

# Niharika Mathur

Human-Centered Computing (HCC) PhD Candidate, Georgia Tech, Atlanta, USA.  
nmathur35@gatech.edu | niharikamathur.com | Google Scholar

---

**Research Interests:** Human-Centered AI; Responsible AI; Human-Centered Explainable AI (HCXAI); Conversational AI Design; Health Informatics; Ubiquitous Computing; Aging and Accessibility.

## Education

---

|                |                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021 - present | <b>Georgia Institute of Technology (Georgia Tech)</b><br>Ph.D. Candidate, Human-Centered Computing (HCC)<br>Advisors: Dr. Elizabeth Mynatt and Dr. Sonia Chernova<br>Thesis: <i>Designing Human-Centered Explanations of LLM-Based AI Systems for Aging-in-Place</i><br>Thesis Committee: Dr. Thomas Ploetz, Dr. Mark Riedl, Dr. James Landay, Dr. Jodi Forlizzi |
| 2019 - 2021    | <b>Georgia Institute of Technology (Georgia Tech)</b><br>M.S., Human-Computer Interaction (HCI)<br>Specialization: <i>Interactive Computing</i><br>Thesis Advisor: Dr. Elizabeth Mynatt                                                                                                                                                                          |
| 2015 - 2019    | <b>Vellore Institute of Technology</b><br>B.Tech., Computer Science<br>Project Advisor: Dr. Ilanthenral Kandasamy                                                                                                                                                                                                                                                |

## Awards and Recognitions

---

|             |                                                                                                                                                                                                                                                                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025        | <b>Foley Scholar Award Winner</b><br>(Highest award for research excellence in computing at Georgia Tech)<br><b>Best Poster Award</b><br>ACM GROUP'25 Conference<br><b>Special Recognition for Outstanding Reviews (for 5 full CHI papers)</b><br>ACM CHI'25                                                                                             |
| 2024        | <b>Top 10 selected papers</b><br>ACM CHI'24 Human-Centered Explainable AI Workshop (HCXAI)                                                                                                                                                                                                                                                               |
| 2023        | <b>Special Recognition for Outstanding Review</b><br>ACM CHI'23                                                                                                                                                                                                                                                                                          |
| 2022        | <b>Best Paper Award</b><br>#1 paper at ACM ASSETS'22 (acceptance rate: 27%)<br><b>Innovation in Health Systems Fellowship (\$3750)</b><br>George Family Foundation<br><b>ACM SIGACCESS Award (\$1100)</b><br>Funding Support for Conference Travel to Athens, Greece<br><b>GVU Travel Award (\$500)</b><br>School of Interactive Computing, Georgia Tech |
| 2017        | <b>Competitive Communicator (CC) and Competitive Leader (CL) Award</b><br>Toastmasters International (TMI)                                                                                                                                                                                                                                               |
| 2015 - 2019 | <b>Dean's Undergraduate Academic Scholarship</b><br>VIT Vellore, India                                                                                                                                                                                                                                                                                   |

## Publications

---

### Peer-Reviewed and Under-Review Papers

[C12] **Niharika Mathur**, Hasibur Rehman, Smit Desai. [Assessing the Effect of Explanatory Personas in LLM-Based Conversational AI Agents for Assistive Support in Everyday Well-Being](#). [In preparation].

[C11] **Niharika Mathur**, Tamara Zubatiy, Agata Rozga, Jodi Forlizzi, Elizabeth Mynatt. [“Sometimes You Need Facts, and Sometimes a Hug”: Understanding Older Adults’ Preferences for Explanations in LLM-Based Conversational AI Systems](#). [Under Review at **CHI’26**].

[C10] Josey Benandi\*, **Niharika Mathur\***, Sangha Park, Tracy Mitzner, Agata Rozga, Elizabeth Mynatt. [“The Only Thing Certain About This is Uncertainty”: Exploring Technology-Mediated Care Coordination Practices Among Older Adults with Mild Cognitive Impairment](#). [Under Review at **CSCW’26**].

