

Poorna Talkad Sukumar, Ph.D.

pt2393@nyu.edu • <https://poornats.github.io/> • she/her/hers

RESEARCH INTERESTS

Human-Computer Interaction; Information Visualization; Visualization in Journalism; Cognitive Biases in Visualizations; Personal Data Visualization; Visualization Interaction Techniques

EDUCATION

- 2021 **Ph.D. Computer Science and Engineering**, University of Notre Dame, USA
Dissertation: Contextual and Qualitative Approaches for Visualization Design
Advisors: Dr. Aaron Striegel and Dr. Ronald Metoyer
GPA: 4.0/4.0
- 2010 **M.Sc. Mobile and Ubiquitous Computing**, Lancaster University, UK
Thesis: Enhanced Stance Phase Detection and Extended Kalman Filtering for Strapdown Pedestrian Dead Reckoning
Thesis Supervisor: Dr. Mike Hazas
- 2008 **B.E. Computer Science and Engineering**, Dayananda Sagar College of Engineering, Bengaluru, India

EMPLOYMENT

- 2022 - **Postdoctoral Associate**, Tandon School of Engineering, New York University, USA
Advisor: Dr. Oded Nov
- 2021 - 2022 **Mary H. '80 and Richard K. '80 Templeton Assistant Professor (Tenure-Track)**, Department of Computer Science, Union College, Schenectady, USA
- 2016 - 2021 **Graduate Research Assistant**, Department of Computer Science and Engineering, University of Notre Dame
- 2015 - 2016 **Teaching Assistant**, Department of Computer Science and Engineering, University of Notre Dame
- 2012 - 2015 **Project Associate**, Department of Computer Science and Automation, Indian Institute of Science, Bengaluru, India
- 2011 - 2012 **Software Developer**, Matter 2 Media, Bristol, UK
- 2010 - 2011 **Research Assistant**, Computing Department, Lancaster University, UK

AWARDS AND RECOGNITIONS

- 2024 Selected Participant, *NYU Tandon School of Engineering Faculty First-Look Fellowship Program*
- 2023 Travel Award (~\$1500), *National Research Conference for the Prevention of Firearm-Related Harms*

- 2019 - 2022 Special Recognition for Outstanding Reviews, *CHI'22 Papers*, *CHI'20*, and *CSCW'19 Papers*
- 2020 Selected Participant, *Doctoral Colloquium*, *IEEE VIS conference*
- 2019 Outstanding Graduate Teaching Assistant Award, *Department of Computer Science and Engineering*, *University of Notre Dame*
- 2019 Best Paper Honorable Mention Award, "GameViews: Understanding and Supporting Data-driven Sports Storytelling", *ACM CHI conference*
- 2018 Contributor, *NSF Award*, *CHS:III:Small:Designing Visual Representations to Mitigate Potential Cognitive Biases in Complex Decision-Making Processes*. [Link](#)
- 2017 Joseph F. Downes Memorial Award (~\$1,500), *DECISive workshop*, *IEEE VIS*
- 2017 CRA-W Grad Cohort Scholarship (~\$1,500), *Washington DC*

PUBLICATIONS

Peer-reviewed Journal Articles

- 2024 **J6** **Are Mass Shootings in the U.S. Increasing? Understanding How Differing Definitions of Politically Charged Events Impact People's Perceptions of Expected Trends in Visualizations** [Link](#)
Talkad Sukumar, P., Porfiri, M., and Nov, O.
IEEE Computer Graphics and Applications, 44(4), 140-149
- 2023 **J5** **Visualizing Inequity: How Stem Educators Interpret Data Visualizations to Make Judgments About Racial Inequity** [Link](#)
Reinholz, D. L., Ridgway, S., Talkad Sukumar, P., and Shah, N.
SN Social Sciences, 3(5), 76
- 2022 **J4** **Sleep Patterns and Sleep Alignment in Remote Teams during COVID-19** [Link](#)
Breideband, T., Martinez, G., Talkad Sukumar, P., Caruso, M., D'Mello, S., Striegel, A.D., and Mark, G.
Proceedings of the ACM on Human-Computer Interaction, 6(CSCW2), 1-31
- 2022 **J3** **Home-Life and Work Rhythm Diversity in Distributed Teamwork: A Study with Information Workers during the COVID-19 Pandemic** [Link](#)
Breideband, T., Talkad Sukumar, P., Mark, G., Caruso, M., D'Mello, S., and Striegel, A.D.
Proceedings of the ACM on Human-Computer Interaction, 6(CSCW1), 1-23
- 2018 **J2** **Making a Pecan Pie: Understanding and Supporting The Holistic Review Process in Admissions** [Link](#)
Talkad Sukumar, P., Metoyer, R., and He, S.
Proceedings of the ACM on Human-Computer Interaction, 2(CSCW), 1-22
- 2012 **J1** **Tutorial: Implementation of a Pedestrian Tracker Using Foot-Mounted Inertial Sensors** [Link](#)
Fischer, C., Talkad Sukumar, P., and Hazas, M.
IEEE Pervasive Computing, 12(2), 17-27

