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Sept 15, 2025

Cindy Xiong (Bearfield)

Assistant Professor
School of Interactive Computing

I. Earned Degrees

Northwestern University, Ph.D. Psychology 2021
Advisor: Steven Franconeri
Thesis Title: Perceptual and Cognitive Affordances of Data Visualizations

Northwestern University, M.S. Statistics. 2021

Northwestern University, M.S. Psychology. 2018

University of California, Los Angeles, B.S., Applied Mathematics. 2016

University of California, Los Angeles, B.A., Psychology. 2016

II. Employment History

Georgia Institute of Technology, Atlanta, Georgia, USA
Assistant Professor, School of Interactive Computing Jan, 2024 - Present

University of Massachusetts Amherst, Amherst, Massachusetts, USA
Assistant Professor, College of Information and Computer Sciences Sept, 2021 – Dec, 2023

Northwestern University, Evanston, Illinois, USA
Graduate Research Assistant (Advisor: Steven Franconeri), Psychology Sept, 2016 - June, 2021

III. Honors and Awards

NSF CISE EAGER Award IIIS-HCC 2026
Dolby Research Award 2026
Fall 2025 Course Instructor Opinion Survey Honor Roll CS 4460 2025
Google Research Scholar Award 2025
NSF CISE SMALL Award (IIS-III) 2025
Thank-a-Teacher Spring 2024, Georgia Tech Center for Teaching and Learning 2024, 2025, 2026
MathWorks Research Gift 2022, 2024
IEEE PacificVis Conference Best Paper (Top 1 Paper also published in IEEE TVCG) 2024
IEEE Computer Graphics and Application Best Paper Runner-Up (Top 3 papers) 2023
NSF CISE Award (IIS-HCC) Medium 2023
NSF CAREER Award (IIS-HCC) 2023
Adobe Research Gift 2021, 2022, 2023
Dolby Research Gift 2023
UMass Amherst Public Interest Technology Initiative Fellowship 2022
MathWorks Research Gift 2022
IEEE VGTC Visualization Dissertation Award Honorable Mention (Top 4 Dissertations) 2022

IEEE VIS Honorable Mention for Best Poster Award (Top 3 Posters)	2022
ACM CHI Honorable Mention for Best Paper Award (Top 5% of submitted papers)	2022
UMass Amherst Institute of Diversity Sciences Seed Grant Award	2021
UMass Amherst College of Social & Behavioral Sciences Research Support Grant	2021
IEEE VIS Honorable Mention for Best Paper Award (Top 10 Papers)	2020
Northwestern University Career Development Award	2019
Psychonomics Society Graduate Travel Award (Top 20 Submissions)	2019
IEEE Doctoral Colloquium Fellowship	2019
Northwestern Cognitive Science Travel Award	2019
Northwestern TGS Conference Travel Award	2019
Northwestern Segal Design Research Fellowship	2018
Northwestern Psychology Summer Workshop Travel Award	2018
IEEE VIS Honorable Mention for Best Poster Award (Top 3 Posters)	2017
Northwestern Cognitive Science Advanced Fellowship	2017
Northwestern Cognitive Science Fellowship	2016

IV. Research, Scholarship, and Creative Activities

*: Indicates work performed while at Georgia Tech; **Bold**: Indicates student co-authors

A. Published Books, Book Chapters, and Edited Volumes

A1. Books

No data.

A2. Refereed Book Chapters

No data.

A3. Edited Volumes

No data.

B. Refereed Publications and Submitted Articles

B1. Published and Accepted Journal Articles

* [B1.34] **Li, Shiyao**., Rana, Akul., Xiong Bearfield, Cindy., Wall, Emily. (2026) Confirmation Bias Shapes Outlier Identification and Removal in Data Cleaning with Scatterplots. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2026. Acceptance rate: 24.7%.

* [B1.33] **Wang, H. W., Lin, K.,** Cohen, A., Kennedy, R., Zwald, Z., Nobre, C., & Bearfield, C. X. (2026). Do You" Trust" This Visualization? An Inventory to Measure Trust in Visualizations. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2025.3646847

* [B1.32] **Song, H.,** Cho, A., Xiong Bearfield, C., Stasko, J. Visualizing Trust: How Chart

Embellishments Influence Perceptions of Credibility. (2025). IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2025. Acceptance rate: 24.4%. DOI: 10.1109/TVCG.2025.3634785. Acceptance rate: 24.4%.

* [B1.31] **Stokes, C*., Lin, K.*,** & Xiong Bearfield, C. (2025). Write, Rank, or Rate: Comparing Methods for Studying Visualization Affordances IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2025. DOI: 10.1109/TVCG.2025.3633872. Acceptance rate: 24.4%.

* [B1.30] **Kaufman, Z**., Endres, M., Xiong Bearfield, C., Brun, Y. Your Model Is Unfair, Are You Even Aware? Inverse Relationship Between Comprehension and Trust in Explainability Visualizations of Biased ML Models. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2025. Acceptance rate: 24.4%.

* [B1.29] **Chang, M.,** Wang, Y**., Wang, H., Zhou, Y.,** Bulling, A., Xiong Bearfield, C. Tell Me Without Telling Me: Two-Way Prediction of Visualization Literacy and Visual Attention. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2025. DOI: 10.1109/TVCG.2025.3634815. Acceptance rate: 24.4%.

* [B1.28] **Bae, S.,** Cave, K., Carsten, G., Rosen, P., Szafir, D., Xiong Bearfield, C. (2025). Bridging Network Science and Vision Science: Mapping Perceptual Mechanisms to Network Visualization Tasks. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2025.3541571.

* [B1.27] 🏆 Xiong Bearfield, C., van Weelden, L., Waytz, A., Franconeri, S. (2024). Same Data, Diverging Perspectives: The Power of Visualizations to Elicit Competing Interpretations. IEEE PacificVis. DOI: 10.1109/TVCG.2024.3388515. Acceptance rate: 11.5%. [*IEEE PacificVis Best Paper*]

* [B1.26] Zhang, L., Liu, X., Martin, AV., Xiong Bearfield, C., Brun, Y., Guan, H. (2024). Attack-Resilient Image Watermarking Using Stable Diffusion. NeurIPS 2024. Acceptance rate: 25.8%

* [B1.25] **Hu, S.,** Jiang, O., Riedmiller, J., Xiong Bearfield, C. (2024). Motion-Based Visual Encoding Can Improve Performance on Perceptual Tasks with Dynamic Time Series. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2024. Acceptance rate: 23.2%

* [B1.24] **Wang, H.,** Hoffswell, J., Thane, S., Bursztyn, V., Xiong Bearfield, C. (2024) How Aligned are Human Chart Takeaways and LLM Predictions? A Case Study on Bar Charts with Varying Layouts. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2024. Acceptance rate: 23.2%. DOI: 10.1109/TVCG.2024.3456378.

