

Sen He

TENURE-TRACK ASSISTANT PROFESSOR

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Research Interests

Software Engineering	LLM4SE, Performance Engineering
Applied Artificial Intelligence	Large Language Model, Applied Artificial Intelligence
Computer Vision	Segmentation, Depth Estimation

Education

The University of Texas at San Antonio

PH.D. IN COMPUTER SCIENCE

- Department of Computer Science

San Antonio, Texas, USA

Aug. 2016 - Jul. 2022

Indiana University

MASTER STUDENT IN COMPUTER SCIENCE

- Department of Computer Science

Bloomington, Indiana, USA

Aug. 2015 - May. 2016

Harbin University of Science and Technology

B.E. IN COMPUTER SCIENCE AND ENGINEERING

- Department of Computer Science and Engineering

Harbin, HeiLongJiang, China

Aug. 2008 - Jul. 2012

Appointments

The University of Arizona

TENURE-TRACK ASSISTANT PROFESSOR

- Department of Electrical and Computer Engineering, Software Engineering Program

Tucson, Arizona, USA

Jul. 2025 - Present

The University of Arizona

TENURE-TRACK ASSISTANT PROFESSOR

- Department of Systems and Industrial Engineering, Software Engineering Program

Tucson, Arizona, USA

Aug. 2023 - Jun. 2025

Augusta University

TENURE-TRACK ASSISTANT PROFESSOR

- School of Computer and Cyber Sciences

Augusta, Georgia, USA

Aug. 2022 - Jul. 2023

Awards

2019	ACM SIGSOFT Distinguished Paper Award , ACM SIGSOFT	Tallinn, Estonia
2020	Outstanding Research Awards , Department of Computer Science, UTSA	San Antonio, USA
2025	Award for Excellence at the Student Interface , Department of Systems and Industrial Engineering	Tucson, USA
2025	Best Paper Award , International Congress on Intelligent & Service-Oriented Systems Engineering	Tucson, USA

Publications

DynamicLip: Shape-Independent Continuous Authentication via Lip Articulator Dynamics

IEEE TRANSACTIONS ON MOBILE COMPUTING

- Huashan Chen, Yifan Xu, Yue Feng, Ming Jian, Feng Liu, Pengfei Hu, Kebin Peng, **Sen He**, and Zi Wang

TMC'26

February. 2026

Performance analysis of AI-generated code: A case study of Copilot, Copilot Chat, CodeLLaMa, and DeepSeek-Coder models