Peer-reviewed Conference and Workshop Articles

- 2024 **C8** **Connections Beyond Data: Exploring Homophily With Visualizations** [Link](#) [Press](#)
Talkad Sukumar, P., Porfiri, M., and Nov, O.
IEEE Visualization and Visual Analytics (VIS)
- 2022 **C7** **Triggers and Barriers to Insight Generation on a Personal Visualization Interface** [Link](#)
Talkad Sukumar, P., Dey, A., Mark, G., Metoyer, R., and Striegel, A.D.
Graphics Interface
- 2020 **C6** **Characterizing Exploratory Behaviors on a Personal Visualization Interface Using Interaction Logs** [Link](#)
Talkad Sukumar, P., Martinez, G.J., Grover, T., Mark, G., D'Mello, S.K., Chawla, N.V., Mattingly, S.M. and Striegel, A.D.
EuroVis 2020 - Short Papers
- 2019 **C5** **Mobile Devices in Programming Contexts: A Review of the Design Space and Processes** [Link](#)
Talkad Sukumar, P., and Metoyer, R.
Designing Interactive Systems, 1109-1122
- 2019 **C4** **GameViews: Understanding and Supporting Data-driven Sports Storytelling** [Link](#) 
 Zhi, Q., Lin, S., Talkad Sukumar, P., and Metoyer, R.
ACM CHI Conference, 1-23 [Best Paper Honorable Mention Award]
- 2018 **C3** **Replicating User-defined Gestures for Text Editing** [Link](#)
Talkad Sukumar, P., Liu, A., and Metoyer, R.
Interactive Surfaces and Spaces, 97-106
- 2018 **C2** **Towards Designing Unbiased Replication Studies in Information Visualization** [Link](#)
Talkad Sukumar, P., and Metoyer, R.
IEEE Evaluation and Beyond-Methodological Approaches for Visualization (BELIV), 93-101
- 2017 **C1** **Holistic Reviews in Admissions: Reviewer Biases and Visualization Strategies to Mitigate Them** [Link](#)
Talkad Sukumar, P., Metoyer, R., and He, S.
DECISive: Workshop on Dealing with Cognitive Biases in Visualizations. IEEE VIS

Panel, Case Study, Book Chapter, and Posters (Lightly-Reviewed)

- 2023 **L5** **A Crowdsourced Approach to Compare Perceptions of Trend in Visualizations of Mass Shooting Incidents Across Different Data Sources** [Link](#)
Talkad Sukumar, P., Porfiri, M., and Nov, O.
National Research Conference for the Prevention of Firearm-Related Harms [Poster]
- 2021 **L4** **Designing an Interactive Visualization System for Monitoring Participant Compliance in a Large-scale, Longitudinal Study** [Link](#)
Talkad Sukumar, P., Breideband, T., Martinez, G., Caruso, M., Rose, S., Steputis, C., D'Mello, S., Mark, G., and Striegel, A.D.
ACM CHI Conference [Case Study]

- 2020 **L3** **Transparency in Qualitative Research: Increasing Fairness in the CHI Review Process** [Link](#)
 Talkad Sukumar, P., Avellino, I., Remy, C., DeVito, M. A., Dillahunt, T. R., McGrenere, J., and Wilson, M.L.
ACM CHI Conference [Panel]
- 2020 **L2** **Visualizing Participatory Inequities in Classroom Data** [Link](#)
 Talkad Sukumar, P., Reinholz, D., Shah, N., and Striegel, A.D.
IEEE VIS [Poster]
- 2018 **L1** **A Visualization Approach to Addressing Reviewer Bias in Holistic College Admissions** [Link](#)
 Talkad Sukumar, P., and Metoyer, R.
Cognitive Biases in Visualizations, 161-175 [Book Chapter]

