of Massachusetts Amherst, Amherst, MA. |
| 2016-2018 | Design Lab Fellow and Postdoctoral Researcher , UCSD, San Diego, CA.
Advisor: Steven P. Dow |

- 2014-2016 **Postdoctoral Fellow**, University of British Columbia, Vancouver, BC.
Advisors: Kellogg Booth, Cynthia Girling, and Ronald Kellett
- 2008-2014 **Research Assistant**, University of Victoria, Victoria, BC, Canada.
Advisor: Melanie Tory
- Summer 2009 **Research Intern**, SAP, Vancouver, BC, Canada,
Advisor: Michael McAllister
- 2006-2008 **Research Assistant**, University of Malaya, KL, Malaysia.
Advisor: Wai (Albert) Yeap

GRANT SUPPORT

National Science Foundation (NSF), SATC: CORE: Medium: “Principles and Algorithms for Visual Data Exploration Under Differential Privacy”, (Co-PI)

Award Period: 7/1/20 - 6/30/23, **\$1,191,106**

National Science Foundation (NSF), Computing Innovation Fellows 2021, Award Period: 5/1/2022- 4/31/2023, Amount: **\$241,936.00**

National Science Foundation (NSF), Smart & Connected Communities Planning Grant, “MAPPING INSTABILITY: Building an Intelligent Community Agent Platform for Understanding the Impact of Large-Scale Crisis on Small Town Communities”, (PI) Award Period: 10/1/2021- 7/31/2023, Amount: **\$146,941.00**

UMass ADVANCE Collaborative Research Seed Grants, “MAPPING INSTABILITY: The Effects of the Pandemic on the Civic Life of a Small Town.” (Co-PI)

Award Period: 11/11/20 - 11/11/21, **\$15,000**

UMass ADVANCE Collaborative Research Seed Grants, “Towards Reducing Social Inequality in Local-level Public Participation by Giving Voice to Marginalized Populations” (Co-PI)

Award Period: 04/14/21 - 04/14/22, **\$12,000**

Public Interest Technology Initiative at UMass Amherst, “Voice-Enabled Conversational Journaling for Parkinson’s Disease Patients” (Co-PI)

Award Period: 04/1/23 - 10/30/23, **\$9000**

PUBLICATIONS

Note: Top-tier venues in human-computer interaction research include the ACM conferences CHI and CSCW. The premium venue in visualization and visual analytics is IEEE VIS. Highest quality VIS/VAST papers appear in a special issue of IEEE Transactions on Visualization and Computer Graphics (TVCG). ISS is the premier venue for research on the design, development, and use of emerging tabletop, interactive spaces, and multi-surface technologies. Acceptance rates are reported on conference proceedings. Students are typically named first in human-computer interaction research and advisors are last except in unusual circumstances. **Names of students that I supervised are in bold.** Note that conferences represent a primary publication venue in Computer Science.

Refereed Journal Publications

[J14] Yavo-Ayalon, Sharon, **Swapna Joshi**, Yuzhen Zhang, Ruixiang Han, Narges Mahyar, Wendy Ju. “Building Community Resiliency through Immersive Communal Extended Reality (CXR)”, *Multimodal Technologies and Interaction* 7, no. 5 (2023): 43.

[J13] **Alyxander Burns**, **Thai On**, **Christiana Lee**, Cindy Xiong, Evan Peck and Narges Mahyar, “From Invisible to Visible: Impacts of Metadata in Communicative Data Visualization”, 13 Pages, *IEEE Transactions on Visualization and Computer Graphics Journal (TVCG)*, pp. 1-16, 2022.

[J12] Eric P. S. Baumer, **Mahmood Jasim**, Ali Sarvghad and Narges Mahyar, “Of Course it's

Political! A Critical Inquiry into Underemphasized Dimensions in Civic Text Visualization”, *EuroVis 2022*, Volume 4, no. 3, 14 Pages, 2022.

 **Best Paper Award**

[J11] **Abram Handler**, Narges Mahyar, and Brendan O'Connor, “ClioQuery: Interactive Query-Oriented Text Analytics for Comprehensive Investigation of Historical News Archives”, *Transactions on Interactive Intelligent Systems (TiiS)*, Article No. 22, pp. 1–49, 2022.

[J10] Ali Sarvghad, **Rolando Franqui-Nadal**, Rebecca Reznik-Zellen, **Ria Chawla** and Narges Mahyar, “Scientometric Analysis of Interdisciplinary Collaboration and Gender Trends in 30 Years of IEEE VIS Publications”, *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 12 pages, 2022.

[J9] **Brandon Reynante**, Steven P. Dow and Narges Mahyar “A Framework for Open Civic Design: Integrating Public Participation, Crowdsourcing, and Design Thinking”, *ACM Digital Government: Research and Practice (DGOV)*, Volume 2, Issue 4, pp. 1-22, Oct 2021.

[J8] **Alyxander Burns**, Cindy Xiong, Steven Franconeri, Alberto Cairo and Narges Mahyar, “Designing with Pictographs: Envision Topics without Sacrificing Sensemaking”, *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 13 pages, 2021.

[J7] **Hee-Tae Jung**, Taiwoo Park, Narges Mahyar, Sungji Park, Taekyeong Rye, Yangsoo Kim and Sunghoon Ivan Lee, “Rehabilitation Games in Real-World Clinical Settings: Practices, Challenges, and Opportunities”, *ACM Transactions on Computer-Human Interaction Journal (ACM TOCHI, presented at ACM CHI 2021)*, vol. 27, no.6, pp. 1-43, 2020.

[J6] **Sarmad Mehrbod**, Sheryl Staub-French, Narges Mahyar and Melanie Tory, “Beyond the clash: investigating BIM-based building design coordination issue representation and resolution”, *Journal of Information Technology in Construction (ITcon)* 24.3, pp. 33-57, 2019.

