

WEIGAO SU

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EDUCATION

Hunan University
B.Eng in Computer Science

September 2018 - Present
GPA: 3.71/4, Top 4%

PUBLICATION

“Towards Device Independent Eavesdropping on Telephone Conversations with Built-in Accelerometer”

Weigao Su*, Daibo Liu, Taiyuan Zhang, Hongbo Jiang.
Proceedings of the ACM on IMWUT 5.4, 2021.

“EarSonar: Turning Earphone into Middle-Ear Effusion Diagnoser for Daily Healthcare”

Jingyang Hu, Weigao Su*, Daibo Liu, Jie Xiong, Hongbo Jiang.
In revision.

RESEARCH EXPERIENCE

Optimizing Video Streaming for High-speed Rails

Supervised by Prof. Daibo Liu (HNU), Jie Xiong (UMass).

July 2021 – Present
Research Assistant

- Modeled TCP measurements in high speed rails to disclose the root cause of network degradation.
- Researched LTE behavior with worsened channel quality.
- Revisited current ABR strategies to show the underlying deficiency.
- Designed a crowdsourcing-based video delivery framework to ensure QoE for passengers on HSR.

Acoustic-based Middle Ear Effusion Diagnosis

Supervised by Prof. Daibo Liu (HNU), Jie Xiong (UMass).

May 2021 – November 2021
Research Assistant

- Researched FMCW-based range measurements.
- Explored attenuation in sound wave propagation.
- Investigated signal separation in multi-path environment.
- Examined echo features for MEE detection.
- Designed an online MEE diagnosis system.

Scalable Smartphone Eavesdropping over Accelerometer

Supervised by Prof. Daibo Liu (HNU), Hongbo Jiang(HNU).

June 2020 – May 2021
Research Assistant

- Investigated potential gains/threats of motion sensors.
- Employed signal processing and feature engineering to locate underlying features of speech-induced vibration.
- Constructed an adversarial neural network assisted by features to achieve device independent recognition.
- Proposed a way of defense without alteration on hardware.

HONORS AND AWARDS

Second Prize in National College Student Information Security Contest- Project: Hidden camera detection via traffic pattern analysis. College Scholarship (31 out of 620)	<i>2021</i>
National First Prize in RoboMaster University Series- <i>Technical Challenge, Hero Long-range Shooting</i> National Second Prize in RoboMaster University Series- <i>University Championship</i> College Scholarship (31 out of 620)	<i>2020</i>
National Second Prize in FILTRP English Public Speaking Contest College Scholarship (29 out of 577)	<i>2019</i>

SKILLS

Languages: C/C++, JAVA, JavaScript, Matlab, Python.
Tools: Docker, Git, Heroku, MySQL, NS3.
English Proficiency: TOEFL 107 with R28, L29, S25, W25.