

Gulnar Rakhmetulla

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I'm an HCI researcher with a Ph.D. in Computer Science from UC Merced, specializing in accessibility, text entry, and usability. With peer-reviewed publications and hands-on teaching, I excel in creating engaging, inclusive learning environments. My expertise spans user experience, data analysis, and software development, with a passion for innovative, student-centered education. 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

Adjunct Faculty **Santa Monica, CA, USA**
Westcliff University, Santa Monica 2025 – current

Taught courses:

- Introduction to Systems Engineering (TEM 600)
- Strategic Technology Management (TEM 630)
- Big Data Analytics and Visualization (MIS 550)

Develop engaging, interactive lectures with hands-on research and industry insights

Mentor students in research, usability testing, and technology

User Experience Researcher **Remote**
International Information Technology University 2023 – 2024

Planned and conducted user research experiments utilizing both qualitative (interviews, focus groups) and quantitative (surveys, data analysis) methods

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

Conducted UX research on accessibility and usability, identifying key patterns and areas for improvement through mixed-method approaches

Taught core courses:

- Software Engineering (CSE 120) (4 semesters)
- Human-Computer Interaction (CSE 155) (2 semesters)

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

Developed and taught courses, including:

- Human-Computer Interaction
- Information and Communication Technologies
- Database and Client–Server Applications
- Fundamentals of Information Systems

Publications (newest first)

1. **Predicting Text Selection Time and Effort on Smartphones from Selection Characteristics.** In *Proc. of the 18th International Conference on PErvasive Technologies Related to Assistive Environments (PETRA)*

- 2025). **Gulnar Rakhmetulla**, Ahmed Sabbir Arif. [\[Paper\]](#)
2. **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. [\[Paper\]](#)[\[Presentation\]](#)
 3. **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. [\[Paper\]](#)[\[Presentation\]](#)
 4. **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. [\[Paper\]](#)[\[Presentation\]](#)
 5. **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.
 6. **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. [\[Extended Abstract\]](#) [\[Presentation\]](#)
 7. **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. [\[Paper\]](#) [\[Presentation\]](#)
 8. **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. [\[Position Paper\]](#)
 9. **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:** Expert in designing and conducting usability testing, user studies, interviews, surveys, and focus groups to gather actionable insights for product and system design
- **Data Analysis & Visualization:** Proficient in both qualitative and quantitative analysis, skilled in translating complex data into impactful visualizations using tools such as SPSS and NCSS
- **Technical Proficiency:** Highly experienced with tools like LaTeX for academic writing and Figma for UI/UX design. Capable of creating wireframes, mockups, and flow diagrams
- **Software Development:** Solid background in Java, SQL, PHP, HTML/CSS, and JavaScript with Android app development expertise

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 <i>University of California, Merced</i>	Merced, California, USA \$10,000 Jun. 2018, 2019
EECS Travel Fellowship <i>University of California, Merced</i>	Merced, California, USA \$2,900 Jun. 2018
International Scholarship <i>University of Sheffield</i>	Sheffield, UK \$3,800 Sep. 2015
Center for International Programs <i>Bolashak International Scholarship to study abroad</i>	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, ACM (Association for Computing Machinery) 2017-Present
2. Reviewer, CHI 2021-2024, DIS 2024, MobileHCI 2024, IHCI 2023, IMWUT 2023, ISS 2019-2022, IUI 2019-2021, GI 2021.
3. Program Committee Member, Graphics Interface Conference (GI), 2021