[J5] **Sarmad Mehrbod**, Sheryl Staub-French, Narges Mahyar and Melanie Tory, “Characterizing Interactions with BIM Tools in Building Design Coordination Meetings”, *Journal of Automation in Construction*, vol. 98, pp. 195-213, 2019.

[J4] Girling, Cynthia, Ronald W. Kellett, Kellogg S. Booth, Narges Mahyar, **Kelly J. Burke** and Alix Krahn, “Collaboration Tools to Support Informed Public Engagement”, *Landscape Research Record*, NO. 06, pp. 264-278. 2017. [Outstanding Paper Award, Council of Educators in Landscape Architecture, 2017]

 **Outstanding Paper Award**

[J3] Ali Sarvghad, Melanie Tory and Narges Mahyar, “Visualizing Dimension Coverage to Support Exploratory Analysis”, *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 10 pages, vol. 23, no.1, pp.21-30. 2016.

[J2] Narges Mahyar and Melanie Tory, “Supporting Communication and Coordination in Collaborative Sensemaking”, *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, pp. 1633-1642, 2014. [Best Paper Award, VAST 2014].

 **Best Paper Award**

[J1] Narges Mahyar, Ali Sarvghad and Melanie Tory, “Note Taking in Co-located Collaborative Visual Analytics: Analysis of an Observational Study”, *Information Visualization*, vol. 11, no. 3, pp. 190-204, 2012. [**Special Issue on VAST 2010 top 4 papers**].

Refereed Conference Publications

[C15] **Sheshera Mysore**, **Mahmood Jasim**, **Haoru Song**, **Sarah Akbar**, **Andre Kenneth Chase Randall** and Narges Mahyar, “Exploring how Data Scientists Review Scholarly Literature”, *ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR)*, pp. 137-152. 2023.

[C14] **Alyxander Burns, Christiana Lee, Ria Chawla**, Evan Peck and Narges Mahyar, “Who Do We Mean When We Talk About Visualization Novices?”, ACM Conference on Human Factors in Computing (*CHI*), pp. 1-16, 2023.

 **Best Paper Award**

[C13] **Zhiqiu Jiang, Mashrur Rashik**, Kunjal Panchal, **Mahmood Jasim**, Ali Sarvghad, Pari Riahi, Erica Dewitt, Fay Thurber and Narges Mahyar, “CommunityBots: Creating and Evaluating a Multi-Agent Chatbot Platform for Public Input Elicitation”, *Proceedings of the ACM Computer-Supported Cooperative Work and Social Computing (CSCW)*, pp. 1-32, 2023.

[C12] Erica Dewitt, **Zhiqiu Jiang, Mashrur Rashik, Kunjal Panchal, Mahmood Jasim**, Fey Thurber, Cami Quinteros, Ali Sarvghad, Narges Mahyar, and Pari Riahi, “Mapping Instability: The Effects of the Pandemic on the Civic Life of a Small Town”, *Environments by Design: Health, Wellbeing, and Place Conference*, AMPS proceeding Series 26.2, pp. 170-181, 2022.

[C11] **Mahmood Jasim**, Christopher Collins, Ali Sarvghad and Narges Mahyar, “Supporting Serendipitous Discovery and Balanced Analysis of Online Product Reviews with Interaction-Driven Metrics and Bias-Mitigating Suggestions”, ACM Conference on Human Factors in Computing (*CHI*), pp.1-24, 2022.

[C10] **Mahmood Jasim**, Enamul Hoque, Ali Sarvghad and Narges Mahyar, “CommunityPulse: Facilitating Community Input Analysis by Surfacing Hidden Insights, Reflections, and Priorities”, ACM Designing Interactive Systems (*DIS*), pp. 846-863, 2021.

 **Honorable Mention**

[C9] Carolina Aragón, **Mahmood Jasim** and Narges Mahyar, “RisingEMOTIONS: Bridging Art and Technology to Increase Public Engagement with Climate Change”, ACM Creativity and Cognition (*C&C*), pp. 1-10, 2021.

[C8] **Mahmood Jasim, Pooya Khaloo, Somin Wadhwa**, Amy X. Zhang, Ali Sarvghad and Narges Mahyar, “CommunityClick: Capturing and Reporting Community Feedback from Town Halls to Improve Inclusivity”, ACM Computer-Supported Cooperative Work and Social Computing (*CSCW*), pp. 1-32, 2020.

 **Best Paper Award**

[C7] Narges Mahyar, **Diana V. Nguyen, Maggie Chan, Jiayi Zheng** and Steven P. Dow, “The Civic Data Deluge: Understanding the Challenges of Analyzing Large-Scale Community Input”, ACM Designing Interactive Systems (*DIS*), pp. 1171-1181, 2019.

[C6] Narges Mahyar, **Michael James, Michelle Ng, Reggie Wu** and Steven P. Dow, “CommunityCrit: Inviting the Public to Improve and Evaluate Urban Design Ideas through Micro-Activities”, ACM Human Factors in Computing Systems (*CHI*), pp. 1-14, 2018.

[C5] Narges Mahyar, **Kelly Burke, Siyi Meng, Jialiang Xiang**, Kellogg S. Booth, Cynthia Girling and Ronald Kellett, “UD Co-Spaces: A Table-Centered Multi-Display Environment for Public Engagement in Urban Design Charrettes”, *Interactive Surfaces and Spaces (ISS '16)*, ACM, pp. 109-118, 2016.

 **Honorable Mention**

[C4] **Sarmad Mehrbod**, Sheryl Staub-French, Melanie Tory and Narges Mahyar, “A Framework for Classifying BIM Design Coordination Issues”, *Construction Specialty Conference*, June 8-10, pp. 329-429, 2015.

[C3] Narges Mahyar, Ali Sarvghad, Melanie Tory and **Tyler Weeres**, “Observations of Record-Keeping in Co-located Collaborative Analysis”, HCI Mini-Track, *HICSS 2013*, pp. 460-469, 2013.