[B1.23] **Elhamdadi, H.,** Stefkovics, A., Beyer, J., Moerth, E., Pfister, H., Xiong Bearfield, C., Nobre, C. (2023). Vistrust: a Multidimensional Framework and Empirical Study of Trust in Data Visualizations. IEEE Transactions on Visualization and Computer Graphics. Acceptance rate: 25.8%

[B1.22] Holder, E., Xiong Bearfield, C. (2023). Polarizing Political Polls: How Visualization Design Choices Can Shape Public Opinion and Increase Political Polarization. IEEE Transactions

on Visualization and Computer Graphics. Acceptance rate: 25.8%

[B1.21] Stokes, C., Bearfield, C. X., & Hearst, M. A. (2023). The Role of Text in Visualizations: How Annotations Shape Perceptions of Bias and Influence Predictions. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2023.3338451

[B1.20] Xiong, C**., Stokes, C**., Lovett, A., Franconeri, S. (2023). What Does the Chart Say? Grouping Cues Guide Viewer Comparisons and Conclusions in Bar Charts. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2023.3289292

[B1.19] **Gaba, A., Kaufman, Z.,** Cheung, J., Shvakel, M., Hall, K., Brun, Y., Xiong Bearfield, C. (2023). My Model is Unfair, Do People Even Care? Visual Design Affects Trust and Perceived Bias in Machine Learning. IEEE Transactions on Visualization and Computer Graphics. Acceptance rate: 25.8%

[B1.17] **Gaba, A.,** Setlur, V., Srinivasan, A., Hoffswell, J., Xiong, C. (2022). Comparison Conundrum and the Chamber of Visualizations: An Exploration of How Language Influences Visual Design. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2022. DOI: 10.1109/TVCG.2022.3209456. Acceptance rate: 26.5%

[B1.16] Xiong, C**., Stokes, C.,** Kim, Y., & Franconeri, S. (2022). Seeing What You Believe or Believing What You See? Belief Biases Correlation Estimation. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2022. DOI: 10.1109/TVCG.2022.3209405. Acceptance rate: 26.5%

[B1.15] Holder, E., & Xiong, C. (2022). Dispersion vs Disparity: Hiding Uncertainty Can Encourage Stereotyping When Visualizing Social Outcomes. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2022. DOI: 10.1109/TVCG.2022.3209377. Acceptance rate: 26.5%

[B1.14] **Mantri, P.,** Subramonyam, H., Michal, A., Xiong, C. (2022). How Do Viewers Synthesize Conflicting Information from Data Visualizations? IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2022. DOI: 10.1109/TVCG.2022.3209467. Acceptance rate: 26.5%

[B1.13] ⏳ Xiong, C., Sarvghad, A., Goldstein, D., Hofman, J., & Demiralp, C. (2022). Investigating Perceptual Biases in Icon Arrays. Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems. DOI:10.1145/3491102.3501874. Accepted first round, acceptance rate 12.5%. [*Best Paper Honourable Mention*]

[B1.12] Xiong, C., Lee-Robbins, E., Zhang, I., **Gaba, A.,** & Franconeri, S. (2022). Reasoning Affordances with Tables and Bar Charts. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2022.3232959

[B1.11] Burns, A., On, T., Lee, C., Xiong, C., Peck, E., Mahyar, N. (2022). From Invisible to Visible: Impacts of Metadata in Communicative Data Visualization. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2022.3231716

[B1.10] ⏳ Wall, E., Xiong, C., Kim, Y. (2022). VisHikers' Guide to Evaluation: Competing Considerations in Study Design. IEEE Computer Graphics and Applications, 2022. DOI:

10.1109/MCG.2022.3152676. [*IEEE CG&A Best Paper Runner-Up*]

[B1.9] Yang, L. Xiong, C., Wong, K., Wu, A., Qu, H. (2022). Explaining with Examples: Lessons Learned from Crowdsourced Introductory Description of Information Visualizations. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2021.3128157

[B1.8] Burns, A., Xiong, C., Franconeri, Cairo, A., S., Mahyar, N. (2021). Designing with Pictographs: Envision Topics without Sacrificing Depth of Understanding. IEEE Transactions on Visualization and Computer Graphics, 2021. DOI: 10.1109/TVCG.2021.3092680. Acceptance rate: 24.6%

[B1.7] Ajani, K., Lee, E., Xiong, C., Knaflic, C. N., Kemper, W., Franconeri, S. (2021). Declutter and Focus: Empirically Evaluating Design Guidelines for Effective Data Storytelling. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2021.3068337.

[B1.6] Xiong., C., Setlur, V., Bach, B**., Lin, K.,** Koh, E., & Franconeri, S. (2021). Visual Arrangements of Bar Charts Influence Comparisons in Viewer Takeaways. IEEE Transactions on Visualization and Computer Graphics, IEEE VIS 2021. DOI: 10.1109/TVCG.2021.3114823. Acceptance rate: 25.5%

[B1.5] Ceja, C., McColeman, C., Xiong, C., Franconeri, S. (2020). Truth or Square: Aspect Ratio Biases Recall of Position Encodings. IEEE Transactions on Visualization and Computer Graphics, InfoVis 2020. DOI: 10.1109/TVCG.2020.3030422. Acceptance rate: 25.6%

[B1.4] 🏆 Elliott M., Nothelfer, C., Xiong, C., Albers Szafir, D. (2020). A Design Space of Vision Science Methods for Visualization Research. IEEE Transactions on Visualization and Computer Graphics, InfoVis 2020.DOI: 10.1109/TVCG.2020.3029413. Acceptance rate: 25.6% [*Best Paper Honourable Mention*]

[B1.3] Xiong, C., Shapiro, J., Hullman, J., & Franconeri, S. (2019). Illusion of Causality in Visualized Data. IEEE Transactions on Visualization and Computer Graphics, InfoVis, 2019. DOI: 10.1109/TVCG.2019.2934399. Acceptance rate: 25.8%

[B1.2] Xiong, C., Ceja, C., Ludwig, C., & Franconeri, S. (2019). Biased Average Position Estimates in Line and Bar Graphs: Underestimation, Overestimation, and Perceptual Pull. IEEE Transactions on Visualization and Computer Graphics, InfoVis, 2019. DOI: 10.1109/TVCG.2019.2934400. Acceptance rate: 25.8%

[B1.1] Xiong, C., van Weelden, L., & Franconeri, S. (2019). The Curse of Knowledge in Data Visualizations. IEEE Transactions on Visualization and Computer Graphics. DOI: 10.1109/TVCG.2019.2917689

B2. Conference Presentation with Proceedings (Refereed)

* [B2.58] **Chenyu, Lin.*, Xiong Bearfield, Cindy.,** Icy Yunyi Zhang. (2026). Mitigating Confirmation Bias Through Hand-Drawing Videos. IEEE VIS Short Paper 2025. Short Paper Acceptance rate: 32.8%

* [B2.57] **Hu, Songwen*.,** Endert, Alex., Xiong Bearfield, Cindy. (2026). Interaction Modulates

Visual Interpretation and Trust in Uncertainty Visualizations. Journal of Vision/Vision Science Society, 2026.

