

ZI WANG

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EDUCATION AND EMPLOYMENT

Augusta University <i>School of Computer and Cyber Sciences</i> <i>Assistant Professor</i>	2022 - Present
Florida State University, Ph.D. <i>Computer Science</i> <i>Research Areas: Cyber Security, Mobile Sensing</i> <i>Advisor: Prof. Jie Yang</i>	2016 - 2022
Beijing Jiaotong University, M.S. <i>Information System of Traffic Security</i> <i>Advisor: Prof. Yanhui Wang</i>	2011 – 2014
Beijing Jiaotong University, B.E. <i>Information System of eCommerce</i>	2006 – 2010

RESEARCH EXPERIENCE

Augusta University <i>Assistant Professor</i> — Towards Earables Sensing in Enhancing Human-centered Healthcare Applications — Analysis of EEG and fMRI Data for Enhanced Patient Health Status and Activity Recognition — Enhancing Security, Interaction, and Healthcare through Head-Worn Wearable — Audio-Visual Perception and Multimodal Biometric Deepfake Vulnerability Assessment — Human-Computer Interaction and Usable Security with Novel Biometrics	2022 – Present
Pervasive Computing and Cybersecurity Lab, Florida State University, Tallahassee, FL <i>Research Assistant</i> — Ear Wearables Study including Acoustic Toothprint and Ear Canal Deformation. — Multi-user Tracking and Activity Recognition.	2016 – 2022
Beijing Jiaotong University, Beijing, China <i>Research Assistant</i>	2010 – 2014

PUBLICATIONS

1. **Zi Wang**, Yilin Wang, Jie Yang, "EarSlide: a Secure Ear Wearables Biometric Authentication Based on Acoustic Fingerprint". *Proceedings of the ACM on Interactive, Mobile, Wearable, and Ubiquitous Computing (UbiComp 2024)*, [top-tier crankings.org conference](https://www.crankings.org/conference).
2. Youngone Lee, Sheng Tan, **Zi Wang**, "CochlearMotion: Head Gesture Recognition Leveraging Ear Canal Deformation Sensing", *The Hawaii International Conference on System Sciences (HICSS-58)*, January 2025.
3. Kebin Peng, Haotang Li, Zhenyu Qi, Huashan Chen, **Zi Wang**, Wei Zhang, Sen He, "LAA-Net: A Physical-prior-knowledge Based Network for Robust Nighttime Depth Estimation", *Conference on Computer Vision and Pattern Recognition 2025. (CVPR 2025, under review)*
4. Huashan Chen, Yifan Xu, Yue Feng, Ming Jian, Feng Liu, Pengfei Hu, Kebin Peng, Sen He, **Zi Wang**, "DynamicLip: Shape-Independent Continuous Authentication via Lip Articulator Dynamics", *IEEE Transactions on Mobile Computing (IEEE TMC, under review)*
5. Yilin Wang, **Zi Wang** (Co-first-author), Jie Yang, "Acoustic-based Alphanumeric Input Interface for Earables", *International Conference on Computer Communications and Networks. (ICCCN 2024)*

6. **Zi Wang**, Yili Ren, Yingying Chen, Jie Yang, "ToothSonic: Earable Authentication via Acoustic Toothprint", *Proceedings of the ACM on Interactive, Mobile, Wearable, and Ubiquitous Computing (UbiComp 2022)*, [top-tier csrcrankings.org conference](https://top-tier.csrankings.org/conference).
7. **Zi Wang**, Sheng Tan, Linghan Zhang, Yili Ren, Zhi Wang, and Jie Yang, "EarDynamic: An Ear Canal Deformation Based Continuous User Authentication Using In-Ear Wearables", *Proceedings of the ACM on Interactive, Mobile, Wearable, and Ubiquitous Computing (UbiComp 2021)*, (Acceptance Rate 20%) [top-tier csrcrankings.org conference](https://top-tier.csrankings.org/conference).
8. **Zi Wang**, Linghan Zhang, Sheng Tan, Jie Yang, "ObstacleWatch: Acoustic-based Obstacle Collision Detection for Pedestrian Using Smartphone", *Proceedings of the ACM on Interactive, Mobile, Wearable, and Ubiquitous Computing (UbiComp 2019)*, (Acceptance Rate 20%), [top-tier csrcrankings.org conference](https://top-tier.csrankings.org/conference).
9. Yili Ren, **Zi Wang**, Yichao Wang, Sheng Tan, Yingying Chen, Jie Yang. "GoPose: 3D Human Pose Estimation Using WiFi", *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (UbiComp 2022)*, September 2022. [top-tier csrcrankings.org conference](https://top-tier.csrankings.org/conference).
10. Yili Ren, **Zi Wang**, Sheng Tan, Yingying Chen, Jie Yang. "Winect: 3D Human Pose Tracking for Free-form Activity Using Commodity WiFi", *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (UbiComp 2021)*, December 2021. [top-tier csrcrankings.org conference](https://top-tier.csrankings.org/conference).
11. Linghan Zhang, Sheng Tan, **Zi Wang**, Yili Ren, Zhi Wang, Jie Yang, "VibLive: A Continuous Liveness Detection for Secure Voice User Interface in IoT Environment", *36th Annual Computer Security Applications Conference (ACSAC 2020)*, December 2020. (Acceptance Rate: 23.41%)
12. Yili Ren, Sheng Tan, Linghan Zhang, **Zi Wang**, Zhi Wang, Jie Yang. "Liquid Level Sensing Using Commodity WiFi in a Smart Home Environment", *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (UbiComp 2020)*, September 2020. [top-tier csrcrankings.org conference](https://top-tier.csrankings.org/conference).
13. Sheng Tan, Linghan Zhang, **Zi Wang**, Jie Yang, "MultiTrack: Multi-User Tracking and Activity Recognition Using Commodity WiFi", *ACM Conference on Human Factors in Computing Systems (CHI 2019)*, Glasgow, 2019. (Acceptance Rate: 23.8%) [top-tier csrcrankings.org conference](https://top-tier.csrankings.org/conference).