[C2] Narges Mahyar, Ali Sarvghad, and Melanie Tory, “A Closer Look at Note Taking in the Co-located Collaborative Visual Analytics Process,” *IEEE Visual Analytics Science and Technology (VAST’10)*, pp. 171-178, 2010.

 **Top 4 Best VAST Papers**

[C1] Wai K. Yeap, Tommi Opas and Narges Mahyar, “On Two Desiderata for Creativity Support Tools”, *Conference on Computational Creativity*, pp. 180-189, 2010.

Refereed Workshop Papers

[W12] Pantea Haghighatkah, Mennatallah El-Assady, Jean-Daniel Fekete, Narges Mahyar, Carita Paradis, Vasiliki Simaki, Bettina Speckmann, “Characterizing Uncertainty in the Visual Text Analysis Pipeline”, *Vsiuzliation for Digital Humanity (Vis4DH) workshop*, In conjunction with IEEE VIS 2022, Oct 16-21, 2022.

[W11] Kostiantyn Kucher, Nicole Sultanum, Angel Daza, Vasiliki Simaki, Maria Skeppstedt, Barbara Plank, Jean-Daniel Fekete, Narges Mahyar, *Workshop on Evaluation and Beyond-Methodological Approaches for Visualization (BELIV 2022)*, in conjunction with IEEE VIS 2022, Oct 16-21, 2022.

[W10] **Alyxander Burns, Thai On, Christiana Lee**, Rachel Shapiro, Cindy Xiong, Narges Mahyar, “Making the Invisible Visible: Risks and benefits of disclosing metadata in visualization”, *IEEE Workshop on Visualization for Social Good (VIS4Good)*, pp. 11-15, 2021.

[W9] **Alyxander Burns**, Cinxy Cindy Xiong, Steven Franconeri, Alberto Cairo and Narges Mahyar, “How to evaluate data visualizations across different levels of understanding”, *BELIV Workshop on Evaluation and Beyond-Methodological Approaches for Visualization*, in conjunction with IEEE VIS 2020, pp. 19-28, 2020.

[W8] **Mahmood Jasim**, Amy X. Zhang, Ali Sarvghad and Narges Mahyar, “Inclusivity in Town Halls: Challenges, Paradigm Shift, and Opportunities”, *Civic Technologies Workshop*, in conjunction with CSCW 2020, 5 pages, 2020.

[W7] Narges Mahyar, **Weichen Liu, Dangyi Liu** and Steven P. Dow, *Enabling Crowdsourced Visualizations to Support Large-Scale Civic Engagement*, *Workshop on Crowd-Civic Systems, CSCW 2017*, 5 pages, 2017.

[W6] Narges Mahyar, Kellogg S. Booth, Cynthia Girling and Ronald Kellett, “Just Scratching the Surface, the Long Road to Effective Cross-Display Interaction”, *Cross-Surface '16 workshop*, in conjunction with ACM ISS'16, 7 pages, 2016.

[W5] Narges Mahyar, Sung-Hee Kim and Bum Chul Kwon, “Towards a Taxonomy for Evaluating User Engagement in Information Visualization“, *Workshop on Personal Visualization: Exploring Everyday Life, IEEE VIS 2015*, 4 pages, 2015.

[W4] Ronald Kellett, Kellogg Booth and Narges Mahyar, “Collaboration Technology for Stakeholder Engagement in Urban Planning”, *Information Technology & City Life Workshop, CSCW 15*, March 14-16, 2 pages, 2015.

[W3] Narges Mahyar, Ali Sarvghad, Melanie Tory and Tyler Weeres “CoSpaces: Workspaces to Support Co-located Collaborative Visual Analytics,” *DEXIS 2011*, 4 pages, Nov 2011.

[W2] Narges Mahyar, Ali Sarvghad, and Melanie Tory, “Roles of Notes in Co-located Collaborative Visualization”, *Workshop on Collaborative Visualization on Interactive Surfaces (CoVis 2009)*, 4 pages, Oct. 2009.

[W1] Ali Sarvghad, Narges Mahyar and Melanie Tory, “History Tools for Collaborative Visualization,” *Workshop on Collaborative Visualization on Interactive Surfaces (CoVis 2009)*, 4 pages, Oct. 2009.

Refereed Abstract, Poster & Demo Papers

[A8] **Andrew Cunningham, Alyxander Burns** and Narges Mahyar, “Looking to the Past to Visualize the Present: Revisiting W.E.B. Du Bois’ Abolitionist Visualizations”, *In Posters of the IEEE Conference on Visualization*, 2 pages, 2020.

[A7] **Mahmood Jasim, Pooya Khaloo, Somin Wadhwa**, Amy X. Zhang, Ali Sarvghad and Narges Mahyar, “CommunityClick: Towards Improving Inclusivity in Town Halls”. In Companion Publication of the 2020 Conference on Computer Supported Cooperative Work and Social Computing (*CSCW’20 Companion*), ACM, pp. 37–41, 2020.

[A6] **Tamanna Motahar, Mahmood Jasim**, Syed Ishtiaque Ahmed and Narges Mahyar, “Exploring How International Graduate Students in the US Seek Support”, ACM Conference on Human Factors in Computing Systems (*CHI*), Extended Abstract, PP. 1-8, CHI, 2020.

[A5] **Mahmood Jasim**, Ali Sarvghad, Enamul Hoque and Narges Mahyar, “Towards Understanding Desiderata for Large-Scale Civic Input Analysis”, ACM Conference on Human Factors in Computing Systems (*CHI*), Extended Abstract, pp.1-8, CHI, 2020.

[A4] Cynthia Girling, Kellogg S. Booth, Narges Mahyar, Ronald Kellett and **Kelly Burke**, “Fast and Early Feedback: Collaboration Tools to Support Informed Public Engagement”, *Council of Educators in Landscape Architecture Conference*, Abstract, 4 pages, May 2017.