* [B2.56] Malitek, Adam., **Chang, Minsuk*.,** Xiong Bearfield, Cindy., Fukuda Keisuke. (2026). Repeated Encoding Opportunities Mitigate Belief-Based Bias in Correlation Estimation . Journal of Vision/Vision Science Society, 2026.

* [B2.55] **Lin, Kylie***., Maxwell, Paik., Xiong Bearfield, Cindy. (2026). Exploring the Mental Representation of Visualization Complexity through Measurement Methods. Journal of Vision/Vision Science Society, 2026.

* [B2.54] **Lin, Kylie***., Guan, Hui., Rapp, David., Xiong Bearfield, Cindy.(2026). A Four-Stage Framework of Visual Complexity and Trust as Mediated by Effort. Proceedings of the 2026 Pacific Visualization Conference in Sydney, Australia.

* [B2.53] **Lin, Kylie***., Ru, Sean Sheng-tse., Chang, Minsuk., Xiong Bearfield, Cindy. (2026). beautiVis: An Annotated Visualization Dataset from Reddit's r/dataisbeautiful. Proceedings of the 2026 Pacific Visualization Conference in Sydney, Australia. Acceptance rate: 35.6%

* [B2.52] **Gaba, Aimen***, Wall Emily, Keyes Os, Hall Kyle Wm, Brun Yuriy, Xiong, Cindy. (2026). A Gender-Diverse Perspective of Bias in Large Language Models. ACM FAccT, in Montréal, Canada.

* [B2.51] **Li, Shiyao***., Deva, Roshini., Narechania, Arpit., Karduni, Alireza., Bearfield, Cindy Xiong., Wall, Emily. (2026). Does a Picture Paint a Thousand Words? Using Visual and Textual Channels to Understand Attitudes and Beliefs. Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems. Acceptance rate: 25.3%

* [B2.50] **Hu, S.,** Yu, T., Kim, S., Rossi, R., & Bearfield, C. X. (2025). VisChatter: Enhance Synchronous Collaboration on Data Visualization Dashboard with Visual Annotations. In Proceedings of the Annual Meeting of the Cognitive Science Society (Vol. 47).

* [B2.49] **Stokes,** C., **Lin, K. R.,** & Bearfield, C. X. (2025). Elicitation Strategies for Capturing Information Visualization Affordances. In Proceedings of the Annual Meeting of the Cognitive Science Society (Vol. 47).

* [B2.48] **Ji, Y.,** Kon, M., Lovett, A., Livingston, M., Khemlani, S., Yang, Y., & Bearfield, C. X. (2025). Visualizing Motion Traces Enhances Pursuit Detection in Dynamic Scenes. In Proceedings of the Annual Meeting of the Cognitive Science Society (Vol. 47).

* [B2.47] **Lin, K.,** Stokes, C., & Bearfield, C. X. LLMs Are Not Reliable Human Proxies to Study Affordances in Data Visualizations. HEAL Workshop at ACM CHI 2025.

* [B2.46] **Savalia, T.,** Lovett, A., Ceja, C., Cowell, R., Xiong Bearfield, C. Global Extrema Bias Perception and Recall of Average Data Values in Line Charts. IEEE VIS Short Paper 2025. Short Paper Acceptance rate: 34.2%

* [B2.45] Verboom, D., Mchedlidze, T., Oral, B., Dimara, E., Rebelo, D., Kamoen, N., Xiong Bearfield, C. Visualizing Opinion Space in Voting Advice Applications: A User Study IEEE VIS Short Paper 2025. Short Paper Acceptance rate: 34.2%

* [B2.44] **Li, Y.,** Berger, E., Kahng, M., Xiong Bearfield, C. From Perception to Decision: Assessing the Role of Chart Types Affordances in High-Level Decision Tasks. IEEE VIS Short Paper 2025. Short Paper Acceptance rate: 34.2%

* [B2.43] **Chang, M.,** Wang, Y, **Wang, H.,** Bulling, A., Xiong Bearfield, C. Grid Labeling: Crowdsourcing Task-Specific Importance from Visualizations Proceedings of the European Conference on Visualization. Eurographics Association. Short Paper. Acceptance rate: 33%

* [B2.42] **Li, Shiyao**, Davidson, T., Xiong Bearfield, C., Wall, E. Confirmation Bias: The Double-Edged Sword of Data Facts in Visual Data Communication. Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems. DOI: 10.1145/3706598.371383. Acceptance rate: 25.1%

* [B2.41] Das, A., Xiong Bearfield, C.,, Mueller, K. (2025). Leveraging Large Language Models for Personalized Public Messaging. ACM CHI Late Breaking Work. Acceptance rate: 32.83%

* [B2.40] **Lin, K.,** Guan, H., Ru, S., Rapp, D., Xiong Bearfield, C. (2025). What Makes a Visualization Visually Complex? ACM CHI Late Breaking Work. Acceptance rate: 32.83%

* [B2.39] **Chang, M.,** Malitek, A., Fukuda, K., Xiong Bearfield, C. Early Stage Eye-fixations Reveal Belief-Driven Bias in Correlation Perception. Vision Science Society 2025.

* [B2.38] **Chang, M.,** Malitek, A., Fukuda, K., Xiong Bearfield, C. Seeing What You Want to See: How Belief Biases Perception and Memory. Vision Science Society 2025.

* [B2.37] **Elhamdadi, H.,** Seo, S., Padilla, L., Xiong Bearfield, C. (2025) Processing Fluency Mediates Trust in Data Visualizations. Oral Presentation at the Vision Science Society, Journal of Vision. Acceptance rate: 14.28%

* [B2.36] **Knittel, C., Awuah, J**., Franconeri, S., Xiong Bearfield, C. (2024) Gridlines Mitigate Sine Illusion in Line Charts. IEEE VIS Short Paper. Acceptance rate: 31.9%

* [B2.35] **Lin, K., Ru, S.,** Rapp, D., Guan, H., Xiong Bearfield, C. What Makes a Visualization Visually Complex? Exploring Design Features Related to Visual Complexity. Poster at IEEE VIS 2024.

* [B2.34] **Elhamdadi.,** H., Islam, M., Mitra, S., Burhanuddin, I., Yu, T., Meliou, A., Xiong Bearfield, C. Contrasting Diverse, Probabilistic, and Visualization-Based Data Selection Methods for Visual Analytics. Poster at IEEE VIS 2024.

* [B2.33] **Chang, M.,** Lee, S., Cho, A., Jeon, H., Park, S., Xiong Bearfield, C., Seo, J. Efficiently Crowdsourcing Visual Importance with Punch-Hole Annotation. Poster at IEEE VIS 2024.

* [B2.32] **Ru, S., Lin, K.,** Rapp, D., Guan, H., Xiong Bearfield, C. Charting Complexity: How Chart Types Relate to Visual Complexity. Poster at IEEE VIS 2024.

* [B2.31] **Hu, S.,** Jiang, O., Riedmiller, J., Xiong Bearfield, C. Perceptual Benefits of Animation are Task-Dependent: Effects of Staging and Tracing in Dynamic Displays. Vision Science Society 2024.