EMPIRICAL SOFTWARE ENGINEERING

- Shuang Li, Yuntao Cheng, Jinfu Chen, Jifeng Xuan, **Sen He**, and Weiyi Shang

EMSE'26

January. 2026

- Microservice Logs Analysis Employing AI: A Systematic Literature Review** JSS' 26
JOURNAL OF SYSTEMS AND SOFTWARE *January. 2026*
 • MdArfan Uddin, Shakthi Weerasinghe, Darek Gajewski, Melika Akbarsharifi, Roxana Akbarsharifi, Christopher Stoner, Tomas Cerny, and **Sen He**
- Geospatial Analysis of Wildfire Impact and Predictive Modeling of Susceptibility: A Case Study of Maui, Hawaii and California** HICSS' 26
HAWAII 59TH INTERNATIONAL CONFERENCE ON SYSTEM SCIENCES *January. 2026*
 • Jiyue Zhao, Shiwei Fang, Sheng Tan, **Sen He** and Zi Wang
- UWB-PostureGuard: A Privacy-Preserving RF Sensing System for Continuous Ergonomic Sitting Posture Monitoring** HICSS' 26
HAWAII 59TH INTERNATIONAL CONFERENCE ON SYSTEM SCIENCES *January. 2026*
 • Haotang Li, Zhenyu Qi, **Sen He**, Kebin Peng, Sheng Tan, Yili Ren, Tomas Cerny, Jiyue Zhao and Zi Wang
- Quantification of Suspended Sediment Concentration Using Laboratory Experimental Data and Machine Learning Model** WATER' 25
WATER, MDPI JOURNAL *August. 2025*
 • Sathvik Reddy Nookala, Jennifer Guohong Duan, Kun Qi, Jason Pacheco and **Sen He**
- Unveiling Code Clone Patterns in Open Source VR Software: An Empirical Study** AUSE' 25
AUTOMATED SOFTWARE ENGINEERING, AN INTERNATIONAL JOURNAL *July. 2025*
 • Huashan Chen, Zisheng Huang, Yifan Xu, Wenjie Huang, Jinfu Chen, Haotang Li, Kebin Peng, Feng Liu, and **Sen He**
- Harnessing Large Language Model for Virtual Reality Exploration Testing: A Case Study** AUSE' 25
AUTOMATED SOFTWARE ENGINEERING, AN INTERNATIONAL JOURNAL *July. 2025*
 • Zhenyu Qi, Haotang Li, Hao Qin, Kebin Peng, **Sen He**, and Xue Qin
- GraphQL-Aware Healing in Service-Oriented Architectures via Multi-Signal Learning** SOSE' 25
IEEE 19TH INTERNATIONAL CONFERENCE ON SERVICE-ORIENTED SYSTEM ENGINEERING *July. 2025*
 • Nariman Mani, Salma Attaranasl and **Sen He**
- Self-Supervised Graph Transformer With Contrastive Learning for Brain Connectivity Analysis Towards Improving Autism Detection** ISBI' 25
IEEE 22ND INTERNATIONAL SYMPOSIUM ON BIOMEDICAL IMAGING *January. 2025*
 • Yicheng Leng, Syed Anwar, Islem Rekik, **Sen He** and Eung-Joo Lee
- A Learning-Based POMDP Approach for Adaptive Cyber Defense Against Multi-Stage Attacks** HPCC' 24
THE 26TH INTERNATIONAL CONFERENCE ON HIGH PERFORMANCE COMPUTING AND COMMUNICATIONS *December. 2024*
 • Yuantian Zhang, Weixia Cai, Huashan Chen, Zhenyu Qi, Hong Chen, Feng Liu, and **Sen He**
- A Study of Code Clone on Open Source VR Software** ASE' 24
IEEE/ACM INTERNATIONAL CONFERENCE ON AUTOMATED SOFTWARE ENGINEERING *November. 2024*
 • Wenjie Huang, Jinfu Chen, Huashan Chen, Zhenyu Qi, Xiaojia Yang, Kebin Peng, and **Sen He**
- Assessing the Performance of AI-Generated Code: A Case Study on GitHub Copilot** ISSRE 24
THE 35TH IEEE INTERNATIONAL SYMPOSIUM ON SOFTWARE RELIABILITY ENGINEERING *October. 2024*
 • Shuang Li, Yuntao Cheng, Jinfu Chen, Jifeng Xuan, **Sen He**, and Weiyi Shang
- Improving Resource and Energy Efficiency for Cloud 3D through Excessive Rendering Reduction** Eurosys' 24
19TH EUROPEAN CONFERENCE ON COMPUTER SYSTEMS *April. 2024*
 • Tianyi Liu, Jerry Lucas, **Sen He**, Tongping Liu, Xiaoyin Wang, and Wei Wang
- A Study of Java Microbenchmark Tail Latencies** ICPE' 23
14TH ACM/SPEC INTERNATIONAL CONFERENCE ON PERFORMANCE ENGINEERING *April. 2023*
 • **Sen He**, In Kee Kim, and Wei Wang

A Cloud 3D Dataset and Application-Specific Learned Image Compression in Cloud 3D

ECCV' 22

EUROPEAN CONFERENCE ON COMPUTER VISION

October, 2022

- Tianyi Liu, **Sen He**, Vinodh Kumaran Jayakumar, and Wei Wang

Performance Testing for Cloud Computing with Dependent Data Bootstrapping

ASE' 21

IEEE/ACM INTERNATIONAL CONFERENCE ON AUTOMATED SOFTWARE ENGINEERING

November, 2021

- **Sen He**, Tianyi Liu, Palden Lama, Jaewoo Lee, In Kee Kim, and Wei Wang

A Benchmarking Framework for Interactive 3D Applications in the Cloud

MICRO' 20

IEEE/ACM INTERNATIONAL SYMPOSIUM ON MICROARCHITECTURE

October, 2020

- Tianyi Liu, **Sen He**, Sunzhou Huang, Danny Tsang, Lingjia Tang, Jason Mars, and Wei Wang

A Statistics-based Performance Testing Methodology for Cloud Applications

ESEC/FSE' 19

27TH ACM JOINT EUROPEAN SOFTWARE ENGINEERING CONFERENCE AND SYMPOSIUM ON THE FOUNDATIONS OF

SOFTWARE ENGINEERING

August, 2019

- **Sen He**, Glenna Manns, John Saunders, Wei Wang, Lori Pollock, and Mary Lou Soffa

Testing Cloud Applications under Cloud-Uncertainty Performance Effect

ICST' 18

IEEE CONFERENCE ON SOFTWARE TESTING, VALIDATION AND VERIFICATION

April, 2018

- Wei Wang, Ningjing Tian, Sunzhou Huang, **Sen He**, Abhijeet Srivastava, Mary Lou Soffa, and Lori Pollock,