[A3] Narges Mahyar, **Weichen Liu**, Sijia Xiao, Jacob T. Browne, Ming Yang and Steven P. Dow, “ConsensusUs: Visualizing Points of Disagreement for Multi-Criteria Collaborative Decision Making”, *CSCW 2017*, demonstration, 4 pages, 2017.

[A2] Narges Mahyar, **Siyi Meng, Jialiang Xiang**, Kellogg S. Booth, Cynthia Girling and Ronald Kellett, “A Multi-Display Environment for Community Planning”, *Graphics Interface (GI)*, 2 pages, Poster, 2016.

 Honorable Mention

[A1] Narges Mahyar and Melanie Tory, “CLIP: A Visual Thinking Space to Support Collaborative Sensemaking and Reasoning”, *Graphics, Animation and New Media (GRAND) NCE AGM*, 4 pages research note, 2014.

 Honorable Mention

Other Publications: Magazines, Commentary Papers & Doctoral Symposium

[OP4] Iman Deznabi, **Tamanna Motahar**, Ali Sarvghad, Madelina Fiterau and Narges Mahyar, “Impact of the COVID-19 Pandemic on the Academic Community: Results from a survey conducted at University of Massachusetts Amherst”, *ACM Digital Government: Research and Practice (DGov)*, 2.2, pp. 1-12, 2021.

[OP3] Narges Mahyar, **Mahmood Jasim** and Ali Sarvghad, “Designing Technology for Sociotechnical Problems: Challenges & Considerations”, *IEEE Computer Graphics and Applications (CG&A)*, (Volume: 40, Issue: 6), pp. 76-87, 2020.

[Invited Article]

[OP2] Michael Sedlmair, Petra Isenberg, Tobias Isenberg, Narges Mahyar and Heidi Lam, *Proceedings of the Sixth Workshop on "Beyond Time and Errors: Novel Evaluation Methods for Visualization" (BELIV 2016, October 24, Baltimore, Maryland, USA)*, October 2016.

[OP1] Narges Mahyar, “Supporting Note Taking in Co-located Collaborative Visual Analytics on Large Interactive Surfaces”, Part of the Doctoral Colloquium, *ACM International Conference on Interactive Tabletops and Surfaces (ITS)*, 4 pages, Nov 2011.

Dissertation & Thesis

Narges Mahyar, Supporting Sensemaking during Collocated Collaborative Visual Analytics. Ph.D. Dissertation. University of Victoria, 2014.

Narges Mahyar, Implementation of Creative-Pad: A New Creativity Support System. MSc Thesis. University of Malaya, 2008.

INVITED TALKS, PANELS & WORKSHOPS

- 2023 **Data Visualization for Effective Science Communication with Diverse Audience**
Co-led with Ali Sarvghad
Organized by University of Massachusetts Center for Clinical and Translational Science (UMCCTS) with the UMass Amherst Public Engagement Project.
May 8, 2023
- 2023 **Human-Centered Computing for Addressing Complex Sociotechnical Problems**
Concordia University, Department of Computer Science, March 27, 2023
University of Maryland College Park, iSchool, February 21, 2023
Virginia Tech, Department of Computer Science, January 31, 2023
- 2022 **Designing and Building Tools for Fostering Equity and Inclusion in Civic Decision-Making** (joint talk with Ali Sarvghad)
University College London, Interaction Centre (UCLIC), December 14, 2022
City, University of London, School of Science and Technology, December 8, 2022
SIGCHI Paris Talk Series, December 6, 2022
UNC Chapel Hill, School of Information & Library Science (SILS), Nov 14, 2022
- 2022 **Social Computing and Visualization Tools for Empowering the Public**
Tableau Research, August 4, 2022
Northwestern University, Technology & Social Behavior (TSB) Speaker Series, April 21, 2022
Tufts University, Computer Science Colloquium Series, April 7, 2022
- 2022 **Connecting Science and Art for Effective Community Engagement**
Engineers and Scientists Acting Locally (ESAL), May 19, 2022
- 2021 **Building Equitable Social Computing and Visualization Tools for Democratizing Public Participation**
UCLAB Potsdam, Information + Visualization Public Talk Series, Nov 23, 2021
University of Colorado Boulder, ATLAS Colloquium Series, April 27, 2021
- 2021 **Towards Reducing Social Inequality in Local-level Public Participation by Giving Voice to Marginalized Populations**
Institute of Diversity Sciences, UMass Amherst, November 23, 2021
- 2020 **Looking to the Past to Visualize the Present: Revisiting W.E.B. Du Bois Abolitionist Visualizations**
CICS Community Discussion on Antiracism, UMass Amherst, Oct 2020
- 2019 **Social Computing and Visualization for Democratizing Public Participation**
University of Toronto, Department of Computer Science, October 27, 2021
Ontario Tech University, Department of Computer Science, October 25, 2021
- 2019 **Community-Centered Urban Design at Scale**
Erv Zube Lecture Series 2019, Landscape Architecture and Regional Planning, UMass Amherst, September 3, 2019
- 2019 **Social Computing and Visualization to Increase Participation and Collective Innovation**
Data Science Research Symposium, UMass Amherst, April 24, 2019