[B2.30] **Lin, K.,** Rapp, D., & Xiong Bearfield, C. Visual Complexity Impacts Reader Confidence and Comprehension in Data Visualizations. Psychonomics 2023.

[B2.29] **Elhamdadi, H., Gaba, A.,** Kim, Yea-Seul., Xiong, C. (2022). How Do We Measure Trust in Visual Data Communication. IEEE Vis BELIV Workshop, 2022.

[B2.28] **Elhamdadi, H.,** Padilla, L., Xiong, C. (2022). Using Processing Fluency as a Metric of Trust in Scatterplot visualizations. IEEE Vis TREX Workshop, 2022.

[B2.27] Stokes, C., Xiong, C., Hearst, M.. Driving Reader Interpretations with Text Annotations in Data Visualizations. Society for Judgment and Decision-Making Annual Conference 2022.

[B2.26] 🏆 **Elhamdadi, H.,** Padilla, L., Xiong, C. Processing Fluency improves Trust in Scatterplot Visualizations. Poster at IEEE VIS, 2022. [*Best Poster Honourable Mention].

[B2.25] **Savalia, T.,** Ceja, C., Cowell, R., Xiong, C. Data Shape and Response Modalities Can Bias Estimations of Average Data Location in Visualizations.VSS 2022.

[B2.24] Ceja, C., & Xiong, C. Show or Tell? Visual and Verbal Representations Bias Position Recall. Poster at IEEE VIS, 2021.

[B2.23] Xiong, C**., Stokes, C.,** Franconeri, S. Visual Salience and Grouping Cues Guide Relation Perception in Visual Data Displays. VSS 2021.

[B2.22] Burns, A., On, T., Lee, C., Shapiro, R., Xiong, C., & Mahyar, N. (2021). Making the Invisible Visible: Risks and Benefits of Disclosing Metadata in Visualization.2021 IEEE Workshop on Visualization for Social Good (VIS4Good) (pp. 11-15).

[B2.21] Ceja, C., & Xiong, C. (2021). Show or Tell? Visual and Verbal Representations Bias Position Recall. IEEE Vis VISxVISION Workshop, 2021.

[B2.20] Xiong, C., van Weelden, L., Waytz, A., & Franconeri, S. (2020). Same Graph, Different Conclusions: Perceptual Salience Drives Data Interpretation and Decision Making. Proceedings to Society for Consumer Psychology, Hungtinton Beach, CA, 2020. Competitive Paper Submission, acceptance rate: 16%

[B2.19] Xiong, C**., Stokes, C.,** Kim, Y., Franconeri, S. See What You Want: Belief Biases Correlation Estimations. OPAM 2020.

[B2.18] Xiong, C., van Weelden, L., Waytz, A., & Franconeri, S. Same Graph, Different Conclusions: Perceptual Salience Drives Data Interpretation and Decision Making. Society for Consumer Psychology, 2020.

[B2.17] Burns, A., Xiong, C., Franconeri, Cairo, A., S., Mahyar, N. (2020). How to Evaluate Data Visualizations across Different Levels of Understanding. IEEE Vis BELIV Workshop, 2020.

[B2.16] Xiong, C., Ceja, C., Ludwig., C., & Franconeri, S. L. Position Estimation Illusions in Visualized Data: Underestimation, Overestimation and Perceptual Pull. OPAM, 2019, Montreal, Canada.

[B2.15] Xiong, C., Lee, E., & Franconeri, S. Confirmation Bias in Graphical Displays. Society for

Judgment and Decision Making, 2019, Montreal, Canada.

[B2.14] 🏆 Xiong, C., van Weelden, L., & Franconeri, S. Same Data, Diverging Conclusions: Perceptual Salience Drives Data Interpretation. Psychonomics 2019. [*Graduate Travel Award*] awarded to 20 students.

[B2.13] Ceja, C., McColeman, C., Xiong, C., & Franconeri, S. Position Estimates in Bar Graphs: Error and Bias. Poster at IEEE VIS, 2019.

[B2.12] Xiong, C., Ceja, C., Ludwig., C., & Franconeri, S. L. Attraction and Response Probe Similarity Effects in a Multiple Ensemble Judgment Task. VSS 2019.

[B2.11] Lee, J., Xiong, C., Ceja, C., & Franconeri, S. L. Perceptual Bias in Object Position Estimates in Data Visualization. 28th UCLA Psychology Undergraduate Research Conference, Los Angeles CA, USA.

[B2.10] **Lin, K..,** Salovich, N. A., Xiong, C., Franconeri, S. L., & Rapp, D. N. Controversial Topics Increase Skepticism of Data Visualizations. Chicago Area Undergraduate Research Symposium, Chicago, IL, USA.

[B2.9] Xiong, C., Padilla, L., Grayson, K., Franconeri, S. (2019). Examining the Components of Trust in Map-Based Visualizations. EuroVis Workshop on Trustworthy Visualization (TrustVis) 2019, Portal, Portugal.

[B2.8] Xiong, C. (2019). Visualization Design to Afford Critical Thinking about Data. IEEE Transactions on Visualization and Computer Graphics, Doctoral Colloquium 2019.

[B2.7] 🏆 Xiong, C., van Weelden, L., & Franconeri, S., The curse of knowledge in visual data communication. IEEE VIS, 2017. [*Best Poster Honorable Mention]

[B2.6] Xiong, C., van Weelden, L., & Franconeri, S. Graphs as Ambiguous Figures. VSS 2018.

[B2.5] Xiong, C., van Weelden, L., & Franconeri, S. (2017). The Power of Top-Down Salience in Data Visualizations. OPAM, 2017.

[B2.4] Xiong, C., van Weelden, L., & Franconeri, S., (2017). The Curse of Knowledge in Visual Data Communication. IEEE Transactions on Visualization and Computer Graphics, DECISIVe Workshop 2017.

[B2.3] Hines, C.A., Ho, J., Xiong, C., Bufford, C. A., Thai, K. P., & Kellman, P. J. (2016). Perceptual learning intervention improved abstract musical pattern recognition. 25th UCLA Psychology Undergraduate Research Conference, Los Angeles CA, USA.

[B2.2] Ho, J., Xiong, C., Bufford, C. A., Thai, K. P., & Kellman, P. J. (2016)Perceptual Learning of Musical Abstract Patterns. Berkeley Interdisciplinary Research Conference for Undergraduates, Berkeley, CA, USA.

[B2.1] Bufford, C., Thai, K. P., Ho, J., Xiong, C., Hines, C., & Kellman, P. (2016). Perceptual learning of abstract musical patterns: Recognizing composer style. Proceedings of the 14h Annual Conference of the International Conference for Music Perception and Cognition (pp. 8-12).

B3. Other Refereed Material

*[B3.13] C., Xiong Bearfield. Born in the Lab, Broken in the Wild? Dagstuhl Seminar on Visualization Guidelines, 2025.

[B3.13] Nobre, C., Xiong Bearfield, C., Levine, J., Wall, E., Moritz, D., Dimara, E. Establishing and Thriving in an Academic Career. IEEE VIS, 2023

[B3.12] Nourani, M., Ragan, E., Karduni, A., Xiong, C., Davis, B. TREX: Workshop on TRust and EXpertise in Visualization. IEEE VIS, 2022.