[C9] **Niharika Mathur**, Tamara Zubatiy, Agata Rozga, Elizabeth Mynatt. [“It feels like hard work trying to talk to it”: Understanding Experiences of Encountering and Repairing Conversational Breakdowns with Voice-Based AI Systems](#). [Under Review at the *ACM Transactions on Accessible Computing (TACCESS’26)*].

[C8] **Niharika Mathur**, Tamara Zubatiy, Elizabeth Mynatt. [A Research Through Design Study on AI Explanations for Collaborative Everyday Tasks](#). *ACM International Conference on Supporting Group Work (GROUP’25 Companion)*.

 **Best Poster Award at ACM GROUP’25**

[C7] **Niharika Mathur**, Alisha Pradhan, Elizabeth Mynatt, Masatomo Kobayashi, John Vines, Katie Seaborn, Erin Buehler, Agata Rozga, Jenny Waycott, John Rudnik, Tamara Zubatiy. [Technology-Mediated Caregiving For Older Adults Aging in Place](#). *ACM Conference on Human Factors in Computing Systems Extended Abstracts (CHI’25)*.

[C6] Zhenrui Liao, **Niharika Mathur**, Vidur Joshi, Shailendra Joshi. [The Promise of Artificial Intelligence in Neuroanesthesia: An Update](#). *Journal of Neuroanaesthesiology and Critical Care*.

[C5] **Niharika Mathur**, Tamara Zubatiy, Agata Rozga, Elizabeth Mynatt. ["Why did you say that?": Recommendations for Understanding Explainability in Conversational AI Systems for Older Adults with MCI](#). *International Conference on Ubiquitous Computing and Ambient Intelligence (UCAmI’23)*.

[C4] Tamara Zubatiy\*, **Niharika Mathur\***, Larry Heck, Kayci Vickers, Agata Rozga, Elizabeth Mynatt. [“I don’t know how to help with that” - Learning from Limitations of Modern Conversational Agent Systems](#). *ACM Conference On Computer-Supported Cooperative Work and Social Computing (CSCW’23)*.

[C3] Tamara Zubatiy, Kayci Vickers, Jessica Saurman, Felicia Goldstein, Amy Rodriguez, **Niharika Mathur**, Elizabeth Mynatt. [A Distributed Cognition Approach to Understanding Compensatory Calendaring Cognitive Systems of Older Adults with MCI and Their Care Partners](#). *International Conference on Ubiquitous Computing and Ambient Intelligence (UCAmI’23)*.

[C2] **Niharika Mathur**, Kunal Dhodapkar, Tamara Zubatiy, Jiachen Li, Brian Jones, Elizabeth Mynatt. [A Collaborative Approach to Support Medication Management in Older Adults with Mild Cognitive Impairment Using Conversational Assistants \(CAs\)](#). *ACM SIGACCESS Conference on Computers and Accessibility (ASSETS’22)*.

 **Best Paper Award at ACM ASSETS’22**

[C1] Tamara Zubatiy, **Niharika Mathur**, Kayci L. Vickers, Elizabeth Mynatt. [Empowering Dyads of Older Adults with MCI and their Care Partners Using Conversational AI Agents](#). *ACM Conference on Human Factors in Computing Systems (CHI’21)*.

### Invited Book Chapters

[B1] Ilanthenral Kandasamy, WB Vasantha, **Niharika Mathur**, Mayank Bisht, Florentin Smarandache. [Sentiment analysis of the #MeToo movement using neutrosophy](#). In *Optimization Theory Based on Neutrosophic and Plithogenic Sets* 2020.

### Workshops Organized

[W2] Niharika Mathur, Alisha Pradhan, Elizabeth Mynatt, Masatomo Kobayashi, John Vines, Katie Seaborn, Erin Buehler, Agata Rozga, Jenny Waycott, John Rudnik, Tamara Zubatyy. [Technology-Mediated Caregiving for Older Adults Aging in Place](#). At *ACM Conference on Human Factors in Computing Systems (CHI'25)*.

