

# KE LI

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## EDUCATION

<b>Cornell University</b>	Jul. 2021 - Aug. 2026 (Expected)
<i>Ph.D. Candidate at <a href="#">SciFi Lab</a> in Information Science, College of Computing and Information Science</i>	
• <b>Advisor:</b> Prof. <a href="#">Cheng Zhang</a> , <b>Special Committee Member:</b> Prof. <a href="#">Deborah Estrin</a> and Prof. <a href="#">Rajalakshmi Nandakumar</a>	
• <b>Concentration:</b> Ubiquitous Computing, Sensing Systems, Wearable Devices, and Artificial Intelligence	
<b>Cornell University</b>	Jul. 2021 - Dec. 2024
<i>M.S. in Information Science, College of Computing and Information Science</i>	
<b>Shanghai Jiao Tong University (SJTU)</b>	Sept. 2016 - Jul. 2020
<i>B.S. in Information Engineering, School of Electronic Information and Electrical Engineering</i>	
• <b>Overall GPA:</b> 91.41/100 (Rank <b>3/158</b> )	
• Outstanding Graduates from Universities in Shanghai ( <b>Top 5%</b> )	
<b>Carnegie Mellon University (CMU)</b>	Jul. 2019 - Sept. 2019
<i>Research Assistant in Department of Electrical and Computer Engineering, Supervisor: Prof. <a href="#">Swarun Kumar</a></i>	

## PUBLICATIONS

<a href="#">SonicID: User Identification on Smart Glasses with Acoustic Sensing</a> . <b>Ke Li</b> , Devansh Agarwal, Ruidong Zhang, Vipin Gunda, Tianjun Mo, Saif Mahmud, Boao Chen, François Guimbretière, and Cheng Zhang. <i>Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.</i> (IMWUT '24) 8, 4, Article 169, 27 pages.	Nov. 2024
<a href="#">ActSonic: Recognizing Everyday Activities from Inaudible Acoustic Wave Around the Body</a> . Saif Mahmud, Vineet A Parikh, Qikang Liang, <b>Ke Li</b> , Ruidong Zhang, Ashwin Ajit, Vipin Gunda, Devansh Agarwal, François Guimbretière, and Cheng Zhang. <i>Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.</i> (IMWUT '24) 8, 4, Article 183, 32 pages.	Nov. 2024
<a href="#">Ring-a-Pose: A Ring for Continuous Hand Pose Tracking</a> . Tianhong Catherine Yu, Guilin Hu, Ruidong Zhang, Hyunchul Lim, Saif Mahmud, Chi-Jung Lee, <b>Ke Li</b> , Devansh Agarwal, Shuyang Nie, Jinseok Oh, François Guimbretière, and Cheng Zhang. <i>Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.</i> (IMWUT '24) 8, 4, Article 189, 30 pages.	Nov. 2024
<a href="#">EchoGuide: Active Acoustic Guidance for LLM-Based Eating Event Analysis from Egocentric Videos</a> . Vineet Parikh, Saif Mahmud, Devansh Agarwal, <b>Ke Li</b> , François Guimbretière, and Cheng Zhang. In <i>Proceedings of the 2024 ACM International Symposium on Wearable Computers (ISWC '24)</i> , 40–47. <b>Best Paper Honorable Mention Award</b>	Melbourne, Australia Oct. 2024
<a href="#">AI-Powered Eyewear for Routine Facial Expression Analysis in Parkinson's Disease: Study Design and Goals</a> . Hwai Yin Ooi, Cheng Zhang, <b>Ke Li</b> , Jordan Narins, and Harini Sarva. <i>The International Congress of Parkinson's Disease and Movement Disorders</i> , 39 (suppl 1).	Sept. 2024
<a href="#">GazeTrak: Exploring Acoustic-based Eye Tracking on a Glass Frame</a> . <b>Ke Li</b> , Ruidong Zhang, Boao Chen, Siyuan Chen, Sicheng Yin, Saif Mahmud, Qikang Liang, François Guimbretière, and Cheng Zhang. In <i>Proceedings of the 30th Annual International Conference on Mobile Computing and Networking (ACM MobiCom '24)</i> , 497–512.	D.C., USA Nov. 2024
<a href="#">EyeEcho: Continuous and Low-power Facial Expression Tracking on Glasses</a> . <b>Ke Li</b> , Ruidong Zhang, Siyuan Chen, Boao Chen, Mose Sakashita, François Guimbretière, and Cheng Zhang. In	Honolulu, USA May 2024

*Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24)*, Article 319, 1–24.