- Outstanding Achievement & Advocacy Awards Banquet, UMass Amherst, April 5, 2019
- 2019 **Social Computing to Enhance Public Engagement in Urban Design at Scale**
 CS Women Lunch Series, UMass Amherst, February 20, 2019
 WPI, Computer Science Colloquium, Jan 11, 2019
 New Jersey Institute of Technology, Department of Computer Science, Feb 20, 2018
 Virginia Tech, Department of Computer Science, Feb 12, 2018
 San Jose State University, Department of Computer Science, Feb 6, 2018
 University of Illinois at Chicago, Department of Computer Science, Feb 1, 2018
- 2018 **Social Computing to Improve Public Engagement in Urban Planning**
 Innovations in Participatory Democracy Conference 2018, Phoenix, AZ, March 8, 2018
- 2017 **Technologies for Increasing Public Engagement in Civic Issues**
 Changemakers Day, UC San Diego, CA, 2017
- 2017 **Collective Innovation for Business and Civics**
 Game Changers Series: Collaboratory for Downtown Innovation (CDI), San Diego, CA, Jan 25, 2017
- 2016 **Designing Collaborative Visual Analytics Tools: From Supporting Experts to Engaging the Public**
 Autodesk Research, Toronto, ON, May 17, 2016
 York University, Toronto, ON, May 16, 2017
 Microsoft Research, Redmond, WA, Feb 18, 2016
- 2016 **Large Interactive Surfaces for Collaboratively Exploring and Driving Meaning from Complex Data**
 Simon Fraser University, SIAT, Vancouver. BC, March 16, 2016
- 2016 **From Desktops to Tabletops: Opportunities and Challenges**
 University Washington Bothell, Bothell, WA, Feb 8, 2016
- 2016 **Technology for Design: A Road Map**
 Boston University, Boston, MA, Jan 27, 2016
- 2014 **Supporting Team Communication and Coordination in Visual Analytics**
 University of British Columbia, Vancouver, BC, April 24, 2014

TEACHING EXPERIENCE

Instructor

Spring 2023	Advanced Methods in HCI (COMPSCI 625), UMass Amherst.
Fall 2022	Introduction to HCI (COMPSCI 325), UMass Amherst.
Spring 2021	Advanced Methods in HCI (COMPSCI 690A), UMass Amherst.
Fall 2020	Introduction to HCI (COMPSCI 325), UMass Amherst.
Spring 2020	Computing for the Common Good (COMPSCI 692M), UMass Amherst.
Fall 2019	Introduction to HCI (COMPSCI 325), UMass Amherst.
Spring 2019	Advanced Methods in HCI (COMPSCI 690A), UMass Amherst.
Fall 2018	Digital Civics (COMPSCI 592C), UMass Amherst.

Co-Instructor & Guest Lecturer

Fall 2017	Civic Design (Cogs 160) Co-Instructor along with Steven Dow, UCSD.
Spring 2016	Graduate Research Colloquium (<i>IAT 805</i>), Guest lecturer, School of Arts and Interactive Technology, Simon Fraser University.
Summer 2014	Human-Computer Interaction (<i>SENG 310</i>), Guest lecturer, UVic.
Spring 2014	Advanced Methods for Human-Computer Interaction (CSC 578C), Guest lecturer, University of Victoria (UVic).
Summer 2013	Human-Computer Interaction (<i>SENG 310</i>), Guest lecturer, UVic.
Fall 2008	Object-Oriented Software Development (<i>SENG 330</i>), Guest lecturer, UVic.

SELECTED MEDIA COVERAGE

[CommunityClick Deployment in Town of Amherst](#)

Daily Hampshire Gazette, Dec 1, 2021

[RisingEMOTIONS was selected for the internationally acclaimed CODA award](#)

East Boston Massachusetts Newspaper, June 30, 2020

[RisingEMOTIONS in East Boston](#)

Friends of the Mary Ellen Welch Greenway, Dec 19, 2019

[CommunityCrit Gives Community Members a Newfound Voice](#)

UC San Diego Design Lab News, April 28, 2018

[Design Lab Heads Downtown to Present New Strategies and Program to Take on Society's Most Daunting Challenges](#)

UC San Diego Design Lab News, April 3, 2018

[Design Lab Launches City-Wide Civic Design Challenge](#)

UC San Diego Design Lab News, April 3, 2018

[Snapshot of Current Trends in Visualization](#)

IEEE Computer Society, March 2015

[Introduction to the VAST 2010 Special Issue of best papers of Visual Analytics Science and Technology \(VAST\) 2010](#)

Sage Journals, April 27, 2012

PROFESSIONAL ACTIVITIES

Steering/Executive Committee

2022-2026	IEEE VIS Executive Committee (VEC)
2015-2016	HCI@UBC, Monthly Seminar Series, Steering Committee, UBC

Organizing Committee

2023	Workshop Co-Chair, IEEE VIS 2023
2022	Visualization for Social Good Workshop (<i>Vis4Good</i>) 2022, in conjunction with IEEE VIS 2022
2021	Paper Co-Chair, ACM Creativity and Cognition Conference (<i>C&C</i>) 2021
2019	Fast Forward Co-Chair, IEEE VIS 2019
2018	Organizing Committee, DTSHPS Workshop 2018 (Designing Technologies to Support Human Problem Solving), in conjunction with VL/HCC 2018
2016	Organizing Committee, BELIV (<i>Beyond Time and Errors: Novel Evaluation Methods for Visualization</i>) 2016, in conjunction with IEEE VIS 2016

Grant Panelist

2019 National Science Foundation (NSF)

Program Committee Member

2023 IEEE VIS 2023, Full Papers

2022 IEEE VIS 2022, Full Papers

2021 CHI 2022, AC member (Sub-Committee: Visualization)

2020 CHI 2020, AC member (Sub-Committee: Understanding People)

2019 IEEE VIS 2019, Short Papers

2019 CHI 2020, AC member (Understanding People)

2018 CHI 2018 Late Breaking Work (*LBW*)

2018 & 2019 ACM Creativity and Cognition Conference (*CC*)

2018 BELIV Workshop (*Beyond Time and Errors: Novel Evaluation Methods for Visualization*), in conjunction with IEEE VIS 2018

2016 Interactive Surfaces and Spaces (*ISS*), 2016

2016 Graphics Interface (*GI*), 2016

2015 DEXIS 2015, Workshop on Data Exploration for Interactive Surfaces, in conjunction with Interactive Tabletops and Surfaces (*ITS*)