[B3.11] **Lin, K.,** Rapp, D., Xiong, C. Attempts to Augment Refutation Text Benefits with Visualizations. Northwestern University Undergraduate Research Expo. 2021

[B3.10] Xiong, C., Nothelfer, C., Elliott, M., Szafir, D. VisXVision: Workshop on Novel Directions in Vision Science and Visualization Research. IEEE VIS, 2021.

[B3.9] Elliott M., Bylinskii, Z., Nothelfer, C., Xiong, C., Albers Szafir, D. VisXVision: Workshop on Novel Directions in Vision Science and Visualization Research. IEEE VIS, 2019

[B3.8] Xiong, C., Bylinskii, Z., Elliott M., Nothelfer, C., Albers Szafir, D.VISxVISION Workshop: Novel Vision Science Research Directions in Visualization. Vision Sciences Society Annual Meeting 2019 May, St. Pete Beach, Florida.

[B3.7] Xiong, C., Ludwig, C., Ceja, C, & Franconeri, S. Perceptual Anchoring of Inferences from Dual-axis Graphs. Fifth European Summer School on Computational and Mathematical Modeling of Cognition. 2018 July, Couches, France.

[B3.6] Xiong, C., Ceja, C., Lee, J., Franconeri, S.Perceptual Anchoring of Graph Element Positions in Dual-Axis Graphs. Poster presented at the Fifth European Summer School on Computational and Mathematical Modeling of Cognition 2018 July, Couches, France.

[B3.5] Nothelfer, C., Elliott M., Bylinskii, Z., Xiong, C., Albers Szafir, D. Vision and Visualization: Inspiring novel research directions in vision science. Symposium at Vision Sciences Society Annual Meeting 2018 May, St. Pete Beach, Florida

[B3.4] Elliott M., Bylinskii, Z., Nothelfer, C., Xiong, C., Albers Szafir, D. Visualization Meets Vision Science. Meetup at IEEE InfoVis 2018, Berlin, Germany.

[B3.3] Nothelfer, C., Bylinskii, Z., Elliott, M., Xiong, C., & Szafir, D.A. Vision Science Meets Visualization. Panel at IEEE InfoVis 2017, Phoenix, Arizona.

[B3.2] Elliott, M., Nothelfer, C., & Xiong, C. VSSxVIS: Information Visualization Research. Panel at Vision Sciences Society Annual Meeting 2017 May, St. Pete Beach, Florida.

[B3.1] Xiong, C., Kubricht, J., Lu, H. A Computational Investigation into Intuitive Physics for Colliding Objects. The 16th Annual Stanford Undergraduate Psychology Conference, Palo Alto, CA, 2016.

B4. Submitted Publications (with Date of Submission)

* [B4.1] Li, S. Rana, A., Xiong, C., Wall, E. Confirmation Bias Shapes Outlier Identification and Removal in Data Cleaning with Scatterplots. Submitted March, 2026

* [B4.2] Hu, S., Endert, A., Xiong, C. Interaction Modulates Trust in Multi-Forecast Visualizations through Perception and User Agency. Submitted March, 2026

* [B4.3] Volovoi, M., Andris, C., Heischmidt, K., Belghith, Y., Roberts, J., Xiong, C. One Map, Two Maps: Linked Multiscale Choropleth Maps for Contextualizing Thematic Data. Submitted March, 2026

C. Other Publications and Creative Products

C1. Patents

No data.

C2. Non-Refereed Publications

No data.

D. Presentations

D1. Invited Seminar Talk

* [D1.43] Xiong, C. (2026). Hong Kong University of Science and Technology (HKUST)

* [D1.42] Xiong, C. (2026). Perimeter College, Georgia State University

* [D1.41] Xiong, C. (2026). University of Washington

* [D1.40] Xiong, C. (2025). Mind, Behavior and Development Unit, World Bank Group

* [D1.39] Xiong, C. (2025). Renmin University of China

* [D1.38] Xiong, C. (2025). Global Water Security Center, University of Alabama.

* [D1.37] Xiong, C. (2025). Georgetown University

* [D1.36] Xiong, C. (2025). University of Calgary

* [D1.35] Xiong, C. (2025). Adobe Research

* [D1.34] Xiong, C. (2024). University of California, Merced HCI Seminar

* [D1.33] Xiong, C. (2024). University of Maryland HCI Seminar

* [D1.32] Xiong, C. (2024). University of Stuttgart

* [D1.31] Xiong, C. (2024). COGGRAPH Lecture at Stanford University

* [D1.30] Xiong, C. (2024). University of Utah

[D1.29] Xiong, C. (2023). University of California, Los Angeles

[D1.29] Xiong, C. (2023). New York University

[D1.28] Xiong, C. (2023). Columbia University

[D1.27] Xiong, C. (2023). Northeastern University

[D1.26] Xiong, C. (2023). Georgia Institute of Technology

[D1.25] Xiong, C. (2023). Emory University

[D1.24] Xiong, C. (2022). University of Illinois Urbana-Champaign

[D1.23] Xiong, C. (2022). ETVIS Workshop on eye tracking and visualization (keynote)

[D1.22] Xiong, C. (2022). IT World Canada Digital Transformation Conference

[D1.21] Xiong, C. (2022). University of Massachusetts, Amherst HCI Seminar

[D1.20] Xiong, C. (2021). Brown University HCI Seminar

[D1.19] Xiong, C. (2021). People Analytic RoundTable Milwaukee HCA

[D1.18] Xiong, C. (2021). People Analytics Conference by the Conference Board

[D1.17] Xiong, C. (2021). Southern California People Analytics Meetup

[D1.16] Xiong, C. (2021). Conference on Computer Vision and Pattern Recognition. Chart QA Workshop. (Keynote)

[D1.15] Xiong, C. (2020). National Bureau of Economic Research

[D1.14] Xiong, C. (2020). Microsoft Research Computational Social Science Group.

[D1.13] Xiong, C. (2020). University of Michigan, Ann Arbor

[D1.12] Xiong, C. (2019). University of Massachusetts, Amherst

[D1.11] Xiong, C. (2019). University of Massachusetts, Boston

[D1.10] Xiong, C. (2019). Wellesley College

[D1.9] Xiong, C. (2019). Northeastern University

[D1.8] Xiong, C. (2019). University of Washington.

