

# Neelma Bhatti

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## EDUCATION

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- **Virginia Tech** Blacksburg, VA, USA  
*Ph.D in Computer Science* Aug 2018 - August 2022  
*PhD Advisory Committee Members: D. Scott McCrickard (Chair, Virginia Tech), Aisling Kelliher (Co-chair, Virginia Tech), Mohammed Saad Seyam (Virginia Tech), Katherine S. Cennamo (Virginia Tech), Alexis Hiniker (University of Washington).*
- **Virginia Tech** Blacksburg, VA, USA  
*MS in Computer Science* Aug 2018 - July 2020
- **University of Sindh** Jamshoro, Pakistan  
*M.Phil in Information Technology* March 2013 - December 2016
- **University of Sindh** Jamshoro, Pakistan  
*BS in Information Technology* January 2007 - December 2010

## RESEARCH INTERESTS

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- **Research Areas::** Parent-child Computer Interaction; usability engineering, technologies for families and children; participatory and ethnographic methods; distractions/disorientation; digital childcare assistants.
- **Methods::** Surveys, interviews, probes, auto-ethnography, personas.

## EXPERIENCE

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- **Dhanani School of Science and Engineering, Habib University** Karachi, Pakistan  
*Visiting Assistant Professor* January 2025 - Current
  - Instructed courses such as Introduction to Human-Computer Interaction
- **Dhanani School of Science and Engineering, Habib University** Karachi, Pakistan  
*Assistant Program Director, Computer Science* August 2023 - July 2024
  - During my time as Assistant Program Director, I collaborated with the Program Director and other stakeholders to ensure that the CS program meets all necessary national and international accreditation requirements and standards and maintains accurate documentation and evidence to support compliance with accreditation bodies. I also led the accreditation of the Computer Science Program by the local accreditation body, the National Computing Education Accreditation Council (NCEAC).
- **Dhanani School of Science and Engineering, Habib University** Karachi, Pakistan  
*Assistant Professor, Computer Science* August 2022 - December 2024
  - Instructed courses such as Introduction to Human-Computer Interaction, Algorithmic Problem Solving, and Intro to Design Thinking.
  - Actively participated in the service responsibilities associated with the role.
  - Provided guidance and supervision for six final-year capstone projects.
  - Co-chaired the second Dhahani School of Science and Engineering Undergrad Symposium (DURS) 2024.
- **Faculty of Engineering and Technology** University of Sindh, Pakistan  
*Teaching Assistant* March 2012 - December 2016
  - Taught undergraduate courses including Visual Programming (VB.Net), Programming Fundamentals (C++), and Software Engineering Project Management. Additional services included student counseling, event management, and supervision of undergraduate theses and projects.
- **Department of Computer Science** University of Sindh Mirpurkhas Campus, Pakistan  
*Visiting Tutor* January 2012 - May 2012
  - Taught undergraduate courses including Visual Programming (VB.Net) and Introduction to Information Technology

## Peer-Reviewed conference and journal publications:

- **Bhatti, N.**, Mustaque, Q., Qadir, A. A., and Riaz, M. H., 2025, April. "Understanding Pakistani Mothers' Use and Non-Use of Screen Media-based Devices: Gratifications, Strategies, and Design Implications". In Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems.
- Batool, U., Khan, A. A., Siddiqui, U., and **Bhatti, N.**, 2024. "Using Technology To Improve Awareness, Convenience, And Communication About Neurodivergence In Higher Educational Institutes In Pakistan." In Proceedings of 26th IEEE International Multi Topic Conference 2024.
- Kotut, L., **Bhatti, N.**, Hassan, T., Haqq, D., and Saaty, M., 2024, April. "Griot-Style Methodology: Longitudinal Study of Navigating Design With Unwritten Stories. " In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems.
- **Bhatti, N.**, Mbakwe, A.B., Nnadi, S., Clarke, G.S., McCrickard, D.S., Kelliher, A., Gautam, A., 2022. "Intimate Narratives: An Assets-Based Approach To Develop Holistic Perspectives of Student Mothers' Lives and Their Use of Technology in Parenting." In Proceedings of the ACM on Human-Computer Interaction, 6(CSCW2)
- **Bhatti, N.**, Kotut, L., Haqq, D., Stelter, T.L., Saaty, M., Kelliher, A. and McCrickard, D.S., 2021. "Parenting, Studying and Working at Home in a Foreign Country: How International Student Mothers in the US Use Screen Media For and With Their Young Children." In Proceedings of the ACM on Human-Computer Interaction, 6(CSCW2), pp.1-28.
- **Bhatti, N.**, Saaty, M. and McCrickard, S., 2021, June. "Designing Mobile Applications to Minimize Disorientation in Informal Learning Environments." In ACM Interaction Design and Children (pp. 196-203). (**Best Short Paper Honorable Mention Award**)
- Kotut, L., **Bhatti, N.**, Saaty, M., Haqq, D., Stelter, T.L. and McCrickard, D.S., 2020, April. "Clash of times: Respectful technology space for integrating community stories in intangible exhibits." In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (pp. 1-13).
- **Bhatti, N.**, Ismaili, I.A., Dhomeja, L.D. and McCrickard, D.S., 2020, August. "Revealing And Resolving Disorientation In An Online Course Module Of Java Programming. In 2020 15th International Conference on Computer Science and Education (ICCSE) (pp. 781-786). IEEE.
- **Bhatti, N.**, Ismaili, I.A. and Dhomeja, L.D., 2017, March. "Identifying and resolving disorientation in e-learning systems." In 2017 international conference on communication, Computing and Digital Systems (C-CODE) (pp. 169-174). IEEE.
- Mansoor, S., Bhutto, A., **Bhatti, N.**, Aamir Patoli, N. and Ahmed, M., 2017, April. "Improvement of students' abilities for quality of software through personal software process." In 2017 International Conference on Innovations in Electrical Engineering and Computational Technologies (ICIEECT) (pp. 1-4). IEEE.
- **Bhatti, N.**, Dhomeja, L.D. and Malkani, Y.A., 2014, December. "Service discovery protocols in Pervasive Computing: A review." In 17th IEEE International Multi Topic Conference 2014 (pp. 205-210).

