POORNA TALKAD SUKUMAR

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RESEARCH INTERESTS

Human-Computer Interaction (HCI); Information Visualization; Computer-Supported Cooperative Work (CSCW); Personal Data Visualization; Cognitive Biases in Visualizations; Empirical Studies

EDUCATION

University of Notre Dame　　　　　　　　　　　　　　　　　　　　　　　*Indiana, USA*
PH.D. COMPUTER SCIENCE AND ENGINEERING　　　　　　　　　　　　　　　　*Aug 2021*
- *Dissertation:* Contextual and Qualitative Approaches for Visualization Design
- Advisors: Dr. Aaron Striegel and Dr. Ronald Metoyer
- *GPA:* 4.0/4.0

Lancaster University　　　　　　　　　　　　　　　　　　　　　　　　*Lancashire, UK*
M.SC. MOBILE AND UBIQUITOUS COMPUTING　　　　　　　　　　　　　　　　*2010*
- *Thesis:* Enhanced Stance Phase Detection and Extended Kalman Filtering for Strapdown Pedestrian Dead Reckoning
- Thesis Supervisor: Dr. Mike Hazas

Dayananda Sagar College of Engineering　　　　　　　　　　　　　　　*Bengaluru, India*
B.E. COMPUTER SCIENCE AND ENGINEERING　　　　　　　　　　　　　　　　*2008*

PROFESSIONAL APPOINTMENTS

Mary H. '80 and Richard K. '80 Templeton Assistant Professor (Tenure-Track)　Schenectady, NY, USA
Department of Computer Science, Union College　　　　　　　　　　　　*Sept 2021 - Present*

Graduate Research Assistant　　　　　　　　　　　　　　　　　　　　Indiana, USA
Department of Computer Science and Engineering, University of Notre Dame　*2016 - 2021*

Graduate Teaching Assistant　　　　　　　　　　　　　　　　　　　　Indiana, USA
Department of Computer Science and Engineering, University of Notre Dame　*2015 - 2016, 2018*

Project Associate　　　　　　　　　　　　　　　　　　　　　　　　Bengaluru, India
Department of Computer Science and Automation, Indian Institute of Science　*2012 - 2015*

Software Developer　　　　　　　　　　　　　　　　　　　　　　　Bristol, UK
Matter 2 Media　　　　　　　　　　　　　　　　　　　　　　　　　　*2011 - 2012*

Research Assistant　　　　　　　　　　　　　　　　　　　　　　　Lancashire, UK
Computing Department, Lancaster University　　　　　　　　　　　　　　*2010 - 2011*

PUBLICATIONS

REFEREED JOURNAL ARTICLES

Reinholz, D., Ridgway, S., **Talkad Sukumar, P.**, and Shah, N. 2022. Visualizing Inequity: How Data Visualizations Can Support Sensemaking About Racial Inequity (*Under Review, CBE—Life Sciences Education Journal*).

Breideband, T., Martinez, G., **Talkad Sukumar, P.**, Caruso, M., D'Mello, S., Striegel, A.D., and Mark, G. 2022. Collaborating from Home during COVID-19: Examining Individual Sleep and Sleep Alignment in Teams. *CSCW, 2022* (*To appear*).

Breideband, T., **Talkad Sukumar, P.**, Mark, G., Caruso, M., D'Mello, S., and Striegel, A.D. 2022. Home-Life and Work Rhythm Diversity in Distributed Teamwork: A Study with Information Workers during the COVID-19 Pandemic. *CSCW, 2022* (*To appear*).

Talkad Sukumar, P., Metoyer, R., He, S. 2018. Making a Pecan Pie: Understanding and Supporting The Holistic Review Process in Admissions. *Proceedings of the ACM on Human-Computer Interaction, 2(CSCW), 1-22.* [25.6% Acceptance Rate].

Fischer, C., **Talkad Sukumar, P.**, Hazas, M. 2012. Tutorial: implementation of a pedestrian tracker using foot-mounted inertial sensors. *IEEE Pervasive Computing,12(2), 17-27.*

Refereed Conference and Workshop Articles

Talkad Sukumar, P., Dey, A., Mark, G., Metoyer, R., and Striegel, A.D. 2022. Triggers and Barriers to Insight Generation on a Personal Visualization Interface. *Graphics Interface, 2022* (*To appear*).

Talkad Sukumar, P., Martinez, G.J., Grover, T., Mark, G., D'Mello, S.K., Chawla, N.V., Mattingly, S.M. and Striegel, A.D. 2020. Characterizing Exploratory Behaviors on a Personal Visualization Interface Using Interaction Logs. *EuroVis 2020 - Short Papers.* [45.7% Acceptance Rate]

Talkad Sukumar, P. and Metoyer, R. 2019. Mobile Devices in Programming Contexts: A Review of the Design Space and Processes. *In Proceedings of the 2019 on Designing Interactive Systems Conference (pp. 1109-1122).* [25% Acceptance Rate]

Zhi, Q., Lin, S., **Talkad Sukumar, P.**, and Metoyer, R. 2019 GameViews: Understanding and Supporting Data-driven Sports Storytelling. *In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (pp. 1-13).* [23.8% Acceptance Rate, **Best Paper Honorable Mention Award (top 5%)].**

Talkad Sukumar, P., Liu, A., and Metoyer, R. 2018. Replicating User-defined Gestures for Text Editing. *In Proceedings of the 2018 ACM International Conference on Interactive Surfaces and Spaces (pp. 97-106).* [26.7% Acceptance Rate]

Talkad Sukumar, P. and Metoyer, R. 2018. Towards Designing Unbiased Replication Studies in Information Visualization. *In 2018 IEEE Evaluation and Beyond-Methodological Approaches for Visualization (BELIV) (pp. 93-101).*

