

# YUNSHU WANG

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## EDUCATION

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### Doctor of Philosophy in Computer Science and Engineering

Sept. 2021 – Dec. 2023

*University of California, Riverside, Riverside, CA*

- Thesis: Title Not Confirmed
- Cumulative GPA 3.61/4.0

### Master of Science in Computer Science

Aug. 2019 – May 2021

*The University of Mississippi, Oxford, MS*

- Thesis: A Novel Approach Toward High Accuracy Indoor Localization
- Cumulative GPA 3.95/4.0
- Chancellor's Honor Roll

### Bachelor of Science in Computer Science

Aug. 2016 – May 2019

*The University of Mississippi, Oxford, MS*

- Cumulative GPA 3.80/4.0
- Chancellor's Honor Roll

### Bachelor of Science in Computer Science

Aug. 2014 – May 2016

*North China University of Technology, Beijing*

- Cumulative GPA 4.0/4.0

## PUBLICATIONS

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- C.1** The World is Too Big to Download: 3D Model Retrieval for World-Scale Augmented Reality  
Yi-Zhen Tsai, James Luo, **Yunshu Wang**, Jiasi Chen  
ACM MMSys 2023 (**Best student paper award**)
- C.2** SLAM-Share: Visual Simultaneous Localization and Mapping for Real-time Multi-user Augmented Reality  
Aditya Dhakal, Xukan Ran, **Yunshu Wang**, Jiasi Chen, K. K. Ramakrishnan  
ACM CoNEXT 2022
- C.3** Testbed development for a novel approach towards high accuracy indoor localization with smartphones  
**Yunshu Wang**, Lee Easson, Feng Wang  
ACM SE 2021

Another Paper:

Yi-Zhen Tsai, **Yunshu Wang**, Jiasi Chen  
Some Conference 2023

## PROJECTS

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**The World is Too Big to Download: 3D Model Retrieval for World-Scale Augmented Reality***UCR Department of Computer Science and Engineering, Riverside*

- Executed precise data collection and efficient data processing, ensuring accuracy and relevance for analysis

**SLAM-Share: Visual Simultaneous Localization and Mapping for Real-time Multi-user Augmented Reality***UCR Department of Computer Science and Engineering, Riverside*

- Designed and developed a pioneering multi-user Simultaneous Localization and Mapping (SLAM) prototype by enhancing ORBSLAM3. Facilitates collaborative map building and unified real-time mapping.
- Conducted comprehensive latency and accuracy assessments, comparing prototype performance to SLAM-Share, while also contributing significantly to the manuscript by detailing baseline model intricacies and generating illustrative plots using draw.io software

**Testbed development for a novel approach towards high accuracy indoor localization with smartphones***Olemiss Department of Computer and Information Science, Oxford*

- Led the end-to-end design, construction, and rigorous testing of an innovative testbed for 3D indoor localization via smartphone-based pedestrian dead reckoning. Seamlessly integrated Android applications in Java, Firebase databases, and a Python-backed server to facilitate comprehensive indoor positioning capabilities
- Leveraged machine learning methodologies to enhance accuracy by 85%, resulting in a notable achievement of up to 97.9% accuracy

**Create Consistent-focused Network for Augmented Reality Challenges***UCR Department of Computer Science and Engineering, Riverside*

- Tailored the "MicroRaft" Java project for Android compatibility, resulting in a consistency-focused network that enables reliable communication among multiple cell phones

**Another Project: Title not confirmed****WORK EXPERIENCE****Intermediate Data Structures and Algorithms Graduate Teaching Assistant**

Jan. – Mar. 2023

*University of California, Riverside, Riverside, CA*

Instructor: Dr. Mingxun Wang, PhD, MS, Dr. Amr Magdy, PhD.

- Mobilized student learning motivation and academic performance during self-designed extracurricular activities about dynamic programming algorithms and data structures
- Improved objectives evaluation consistency by coordinating instructing and grading team of 12
- Piloted adaptive instruction method by cooperating with instructor and monitoring student performance

**Graduate Data Analysis and Programming Teaching Assistant**

Aug. 2019 – May 2021

*The University of Mississippi, Oxford, MS*

Instructors: Dr. Yixin Chen, PhD, MS, B.S., Dr. Dawn E. Wilkins, Professor and Chair

- ◇ CSci 502: Fundamental Concepts in Algorithms
- ◇ CSci 450: Organization of Programming Languages
- ◇ CSci 433: Algorithm and Data Structure Analysis
- ◇ CSci 390: Special Topics in Programming
- ◇ CSci 311: Models of Computation

- Co-instructed intermediate and advanced level computer science lectures for 4 semesters
- Propelled individual sessions to enhance students' mastery of intricate algorithmic concepts

- Directed regular gradings and bonus credit offers based on beyond-expectation achievements

**Undergraduate Teaching Assistant**

Feb. 2018 – May 2019

*The University of Mississippi, Oxford, MS*

Instructors: Mr. Joseph Carlisle, MS, BS, Dr. Philip J. Rhodes, PhD., Mrs. Hui Xiong, MS, BS.

- ◇ CSci 490: Special Topics in Programming Analysis
- ◇ CSci 211: Computer Science III (Advanced Java)
- ◇ CSci 112: Computer Science II (Intermediate Java)
- ◇ CSci 111: Computer Science I (Elementary Java)

- Precepted around 40 undergraduate students per semester by offering structural supports to improve students' confidence and competence
- Spearheaded student-centered help sessions by designing hint-like practices and inspiring self-learning
- Collaborated with courses instructors to provides students with constructive feedback and productive learning experience

**Community Assistant**

Jul. 2017 – May 2018

*The University of Mississippi, Oxford, MS*

- Personalized assistance based on residents' personal and academic needs
- Oversaw Code of Conduct, managed administrative duties and resolved group conflicts
- Drove engaging events and fostered a cooperative and inclusive living environment

**LEADERSHIP****President**

Aug. 2017 – Oct. 2018

*Friendship Association of Chinese Students and Scholars, Oxford, MS*

- Directed Fund Applications and Sponsor Advertisement
- Designed event flows and arranged shows for each activity
- Contacted International Student Office for detailed operational guide
- Delegated purchasing, publicity, and website management to other staff members

**Chief Officer***International & American Student Alliance, Oxford, MS*

- Coordinated cultural events and activities to foster a diverse and inclusive environment
- Organized workshops on cultural exchange, enhancing intercultural awareness among students
- Assisted in planning and executing international student orientation programs
- Supported initiatives to celebrate international holidays and traditions on campus

**AWARDS***University of California, Riverside, Riverside, CA*

- Graduate Fellowship - NRT Sept. 2021
- STIPEND - Dept Award Sept. 2021
- Graduate Fellowship Sept. 2021

*The University of Mississippi, Oxford, MS*

- Magna Cum Laude May 2019
- International Undergraduate Student Scholarship Aug. 2017
- Community Assistant of the Year, University of Mississippi (UM) May 2018

*North China University of Technology, Shijingshan, Beijing*

- National Scholarship for Exchange Student Aug. 2016
- Merit Student of Beijing May 2015