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Education

2017 –	Northwestern University	Ph.D.	Cognitive Psychology
2017 – 2019	Northwestern University	M.S.	Statistics
2016 – 2017	Northwestern University	M.S.	Psychology
2012 – 2016	UCLA	B.S.	Applied Mathematics
		B.A.	Psychology
			Minor: Environmental Engineering

Research Interests

Information Visualization, Data Communication, Decision Making, Visual Cognition

Dissertation

Perceptual + Cognitive Biases in Decision Making within Visualized Data

Committee Members: **Steven Franconeri, Satoru Suzuki, David Rapp**

Research Positions

2019	User Experience Research Intern <i>Charting Visual Design Revolution, Graphics and Charting Image Processing, Signal Processing and Communications</i> The MathWorks
2018 – 2019	Northwestern Design Research Fellow <i>Visualization Design for Critical Thinking about Data</i> Principal Investigator: Steven Franconeri & Jessica Hullman
2017 – 2018	Cognitive Science Advanced Fellow <i>Curse of knowledge in the Perception of Visualized Data</i> PI: Steven Franconeri & Adam Waytz
2016 – 2021	Graduate Student, Northwestern Visual Thinking Lab <i>Decision Making in Data Visualizations</i> PI: Steven Franconeri
2015 – 2016	Research Assistant, UCLA Computational Vision and Learning Lab <i>Psychophysics, Computational Psychology Approach to Intuitive Physics</i> PI: Hongjing Lu
2013 – 2016	Research Assistant, UCLA Civil and Environmental Engineering Jay Lab <i>Antibiotic Resistance in Airborne Bacteria</i> PI: Jenny Jay
2012 – 2016	Research Assistant, UCLA Human Perception Lab <i>Perceptual Learning applied to Chemistry, Algebra & Music</i> PI: Phil Kellman

International Visiting and Development

- 2018 Utrecht University
Utrecht, the Netherlands
Ambiguity in Graph Pattern Interpretation and Perspective Taking
PI: **Lisanne van Weelden**
- 2018 Summer School on Computational and Mathematical Modeling of Cognition
Couches, France
Perceptual Anchoring of Inferences from Dual-axis Graphs
PI: **Casimir Ludwig**
- 2015 Peking University
Beijing, China
Social Status and Its Relationship to Neural Responses to Fairness
PI: **Xiaolin Zhou**

Teaching Experience

2015 Winter	Teaching Assistant	UCLA	Introduction to Psychology
2017 Winter	Teaching Assistant	Northwestern University	Brain Damage and the Mind
2017 Spring	Teaching Assistant	Northwestern University	Decision Making
2017 Fall	Teaching Assistant	Northwestern University	Developmental Psychology
2017 Fall	Guest Lecturer	Northwestern University	Cognitive Science Proseminar
2019 Fall	Teaching Assistant	Northwestern University	Developmental Psychology
2019 Fall	Guest Lecturer	Northwestern University	Perception

Grants and Fellowship

- 2019 Psychonomics Society Graduate Travel Grant
- 2019 IEEE Doctoral Colloquium Fellowship
- 2019 Northwestern Cognitive Science Travel Grant
- 2019 Northwestern TGS Conference Travel Grant
- 2018 – 2019 Northwestern Segal Design Research Fellowship
- 2018 Northwestern Psychology Summer Workshop Travel Grant
- 2018 Northwestern TGS Conference Travel Grant
- 2017 – 2018 Northwestern Cognitive Science Advanced Fellowship
- 2016 – 2017 Northwestern Cognitive Science Fellowship

Publications

Xiong, C., van Weelden, L., Waytz, A., & Franconeri, S. (in prep). Changing Minds in Decision Making Tasks with Ambiguous Graphs.

Xiong, C., van Weelden, L., & Franconeri, S. (in prep). Same Graph, Different Conclusions: Top-Down Processes lock People into Persisting Perspectives.

Ajani, K., Lee, E., Knafllic, C. N., **Xiong, C.**, Kemper, W., Franconeri, S. (in prep). Declutter and Focus: Empirically evaluating design guidelines for effective data storytelling.

Lee, E., **Xiong**, C., & Franconeri, S. (submitted). Confirmation Bias in Data Visualization.

Xiong, C., Shapiro, J., Hullman, J., & Franconeri, S. (to appear). Illusion of Causality in Visualized Data. *IEEE Transactions on Visualization and Computer Graphics, InfoVis*, 2019.

Xiong, C., Ceja, C., Ludwig, C., & Franconeri, S. (to appear). Biased Average Position Estimates in Line and Bar Graphs: Underestimation, Overestimation, and Perceptual Pull. *IEEE Transactions on Visualization and Computer Graphics, InfoVis*.