An Empirical Study on the Status of Software Localization in Open Source Projects

SEKE' 15

INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING AND KNOWLEDGE ENGINEERING

October, 2015

- Zeyad Alshaiikh, Shaikh Mostafa, Xiaoyin Wang, and **Sen He**

Services

2020	Reviewer - Conference 2020 , ESEC/FSE	USA
2021	Reviewer - Conference 2021 , SC	USA
2022	Reviewer - Conference 2022 , ASE; BDCAT; CloudCom	USA
2022	Reviewer - Journal 2022 , Computers & Security	USA
2023	Program Committee - Conference 2023 , LTB; ICNCC; SmartCom; ICDM; ICICT	USA
2023	Reviewer - Conference 2023 , IEEE Cloud; IEEE Edge; COMP; ICONIP; ICA3PP	USA
	Reviewer - Journal 2023 , Computers & Security; Frontiers in Neuroscience; Empirical Software	
2023	Engineering; IEEE Transactions on Systems, Man and Cybernetics: Systems; IEEE Transactions on Big Data; IEEE Internet of Things Journal; IEEE Transactions on Reliability; Cluster Computing	USA
2024	Program Chair - Conference 2024 , ASE - VR Workshop	USA
2024	Program Committee - Conference 2024 , ICPE; Cloud Summit; ISD; SOSE; ICDM	USA
2024	Reviewer - Conference 2024 , CVPR; NeurIPS	USA
2024	Guest Editor - Journal 2024 , Electronics; Automated Software Engineering	USA
	Reviewer - Journal 2024 , Cluster Computing; IEEE Transactions on Big Data; IEEE Internet of	
2024	Things Journal; IEEE Transactions on Cloud Computing; IEEE Transactions on Reliability; IEEE Transactions on Systems, Man and Cybernetics: Systems; Transactions on Consumer Electronics; ACM Transactions on Internet Technology	USA
2025	Panel Reviewer - NSF 2025 , NSF	USA
2025	Finance Chair - Conference 2025 , CISOSE	USA
2025	Program Committee - Conference 2025 , ICPE; ICNCC; AAAI; AISTATS; ICNCC; ISD; SOSE, DEBS, ASE	USA
2025	Reviewer - Conference 2025 , ICLR; ICML	USA
2025	Guest Editor - Journal 2025 , Electronics; Automated Software Engineering	USA
	Reviewer - Journal 2025 , IEEE Transactions on Software Engineering; ACM Transactions on	
2025	Software Engineering and Methodology	USA
2026	Reviewer - Conference 2026 , CVPR; ECCV; ICIP	USA
2026	Reviewer - Journal 2026 , Springer Empirical Software Engineering; ACM Transactions on Internet of Things	USA

Teaching

CS 4823 / CS 6643, Parallel Computing

GRADUATE CLASS AT THE UNIVERSITY OF TEXAS AT SAN ANTONIO

San Antonio

Fall 2020

CYBR 2600, Networking and Cyber Security

UNDERGRADUATE CLASS AT AUGUSTA UNIVERSITY

Augusta

Fall 2022

AIST 2110, Principles of Scripting and Automation

UNDERGRADUATE CLASS AT AUGUSTA UNIVERSITY

Augusta

Spring 2023

SFWE 101, Introduction to Software Engineering

UNDERGRADUATE CLASS AT THE UNIVERSITY OF ARIZONA

Tucson

Fall 2023

SFWE 101, Introduction to Software Engineering

UNDERGRADUATE CLASS AT THE UNIVERSITY OF ARIZONA

Tucson

Spring 2024

SFWE 101, Introduction to Software Engineering

UNDERGRADUATE CLASS AT THE UNIVERSITY OF ARIZONA

Tucson

Fall 2024

SFWE 409/509, Cloud Computing Principle

HYBRID CLASS AT THE UNIVERSITY OF ARIZONA

Tucson

Spring 2025

SFWE 101, Introduction to Software Engineering

UNDERGRADUATE CLASS AT THE UNIVERSITY OF ARIZONA

Tucson

Fall 2025

SFWE 409/509, Cloud Computing Principle

HYBRID CLASS AT THE UNIVERSITY OF ARIZONA

Tucson

Spring 2026

Funding

Herbold Award Nomination

PHD ADVISOR

- Awarded: \$32,500

Herbold Foundation

Summer 2024

AY25-26 Accelerator Fellowship

PI

- Awarded: \$2,000

University of Arizona

Fall 2025

AY26 NSF I-Corps, Pacific West

PI

- Awarded: \$3,000

Arizona State University

Spring 2026