

KE LI

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EDUCATION

Cornell University

Jul. 2021 - Aug. 2027 (Expected)

Ph.D. Candidate at SciFi Lab in Information Science, College of Computing and Information Science

- **Advisor:** Prof. [Cheng Zhang](#), **Special Committee Member:** Prof. [Deborah Estrin](#) and Prof. [Rajalakshmi Nandakumar](#)
- **Concentration:** Ubiquitous Computing, Sensing Systems, Wearable Devices, and Artificial Intelligence

Cornell University

Jul. 2021 - Dec. 2024

M.S. in Information Science, College of Computing and Information Science

Shanghai Jiao Tong University (SJTU)

Sept. 2016 - Jul. 2020

B.S. in Information Engineering, School of Electronic Information and Electrical Engineering

- **Overall GPA:** 91.41/100 (Rank **3/158**)
- Outstanding Graduate from Universities in Shanghai (**Top 5%**)

PUBLICATIONS

SonicID: User Identification on Smart Glasses with Acoustic Sensing.	Ke Li , 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. (IMWUT '24)</i> 8, 4, Article 169, 27 pages.	Nov. 2024
ActSonic: Recognizing Everyday Activities from Inaudible Acoustic Wave Around the Body.	Saif Mahmud, Vineet A Parikh, Qikang Liang, Ke Li , Ruidong Zhang, Ashwin Ajit, Vipin Gunda, Devansh Agarwal, François Guimbretière, and Cheng Zhang. <i>Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. (IMWUT '24)</i> 8, 4, Article 183, 32 pages.	Nov. 2024
Ring-a-Pose: A Ring for Continuous Hand Pose Tracking.	Tianhong Catherine Yu, Guilin Hu, Ruidong Zhang, Hyunchul Lim, Saif Mahmud, Chi-Jung Lee, Ke Li , Devansh Agarwal, Shuyang Nie, Jinseok Oh, François Guimbretière, and Cheng Zhang. <i>Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. (IMWUT '24)</i> 8, 4, Article 189, 30 pages.	Nov. 2024
EchoGuide: Active Acoustic Guidance for LLM-Based Eating Event Analysis from Egocentric Videos.	Vineet Parikh, Saif Mahmud, Devansh Agarwal, Ke Li , François Guimbretière, and Cheng Zhang. In <i>Proceedings of the 2024 ACM International Symposium on Wearable Computers (ISWC '24)</i> , 40–47. Best Paper Honorable Mention Award	Melbourne, Australia Oct. 2024
AI-Powered Eyewear for Routine Facial Expression Analysis in Parkinson's Disease: Study Design and Goals.	Hwai Yin Ooi, Cheng Zhang, Ke Li , Jordan Narins, and Harini Sarva. <i>The International Congress of Parkinson's Disease and Movement Disorders</i> , 39 (suppl 1).	Sept. 2024
GazeTrak: Exploring Acoustic-based Eye Tracking on a Glass Frame.	Ke Li , 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
EyeEcho: Continuous and Low-power Facial Expression Tracking on Glasses.	Ke Li , Ruidong Zhang, Siyuan Chen, Boao Chen, Mose Sakashita, François Guimbretière, and Cheng Zhang. In <i>Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24)</i> , Article 319, 1–24.	Honolulu, USA May 2024

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

WORK EXPERIENCES

Facebook <i>Computer Science Research Intern in the domain of computer vision, machine learning, sensor fusion, and HCI software and hardware development</i>	Aug. 2025 - Dec. 2025
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Carnegie Mellon University (CMU)

Jul. 2019 - Sept. 2019

*Research Assistant in Department of Electrical and Computer Engineering, Supervisor: Prof. [Swarun Kumar](#)***SERVICE****External Reviewer**

2022 - Present

*UbiComp '22 '23 '24 '25, UIST '23, CHI '24 '25 '26***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.