TEACHING EXPERIENCE

- 2023 **Postdoctoral Associate**, Tandon School of Engineering, New York University
- **MG-GY 6203 Data Visualization for Business Intelligence** [Spring 2023]
 - Developed all course materials and taught the entire course independently
 - Graded all coursework and provided detailed feedback.
- 2021 - 2022 **Assistant Professor**, Department of Computer Science, Union College
- **CSC 250 Algorithm Design and Analysis** [Spring 2022]
 - **CSC 380 User Interfaces** [Spring 2022]
 - **CSC 105 Game Development: Introduction to Computer Science** [Fall 2021, Winter 2022]
- For the above courses,
- Designed the syllabus, prepared all course materials, including lectures, assignments, and exams
 - Taught the entire course independently
 - Graded all coursework, provided detailed feedback, and held office hours to assist students
- 2015 - 2018 **Graduate Teaching Assistant**, Department of Computer Science and Engineering, University of Notre Dame
- **CSE 40424 - Human-Computer Interaction** [Spring 2016, Spring 2018]
 - **CSE 40647 - Data Mining** [Fall 2015]
- For the above courses,
- Assisted the instructors in developing course materials
 - Delivered selected lectures and helped lead lab sessions
 - Responsible for grading assignments, exams, and providing feedback
 - Held office hours to support student learning and address questions

STUDENT ADVISING AND MENTORING

- 2024 - **Wen Yin** (Ph.D. student, New York University): Mentoring on visualization research project
- 2024 - **Yujia Hou** (B.S., New York University): Mentoring on visualization research project
- 2024 **Nikitaa Kenkre** (M.S., New York University): Mentored during capstone project
- 2022 **Jason D'Amico** (B.S., Union College): Supervised summer research project
- 2022 **Jing Chen** (B.S., Union College): Supervised senior thesis
- 2022 **Celia Lane** (B.S., Union College): Supervised senior thesis

INVITED AND CONFERENCE TALKS

- 2024 Connections Beyond Data: Exploring Homophily With Visualizations. *IEEE VIS (virtual)*
- 2022 Triggers and Barriers to Insight Generation in Personal Visualizations. *Graphics Interface (virtual)*
- 2021 Towards a Realistic Understanding Of Personal Visualization. *Union College, Schenectady, NY (virtual)*
- 2020 Characterizing Exploratory Behaviors on a Personal Visualization Interface Using Interaction Logs. *EuroVis (virtual)*
- 2019 Mobile Devices in Programming Contexts: A Review of the Design Space and Processes. *Designing Interactive Systems (DIS), San Diego, USA*
- 2018 Replicating User-defined Gestures for Text Editing. *Interactive Surfaces and Spaces (ISS), Tokyo, Japan*
- 2018 Making a Pecan Pie: Understanding and Supporting The Holistic Review Process in Admissions. *CSCW, Jersey City Tokyo, USA*
- 2018 Towards Designing Unbiased Replication Studies in Information Visualization. *BELIV Workshop, IEEE VIS, Berlin, Germany*
- 2017 Holistic Reviews in Admissions: Reviewer Biases and Visualization Strategies to Mitigate them. *DECISive Workshop, IEEE VIS, Phoenix, Arizona*

SERVICE

- 2019 - Reviewed over 30 manuscripts for *ACM CHI, ACM CSCW, IEEE VIS, ACM MobileHCI, IEEE TVCG, ACM UIST, PacificVis, and JOVI*.
- 2022 Member of Faculty Search Committee (for Visiting Assistant Professor position), *Department of Computer Science, Union College*
- 2022 Member of Union Coalition for Inclusiveness and Diversity (UCID), *Union College*
- 2022 Member of Women of Color Collective (WOCC), *Union College*
- 2020 Panel Co-organizer, *Transparency in Qualitative Research: Increasing Fairness in the CHI Review Process, ACM CHI*
- 2019 - 2020 Graduate Student Union representative, *Department of Computer Science and Engineering, University of Notre Dame*
- 2019 Session Chair for *ACM CHI and ACM DIS*.