[W1] Abigale Stangl, Niharika Mathur, Yasmine Belghith. [Workshop on Design for Tactile and Embodied Learning](#). At *the School of Design, Georgia Tech 2025*.

### Workshop Papers and Doctoral Consortium

[A2] Niharika Mathur and Elizabeth Mynatt. [Categorizing Sources of Information for Explanations in Conversational AI Systems in the Home for Older Adults Aging in Place](#). *Workshop on Human-Centered Explainable AI (HCXAI) at ACM Conference on Human Factors in Computing Systems (CHI'24)*.

**Top 10 selected papers for presentation at the 4th HCXAI Workshop at CHI'24.**

[A1] Niharika Mathur. [Designing Human-Centered Explanations in LLM-based Conversational AI Systems for Aging-in-Place](#). *Doctoral Consortium at the Summit on Responsible Computing, AI and Society (RCAIS'24)*.

**Selected as part of the 20-student cohort for the inaugural Responsible AI Summit'24.**

### Articles, writings, and panels

[H1] Niharika Mathur. [A Primer on Conducting User Research with Older Adults](#). *Medium* (Georgia Tech HCI). 2020

## Research and Work Experience

---

|             |                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021 -      | <b>Georgia Tech, NSF AI CARING Institute (also part of Tech-AI Hub)</b><br><i>Graduate Research Assistant (GRA), advised by Dr. Elizabeth Mynatt and Dr. Sonia Chernova</i><br>Conducting research on the design of human-centered and contextual explanations in LLM-AI systems.                                                                                                                                  |
| Summer 2020 | <b>Georgia Tech, Office of Information Technology (OIT)</b><br><i>User Experience Research Intern, mentored by David Lacy</i><br>Conducted user research (interviews and surveys) with 36 incoming freshmen students and designed the 2020 “Welcome Home to Georgia Tech” website. Conducted usability evaluations on the website with 17 freshmen students. The website gathered 543 visits in the first week.    |
| Fall 2019   | <b>Georgia Tech, Animal-Computer Interaction Lab</b><br><i>Graduate Research Assistant (GRA), advised by Dr. Melody Moore-Jackson</i><br>Conducted user research (fly-on-the-wall observations and user interviews) with adopters at Atlanta Humane Society and provided design recommendations for instrumented dog toys for quantifying canine behavior to build suitable adoption profiles for shelter animals. |
| Summer 2018 | <b>Tika Data Services</b><br><i>User Research Intern</i><br>Implemented a privacy-by-design framework to design prototypes for a machine learning data annotation tool and tested outcome efficiency using Monte Carlo Simulation. Conducted usability evaluations with 15 non-expert data annotators and developed concrete design guidelines for crowdsourced data annotation tools.                             |
| Summer 2017 | <b>The Upside Story</b><br><i>Design Research Intern</i><br>Conducted needs analysis (interviews and contextual inquiry) and co-design sessions for 3 upcoming brands and crafted brand design strategy, including website design, user research guidelines, and content writing.                                                                                                                                  |

## Grant Writing Experience

---

2021 - 2026      **National Science Foundation (NSF)**  
*Title: AI Institute for Collaborative Assistance and Responsive Interaction for Networked Groups (AI CARING)*  
*Role:* Contributed to the collaborative effort of ideation and writing the grant  
*Award no.: 2112633; Amount awarded: \$20,000,000* (over five years)  
*PI and Institute Director:* Dr. Sonia Chernova; *Co-PI:* Dr. Elizabeth Mynatt, Dr. Reid Simmons