[D1.7] Xiong, C. (2019). Tableau Research

[D1.6] Xiong, C. (2019). University of British Columbia

[D1.5] Xiong, C. (2019). Columbia University

[D1.4] Xiong, C. (2019). New York University

[D1.3] Xiong, C. (2019). Brown University

[D1.2] Xiong, C. (2019). Tufts University

[D1.1] Xiong, C. (2019). The Mathworks

D2. Invited Conference, Symposia and Workshop Presentations

* [D2.19] Xiong, C. (2026). Zhejiang University International Summer School on Visual Analytics

* [D2.18] Xiong, C. (2026). Canadian Institute for Advanced Research on Communicating Uncertainty

* [D2.17] Xiong, C. (2026). Dolby's Smart Realities Summit

* [D2.16] Xiong, C. (2025). Nightingale Workshop on Data Literacy at Stanford University

* [D2.15] Xiong, C. (2025). Gordon Research Conference on Visualization in Science and Education

* [D2.14] Xiong, C. (2025). Dagstuhl Seminar on Visualization Guidelines

* [D2.13] Xiong, C. (2024). Computational Models of Skill and Concept Learning. Center of Excellence in Computational Cognition (CoCo), Georgia Institute of Technology

* [D2.12] Xiong, C. (2024). Dagstuhl Seminar on AI + Human Intelligence

* [D2.11] Xiong, C. (2023). Dagstuhl Seminar 23051 Perception in Network Visualization

* [D2.10] Xiong, C. (2021). Department of Psychology Perception and Cognition Lab, UMass Amherst

* [D2.9] Xiong, C. (2018). Northwestern University HCI Group

* [D2.8] Xiong, C. (2018). Northwestern University HCI Group

[D2.7] Xiong, C. (2018). Northwestern University HCI Group

[D2.6] Xiong, C. (2020). Adobe Workshop at Northwestern University

[D2.5] Xiong, C. (2020). Yale University Behavioral Finance Reading Group

[D2.4] Xiong, C. (2019). Northwestern University Design Cluster

[D2.3] Xiong, C. (2018). Northwestern University Kellogg School of Management

[D2.2] Xiong, C. (2018). Northwestern University R User Group

[D2.1] Xiong, C. (2018). Northwestern University HCI Group

D3.Conference Presentations

(listed under conference proceedings)

E. Grants and Contracts

E1. As Principal Investigator (Total Funding: $2,111,930; Xiong's Share: $1,412,585)

* [E1.10] NSF CISE EAGER Neural Correlates of Complexity in Data Visualizations, $149,746 (Xiong:

50%, $75,000), Sept 2026 – August, 2027 (Co-PI Anna Ivanova, Georgia Tech).

* [E1.9] NSF CISE IIS-HCC Student Travel Support for the Doctoral Colloquium at IEEE Visualization & Visual Analytics (IEEE VIS), $12,000 (Xiong: 100%, $12k), June 2026 – June 2027.

* [E1.8] Dolby Research Award on Semantic and Affective Expression in Light Design for Storytelling and Analytics, $50,000. (Xiong: 100%, $50k) Jan 2026.

* [E1.7] Google Research Scholar on Reframing Human-AI Trust: From Interpersonal to Institutional Trust, $60,000. (Xiong: 50%, $30k) December 2025. (Co-PI Ryan Shandler, School of Cybersecurity and Privacy).

* [E1.7] Google Research Scholar on Dynamic Approaches to Model & Increase Thoughtful Engagement with AI, $60,000. (Xiong: 50%, $30k) July 2025. (Co-PI Ryan Shandler, School of Cybersecurity and Privacy).

* [E1.6] Research Gift, the MathWorks, $15k (Xiong: 100%, $15k), Jan 2025 – July 2025.

* [E1.5] NSF CISE Medium IIS-HCC Advancing Visualization Decision Support through Mitigating Confirmation Bias, $1,198,084 (Xiong: 46.6%, $558,739), Nov 2023 – Oct 2028. (Co-PI Emily Wall, Emory University).

* [E1.4] NSF CAREER IIS-HCC Designing Visualizations to Support Critical Thinking and Calibrated Trust in Data, $631,846 (Xiong: 100%, $6631,846), July 2023 – June 2028.

[E1.3] Research Gift, Dolby Labs, $40k (Xiong: 100%, $40k), Sept 2023.

[E1.2] Research Gift, the MathWorks, $15k (Xiong: 100%, $15k), Sept 2022.

[E1.1] Research Gift, Adobe Research, $30k (Xiong: 100%, $30k), Sept 2021 – Sept 2023

E2. As Co-Principal Investigator (Total Funding: $13.63 million, Xiong's Share: $303,379)

* [E2.4] NSF CISE SMALL IIS-III on Perception-Augmented Databases for Efficient and Robust Visual Analytics, $600,000. (Xiong's share: 33%, $200,000). (Co-PI Alexandra Meliou, University of Massachusetts Amherst). July 15, 2025 - June 30, 2028.

* [E2.3] US Army DEVCOM Data and Analysis Center on Examining Human Trust in AI-Generated Intelligence Analysis. (Originally a 5-year, 13 million budget; adjusted after budget cuts to be a 1-year project. Xiong's share: $93,379). May 2025 – Dec 2025.

[E2.2] UMass Amherst Institute of Diversity Sciences Seed Grant. *$15,000.* (Xiong: $5000). Sept 2022 – Sept 2023.

[E2.1] UMass Amherst College of Social & Behavioral Sciences Research Support Grant, $14,000. (Xiong: $5000). Dec 2022 - Dec 2023.

E3. As Senior Personnel or Contributor

* [E3.1] Predict Reader Insights in Visualization by Modeling Cognitive Affordances, CoCo Pilot Grant at Georgia Tech, $2,000. January 2026 – May 2026. (Faculty Advisors: Cindy Xiong

Ratan Murty; Student PI Songwen Hu, Interactive Computing, Georgia Tech).

E4. Pending Proposals

* [E4.1] NSF CISE Future Computing Research (Future CoRe) IIS-HCC Neuroscience-Informed Predictive Models of Engagement and Understanding in Data Visualization, $1,000,000 (Xiong: 50%, $500,000), Jan 2027 – Dec 2031. (Co-PI Anna Ivanova, Georgia Tech).

F. Other Scholarly and Creative Accomplishments

F1. Software Developed and Maintained

No data.

G. Societal and Policy Impacts

* [G.1] Contributed to 30+ comments as a member of the Human Factors Task Group at the National Institute of Standards and Technology regarding Forensic Science and Speaker Recognition practices in the United States.

H. Other Professional Activities

No Data.

V. Education

A. Courses Taught

A1. Georgia Institute of Technology, School of Interactive Computing

CS 6730 – Data Visualization, 53 students.	Spring 2026
CS 4460 – Introduction to Information Visualization, 156 students.	Fall 2025
CS 4460 - Introduction to Information Visualization, 122 students	Spring 2025
CS 6730 – Data Visualization, 70 students.	Spring 2025
CS 4460 - Introduction to Information Visualization, 147 students	Spring 2024

A2. University of Massachusetts Amherst, Information and Computer Sciences

CS 490U – Introduction to User Experience Research, 60 students.	Spring 2023
CS/Psych 891 - Making Sense of Visual Data, 30 students	Fall 2022
CS 490U – Introduction to User Experience Research, 60 students.	Spring 2022

A3. Northwestern University, School of Professional Studies

PSYCH 373-CN Decision Making, 15 students.	Fall 2022

B. Individual Student Guidance

B1. Ph.D. Students

Minsuk Chang, Interactive Computing, Georgia Institute of Technology. Fall 2024–Present
Advisor: Cindy Xiong Bearfield
PhD Program: Computer Science
Concentration: Visual Analytics
Project: Perceptual Saliency Models for Data Visualizations
Qualification Exam Passed: April 2026