Reviewer

2014-2020 IEEE Visual Analytics Science and Technology (*VAST*)

2015-2023 ACM Human Factors in Computing Systems (*CHI*)

2016-2018, 2020 Computer-Supported Cooperative Work and Social Computing (*CSCW*)

2017 Human-Computer Interaction Journal

2014-2019 IEEE Computer Graphics and Applications Journal

2018 Interactive Surfaces and Spaces (*ISS*)

2017 Graphics Interface (*GI*)

2015 Visualization Viewpoint

2015-2019 IEEE Information Visualization Journal (*InfoVis*)

2015 EuroVis (*Eurographics/ IEEE VGTC Symposium on Visualization*)

2014 Graphics, Animation and New Media (*GRAND*)

Internal Service

2022 Graduate Student Award, Committee Member

2022 Distinguished & Rising Star Seminar Series, Committee Member

2021 Graduate Student Program, Committee Member

2021 Faculty & Staff Award, Committee Member

2020 ADVANCED Faculty Fellow

2018 & 2019 Informatics Faculty Recruiting Search Committee Member

2019 Executive Committee Member (Elected Position)

2018 PhD Admission Committee Member

SUPERVISION & MENTORSHIP

Note: I have created a “**mentoring program**” to actively involve undergraduate and underrepresented minority students in research. **To date, I have mentored 65 students (34/65 women) including 40**

undergraduate students (24/40 women) as part of my mentoring program. Many of my undergraduate mentees co-authored publications at top HCI and visualization venues with myself and my Ph.D. students (please see the citations next to each undergraduate students' name).

Postdoctoral Supervision, UMass Amherst

2-Swapna Joshi, NSF CI Fellow, May 2022-May 2023.

1-Zhiqiu Jiang, Fall 2021-August 2022.

Ph.D. Student Supervision

8-Amit Sarker, Computer Science, UMass Amherst, Fall 2022-present.

* Co-Advise with Ali Sarvghad

7-Mashrur Rashik, Computer Science, UMass Amherst, Fall 2021-present.

* Co-Advise with Ali Sarvghad

6-Mahmood Jasim, Computer Science, UMass Amherst, Fall 2018-present.

*Incoming Tenure Track Faculty at Louisiana State University.

5-Alyx Burns, Computer Science, UMass Amherst, Fall 2019-Fall 2022.

*Now Lecturer at Mount Holyoke College.

4-Tamanna Motahar, UMass Amherst, Fall 2019-2020.

*Now Ph.D. Student at University of Utah.

3-Pooya Khaloo, Computer Science, UMass Amherst, Fall 2018-Fall 2019.

*Now Senior Autonomous Vehicle Simulation Engineer at Nvidia.

2-Sarmad Mehrbod, PhD, Civil Engineering, UBC, 2014-2016.

*Co-advised with Sheryl Staub-French.

1-Kelly J. Burke, PhD, iSchool, UBC, Summer 2016.

*Co-advised with Kellogg Booth.

Ph.D. Thesis Committee Member

3-Uzma Haque Syeda, PhD, Computer Science at Northeastern University, Committee Member, 2023.

2-Abe Handler, PhD, Computer Science at UMass Amherst, Committee Member, 2021.

*Now Assistant Professor at the Leeds School of Business, UC Boulder.

1-Hee-Tae Jung, PhD, Computer Science at UMass Amherst, Committee Member, UMass Amherst.

*Now Assistant Professor at Indiana University–Purdue University Indianapolis (IUPUI)

Synthesis Project Supervision, UMass Amherst

2-Tu Vu, PhD. Computer Science, Fall 2019.

1-Youngwoo Kim's, PhD. Computer Science, Fall 2019.

Graduate Student (Msc.) Supervision

9-Lekha Harishchandra, MSc. Computer Science, UMass Amherst, Spring 2023-Present

8-Nishtha Agrawal, Msc, Computer Science, NYU, Fall 2023 – Present.

7-Shilpa Sweth, MSc. Computer Science, UMass Amherst, Summer 2022- present

6-Haoru Song, MSc. Computer Science, UMass Amherst, Summer 2022- Fall 2023.

5-Julian Killingback, MSc. Computer Science, UMass Amherst, Fall 2020-Fall 2021.

4-Somin Wadhwa, MSc. Computer Science, UMass Amherst, Fall 2020-Fall 2021.

*Now Ph.D. Student at Northeastern University.

3-Yueying Liu, MSc. Computer Science, UMass Amherst, Fall 2020-Fall 2021.

2-Weichen Liu, MSc. Computer Science, UCSD, Fall 2016-June 2017.

1-Dangyi Liu, MSc. Computer Science, UCSD, Fall 2016-June 2017.

Undergraduate Supervision (Honors Thesis), UMass Amherst

6-Abigail Elliott, BSc. CS, **Honors Thesis Advisor**, Fall 2021-Fall 2022.

5-Preston Yee, BSc. CS, **Honors Thesis Advisor**, Fall 2020-Fall 2021.

4-Thai On, BSc. CS, **Honors Thesis Advisor**, Fall 2020-Fall 2022. [**J12, W10**]

3-Matt Rossman, BSc. Cs, **Honors Thesis Advisor**, 2020.

*Now MS student at Georgia Tech University.

2-Emily Goroza, BSc. Computer Science, **Honors Thesis Committee**, 2019,

*Now Frontend Software Engineer II at Wayfair.

1-Anjali Devakumar, BSc. Computer Science, **Honors Thesis Committee**, 2019,

*Now MS HCI student at Georgia Tech University.

Undergraduate Supervision (Research Assistants)

40-Yaojia Lu, computer Science (Holyoke College), Spring 2023 – Present.

39-Luke Geel, Computer Science, UMass Amherst, Fall 2022 – Present.

