

Zhenyu Ren

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EDUCATION

Southern University of Science and Technology (SUSTech) Shenzhen, China
B.Sc. in Communication Engineering; GPA: 3.69/4.00; Weighted Score: 88.07 Sep 2018 – Jun 2022
M.Sc. in Electronic Science and Technology; GPA: 3.44/4.00; Weighted Score: 88.52 Sep 2022 – Jun 2025
Supervised by Prof. [Rui Wang](#) (Area Editor of IEEE OJ-COMS), focusing on **sensing channel modeling and experimental mmwave system for wireless sim2real gesture recognition**.

EXPERIENCE

Huawei Technology, Computer Network and Protocol Research Laboratory Shenzhen, China
Research Intern July 2024 – present

- Working on **short-range wireless communication protocols (e.g., SparkLink)**. Collaborating with Prof. [Mo Li](#) (IEEE Fellow).

Huawei Technology, Wireless Technology (WT) Laboratory Shenzhen, China
Research Intern June 2021 – June 2022

- Focusing on **wireless communication and sensing technology**. Supervised by Dr. [Tony Han Xiao](#) (Chair of IEEE 802.11bf).
- Contributed to the “Channel Models for WLAN Sensing Systems” for IEEE 802.11bf standard (doc.: IEEE 802.11-21/0782r5): [Link](#).
- Developed a Wi-Fi based indoor near field imaging system, which also served as my bachelor thesis at SUSTech: [Slides](#) and [Report](#) in Chinese.

PUBLICATIONS

Zhenyu Ren, Guoliang Li, Chenqing Ji, Chao Yu, Shuai Wang, and Rui Wang. “CASTER: A Computer-Vision-Assisted Wireless Channel Simulator for Gesture Recognition,” in IEEE Open Journal of the Communications Society, vol. 5, pp. 3185-3195, 2024 (*IF 2023: 7.9, JCR Q1*).
[Paper](#) | [GitHub](#) | [Project Page](#) (*Includes 3 demo experiment videos. If the page loads slowly within China, you can try accessing <http://lasso.eee.sustech.edu.cn/caster/> instead.*)
Zhenyu Ren, Chenqing Ji, Chao Yu, Wanli Chen, and Rui Wang. “Computer-Vision Assisted Wireless Channel Simulation for Human Motion Recognition: Methods and Applications,” submitted to Journal of Radars (*Invited paper, Chinese top journal for radar system*).

PATENTS

Zhenyu Ren, Wanli Chen, Rui Wang, Chao Yu, “Wireless Channel Simulation Method, Device, Computer Equipment, and Storage Medium”, Patent Application No.: 2023110356420, Southern University of Science and Technology, Application Date: 2023.08.16 (Chinese Invention Patent).

AWARDS & ACHIEVEMENTS

Second Prize in the 17th “Challenge Cup” Guangdong University Student Extracurricular Academic Science and Technology Works Competition, 2023.
Leader for Guangdong University Students’ Science and Technology Innovation Cultivation Special Fund (“Climbing Plan” Special Fund), 2022~2023 (*Funding: 20,000 RMB*).
2022 Excellent Graduate of Undergraduate for exceptional performance in the SUSTech.
Southern University of Science and Technology Outstanding Student Third-Class Scholarship (2018~2019, 2020~2021).
First Prize in the 2020 National College Student Mathematics Modeling Competition (*Top 0.5% among 45000++ teams in China*).

SKILLS

Programming Languages: C/C++, Python, MATLAB, Java

Technologies: PyTorch, Linux/Ubuntu, Git/GitHub, OpenCV, UHD/USRP, 60GHz Sivers

Writing: L^AT_EX, Markdown, Website

English: IELTS 6.5 with sub-score 6.0 (Test date: *Jan 2024*);

SELECTED PROJECTS

Note: You can look up my [GitHub](#) for my full project lists.

CASTER | [Paper](#) | [GitHub](#) | [Project Page](#)

An open-source platform for wireless channel simulation, human/hand pose extraction, gesture spectrogram generation, and real-time gesture recognition based on millimeter-wave passive sensing and communication systems.

Some other projects:

- (1) [rayTrace](#): MATLAB software for indoor radio ray-tracing with human blockage. *A segment of GIF results was featured by Huawei's keynote speaker during the 1st workshop on wi-fi sensing ([video recording at 15:52](#)).*
- (2) [Personal Website](#): Math notes and technical blogs.

EXTRACURRICULAR ACTIVITIES

Reviewer for IEEE ICC 2024, IEEE GLOBECOM 2024, IEEE ICMLCN 2024.

TPC reviewer for IEEE ICC 2024 Workshop.

Teaching Assistant for Wireless Communication.

REFERENCES

Prof. [Rui Wang](#), Associate Professor, Department of Electronic and Electrical Engineering (EEE), Southern University of Science and Technology, Email: wang.r@sustech.edu.cn.

Last Updated: *July 07, 2024* by Zhenyu Ren