Songwen Hu, Interactive Computing, Georgia Institute of Technology. Fall 2023–Present
Advisor: Cindy Xiong Bearfield
PhD Program: Computer Science
Concentration: Visual Analytics
Project: Interaction and Animation for Trustworthy Visualizations
Qualification Exam Passed: April 2025

Kylie Lin, Interactive Computing, Georgia Institute of Technology. Fall 2023–Present
Advisor: Cindy Xiong Bearfield
PhD Program: Human-Centered Computing
Concentration: Visual Analytics
Project: Visual Complexity to Afford Critical Thinking with Data
Qualification Exam Passed: April 2025

Aimen Gaba, Information and Computer Sciences, UMass Amherst. Fall 2021–Present
Advisor: Cindy Xiong Bearfield
PhD Program: Computer Science
Project: Natural Language And Visual Design Can Influence Trust And Bias Perception In Ai
Thesis Proposed: March 2025

Hamza Elhamdadi, Information and Computer Sciences, UMass Amherst Fall 2021–Summer 2025
Advisor: Cindy Xiong Bearfield
PhD Program: Computer Science
Project: How to Measure Trust in Visual Data Communication
Thesis Defended: July 2025

B2. M.S. Students and Other PhD Students

Xiaoran Bai, Georgia Tech	Fall 2025 – Spring 2026
Kiki Marlam, Georgia Tech	Spring 2025 – present
Echo Cho, Georgia Tech	Spring 2025 – present
Shachika Thanigaivelu, Georgia Tech	Spring 2025 – present
Yuanhong Zhou, Georgia	Spring 2024 - present
Yishu Ji, Georgia Tech.	Fall 2024 – Summer 2025
Sean Ru, Georgia Tech	Spring 2024 – present
Ouxun Jiang, Northwestern University	Spring 2024 – present
Will Huichen Wang, University of Washington	Spring 2023 - present
Shiyao Li, Emory University	Fall 2023 - present
Tejas Savalia, Emory University/UMass Amherst	Spring 2023 - present

Misha Oraa Ali, Brown University	Spring 2022 – Fall 2023
Prateek Mantri, UMass Amherst	Fall 2021 - Spring 2022
Alexandra Burns, UMass Amherst	Fall 2021 – Spring 2022
Maliha Islan, UMass Amherst	Fall 2021 – Spring 2022

B3. Undergraduate Students

Sean Kim, Georgia Tech	2025	-	present
Gabriel Waterhouse, UNC Chapel Hill	2025	-	present
Arham Chowdhury, University of Delware	2025	-	present
Ibaad Sayeed, Georgia Tech	2024	-	present
Sriram Manikandan, Georgia Tech	2024	-	present
Mark Volovoi, Georgia Tech	2024	–	present
Reid Laughton, Georgia Tech (now at UPenn)	2024	–	present
Matthew Chong, Georgia Tech	2025	–	present
Srikar Dusi, Georgia Tech	2025	–	present
Krishnav Singhal, Georgia Tech	2025	–	present
Avinash Palliyil, Georgia Tech	2025	–	present
Mahathi Gumudavelli, Georgia Tech	2025		
Kunal Mohindra, Georgia Tech	2024		
Alex Soong, Georgia Tech	2024		
Abhinav Vinod, Georgia Tech	2024		
Pranit Dodda, Georgia Tech	2024		
Saaliha Allaudin Khan Ghori, Georgia Tech	2024		
Yuki Thane, UMass Amherst	2024		
Victor Valbuena, Georgia Tech	2024		
Tejaswini Ramkumar Babu, Georgia Tech	2024		
Sydney Stratis, UMass Amherst	2023		
Marie Shvakel, UMass Amherst	2023		
Matteo Mastandrea, UMass Amherst	2023		
Jason Cheung, UMass Amherst	2023		
Christiana Lee, UMass Amherst	2023		
Tiffany Lou, UMass Amherst	2023		
Kylie Lin, Northwestern University	2022		
Guilherme Santos Rocha, Amherst College	2022		
Jocelyn Velazquez, UMass Amherst	2022		
Erin Melia, UMass Amherst	2022		
Lily Thai Edmonds, UMass Amherst	2022		
Bhoomika Raj Ethakota, UMass Amherst	2022		
Nisarga Patil, UMass Amherst	2022		
Gaby Nugent, UMass Amherst	2022		
Lynn Li, UMass Amherst	2022		
Rinija Raja, UMass Amherst	2022		
Thai On, UMass Amherst	2022		
Sarah Stoiber, Northwestern University	2020		
Rachel Shapiro, Northwestern University	2020		

Meghna Jain, Northwestern University	2020
Madison Tyrcha, Northwestern University	2019
Gabriel Belkind-Gerson, Northwestern University	2019
Chase Stokes, Northwestern University	2017
Jun Lee, Northwestern University	2017
Emily Manheimer, Northwestern University	2017
Chase Bednarz, Northwestern University	2017
Sara Malik, Northwestern University	2016

B4. Service on Thesis or Dissertation Committees

Adam Coscia, PhD in CS, Georgia Institute of Technology. Defended Spring 2026
Committee Role: Member
Advisor: Alex Endert
Thesis Title: Visual Analytics for Responsible LLMs in Education

Alex Bendeck, PhD in CS, Georgia Institute of Technology. Defended Spring 2026
Committee Role: Member
Advisor: John Stasko
Thesis Title: Large Language Models As Computational Engines And Virtual Domain Experts

Zafeiria Moumoulidou, PhD in CS, UMass Amherst. Defended Fall 2025
Committee Role: Member
Advisor: Alexandra Meliou
Thesis Title: Fair And Diverse Data Selection Schemes for Data Management And Visualization

Shiyao Li, PhD in CS, Emory University. Defended Summer 2026
Committee Role: Member (for proposal only)
Advisor: Emily Wall
Thesis Title: The Role of Text, Annotations, and Visual Encodings in Shaping Confirmation Bias

Hayeong Song, PhD in CS, Georgia Institute of Technology. Defended Summer 2025
Committee Role: Member
Advisor: John Stasko
Thesis Title: Perceived Credibility in Visualizations

Yu Fu, PhD in CS, Georgia Institute of Technology. Defended Summer 2025
Committee Role: Member
Advisor: John Stasko
Thesis Title: Supporting Effective and Trustworthy Data Communication through Interactive Authoring and Assessment of Data-Driven Narratives

Vijay Marupudi, PhD in HCC, Georgia Institute of Technology. Defended Spring 2025
Committee Role: Member
Advisor: Sashank Varma
Thesis Title: Investigating the role of visual clustering in approximate numerosity perception

Sandarsh Pandey, PhD in Computer Science, Washington St. Louis. Defended Summer 2024
Committee Role: Member
Advisor: Alvitta Ottley
Thesis Title: A Framework To Understand The Relationship Between The Central Tendency Bias, Oblique Effect, And Serial Dependency In The Visual Perception Of Orientation

