Narges Mahyar

Assistant Professor
University of Massachusetts Amherst
College of Information and Computer Sciences
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January 2023
Citizenship: Iranian-Canadian
Email: nmahyar@cs.umass.edu
Website: http://groups.cs.umass.edu/nmahyar/

Labs & Centers:
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

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

2022 **Best Paper Award**, Eurographics/IEEE VGTC Symposium on Visualization (*EuroVis*)

2022 **Recognition of Service** in Appreciation to Contribution to ACM, for serving as Paper Co-Chair, Creativity and Cognition 2021 Conference (*C&C*)

2021 **Best Paper Honorable Mention Award**, Designing Interactive Systems (*DIS*)

2020 **Best Paper Award**, Computer Supported Cooperative Work and Social Computing (*CSCW*)

2017 **Outstanding Paper Award**, Council of Educators in Landscape Architecture

2016 **Best Paper Honorable Mention Award,** Interactive Surfaces and Spaces (*ISS*)

2016 **Best Poster Honorable Mention**, Graphics Interface (*GI*)

2014 **Best Paper Award**, Visual Analytics Science and Technology (*VAST*)

2014 **Best Research Note Honorable Mention**, Graphics, Animation & New Media (*GRAND*)

2010 **Best 4 Papers**, Visual Analytics Science and Technology (*VAST*)

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**

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**

National Science Foundation (**NSF**), Computing Innovation Fellows 2021, Award Period: 1/1/2022- 12/31/2022, 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**

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

[J12] **Alyxander Burns, Thai On, Christiana Lee**, Cindy Xiong, Evan Peck and Narges Mahyar, "From Invisible to Visible: Impacts of Metadata in Communicative Data Visualization", IEEE Transactions on Visualization and Computer Graphics Journal (*TVCG*), 12 pages, 2022, (to appear).

[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, doi: 10.1109/TVCG.2022.3158236, 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

[C16] **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*) 2023, 16 pages, (to appear).

[C15] **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*), 22 pages, (to appear).

[C14] **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*), 30 pages, 2023, (to appear).

[C13] 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.

[C12] 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

[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.


[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.


[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.


[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.


[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 Haghighatkhah, 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 2002, 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, "ConsesnsUs: 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

2022	**Designing and Building Tools for Fostering Equity and Inclusion in Civic Decision-Making** 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), Invited Panelist, 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 Serries, 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 Boys 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

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** (*IAT 805*), Guest lecturer, School of Arts and Interactive Technology, Simon Fraser University.

Summer 2014 **Human-Computer Interaction** (*SENG 310*), Guest lecturer, UVic.

Spring 2014 **Advanced Methods for Human-Computer Interaction** (CSC 578C), Guest lecturer, University of Victoria (UVic).

Summer 2013 **Human-Computer Interaction** (*SENG 310*), Guest lecturer, UVic.

Fall 2008 **Object-Oriented Software Development** (*SENG 330*), 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 CODAaward
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 (*Vis4Good)* 2022, in conjunction with IEEE VIS 2022
2021	Paper Co-Chair, ACM Creativity and Cognition Conference (*C&C*) 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 (*Beyond Time and Errors: Novel Evaluation Methods for Visualization*) 2016, in conjunction with IEEE VIS 2016

Grant Panelist

2019	National Science Foundation (NSF)

Program Committee Member

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 & Rinsing 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 61 students (28/61 women) including 39 undergraduate students (24/39 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

Swapna Joshi, NSF CI Fellow, May 2022-present.
Zhiqiu Jiang, Fall 2021-August 2022.

Ph.D. Student Supervision, UMass Amherst

Amit Sarker, Computer Science, Fall 2022-present.
* Co-Advised with Ali Sarvghad
Mashrur Rashik, Computer Science, Fall 2021-present.
* Co-Advised with Ali Sarvghad
Mahmood Jasim, Computer Science, Fall 2018-presnet.
Alyx Burns, Computer Science, Fall 2019-Fall 2022.
*Now Lecturer at Mount Holyoke College.
Tamanna Motahar, Fall 2019-2020.
*Now Ph.D. Student at University of Utah.
Pooya Khaloo, Computer Science, Fall 2018-Fall 2019.
*Now Senior Autonomous Vehicle Simulation Engineer at Nvidia.

Ph.D. Thesis Committees, UMass Amherst

Abe Handler, PhD, Computer Science, Committee, 2021.
*Now Assistant Professor at the Leeds School of Business, UC Boulder.
Hee-Tae Jung, PhD, Computer Science, Committee, 2019.
*Now Assistant Professor at Indiana University–Purdue University Indianapolis (IUPUI)

Synthesis Project Supervision, UMass Amherst

Tu Vu, PhD. Computer Science, Fall 2019.
Youngwoo Kim's, PhD. Computer Science, Fall 2019.