38-Saiyyam Kochar, Computer Science, UMass Amherst, Fall 2022 – Present.

37-Niya Sharoff, Computer Science, UMass Amherst, Fall 2022 – Present.

36-Nikhil Gautam, BSc. Computer Science, UMass Amherst, Fall 2022 – Present.

35-Mumtaz Fatima, BSc. Computer Science and Economics, UMass Amherst, Summer 2022 -Present.

34-Hallie Liu, BSc. Computer Science and Economics, UMass Amherst, Fall 2022 -Present.

33-Angelika Ladia, BSc, Computer Science, UMass Amherst, Fall 2022- present.

32-Maanans Pari, BSc, Computer Science, UMass Amherst, Fall 2022- present.

31-Dylan Landman, BSc, Computer Science, UMass Amherst, Fall 2022- present.

30-Arshnoor Chadha, BSc. Computer Science, UMass Amherst, Fall 2022-present.

29-Rachel Gupta, BSc. Computer Science, UMass Amherst, Fall 2022 -Fall 2023.

28-Jason Jermany, BSc. Computer Science, UMass Amherst, Fall 2022-Fall 2023.

27-Jason Cheung, BSc, Computer Science, UMass Amherst, Fall 2022- Fall 2023.

26-Ria Chawla, BSc. Computer Science, UMass Amherst, Fall 2020-Fall 2023. [**J12, J10, C15**]

25-Christiana Lee, BSc. Computer Science, UMass Amherst, Fall 2020- Fall 2022. [**J12, C15, W10**]

24-Nikhil Rajkumar, BSc. Computer Science, UMass Amherst, Spring 2022-Summer 2022.

23-Emily Chen, BSc. Arts in User Experience Design, UMass Amherst, Spring 2022-Summer 2022.

22-Tiffany Wang, BSc. Computer Science, UMass Amherst, Summer 2021-Summer 2022.

21-Yasmeen Mekky, BSc. Computer Science, UMass Amherst, Summer 2021-Summer 2022.

20-Rolando Franqui Nadal, BSc. Computer Science, UMass Amherst, Fall 2020-2021, [**J10**]

19-Lucy Cousins, BSc. Computer Science, UMass Amherst, Spring 2020, *Now MS Student in GIS, UMass.

18-Andrew Cunningham, BSc. Computer Science, UMass Amherst, Summer 2020, [**A8**]

17-Arush Ahmed, BSc. Computer Science, UMass Amherst, Summer 2019

- 16-Nancy Zheng, BSc., Cognitive Science, UCSD, Summer 17-Spring 18. [C7]
 15-Diana Nguyen, BSc. Cognitive Science, UCSD, Winter18-Spring 18. [C7]
 14-Maggie Chan, BSc. Cognitive Science, UCSD, Winter 18-Spring 18. [C7]
 13-Reggie Wu, BSc. Cognitive Science, UCSD, Summer 2017. [C6]
 12-Michelle Ng, BSc., Visual and Environmental Studies and Computer Science, Harvard University, Summer 2017. [C6]
 11-Michael James, BSc. Human-Computer Interaction, Drama, Media, and Design, Carnegie Mellon University, Summer 2017. [C6]
 10-Lauren Liu, BSc., Computer Science, UCSD, Fall 2016-June 2017
 9-Joanne Cho, BSc., Cognitive Science, UCSD, Fall 2016-June 2017.
 8-Sanika Moharana, BSc., Cognitive Science, UCSD, Winter 2016-Summer 2017
 *Now PhD student at CMU HCII
 7-Alejandro Panduro, BSc., Cognitive Science, UCSD, Fall 2016-Summer 2017.
 6-Eric Richards, BSc., Cognitive Science, UCSD, Fall 2016-June 2017.
 5-Yabo Shi, BSc. Cognitive Science, UCSD, Winter 2018-Spring 2018.
 4-Andres Baez, BSc. Cognitive Science, UCSD, Fall 2017-Spring 2018.
 3-Siyi (Cathy) Meng, BSc. Computer Science, UBC, Summer 2015. [C5, A2]
 2-Jialiang Xiang, BSc. Computer Science, UBC, Summer 2015. [C5, A2]
 1-Tyler Weeres, BSc. Computer Science, UVic, Summer 2010. [C3, W3]

INDUSTRY EXPERIENCE

- 2004 - 2005 **Leader of the E-banking Team, Leader of E-payment Research Group**, ITC, Tehran, Iran.
 Researched and proposed solutions to implement E-banking and E-payment services over the national network.
- 2003 - 2004 **IT Expert, Member of IT Services Research Group**, ITC, Tehran, Iran.
 Researched technologies to transmit video using ITC infrastructure.
 I contributed to successful implementation of a Video on Demand service.
- 2002 - 2003 **Network Management Analyst**, ITC, Tehran, Iran.
 Researched hardware/software solutions to improve network performance.
- 2000 - 2002 **Network Infrastructure Designer**, Member of Network Research Group, ITC, Tehran, Iran.
 Redesigned network hardware and software for all of Iran's major provinces to support increased network traffic (from 250,000 to 43 million users).

COMMUNITY VOLUNTERING & OUTREACH

- Summer 2022 **Co-Organizer & Co-Instructor of Internet Course for Seniors**, Amherst, MA.
 I co-created a free 5-weeks course to teach the fundamentals of accessing and using the web to seniors. In collaboration with Amherst senior center, I co-organized and co-taught 2 sessions of this course during the summer of 2022.
- Summer 2021- Present **Deployed CommunityClick Virtual in Public Meetings**, Amherst, MA.
 Due to the impact of the pandemic, civic official organized online meetings in lieu of in-person public meetings. My team and I designed and developed a virtual version of CommunityClick to enable attendees of a public zoom meeting to participate more actively and report their feedback in real-time. After over a year of close collaboration with the Town of Amherst, our team has successfully deployed CommunityClick-Virtual on several issues in Amherst including redesign of a park area and a main Library building in downtown Amherst.
- 2020-2021 **Campus-Wide COVID-19 Survey**, UMass Amherst.