## Extended abstracts and work-in-progress papers:

- Sohail, N., Zaidi, S.A., Yasin, H., **Bhatti, N.** and Shahid, S. "Rehnuma: Interactive Companions for Speech-Delayed Children." (forthcoming) In Proceedings of the 24th Annual ACM Interaction Design and Children Conference, June 23-26, 2025, Reykjavik University in Iceland.
- Jamil, L., Zuberi, E.A., Haider, R., and **Bhatti, N.**, 2024. "Empowering Deaf Children Through Tabeer-e-Isharaat, A Digital Educational Platform." In Proceedings of the 23rd Annual ACM Interaction Design and Children Conference, June 17-20, 2024, Delft University of Technology, Netherlands.
- Rashid, H.A., Malik, T., Siddiqui, I., **Bhatti, N.** and Samad, A., 2023. "DYSIGN: Towards Computational Screening of Dyslexia and Dysgraphia Based on Handwriting Quality." In Proceedings of the 22nd Annual ACM Interaction Design and Children Conference, June 19-23, 2023, Chicago, Illinois, USA.
- **Bhatti, N.**, Kelliher, A., Hiniker, A., Choi, K., Shahid, S., Ammari, T., Xu, Y., Murad, C., and Michelson, R. 2022. "Technologies For Children At Home: Exploring Ways To Support Caregivers With Child-friendly Media Technologies For The Home." In GROUP '22: ACM International Conference on Supporting Group Work, January 23- 26, 2022, Sanibel Island, FL, USA.

- **Bhatti, N.**, McCrickard, D.S. and Kelliher, A., 2021. "Re-Imagining Digital Technology and Media As Care-Giving Assistant for Parents of Young Children" (No. 6892). CSCW 2021 Workshop on The Future of Care Work: Towards a Radical Politics of Care in CSCW Research and Practice.
- **Bhatti, N.**, Stelter, T.L. and McCrickard, D.S., 2021. "Conversational User Interfaces as Assistive Interlocutors For Young Children's Bilingual Language Acquisition." In ACM International Conference on Interactive Media Experiences (IMX '21). Association for Computing Machinery, New York, NY, USA, 208–211.
- **Bhatti, N.**, Stelter, T.L. and McCrickard, D.S., 2020, November. "The Interactive Show: A Conversational Companion for Young Children and Childcare Assistant for Parents." In Proceedings of the 8th ACM International Conference on Human-Agent Interaction (pp. 221-223).
- **Bhatti, N.**, 2020, June. Digital childcare: need of the hour for international student mothers. In Proceedings of the 2020 ACM Interaction Design and Children Conference: Extended Abstracts (pp. 1-4).

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## INVITED TALKS AND POSTER PRESENTATIONS

### Invited research talks and presentations

- **2025:** Guest lecture titled "Design Thinking as a Problem-Solving Approach in Computer Science" at Habib University, Pakistan.
- **2023:** Research talk titled "Storytelling using an assets-based approach: Vignettes about digital technologies and modern parenting" at Habib University, Pakistan.
- **2023** Guest lecture titled "Design ideation and thinking" in the Introduction to Human-Computer Interaction class at Virginia Tech, USA.
- **2023:** Research talk titled "A primer on User Experience Design (UX) and User Experience Design (UCD)" for Computer Science students at Habib University, Pakistan.
- **2021:** Research talk titled "Eliciting Intimate narratives of participants' lived experiences with technology" in the Social Informatics Meeting at the Center for Human Computer Interaction, Virginia Tech, USA.
- **2021:** Research talk on "Designing Mobile Applications to Minimize Disorientation in Informal Learning Environments" in the Social Informatics Meeting at the Center for Human Computer Interaction, Virginia Tech, USA.
- **2021:** Tech talk titled "Having to Have It All: Technologies for International Student Mothers and Children in the Multipurpose Home" at Grad Cohort for Women Workshop (CRA-WP), New Orleans, USA.
- **2020:** Research talk titled "Having to Have it All: How International Student Mothers Manage Technology and Children in the Multipurpose Home" in the Social Informatics Meeting at the Center for Human Computer Interaction, Virginia Tech, USA.
- **2019:** Poster presentation titled "Nutritional Facts For Online Political Interactions" at the Grad Cohort for Women Workshop (CRA- W), Chicago, USA.

