

KE LI

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EDUCATION

Cornell University	Jul. 2021 - Aug. 2026 (Expected)
<i>Ph.D. Candidate at SciFi Lab in Information Science, College of Computing and Information Science</i>	
<ul style="list-style-type: none">Advisor: Prof. Cheng Zhang, Special Committee Member: Prof. Deborah Estrin and Prof. Rajalakshmi NandakumarConcentration: Ubiquitous Computing, Sensing Systems, Wearable Devices, and Artificial Intelligence	
Shanghai Jiao Tong University (SJTU)	Sept. 2016 - Jul. 2020
<i>B.S. in Information Engineering, School of Electronic Information and Electrical Engineering</i>	
<ul style="list-style-type: none">Overall GPA: 91.41/100 (Rank 3/158)Outstanding Graduates from Universities in Shanghai (Top 5%)	
Carnegie Mellon University (CMU)	Jul. 2019 - Sept. 2019
<i>Research Assistant in Department of Electrical and Computer Engineering, Supervisor: Prof. Swarun Kumar</i>	

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.</i> (IMWUT '24) 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.</i> (IMWUT '24) 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.</i> (IMWUT '24) 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, Ke Li , 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, Ke Li , 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, Ke Li , 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, Ke Li , 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, Ke Li , 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> Ke Li , 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, Ke Li , 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> Ke Li , 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> Ke Li , Haowei 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 Micro Hand Gesture Sensing with Passive Magnets.</u> Siyuan Wang, Ke Li , Jike Wang, Jingyuan Huang, Cheng Zhang, Alanson P. Sample, and Dongyao Chen. (<i>In Preparation</i>)	

SERVICE

External Reviewer <i>UbiComp '22 '23 '24, UIST '23, CHI '24 '25</i>	2022 - Present
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TEACHING EXPERIENCES

INFO 4320/5321: Introduction to Rapid Prototyping and Physical Computing	Fall '22 '23, Spring '23
<i>Teaching Assistant at Cornell University, Instructor: Prof. Cheng Zhang</i>	
INFO 4120/6120: Ubiquitous Computing (Nominated for Outstanding Teaching Award)	Fall '21
<i>Teaching Assistant at Cornell University, Instructor: Prof. Cheng Zhang</i>	

HONORS & AWARDS

Qualcomm Innovation Fellowship 2024	Apr. 2024
<i>Fellowship focused on recognizing, rewarding, and mentoring PhD students based on Qualcomm's core values of innovation, execution, and teamwork</i>	
Nominated for a 2021-2022 Outstanding Teaching Award	May 2022
<i>Honor bestowed on outstanding PhD teaching assistants in Information Science at Cornell</i>	
Outstanding Graduates in Shanghai (Top 5%)	Jun. 2020
<i>Honor bestowed on outstanding graduates from universities in Shanghai</i>	
A-level Outstanding Scholarship of Shanghai Jiao Tong University (Top 1%)	Nov. 2019
<i>Scholarship awarded to outstanding students at SJTU</i>	
Tang Lixin Scholarship (Top 0.2%)	Oct. 2019
<i>Scholarship founded by Mr. Tang Lixin and awarded to Top 60 students at SJTU</i>	
National Scholarship*2 (3/158, 1/158)	Oct. 2018, 2019
<i>Top scholarship awarded to undergraduates in China for their achievements in academics</i>	
B-level Outstanding Scholarship of Shanghai Jiao Tong University*2 (Top 5%, Top 2%)	Nov. 2017, 2018
<i>Scholarship awarded to outstanding students at SJTU</i>	
Wen-Yuan Pan Scholarship (Top 5%)	Dec. 2017
<i>Scholarship founded by Wen-Yuan Pan Foundation</i>	

EXTRACURRICULAR ACTIVITIES & LEADERSHIP

Development Program for Excellent Student of SJTU, Group Leader	Apr. 2017 – Apr. 2018
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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.	