## Teaching Experience

---

### Graduate Teaching Assistant (GTA) | Georgia Tech

Fall 2023      **Course: Explainable AI** (41 students; Instructor: Dr. Sonia Chernova)  
Spring 2022      **Course: Digital Health Equity** (38 students; Instructor: Dr. Andrea G. Parker)  
Spring 2021      **Course: Human-Computer Interaction** (51 students; Instructor: Dr. Elizabeth Mynatt)  
Spring 2020      **Course: Human-Computer Interaction** (69 students; Instructor: Dr. Elizabeth Mynatt)

## Academic Service and Leadership

---

### Leadership Roles

2026      **CHI Workshop Juror**  
ACM Conference on Human Factors in Computing Systems (CHI'26)

2025      **Program Committee (Associate Chair - Posters Track)**  
ACM Conference on Computer Supported Cooperative Work (CSCW'25)  
**Lead Workshop Organizer**  
CHI'25 in Yokohama, Japan  
**Workshop Co-Organizer**  
Design for Tactile and Embodied Learning, School of Design, Georgia Tech  
**Graduate Student Advisory Council (GSAC) Member**  
College of Computing, Georgia Tech

2021 - 2024      **Student Council Member**  
NSF AI Institute (AI CARING)

2023      **Co-Chair, Graduate Student Council (GSC)**  
School of Interactive Computing, Georgia Tech  
**Accessibility Team Student Volunteer Lead**  
ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'23)

2022      **Student Volunteer (SV)**  
ACM Conference on Human Factors in Computing Systems (CHI'22)

2018      **Area Director**  
Toastmasters International (TMI), VIT Vellore, India

2017      **Team Lead for Guest Management and Hospitality**  
India Emerge Youth Summit (IEYS), VIT, Vellore

2015 - 2019      **Lead Magazine Editor**  
Students for the Exploration and Development of Space (SEDS-VIT), India

### Invited Peer Reviewer

|             |                                                                                                                                                                                                                                                     |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026        | ACM CHI Workshops<br>ACM/IEEE Human-Robot Interaction (HRI) Conference                                                                                                                                                                              |
| 2024 - 2026 | ACM Conference on Human Factors in Computing Systems (CHI)*<br>* 5 total <i>Special Recognitions for Outstanding Reviews at CHI</i>                                                                                                                 |
| 2024 - 2026 | ACM Conference on Computer Supported Cooperative Work (CSCW)                                                                                                                                                                                        |
| 2025        | ACM Transactions on Computing for Healthcare (HEALTH)<br>Elsevier Computers in Human Behavior Journal<br>ACM User Interface Software and Technology (UIST)<br>Springer Personal and Ubiquitous Computing (PAUC)<br>ACM CHI Late Breaking Work (LBW) |
| 2024        | ACM Transactions on Accessible Computing (TACCESS)<br>ACM/IEEE HRI Pioneers<br>ACM Designing Interactive Systems (DIS) Conference<br>ACM Conversational User Interfaces (CUI) Conference                                                            |

