

# Xingyu Chen

xic063@ucsd.edu  
https://xingyuchen.me

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EDUCATION	<b>University of California San Diego (UCSD)</b> Ph.D. in Computer Science and Engineering Advisor: Prof. Xinyu Zhang <b>University at Buffalo (UB), the State University of New York (SUNY)</b> B.S in Computer Science with Distinction Advisor: Prof. Wenyao Xu	Fall 2022 – Present August 2018 – June 2021
EXPERIENCE	<b>Research Intern</b> , Microsoft Research Asia Supervised by Prof. Lili Qiu <b>Researcher</b> , Mobile, Emerging Technologies & Applications (META) Lab University of Colorado Denver Supervised by Prof. Zhengxiong Li <b>Research Assistant</b> , Embedded Sensing and Computing (ESC) Group University at Buffalo, SUNY Supervised by Prof. Wenyao Xu	June 2023 – September 2023 August 2021 – August 2022 August 2018 – August 2021
AWARDS	<b>UC San Diego GPSA Travel Grant Award</b> , <b>SenSys'23 NSF Travel Grant Award</b> , <b>Best Student Paper Award</b> , IEEE International Conference on Health Informatics (ICHI) <b>IEEE COVID-19 Sensor Informatics Challenge</b> <b>Runner-up Award (Second place)</b> , IEEE Healthcare Summit (IHS) <b>Best Paper Award</b> , SenSys'19	2023 2022 2021 2019
PUBLICATIONS	<ol style="list-style-type: none"><li>[1] <b>Xingyu Chen</b>, Xinmin Fang, Shuting Zhang, Xinyu Zhang, Liang He, Zhengxiong Li. "You Only Render Once: Enhancing Energy and Computation Efficiency of Mobile Virtual Reality", In: <i>MobiSys'25</i> (Conference full paper).</li><li>[2] <b>Xingyu Chen</b>, Zihao Feng, Kun Qian, Xinyu Zhang. "Radio Frequency Ray Tracing with Neural Object Representation", In: <i>CVPR'25</i> (Conference full paper).</li><li>[3] <b>Xingyu Chen</b>, Zihao Feng, Ke Sun, Kun Qian, Xinyu Zhang. "RFCanvas: Modeling RF Channel by Fusing Visual Priors and Few-shot RF measurements", In: <i>SenSys'24</i> (Conference full paper).</li><li>[4] <b>Xingyu Chen</b>, Xinyu Zhang. "RF Genesis: Zero-Shot Generalization of mmWave Sensing through Simulation-Based Data Synthesis and Generative Diffusion Models", In: <i>SenSys'23</i> (Conference full paper).</li><li>[5] <b>Xingyu Chen*</b>, Zhengxiong Li*, Baicheng Chen*, Yi Zhu, Chris Xiaoxuan Lu, Zhengyu Peng, Feng Lin. "MetaWave: Attacking mmWave Sensing with Meta-material-enhanced Tags", In: <i>NDSS 2023</i> (*Co-first author) (Conference full paper).</li><li>[6] <b>Xingyu Chen*</b>, Zhengxiong Li*, Srirangaraj Setlur, Wenyao Xu. "Exploring racial and gender disparities in voice biometrics", In: <i>Scientific Reports</i> (*Co-first author) (Journal article).</li><li>[7] <b>Xingyu Chen</b>, Xinmin Fang, Wenchuan Wei, Wenyao Xu, Zhengxiong Li. "Poster: Exploring an Extensible Children Game Framework based on Augmented Reality Building Blocks", In: <i>ACM Conference on Embedded Networked Sensor Systems</i> (<i>SenSys'21</i>) (Poster)</li><li>[8] Xinmin Fang*, <b>Xingyu Chen*</b>, Wenyao Xu, Zhengxiong Li. "Poster: Enhanced Virtual Reality: Exploring an Immersive and Realistic Virtual Reality Training for Nursing", In: <i>ACM Conference on Embedded Networked Sensor Systems</i> (<i>SenSys'21</i>) (*Co-first author) (Poster)</li></ol>	