POSTER

1. **Zi Wang**, Yili Ren, Yingying Chen, Jie Yang, "Fingerprint-Face Friction Based Earable Authentication", *ACM Conference on Computer and Communications Security (CCS 2022)* poster, Virtual, November 2022.
2. **Zi Wang**, Yili Ren, Yingying Chen, Jie Yang, "Earable Authentication via Acoustic Toothprint", *ACM Conference on Computer and Communications Security (CCS 2021)* poster, Virtual, 2021.
3. **Zi Wang**, Yili Ren, Yingying Chen, Jie Yang, "An Ear Canal Deformation Based Continuous User Authentication Using Earables" *The 27th Annual International Conference on Mobile Computing and Networking (Mobicom 2021)* poster, Virtual, 2021.
4. **Zi Wang**, Yili Ren, Yingying Chen, Jie Yang, "Excerpt of ToothSonic: Earable Authentication via Acoustic Toothprint", *Adjunct Proceedings of the 2022 ACM International Joint Conference on Pervasive and Ubiquitous Computing and the 2022 ACM International Symposium on Wearable Computers (UbiComp/ISWC'22Adjunct)* poster, Virtual, 2022.
5. Y. Ren, **Z. Wang**, Y. Wang, S. Tan, Y. Chen, J. Yang, "Tracking Free-form Activity Using WiFi Signals" *The 27th Annual International Conference on Mobile Computing and Networking (Mobicom 2021)* poster, Virtual, 2021.
6. Y. Ren, **Z. Wang**, Y. Wang, S. Tan, Y. Chen, J. Yang "3D Human Pose Estimation Using WiFi Signals" *The 19th ACM Conference on Embedded Networked Sensor Systems (SenSys 2021)* poster, Virtual, 2021.

MEDIAN COVERAGE

Ear Wearable User Authentication via Acoustic Toothprint: [Unite.Ai](#), [ITmedia Japan](#), [Gigazine](#), [ZME Science](#), [Biometric](#), [Intertechnews](#), [Livedoor News](#), etc.

Human Pose Estimation: [Tech Xplore](#), [The hack posts](#), [News8plus](#), [Lifeboat](#)

TEACHING AND MENTORING EXPERIENCE

CYBR 2600 Introduction to Networking and Cyber Security <i>Lecturer</i>	<i>Spring 2025, Fall 2024, Spring 2023</i>
AIST 2220 Intro to Web Development <i>Lecturer</i>	<i>Fall 2023</i>
COP 4020 Programming Language <i>Teaching Assistant & Guest Lecture</i>	<i>Spring 2018, 2019, 2020, Fall 2020</i>
CDA 3100 Computer Organization <i>Teaching Assistant & Guest Lecture</i>	<i>Fall 2018, 2019</i>
CIS 4403, CIS 4360 - Introduction to Computer Security <i>Teaching Assistant & Guest Lecture</i>	<i>Fall 2017, 2021</i>
CGS 2060 Computer Fluency <i>Teaching Assistant</i>	<i>Summer 2018</i>

PROFESSIONAL SERVICES

Committee and Editors, DATA 2024 Committee, CANS 2023 Organizing Committee Co-chair, Electronics Guest Editor

Reviewer for conferences, Reviewer of IEEE INFOCOM 2025, Ubicomp/IMWUT 2024, CHI 2024, MASS 2023, Interact 2023, helped in reviewing paper of InfoCom 2022/2021, ASIACCS 2022, ACSAC 2021, CNS 2021, ESORICS2021, DCOSS 2021, Wisec2021, WASA2021, IWQoS 2021, ICCCN 2021, IoT 2021/2020/2019, MSN 2019.

Reviewer for journals, Reviewer of IEEE Internet of Things Journal, IEEE Transactions on Systems, Man, and Cybernetics, IEEE Transactions on Mobile Computing, IEEE Transactions on Information Forensics and Security, Journal of Systems Architecture, Sensors, Electronics, Healthcare, IoT, Applied Sciences, Future Internet, Biomedicines, Signals, Network, IJMS, JFMK.