

Gulnar Rakhmetulla

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I am an HCI researcher with an extensive track record of peer-reviewed publications in the fields of **accessibility**, **text entry**, and **usability evaluation**. I received my Ph.D. from the University of California, Merced under the supervision of Prof. [Ahmed Sabbir Arif](#) in the Inclusive Interaction Lab. Here are my [LinkedIn](#) and [Google Scholar](#) pages.

Education

Ph.D. in Computer Science	University of California, Merced, US	2018–2022
M.S. in Advanced Control (with Distinction)	University of Sheffield, UK	2015–2016
B.S. in Information Systems (with Honors)	International IT University, Kazakhstan	2010–2014

Experience

Researcher **Almaty, Kazakhstan**
International Information Technology University *2023 – current*

Assisted in planning and conducting user research experiments
Utilized both qualitative and quantitative methods for comprehensive data collection

Research/Teaching Assistant **Merced, California, USA**
University of California, Merced *2018 – 2022*

Performed User Experience Research:
- Conducted usability testing, interviews, surveys, and focus groups
- Analyzed and synthesized data to identify patterns and areas for improvement in user experience
- Conducted both qualitative and quantitative research to collect insights and data for analysis

Taught Courses:
- CSE 120: Software Engineering: · Spring 2018, · Spring 2019, · Fall 2019, · Spring 2020
- CSE 155: Introduction to Human–Computer Interaction: · Fall 2018 · Spring 2022

Senior Lecturer **Almaty, Kazakhstan**
International Information Technology University *2016 – 2017*

Taught Courses:
- Human–Computer Interaction and Communication · Fall 2016
- Information and Communication Technologies · Spring 2017
- Database and Client–Server Applications · Fall 2017
- Fundamentals of Information Systems · Fall 2017

Publications (newest first)

1. **GeShort: One-Handed Mobile Text Editing and Formatting with Gestural Shortcuts and a Floating Clipboard.** In *Proc. of the 2023 Mobile Human-Computer Interaction Conference (MobileHCI 2023)*. **Gulnar Rakhmetulla**, Ahmed Sabbir Arif. [[Paper](#)][[Presentation](#)]
2. **Crownboard: One-Finger Crown-Based Smartwatch Keyboard for Users with Limited Dexterity** In *Proc. of the 2023 CHI Conference on Human Factors in Computing Systems (CHI 2023)*. ACM, New York, NY, USA, 22 pages. [Acceptance rate: 28%]
Gulnar Rakhmetulla, Ahmed Sabbir Arif. [[Paper](#)][[Presentation](#)]

3. **SwipeRing: Gesture Typing on Smartwatches Using a Segmented Qwerty Around the Bezel**
 In *Proc. of the 47th Graphics Interface Conference (GI 2021)*. Canadian Human-Computer Communications Society (CHCCS), Toronto, Ontario, Canada, 166–177. **[best paper award]** [Acceptance rate: 35%]
Gulnar Rakhmetulla, Ahmed Sabbir Arif. [[Paper](#)][[Presentation](#)]
4. **Using Action-Level Metrics to Report the Performance of Multi-Step Keyboards**
 In *Proc. of the 47th Graphics Interface Conference (GI 2021)*. Canadian Human-Computer Communications Society (CHCCS), Toronto, Ontario, Canada, 127–137. [Acceptance rate: 35%] [[Paper](#)][[Presentation](#)]
Gulnar Rakhmetulla, Ahmed Sabbir Arif, Steven Castellucci, I. Scott MacKenzie, Caitlyn Seim.
5. **TapStr: A Tap and Stroke Reduced–Qwerty for Smartphones**
 In *Proc. of the 2020 ACM International Conference on Interactive Surfaces and Spaces (ISS 2020)*. ACM, New York, NY, USA, 47–50. Mohammad Akbor Sharif,
Gulnar Rakhmetulla, Ahmed Sabbir Arif. [[Extended Abstract](#)] [[Presentation](#)]
6. **Senorita: A Chorded Keyboard for Sighted, Low Vision, and Blind Mobile Users**
 In *Proc. of the 2020 CHI Conference on Human Factors in Computing Systems (CHI 2020)*. ACM, New York, NY, USA, 1–13. [Acceptance rate: 24%]
Gulnar Rakhmetulla, Ahmed Sabbir Arif. [[Paper](#)] [[Presentation](#)]
7. **Put a Ring on It: Text Entry Performance on a Grip Ring Attached Smartphone**
 In **MobileHCI 2018 Workshop on Socio-Technical Aspects of Text Entry** (September 3, 2018). Barcelona, Spain, CEUR-WS.org/Vol-2183, 6–10.
 Monwen Shen, **Gulnar Rakhmetulla**, Ahmed Sabbir Arif. [[Position Paper](#)]
8. **Enabling Input on Tiny/Headless Systems Using Morse Code**
 Poster at Center for Cellular and Biomolecular Machines Open House (Oct 22, 2018). University of California, Merced, USA. Anna-Maria Gueorguieva, **Gulnar Rakhmetulla**, Ahmed Sabbir Arif. [[Preprint on arXiv](#)]