- [9] **Xingyu Chen**, Chenhan Xu, Baicheng Chen, Zhengxiong Li, Wenyao Xu. "Poster: In-Ear Thermometer: Wearable Real-time Core Body Temperature Monitoring", In: *ACM Conference on Embedded Networked Sensor Systems (SenSys'20) (Poster)*
- [10] Huining Li, **Xingyu Chen**, Xiaoye Qian, Huan Chen, Zhengxiong Li, Soumyadeep Bhattacharjee, Hanbin Zhang, Ming-chun Huang Wenyao Xu. "An Explainable COVID-19 Detection System based on Human Sounds", In: *The IEEE/ACM international conference on Connected Health: Applications, Systems and Engineering Technologies 2022(CHASE'22) (Conference full paper)*
- [11] Zhengxiong Li, Baicheng Chen, **Xingyu Chen**, Chenhan Xu, Yuyang Chen, Feng Lin, Changzhi Li, Karthik Dantu, Kui Ren, Wenyao Xu. "Reliable Digital Forensics in the Air: Exploring an RF-based Drone Identification System", In: *The ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (UbiComp'22) (Conference full paper)*
- [12] Zhengxiong Li, Baicheng Chen, **Xingyu Chen**, Huining Li, Chenhan Xu, Feng Lin, Chris Xiaoxuan Lu, Kui Ren, Wenyao Xu. "SpiralSpy: Exploring a Stealthy and Practical Covert Channel to Attack Air-gapped Computing Devices via mmWave Sensing", In: *The Network and Distributed System Security (NDSS'22) Symposium (Conference full paper)*
- [13] Chenhan Xu, Huining Li, Zhengxiong Li, **Xingyu Chen**, Aditya Singh Rathore, Hanbin Zhang, Kun Wang, Wenyao Xu "The Visual Accelerometer: A High-fidelity Optic-to-Inertial Transformation Framework for Wearable Health Computing", In: *the IEEE International Conference on Health Informatics 2022 ICHI (Conference paper) [Best student paper award]*
- [14] Huining Li, Huan Chen, Chenhan Xu, Anarghya Das, **Xingyu Chen**, Zhengxiong Li, Jian Xiao, Ming-Chun Huang, Wenyao Xu "Privacy computing using deep compression learning techniques for neural decoding", In: *Smart Health (Journal paper IF = 2.71)*
- [15] Chenhan Xu, Huining Li, Zhengxiong Li, Hanbin Zhang, Aditya Singh Rathore, **Xingyu Chen**, Kun Wang, MING-CHUN Huang, Wenyao Xu. "CardiacWave: A mmWave-based Scheme of Non-Contact and High-Definition Heart Activity Computing", In: *ACM Conference on Pervasive and Ubiquitous Computing (UbiComp'21) (Conference full paper)*
- [16] Baicheng Chen, Zhengxiong Li, Huining Li, **Xingyu Chen**, Chenhan Xu, Wenyao Xu. "ThermoWave: A New Paradigm of Wireless Passive Temperature Monitoring via mmWave Sensing", In: *ACM International Conference on Mobile Computing and Networking (MobiCom'20) (Conference full paper)*
- [17] Hanbin Zhang, Gabriel Guo, Emery Comstock, Baicheng Chen, **Xingyu Chen**, Matthew Stafford, Lora Cavuoto, Jeanne Langan, Wenyao Xu. "RehabPhone: A Software-Defined Tool using 3D Printing and Smartphones for Personalized Home-based Rehabilitation", In: *ACM International Conference on Mobile Systems, Applications, and Services (MobiSys'20) (Conference full paper)*
- [18] Zhengxiong Li, Baicheng Chen, Zhuolin Yang, Huining Li, Chenhan Xu, **Xingyu Chen**, Kun Wang, Wenyao Xu. "FerroTag: A Paper-based mmWave-Scannable Tagging Infrastructure", In: *ACM International Conference on Mobile Computing and Networking (SenSys'19) (Conference full paper) [Best paper award]*

## SERVICES

### Reviewer

- IEEE GlobeCom 2023 CISS
- IEEE Transaction on Mobile Computing.
- IEEE Network Magazine.

### Artifact Evaluation Committee,

- ACM MobiCom 2023.
- ACM MobiSys 2022.
- ACM SenSys/BuildSys 2022 Workshop on Data.

**Volunteer Judge**, CoorsTek Denver Metro Regional Science and Engineering Fair

Feb-2022

**Teaching Assistant**, University of Colorado Denver

- CSCI 4771/5771 Introduction to Mobile Computing.

Fall-2021

- CSCI 4773/5773 Introduction to Emerging System Security.

Spring-2022

**Presenter,**

- University at Buffalo CSE Open House Event Project Demo
- UC San Diego CWC Research Review

2018, 2019

2023

REFEREES

Prof. Xinyu Zhang  
Email: xyzhang@ucsd.edu

Associate Professor  
University of California San Diego

Prof. Wen Yao Xu  
Email: wenyaoxu@buffalo.edu

Professor, Associate Department Chair  
University at Buffalo

Prof. Zhengxiong Li  
Email: zhengxiong.li@ucdenver.edu

Assistant Professor  
University of Colorado Denver