Melanie Bancilhon, PhD in Computer Science, Washington St. Louis. Defended Summer 2024
Committee Role: Member
Advisor: Alvitta Ottley
Thesis Title: Beyond Measures of Speed & Accuracy: Evaluating Visualization Perception, Reasoning & Decision-Making

Jimin Park, PhD in Psychology, University of Minnesota. Defended Fall 2023
Committee Role: Member
Advisor: Narges Mahyar
Thesis Title: The Role Of Numerical Cognitive Processes For Bar Graph Comprehension

Alyxander Burns, PhD in Computer Science, UMass Amherst. Defended Summer 2022
Committee Role: Member
Advisor: Narges Mahyar
Thesis Title: Communicative Information Visualizations: How To Make Data More Understandable By The General Public

C. Educational Innovations and Other Contributions

C1. New Courses and Mentoring Programs Developed

CS/Psych 891 - Making Sense of Visual Data, UMass Amherst	Fall	2022
CS 490U – Introduction to User Experience Research, UMass Amherst	Spring	2022
PSYCH 373-CN Decision Making, Northwestern University	Fall	2020

C2. Tutorials and Summer Schools Developed and Taught

Nightingale Workshop on Data Literacy at Stanford University	Summer	2025
COGGRAPH Workshop on Data Literacy at Stanford University	Summer	2024
IT World Canada Digital Transformation Conference	Summer	2022
People Analytic Round Table Workshop	Fall	2021
People Analytics Conference by the Conference Board	Fall	2021
Conference on Computer Vision and Pattern Recognition Virtual CQA Workshop	Summer	2021
Yale University Behavioral Finance Reading Group Visualization Workshop	Winter	2021
National Bureau of Economic Research Discussion	Summer	2020

C3. Participation in Candidacy and Qualifier Exams

Yeon Tae Chung, HCI Qualifier Exam, HCC PhD Program, Georgia Tech. Fall 2025

Yixuan Li, LMC Qualifier Exam, HCC PhD Program, Georgia Tech.	Spring 2025
Shiyao Li, Qualifier Exam, CS PhD Program, Emory University	Spring 2025
Kylie Lin, VIS Qualifier Exam, HCC PhD Program, Georgia Tech.	Spring 2025
Songwen Hu, VIS Qualifier Exam, HCC PhD Program, Georgia Tech.	Spring 2025
Lingqing Wang, LMC Qualifier Exam, HCC PhD Program, Georgia Tech.	Spring 2025

C4. Guest Lecturers

Data Visualization (CS 6460), Georgia Institute of Technology.	Fall, 2024
Information Visualization (CS 441/541), Emory University.	Fall, 2023
Human Computer Interaction (CS 325), UMass Amherst.	Fall, 2022

VI. Service

A. Professional Contributions

Associate Editor, IEEE Transactions on Visualization and Computer Graphics	2025 - Present
Secretary, IEEE VGTC Executive Committee	2022 – Present
Member, Human Factors Task Group at NIST	2022 – Present
Doctoral Colloquium Chair, IEEE VIS Organizing Committee Member	2025 - Present
Consulting Editor, Cognitive Research: Principles & Implications	2023 – Present
Associate Editor, Journal of Visualization and Interaction	2024 – Present
Department Editor, IEEE CG&A People in Practice	2025 – Present
Short Paper Chair, IEEE PacificVis VisNotes	2024 – Present
Member, Harvard Business Review's Advisory Council,	2024 - Present
General Paper Chair, Eye Tracking and Visualization (ETVIS'24) at ETRA	2024
Publication Chair, IEEE VIS Organizing Committee Member	2024 – 2025
Guest Editor, Journal of Perceptual Imaging	2023 - 2025
Meet-Up Chair, IEEE VIS Organizing Committee Member	2023
Session Chair, Perception at IEEE VIS	2023
Steering Committee Member, VISxVISION Workshop at IEEE VIS	2023
Session Chair, Personal Visualization, and eXtended Reality at IEEE VIS	2022
Session Chair, Studies and Evaluation Methodology at IEEE VIS	2021
Session Chair, Theory, Cognition and Sensemaking at IEEE VIS	2020
Advisory Group Member, Journal of Vision Special Issue on Visualization	2019
Co-Founder, VISxVISION initiative (visxvision.com)	2017
Editor, UCLA The Undergraduate Research Journal of Psychology	2016

B. Public and Community Service

Program Committee Member, HILDA	2026
Program Committee Member, IEEE VIS	2022, 2023, 2024, 2026
Program Committee Member, IEEE VIS Short Paper	2020, 2021, 2022, 2025
Program Committee Member, IEEE PacificVis Full Paper (Journal)	2024
Program Committee Member, EuroVis Poster	2025
Program Committee Member, International Conference on Graphics and Interaction	2025
Program Committee Member, International Joint Conference on Artificial Intelligence	2025
Program Committee Member, ACM Creativity and Cognition	2020

Program Committee Member, EuroVis Short Paper 2021, 2022

Reviewer, ACM Symposium on Eye Tracking Research & Applications
Reviewer, Attention, Perception & Psychophysics
Reviewer, Cognitive Neurodynamics
Reviewer, Cognitive Science Society
Reviewer, IEEE Computer Graphics and Applications
Reviewer, Current Directions in Psychological Science
Reviewer, IEEE Computer Graphics and Applications
Reviewer, IEEE Transactions on Visualization and Computer Graphics
Reviewer, Scientific Reports
Reviewer, Psychonomics Bulletin & Review
Reviewer, Journal of Marketing
Reviewer, International Journal of Human-Computer Interaction
Reviewer, Journal of Perceptual Imaging
Reviewer, Current Directions in Psychological Science
Reviewer, IEEE Transactions on Human-Machine Systems
Reviewer, Information Visualization Journal

Panel Reviewer, NSF IIS-HCC
Panel Reviewer, NSF RITEL
Panel Reviewer, NSF Personal Mental and Behavioral Health
Post-Hoc Reviewer, NSF DRMS
Post-Hoc Reviewer, NSF PAC

C. Public and Community Service

C1. Department Service

Area Lead, Visual Analytics, Interactive Computing, Georgia Tech	2024 – present
Member, Faculty Hiring Committee, Interactive Computing, Georgia Tech	2024 – 2025
Member, Emeritus Committee, Interactive Computing, Georgia Tech	2024 – 2025
Member, School Advisory Committee (SAC), Interactive Computing, Georgia Tech	2025 – 2026

C2. College Service

Member, Informatics Search Committee, CICS, UMass Amherst	2022 – 2023
Member, Executive and Budget Committee, CICS, UMass Amherst	2022 – 2023
Member, New Building Working Group/Committee, CICS, UMass Amherst	2022 – 2023
Member, Chair Search Committee, CICS, UMass Amherst	2022
Ph.D. Admissions Committee, CICS, UMass Amherst	2021
Coordinator for Ph.D. Interviews, Psychology, Northwestern University	2018
Brownbag Colloquium Coordinator, Psychology, Northwestern University	2018

C3. University Service

Member, UCLA Common Book Selection Committee 2015 - 2016