- In 2020, when the pandemic hit, my team and I devoted significant time and effort to conduct a UMass-wide survey to understand how the COVID-19 pandemic impacted the UMass community. We institutionalized the survey and connected the survey with the provost's office. Our results were disseminated across the UMass community and helped the Office of Campus Life and Wellbeing benchmark loneliness and well-being to ground strategic plans and develop interventions to address mental health crises for the student body.
- Fall 2020 **RisingEMOTIONS Installation in Front of East Boston Library**, Boston, MA. In collaboration with Prof. Carolina Aragón from UMass Landscape Architecture, we designed and implemented RisingEMOTIONS, an art installation that displayed sea-level rise in East Boston caused by climate change. The art installation was on display in front of the East Boston Branch of the Boston Public Library for 2 weeks. It was visited by library users and East Boston residents and helped to raise awareness among the East Boston community about the immediate threat of climate change.
- Spring 2019 **Deployed CommunityClick in a Town Public Meeting**, Amherst, MA. In collaboration with the Town of Amherst, my team and I deployed our novel civic technology in the town of Amherst to empower reticent attendees to voice their concerns.
- Sept 2018 **Judge, The First Design-a-Hack-a-Thon**, MIT. Attended a three-day design-a-hack-a-thon on the theme of people-centric mobility in Cambridge, Massachusetts, building upon the City Science group's experience of running hackathons and the Design Lab's experience in supporting HCD research and education. I acted as one of the mentors and judges for the designation.
- 2016-2017 **Design for San Diego (D4SD)**, San Diego, CA. D4SD was a City-wide open civic-design challenge focused on collectively creating solutions to improve mobility, health, housing, and the climate for the city of San Diego. Through this open civic approach of discovery, ideation, prototyping, and implementing solutions, D4SD sought to create opportunities for government, academia, industry, and community members to innovate collaboratively on civic solutions. I co-mentored dozens of students to design and develop the website and design briefs. I also co-taught a civic design course at UCSD to mentor students to come up with solutions for the design challenge.
- 2016-2018 **Mentor, Women and Underrepresented Students in Design Lab, UCSD**. As a postdoctoral fellow in the design lab, I oversaw mentoring women and underrepresented minorities in the design Lab. As part of this effort, I closely mentored 9 female undergraduate students.
- 2015-2016 **Member of Women in Computer Science (FOWCS)**, University of British Columbia, BC, Canada. Developed HCI related curriculum for grade 10-12.
- Summer 2015 **Volunteer**, University of British Columbia, BC, Canada. Helped out Computer Science Department with Girls Learning Code (9-13 years) to host two summer camps. Coordinated and demoed our application 4 times during June and August.
- 2008-2014 **Volunteer**, University of Victoria, Victoria, BC, Canada. Organized many events including department of computer science first Big Data Pechakucha (IdeaFest 2013), and winter social events.

2008-2011 **Instructor and Member of the Executive Committee of Internet Course for Seniors**, University of Victoria, Computer Science Volunteer Program.
Taught basic skills for navigating the Internet and using email.

2008-2011 **Member of Women in Engineering and Computer Science**, UVic.

FINE ARTS BACKGROUND & EDUCATION

Note: I continually draw on the insights about design, aesthetics, and the creative process that came from years of studying Fine Arts and creating artwork. My interdisciplinary training has enabled me to mentor students across disciplines especially with design background and help them to apply insights and contribute valuable new perspectives to HCI and Visualization research areas.

2000-2004 Modern Art Principles, Techniques and History, Gholamhossein Nami's Art Academy, Tehran, Iran.

1998-2000 Modern Art Principles and Techniques, Mahmood Samandaryan's Art Academy, Tehran, Iran.

1994-1998 Watercolor Painting, Atashzad Academy of Art, Mohammad Reza Atashzad, Tehran, Iran.

1991-1994 Drawing and Painting Principles, Mojgan Mousapour, Isfahan, Iran.

ART & CREATIVE ACTIVITY AWARDS & RECOGNITIONS

2020 RisingEMOTIONS Project was selected by **CODAawards** as one of Top 100 most successful design international projects that integrate commissioned art into an interior, architectural, or public space.

2010 Engineering Got Talent (for the Fine Art Exhibition), University of Victoria, Victoria, Canada.

1998 Teaching Award for Creating and Teaching a course on Drawing Principles at Azad University of Tehran, Tehran, Iran.

1996 Second position in the National Competition of Calligraphy (among 96 candidates), Engineering Students of Iran.

1995 Third position in the National Competition of Calligraphy (among 104 candidates), Engineering Students of Iran.

ART INSTALLATION & EXHIBITIONS

2020 RisingEMOTIONS: An Art Installation to Increase Public Engagement with Climate Change, Installed in front of East Boston Library, December 7-19, 2019

2010 Engineering's got talent, University of Victoria, Victoria, Canada.

2010 Group exhibition in Cost Collective Gallery (Abstraction), Victoria, Canada.

2005 Individual exhibition in Museum of Contemporary Art of Isfahan, Iran.

2004 Group exhibition in Atashzad Art Gallery, Tehran, Iran.

2004 Group exhibition in Science & Technology University, Tehran, Iran.

2003 Group exhibition in Atashzad Art Gallery, Tehran, Iran.

2002 Group exhibition in Atashzad Art Gallery, Tehran, Iran.

2002 Individual exhibition in Daryabeygi Gallery, Tehran, Iran.

2001 Group exhibition in Haft Peykar Gallery, Tehran, Iran.

2000 Group exhibition in Kosar Gallery, Isfahan, Iran.

1996 Group exhibition, engineering students, Tehran, Iran.