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

Bufford, C. A., Thai, K. P., Ho, J., **Xiong**, C., Hines, C. A., & Kellman, P. J. (2016). Perceptual learning of abstract musical patterns: Recognizing composer style. In T. Zanto, T. Fujioka, P. Janata, J. Johnson, J. Berger, J. Slater, & C. Chafe (Eds.), *Proceedings of the 14th Annual Conference of the International Conference for Music Perception and Cognition* (pp. 8-12).

Refereed Workshop Papers

Xiong, C. (2019). Visualization Design to Afford Critical Thinking about Data. *IEEE Transactions on Visualization and Computer Graphics, Doctoral Colloquium 2019*, Vancouver, Canada.

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.

Xiong, C., van Weelden, L., & Franconeri, S., (2017). The Curse of Knowledge in Visual Data Communication. *IEEE Transactions on Visualization and Computer Graphics, InfoVis DECISIVE Workshop 2017*, Phoenix, Arizona.

Conference Talks

Xiong, C., (2019). Visualization Design to Afford Critical Thinking about Data. *IEEE Transactions on Visualization and Computer Graphics, InfoVis 2019*, Vancouver, Canada.

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*, Vancouver, Canada.

Xiong, C., Shapiro, J., Hullman, J., & Franconeri, S. (2019). Illusion of Causality in Visualized Data. *IEEE Transactions on Visualization and Computer Graphics, InfoVis 2019*, Vancouver, Canada.

Xiong, C., van Weelden, L., & Franconeri, S., (2019). The Curse of Knowledge in Data Visualizations. *IEEE Transactions on Visualization and Computer Graphics, InfoVis 2019*, Vancouver, Canada.

Xiong, C., van Weelden, L., & Franconeri, S., (2017). The Power of Top-Down Salience in Data Visualizations. Talk at *OPAM 2017*, Vancouver, Canada.

Xiong, C., van Weelden, L., & Franconeri, S., (2017). The Curse of Knowledge in Visual Data Communication. Talk at *IEEE Transactions on Visualization and Computer Graphics, InfoVis DECISIVE Workshop 2017*, Phoenix, Arizona.

Xiong, C., Kubricht, J., Lu, H. (2016). A Computational Investigation into Intuitive Physics for Colliding Objects. Talk at the 16th *Annual Stanford Undergraduate Psychology Conference*, Palo Alto, CA, USA.

Conference Panels and Symposiums

Elliott M., Bylinskii, Z., Nothelfer, C., **Xiong, C.**, Albers Szafir, D. (2019) Vis X Vision: Workshop on Novel Directions in Vision Science and Visualization Research at *IEEE Transactions on Visualization and Computer Graphics, InfoVis*, Vancouver, Canada.

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

Elliott M., Bylinskii, Z., Nothelfer, C., **Xiong, C.**, Albers Szafir, D. (2018). Visualization Meets Vision Science. Meetup at *IEEE Transactions on Visualization and Computer Graphics, InfoVis*, Berlin, Germany.

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

Nothelfer, C., Bylinskii, Z., Elliott, M., **Xiong, C.**, & Szafir, D.A. (2017) Vision Science Meets Visualization. Panel organized at *IEEE Transactions on Visualization and Computer Graphics, InfoVis*, Phoenix, Arizona.

Elliott, M., Nothelfer, C., & **Xiong C.** (2017). VSSxVIS: Information Visualization Research. Panel organized at *Vision Sciences Society Annual Meeting 2017 May*, St. Pete Beach, Florida.

Refereed Poster Presentations

Xiong, C., van Weelden, L., & Franconeri, S. (to appear). Same Data, Diverging Conclusions: Perceptual Salience Drives Data Interpretation. *Psychonomics*, 2019, Montreal, Canada. [***Graduate Travel Award**]

Ceja, C., Mccoleman, C., **Xiong, C.**, & Franconeri, S. (submitted). Position Estimates in Bar Graphs: Error and Biasn. *IEEE Transactions on Visualization and Computer Graphics, InfoVis 2019*, Vancouver, Canada.

Xiong, C., Ceja, C., Ludwig, C., & Franconeri, S. L. (2019). Attraction and Response Probe Similarity Effects in a Multiple Ensemble Judgment Task. Poster presented at *Vision Sciences Society Annual Meeting 2019 May*, St. Pete Beach, Florida.

Lee, J., **Xiong, C.**, Ceja, C., & Franconeri, S. L. (2019). Perceptual Bias in Object Position Estimates in Data Visualization. Poster presented at the 28th *UCLA Psychology Undergraduate Research Conference*, Los Angeles CA, USA.