Talkad Sukumar, P., He, S., and Metoyer, R. 2017. Holistic Reviews in Admissions: Reviewer Biases and Visualization Strategies to Mitigate Them. *In DECISIVe: Workshop on Dealing with Cognitive Biases in Visualizations. IEEE VIS.*

Book chapter and Theses

Talkad Sukumar, P. 2021. Contextual and Qualitative Approaches for Visualization Design. *Doctoral Dissertation, University of Notre Dame.*

Talkad Sukumar, P. and Metoyer, R. 2018. A Visualization Approach to Addressing Reviewer Bias in Holistic College Admissions. *In Cognitive Biases in Visualizations (pp. 161-175). Springer, Cham.*

Talkad Sukumar, P. 2010. Enhanced Stance Phase Detection and Extended Kalman Filtering for Strapdown Pedestrian Dead Reckoning. *Master's Thesis, Lancaster University, UK*

Panel, Case study, Poster

Talkad Sukumar, P., Breideband, T., Martinez, G., Caruso, M., Rose, S., Steputis, C., D'Mello, S., Mark, G., and Striegel, A. 2021. Designing an Interactive Visualization System for Monitoring Participant Compliance in a Large-scale, Longitudinal Study. *In Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (pp. 1-8).* [21% Acceptance Rate]

Talkad Sukumar, P., Avellino, I., Remy, C., DeVito, M. A., Dillahunt, T. R., McGrenere, J., and Wilson, M. L. 2020. Transparency in Qualitative Research: Increasing Fairness in the CHI Review Process. *In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (pp. 1-6).* [28.6% Acceptance Rate].

Talkad Sukumar, P., Reinholz, D., Shah, N., and Striegel, A. 2020. Visualizing Participatory Inequities in Classroom Data. *IEEE VIS 2020 Electronic Conference Proceedings [Poster].*

Awards and Recognitions

2019-2022	**Special Recognition for Outstanding Reviews**, *CHI'22, CHI'20, and CSCW'19 Papers*
2020	**Participant**, *Doctoral Colloquium, IEEE VIS conference*
2019	**Outstanding Graduate TA Award**, *Department of Computer Science and Engineering, University of Notre Dame*
	Best Paper Honorable Mention Award, "GameViews: Understanding and Supporting Data-driven Sports Storytelling", *ACM CHI conference*
2017	**Joseph F. Downes Memorial Award for Conference Travel**, University of Notre Dame $ 1,500
	CRA-W Grad Cohort Scholarship, Computing Research Association (CRA) $ 1,500

Presentations

Invited Talk

Invited talk (virtual): At **Union College,** Schenectady, NY. May 2021. "Towards a Realistic Understanding Of Personal Visualization."

Conference and Workshop Paper Presentations

EuroVis conference (virtual). May 2020. Presented paper, "Characterizing Exploratory Behaviors on a Personal Visualization Interface Using Interaction Logs."

Designing Interactive Systems (DIS) conference, San Diego, USA. June 2019. Presented paper, "Mobile Devices in Programming Contexts: A Review of the Design Space and Processes"

Interactive Surfaces and Spaces (ISS) conference, Tokyo, Japan. Nov 2018. Presented paper "Replicating User-defined Gestures for Text Editing"

CSCW conference, Jersey City, USA. Nov 2018. Presented paper "Making a Pecan Pie: Understanding and Supporting The Holistic Review Process in Admissions"

Evaluation and Beyond-Methodological Approaches for Visualization (BELIV) Workshop, IEEE VIS, Berlin, Germany. Oct 2018. Presented mini-tutorial "Towards Designing Unbiased Replication Studies in Information Visualization."

Dealing with Cognitive Biases in Visualisations (DECISIVe) Workshop, IEEE VIS, Phoenix, Arizona. Oct 2017. Presented paper "Holistic Reviews in Admissions: Reviewer Biases and Visualization Strategies to Mitigate them."

Teaching Experience

Union College

Assistant Professor, Department of Computer Science *Sept 2021 - Present*

- **CSC 105 - Game Development: Introduction to Computer Science** [F21] [W22]
- **CSC 250 - Algorithm Design and Analysis** [S22]
- **CSC 380 - User Interfaces** [S22]

University of Notre Dame

Graduate Teaching Assistant, Department of Computer Science and Engineering *2015-2016, 2018*

- **Human-Computer Interaction (HCI)** [S16] [S18]
  Instructor: Prof. Ronald Metoyer
- **Data Mining** [F15]
  Instructor: Prof. Nitesh Chawla

SERVICE

2019-	**Reviewer**, ACM CHI 2019–2022, ACM CSCW 2019-2022, IEEE VIS 2021, ACM MobileHCI 2022, IEEE TVCG 2015–2016, ACM UIST 2021.
2022	**Member of Faculty Search Committee (Visiting Assistant Professor)**, Union College
2022	**Member of Union Coalition for Inclusiveness and Diversity (UCID)**, Union College
2019	**Session Chair**, ACM DIS and CHI conferences
2019 - 2020	**Graduate Student Union representative**, Dept of Computer Science and Engineering, University of Notre Dame

REFERENCES

Dr. Aaron Striegel

PROFESSOR, DEPT OF COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF NOTRE DAME

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🏠 https://sites.nd.edu/aaron-striegel/

Dr. Ronald Metoyer

PROFESSOR, DEPT OF COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF NOTRE DAME

✉ rmetoyer@nd.edu
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Dr. Gloria Mark

PROFESSOR, DEPT OF INFORMATICS, UNIVERSITY OF CALIFORNIA, IRVINE

✉ gmark@uci.edu
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