Core Skills

- User-Centric Methodologies: Proficient in conducting comprehensive usability testing, user studies, interviews, surveys, focus groups, and A/B testing to extract valuable insights for informed decision-making
- Data Analysis and Visualization: Expertise in both quantitative and qualitative data analysis, coupled with the ability to translate complex data into meaningful visualizations for strategic insights
- Tech Proficiency: Adept in utilizing sophisticated tools such as \LaTeX , NCSS, SPSS, and proficient in crafting Wireframes, Mockups, and Flow Diagrams using Figma
- Development Expertise: Skilled in Android Development, with a solid foundation in Java, SQL, PHP, HTML, CSS, and JavaScript

Awards

Gary Marsden Travel Awards 2023 <i>ACM, Special Interest Group on Computer-Human Interaction</i>	ACM SIGCHI, USA \$2,500 March 2023
Fred and Mitzie Ruiz Fellowship <i>University of California, Merced</i>	Merced, California, USA \$1,000 May 2021
Graduate Student Opportunity Program (GSOP) <i>University of California, Merced</i>	Merced, California, USA \$45,000 Sep. 2020

Fellowship for the research on novel input methods for blind people and ultrasmall devices.

EECS Bobcat Fellowship
University of California, Merced

Merced, California, USA
\$10,000 Jun. 2018, 2019

EECS Travel Fellowship
University of California, Merced

Merced, California, USA
\$2,900 Jun. 2018

International Scholarship
University of Sheffield

Sheffield, UK
\$3,800 Sep. 2015

Center for International Programs
Bolashak International Scholarship to study abroad

Astana, Kazakhstan
\$80,000 Aug. 2015

Presentations

1. Presented a work "*Crownboard: One-Finger Crown-Based Smartwatch Keyboard for Users with Limited Dexterity*", at the CHI Conference on Human Factors in Computing Systems (CHI 2023). (Apr. 23, 2023). Hamburg, Germany
2. Presented a work "*SwipeRing: Gesture Typing on Smartwatches Using a Segmented Qwerty Around the Bezel*", at the Graphics Interface Conference (GI 2021). (May 27, 2021). Burnaby, BC [virtual]
3. Presented a work "*Using Action-Level Metrics to Report the Performance of Multi-Step Keyboards*", at the Graphics Interface Conference (GI 2021). (May 27, 2021). Burnaby, BC [virtual]
4. Presented a work "*TapStr: A Tap and Stroke Reduced-Qwerty for Smartphones*", at the ACM International Conference on Interactive Surfaces and Spaces (ISS 2020). (Nov. 9, 2020). Lisbon, Portugal [virtual]
5. Presented a work "*Senorita: A Chorded Keyboard for Sighted, Low Vision, and Blind Mobile Users*", at the CHI Conference on Human Factors in Computing Systems (CHI 2020). (Apr. 25, 2020). Honolulu, Hawaii, USA [virtual]
6. Presented a work "*Novel Eyes-Free Text Entry Techniques for Mobile Devices*", at the 2nd Annual Fall Symposium: Branches of Cognitive Science, Cognitive Science Student Association. (Nov. 16, 2019). University of California, Merced, USA
7. Presented a work "*Put a Ring on It: Text Entry Performance on a Grip Ring Attached Smartphone*", at MobileHCI Workshop on Socio-Technical Aspects of Text Entry. (Sep. 3, 2018). Barcelona, Spain

Professional Memberships and Services

1. Member of Association for Computing Machinery (ACM) 2017-Present
2. Member of the ACM Special Interest Group on Computer-Human Interaction (SIGCHI) 2022-Present
3. Reviewed papers for IJHCI 2023, IMWUT 2023, CHI 2023, CHI 2022, ISS 2022, CHI 2021, GI 2021, IUI 2021, ISS 2019, IUI 2019
4. Served as a program committee member at Graphics Interface Conference (GI) 2021

Outreach Activities

1. Member of non-profit organization of Kazakh PhD girls union (PhD students and scientists around the world), dedicated to popularize research and inspire young women to pursue careers in STEM. Since 2019
2. Exhibitor at Center of Vision Enhancement (COVE) Vision Fair: Resources and Technology for people with blindness or low vision. A variety of exhibitors presented services, including assistive technologies, that are available for the blind and low vision people. Oct. 10, 2019. Merced, California, USA