Graduate Research Assistant Supervision, UMass Amherst

Haoru Song, MSc. Computer Science, Summer 2022- present.
Julian Killingback, MSc. Computer Science, Fall 2020-Fall 2021.
Somin Wadhwa, MSc. Computer Science, Fall 2020-Fall 2021.
*Now Ph.D. Student at Northeastern University.
Yueying Liu, MSc. Computer Science, Fall 2020-Fall 2021.

Undergraduate Supervision (Honors Thesis), UMass Amherst

Abigail Elliott, BSc. CS, **Honors Thesis Advisor**, Fall 2021-Fall 2022.
Preston Yee, BSc. CS, **Honors Thesis Advisor**, Fall 2020-Fall 2021.
Thai On, BSc. CS, **Honors Thesis Advisor**, Fall 2020-Fall 2022. **[J12, W10]**
Matt Rossman, BSc. Cs, **Honors Thesis Advisor**, 2020.
*Now MS student at Georgia Tech University.
Emily Goroza, BSc. Computer Science, **Honors Thesis Committee**, 2019, *Now Frontend Software Engineer II at Wayfair.
Anjali Devakumar, BSc. Computer Science, **Honors Thesis Committee**, 2019, *Now MS HCI student at Georgia Tech University.

Undergraduate Supervision (Research Assistants), UMass Amherst

Mumtaz Fatima, BSc. Computer Science and Economics, Summer 2022 -Present.
Rachel Gupta, BSc. Computer Science, Fall 2022 – Present.
Hallie Liu, BSc. Computer Science and Economics, Fall 2022 – Present.
Arshnoor Chadha, BSc. Computer Science, Fall 2022 – Present.
Jason Jermany, BSc. Computer Science, Fall 2022 – Present.
Angelika Ladia, BSc, Computer Science, Fall 2022- present.
Maanas Pari, BSc, Computer Science, Fall 2022- present.
Dylan Landman, BSc, Computer Science, Fall 2022- present.
Jason Cheung, BSc, Computer Science, Fall 2022- present.
Ria Chawla, BSc. Computer Science, Fall 2020-Fall 2022. **[J12, J10, C15]**
Christiana Lee, BSc. Computer Science, Fall 2020- Fall 2022. **[J12, C15, W10]**
Nikhil Rajkumar, BSc. Computer Science, Spring 2022-Summer 2022.
Emily Chen, BSc. Arts in User Experience Design, Spring 2022-Summer 2022.
Tiffany Wang, BSc. Computer Science, Summer 2021-Summer 2022.
Yasmeen Mekky, BSc. Computer Science, Summer 2021-Summer 2022.
Rolando Franqui Nadal, BSc. Computer Science, Fall 2020-2021, **[J10]**
Lucy Cousins, BSc. CS, Spring 2020, Currently MS Student in GIS, UMass.
Andrew Cunningham, BSc. Computer Science, Summer 2020, **[A8]**
Arushi Ahmed, BSc. Computer Science, Summer 2019.

Student Supervision, Prior to UMass

Nancy Zheng, BSc., Cognitive Science, UCSD, Summer 17-Spring 18. **[C7]**
Diana Nguyen, BSc. Cognitive Science, UCSD, Winter18-Spring 18. **[C7]**
Maggie Chan, BSc. Cognitive Science, UCSD, Winter 18-Spring 18. **[C7]**
Reggie Wu, BSc. Cognitive Science, UCSD, Summer 2017. **[C6]**
Michelle Ng, BSc., Visual and Environmental Studies and Computer Science, Harvard University, Summer 2017. **[C6]**
Michael James, BSc. Human-Computer Interaction, Drama, Media, and Design, Carnegie Melon University, Summer 2017. **[C6]**
Weichen Liu, MSc. Computer Science, UCSD, Fall 2016-June 2017.

Lauren Liu, BSc., Computer Science, UCSD, Fall 2016-June 2017.
Joanne Cho, BSc., Cognitive Science, UCSD, Fall 2016-June 2017.
Sanika Moharana, BSc., Cognitive Science, UCSD, Winter 2016-Summer 2017
Alejandro Panduro, BSc., Cognitive Science, UCSD, Fall 2016-Summer 2017.
*Now PhD student at CMU HCII
Eric Richards, BSc., Cognitive Science, UCSD, Fall 2016-June 2017.
Yabo Shi, BSc. Cognitive Science, UCSD, Winter 2018-Spring 2018.
Andres Baez, BSc. Cognitive Science, UCSD, Fall 2017-Spring 2018.
Dangyi Liu, MSc. Computer Science, UCSD, Fall 2016-June 2017.
Sarmad Mehrbod, PhD, Civil Engineering, UBC, 2014-2016.
Kelly J. Burke, PhD, iSchool, UBC, Summer 2016.
Siyi (Cathy) Meng, BSc. Computer Science, UBC, Summer 2015. **[C5, A2]**
Jialiang Xiang, BSc. Computer Science, UBC, Summer 2015. **[C5, A2]**
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 conducting 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, Infront 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.