### Invited Talks and Lectures

---

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | <b>A Speed Dating Study for Understanding AI Explanation Preferences for Aging-in-Place</b><br>Department of Computational Media, University of California, Santa Cruz (UCSC)<br><i>Host: Dr. Chia-Fang (Christina) Chung</i><br><b>Contextual Explanations in Conversational AI Systems</b><br>Graduate Student Workshop, Summit for NSF-AI Institutes Leadership (SAIL'25), Virginia, USA.<br><b>Using User Context to Design Actionable AI Explanations</b><br>Human-Computer Interaction Consortium (HCIC), Wisconsin, USA.<br><b>Longitudinal Field Deployments of AI-driven Systems</b><br>AI CARING Student Symposium Panel, Atlanta, USA.                                                              |
| 2024 | <b>AI-driven Interventions for Older Adults</b><br>Drug Safety and Fall Prevention Task Force, Emory University, Atlanta, USA.<br><i>Host: Jill Woodard</i><br><b>Doctoral Consortium</b><br>Summit on Responsible Computing, AI and Society (RCAIS'24), Georgia Tech, Atlanta, USA.<br><b>Guest Lecturer: LLMs for older adults</b><br>GT OMSCS 8001: LLMs.<br><i>Host: Rachel Lowy</i><br><b>Conversational AI Design in Collaborative Caregiving Settings</b><br>Robotic Caregiving and Human Interaction Lab (RCHI), CMU, Pittsburgh, USA.<br><i>Host: Dr. Zachory Erickson</i><br><b>Building Context into AI Explanations</b><br>ACM CHI'24 Human-Centered Explainable AI (HCXAI) Workshop, Hawaii, USA. |
| 2023 | <b>Understanding Explainability in Conversational AI Systems for Caregiving</b><br>Conference on Ubiquitous Computing and Ambient Intelligence (UCAI'23), Cancun, Mexico.<br><b>Alumni in Research Panel</b><br>MS-HCI, Georgia Tech, Atlanta, USA.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2022 | <b>MATCHA: A Conversational AI Assistant for Medication Management in Older Adults</b><br>ACM SIGACCESS (ASSETS'22), Athens, Greece. <b>Awarded Best Paper.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Media

---

2025

Foley Scholars 2025 Award Winners. [[Georgia Tech Research](#)]AI CARING Researchers Win Best Poster Award at ACM GROUP 2025 [[Tech AI Hub](#)]Tech-Mediated Caregiving Workshop at CHI [[IBM Research](#), [Khoury College](#), [Georgia Tech](#)]

## Skills

---

### Research Methods and Skills

Human-Centered Design, Qualitative Research Study Design and Analysis, User Interviews, Usability Studies, Survey Design, Contextual Inquiry, Think-Aloud Studies, In-Home Field Deployments, Wizard-of-Oz Studies, Design Research Methods for AI, Research Through Design, Participatory and Co-Design, Statistical Analysis.

### Languages, Design tools, Libraries, and Technologies

Python, C/C++, R, HTML, JavaScript, PyTorch, Pandas, Google Cloud, MongoDB, Figma, Photoshop, Tableau.

### Selected Coursework

HCI Foundations, Research Methods in HCI, Human-Centered Computing, Prototyping Interactive Systems, Human-Robot Interaction, Explainable AI, Mobile and Ubiquitous Computing.

## Student Mentorship

---

\* indicates mentees who co-authored a publication

2025 - present

**Hasibur Rahman\***

Design and Media PhD Student (Northeastern University) [C12]

2023 - 2025

**Sangha (Ellie) Park\***

MS-HCI (Georgia Tech) [C10]

2021 - 2023

**Josey Benandi\***

MS-HCI (Georgia Tech) (now PM in the U.S. Digital Corps) [C10]

**Lukas Schmid**

MS-HCI (Georgia Tech) (now UX Researcher at Microsoft)

2021 - 2022

**Jiachen Li\***

MS-DM (Georgia Tech) (now CS PhD student at Northeastern University) [C2]

## References

---

### (1) Dr. Elizabeth Mynatt

Dean and Professor,  
Khoury College of Computer Sciences,  
Northeastern University.  
Professor Emeritus, Georgia Tech.  
[e.mynatt@northeastern.edu](mailto:e.mynatt@northeastern.edu)

### (2) Dr. Sonia Chernova

Associate Professor,  
School of Interactive Computing,  
Georgia Tech.  
[chernova@gatech.edu](mailto:chernova@gatech.edu)

### (3) Dr. Jodi Forlizzi

Professor in Computer Science and HCII,  
School of Computer Science,  
Carnegie Mellon University.  
[forlizzi@cs.cmu.edu](mailto:forlizzi@cs.cmu.edu)

### (4) Dr. Thomas Ploetz

Professor and Associate Chair of Graduate Studies,  
School of Interactive Computing,  
Georgia Tech.  
[thomas.ploetz@gatech.edu](mailto:thomas.ploetz@gatech.edu)