### Workshops and courses

- **2022: Organized and led a virtual workshop** titled "Technologies For Children At Home: Exploring Ways To Support Caregivers With Child-friendly Media Technologies For The Home" accepted at the ACM International Conference on Supporting Group Work (GROUP '22).
- **2022:** ACM CHI Conference **course** titled Respecting and Facilitating Children's Contributions to Research, Design and Evaluation in HCI.
- **2021:** The 24th ACM Conference On Computer-Supported Cooperative Work And Social Computing **workshop** "CUI@CSCW: Inclusive and Collaborative Child- facing Voice Technologies".
- **2021:** The 24th ACM Conference On Computer-Supported Cooperative Work And Social Computing **workshop** titled "The Future of Care Work: Towards a Radical Politics of Care in CSCW Research and Practice".
- **2021:** ACM CHI Conference **workshop** "Let's Talk About CUIs: Putting Conversational User Interface Design Into Practice".
- **2020:** ACM Interaction Design for Children 2020 **workshop** on "Smart Toys, Smart Tangibles, Robots and other Smart Things for Children".
- **2020:** Software Carpentries (Unix, Git and Python) **workshop** organized by Virginia Tech University Libraries.

## THESIS

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- **PhD Dissertation:** Technology and International Student Parenting: Implications for Research and Design of Digital Childcare Technologies. Committee: D. Scott McCrickard, Aisling Kelliher, Mohammed Saad Seyam, Katherine S. Cennamo, Alexis Hiniker.
- **MPhil Thesis:** Effect of Social Media on learning of graduate students. Committee: Imdad Ali Ismaili and Lachhman Das Dhomeja.

## GRANTS, FUNDING AND TRAVEL SUPPORT

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- **\$ 3000** Institute for Creativity, Arts, and Technology (ICAT) SEAD Mini Grant, Virginia Tech (**July 1, 2022 - May 31, 2023**)  
**Proposal:** Evaluating commercial screen-based devices for children's connection and engagement with remote contacts  
**Role:** Principal Investigator **Co-PIs:** Koeun Choi, Scott McCrickard, Aisling Kelliher
- **\$600** Gary Marsden Travel Award, ACM CHI **2022**
- **\$600** Conference Travel Grant, Center for Human-Computer Interaction, Virginia Tech. **2020, 2021, 2022**
- Facilitated students from Habib University in securing Gary Marsden Travel Awards to attend ACM conferences: **\$2000** for ACM Interaction Design and Children (IDC) **June 2023**, and **\$500** for ACM CHI Conference on Human Factors in Computing Systems. **April 2025**

## HONORS AND AWARDS

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- Selected as a principal candidate for the **Fulbright PhD Scholarship Program**. August 2017 - August 2022.
- **Best short paper honorable mention award** at ACM Interaction Design and Children (IDC) conference. 2021
- Invited as an **outstanding student speaker** at Virginia Tech's Spring 2022 Commencement.
- Selected to participate in **Grad Cohort for Women (CRA-W) in 2019 and 2021**.
- **Student Volunteer and Doctoral Consortium Participant** at ACM Interaction Design and Children (IDC) conference 2020.
- Accomplished Ph.D. milestones (qualifier exam, preliminary exam) in a timely manner despite giving birth and raising a child without childcare first during Jan 2018- Dec 2019 and then during the initial months of the outbreak of the COVID-19 pandemic (March-June 2020).
- Nominated by the community for The Distinguished Award in Teaching Excellence for a DSSE course for Introduction to Human-Computer Interaction course I designed.

## PROFESSIONAL SERVICES

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- **Reviewer**, ACM CHI Conference on Human Factors in Computing Systems (CHI 2022 and CHI 2025), ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2021, 2022 and 2025), ACM Interaction Design and Children (IDC 2022) and Australian Conference on Human-Computer Interaction (OzCHI 2020).
- **Symposium Co-Chair**, The Dhanani School of Science and Engineering (DSSE) Undergraduate Research Symposium (DURS 2024), Habib University, Karachi, Pakistan.
- **Research Mentor**, Summer Tehqiq\Research Program 2024, Habib University, Karachi, Pakistan.
- **Session Co-Chair**, International Virtual Conference of Emerging Trends In Computing And Software Engineering-2021, Faculty of Science and Technology, ILMA University, Karachi, Pakistan.
- **Student Volunteer**, ACM Interaction Design and Children (IDC) conference 2020.
- **Bachelors and master's Student Selection Committee Member**, University of Sindh Pakistan 2013-2014.
- **Anchor-person**, Academic Convocation 2011 and 2012 of University of Sindh Jamshoro, Pakistan.
- **Student volunteer**, IEEE student branch IICT, University of Sindh Jamshoro, Pakistan. (2009-2010).