- [\*\*EchoWrist: Continuous Hand Pose Tracking and Hand-Object Interaction Recognition Using Low-Power Active Acoustic Sensing On a Wristband.\*\*](#) Chi-Jung Lee, Ruidong Zhang, Devansh Agarwal, Tianhong Catherine Yu, Vipin Gunda, Oliver Lopez, James Kim, Sicheng Yin, Boao Dong, **Ke Li**, Mose Sakashita, François Guimbretière, and Cheng Zhang. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24)*, Article 403, 1–21. Honolulu, USA May 2024
- [\*\*HPSpeech: Silent Speech Interface for Commodity Headphones.\*\*](#) Ruidong Zhang, Hao Chen, Devansh Agarwal, Richard Jin, **Ke Li**, François Guimbretière, and Cheng Zhang. In *Proceedings of the 2023 ACM International Symposium on Wearable Computers (ISWC '23)*, 60–65. **Best Paper Honorable Mention Award** Cancún, Mexico Oct. 2023
- [\*\*EchoNose: Sensing Mouth, Breathing and Tongue Gestures inside Oral Cavity using a Non-contact Nose Interface.\*\*](#) Rujia Sun, Xiaohe Zhou, Benjamin Steeper, Ruidong Zhang, Sicheng Yin, **Ke Li**, Shengzhang Wu, Sam Tilsen, François Guimbretière, and Cheng Zhang. In *Proceedings of the 2023 ACM International Symposium on Wearable Computers (ISWC '23)*, 22–26. Cancún, Mexico Oct. 2023
- [\*\*PoseSonic: 3D Upper Body Pose Estimation Through Egocentric Acoustic Sensing on Smartglasses.\*\*](#) Saif Mahmud, **Ke Li**, Guilin Hu, Hao Chen, Richard Jin, Ruidong Zhang, François Guimbretière, and Cheng Zhang. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. (IMWUT '23)* 7, 3, Article 111, 28 pages. Sept. 2023
- [\*\*EchoSpeech: Continuous Silent Speech Recognition on Minimally-obtrusive Eyewear Powered by Acoustic Sensing.\*\*](#) Ruidong Zhang, **Ke Li**, Yihong Hao, Yufan Wang, Zhengnan Lai, François Guimbretière, and Cheng Zhang. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*, Article 852, 1–18. Hamburg, Germany Apr. 2023
- [\*\*EarIO: A Low-power Acoustic Sensing Earable for Continuously Tracking Detailed Facial Movements.\*\*](#) **Ke Li**, Ruidong Zhang, Bo Liang, François Guimbretière, and Cheng Zhang. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. (IMWUT '22)* 6, 2, Article 62, 24 pages. Jul. 2022
- [\*\*Locating Everyday Objects using NFC Textiles.\*\*](#) Jingxian Wang, Junbo Zhang, **Ke Li**, Chengfeng Pan, Carmel Majidi, and Swarnun Kumar. In *Proceedings of the 20th International Conference on Information Processing in Sensor Networks (IPSN '21)*, 15–30. **Best Paper Award & Best Presentation Award** Nashville, USA May 2021
- [\*\*A Constant Factor Approximation for  \$d\$ -Hop Connected Dominating Set in 3-Dimensional Wireless Network.\*\*](#) **Ke Li**, Xiaofeng Gao, Fan Wu, and Guihai Chen. In *IEEE Transactions on Wireless Communications (TWC)*, vol. 18, no. 9, pp. 4357–4367, Sept. 2019. Sept. 2019
- [\*\*OLEC: A Machine-Learning-Based Energy-Efficient Clustering Algorithm to Prolong Network Lifespan for IoT in High-Dimensional Space.\*\*](#) **Ke Li**, Haowei Huang, Xiaofeng Gao, Fan Wu, and Guihai Chen. In *Proceedings of the 48th International Conference on Parallel Processing (ICPP '19)*, Article 105, 1–10. Kyoto, Japan Aug. 2019
- [\*\*μTouch: Enabling Accurate, Lightweight Micro Hand Gesture Sensing with Passive Magnets.\*\*](#) Siyuan Wang, **Ke Li**, Jike Wang, Jingyuan Huang, Cheng Zhang, Alanson P. Sample, and Dongyao Chen. (*In Preparation*)

## HONORS & AWARDS

Qualcomm Innovation Fellowship 2024

Apr. 2024

*Fellowship focused on recognizing, rewarding, and mentoring PhD students based on Qualcomm's core values of innovation, execution, and teamwork*

**Nominated for a 2021-2022 Outstanding Teaching Award** May 2022

*Honor bestowed on outstanding PhD teaching assistants in Information Science at Cornell*

**Outstanding Graduates in Shanghai (Top 5%)** Jun. 2020

*Honor bestowed on outstanding graduates from universities in Shanghai*

**A-level Outstanding Scholarship of Shanghai Jiao Tong University (Top 1%)** Nov. 2019

*Scholarship awarded to outstanding students at SJTU*

**Tang Lixin Scholarship (Top 0.2%)** Oct. 2019

*Scholarship founded by Mr. Tang Lixin and awarded to Top 60 students at SJTU*

**National Scholarship\*2 (3/158, 1/158)** Oct. 2018, 2019

*Top scholarship awarded to undergraduates in China for their achievements in academics*

**B-level Outstanding Scholarship of Shanghai Jiao Tong University\*2 (Top 5%, Top 2%)** Nov. 2017, 2018

*Scholarship awarded to outstanding students at SJTU*

**Wen-Yuan Pan Scholarship (Top 5%)** Dec. 2017

*Scholarship founded by Wen-Yuan Pan Foundation*

## SERVICE

**External Reviewer** 2022 - Present

*UbiComp '22 '23 '24, UIST '23, CHI '24 '25*

## TEACHING EXPERIENCES

**INFO 2951: Introduction to Data Science with R** Spring '25

*Teaching Assistant at Cornell University, Instructor: Prof. Benjamin Soltoff*

**INFO 4320/5321: Introduction to Rapid Prototyping and Physical Computing** Fall '22 '23, Spring '23

*Teaching Assistant at Cornell University, Instructor: Prof. Cheng Zhang*

**INFO 4120/6120: Ubiquitous Computing (Nominated for Outstanding Teaching Award)** Fall '21

*Teaching Assistant at Cornell University, Instructor: Prof. Cheng Zhang*

## EXTRACURRICULAR ACTIVITIES & LEADERSHIP

**Development Program for Excellent Student of SJTU, Group Leader** Apr. 2017 – Apr. 2018

- Organized various activities, such as lectures, speech contests, volunteer programs, and summer social activities.
- Awarded Outstanding Participant Title in the 2018 Summer Social Practice of SJTU (Top 2%).

**Master Distinguished Lecture, SJTU, Director** May. 2017 - Sept. 2018

- Organized professional academic lectures and invited scholars for speeches, including 8 Nobel Prize Laureates.
- Oversaw the entire process of lecture, including brand building, publicity, directing, reception and recognition.