Lin, K., Salovich, N. A., **Xiong**, C., Franconeri, S. L., & Rapp, D. N. (April, 2019). Controversial Topics Increase Skepticism of Data Visualizations. Presented at the annual *Chicago Area Undergraduate Research Symposium*, Chicago, IL, USA.

Xiong, C., Ludwig, C., Ceja, J., Franconeri, S. (2018). Perceptual Anchoring of Inferences from Dual-axis Graphs. Presentation given at the *Fifth European Summer School on Computational and Mathematical Modeling of Cognition 2018 July*, Couches, France.

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

Xiong, C., van Weelden, L., & Franconeri, S., (2017). Graphs as Ambiguous Figures. Poster presented at *Vision Sciences Society Annual Meeting 2018 May*, St. Pete Beach, Florida.

Xiong, C., van Weelden, L., & Franconeri, S., (2017). The curse of knowledge in visual data communication. *IEEE Transactions on Visualization and Computer Graphics, InfoVis 2017*, Phoenix, Arizona. [***Best Poster Honourable Mention**]

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. Poster presented at the 25th *UCLA Psychology Undergraduate Research Conference*, Los Angeles CA, USA.

Ho, J., **Xiong**, C., Bufford, C. A., Thai, K. P., & Kellman, P. J. (2015). Perceptual Learning of Musical Abstract Patterns. Poster Presentation at the *Berkeley Interdisciplinary Research Conference for Undergraduates*, Berkeley, CA, USA.

Invited Talks

2019 Nov	University of Massachusetts, Amherst	Amherst, MA
2019 Nov	University of Massachusetts, Boston	Boston, MA
2019 Nov	Wellesley College	Wellesley, MA
2019 Nov	University Washington, Seattle	Seattle, WA
2019 Oct	Tableau	Seattle, WA
2019 Oct	University of British Columbia	Vancouver, Canada
2019 Oct	Columbia University	New York City, NY
2019 Oct	New York University	New York City, NY
2019 Sept	Brown University	Providence, RI
2019 Aug	Tufts University	Medford, MA
2019 July	The MathWorks	Natick, MA
2019 June	Northwestern University Design Cluster	Evanston, IL
2019 March	Northwestern University Kellogg School of Management	Evanston, IL
2018 Nov	Northwestern University R User Group	Evanston, IL
2018 Feb	Northwestern University HCI Group	Evanston, IL

Professional Services

University

2018 –	Brownbag Coordinator, Department of Psychology Northwestern University
2018	Coordinator, Northwestern Department of Psychology Prospective Visit
2016 – 2017	Editor, <i>UCLA The Undergraduate Research Journal of Psychology</i> , Spring 2016 Issue

2015 – 2016 Committee Member: UCLA Common Book Committee

Academic

2017 - Co-Founder and Organizer, VISxVISION initiative (visxvision.com)
 2019 Publication Volunteer, VIS 2019 Workshop on Vis X Vision at IEEE InfoVis, 2019
 2019 Reviewer, ACM CHI: Human Factors in Computing Systems 2020 Conference (2)
 2019 Co-Chair, VIS 2019 Workshop on Vis X Vision at IEEE InfoVis, 2019
 2019 Advisory Group, Journal of Vision, *Special Issue on Visualization*
 2019 Organizer, VSS 2019 Workshop on Vis X Vision at Vision Science Society, 2019
 2019 Reviewer, IEEE InfoVis 2019 Conference (4)
 2018 Reviewer, ACM CHI: Human Factors in Computing Systems 2019 Conference (1)
 2018 Reviewer, IEEE InfoVis 2018 Conference (3)
 2018 Organizer, VSS 2018 Symposium *Inspiring Novel Research Directions in Vision Science*
 2018 Organizer, IEEE InfoVis 2018 *Visualization Meets Vision Science Meetup*
 2017 Organizer, IEEE InfoVis 2017 *Visualization Meets Vision Science Panel*
 2017 Organizer, VSS 2017 *Information Visualization Research Panel*

Outreach

2019 Panelist, Northwestern University Graduate Diversity and Inclusion Committee, *Navigating Your Advisor*
 2017 – 2019 Mentor, Northwestern Psychology Graduate Student Mentorship Program
 2017 Application Reviewer, Sneak Peek Program, Northwestern University
 2016 – 2018 Science Fundraiser Volunteer, Illinois Science Council

Undergraduate Students Mentored

2019 – Gabriel Belkind-Gerson
 2017 – Jun Lee
 2017 – Chase Stokes
 2017 – 2018 Emily Manheimer
 2017 – 2018 Chase Bednarz

Professional Memberships

Psychonomic Society Student Member
 Vision Sciences Society Student Member

Language Proficiency

English	Native
Chinese (Mandarin)	Native
Japanese	Business Proficient (N2)