

Sen He

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

San Antonio, Texas, USA

PH.D. IN COMPUTER SCIENCE

Aug. 2016 - Jul. 2022

- Department of Computer Science

Indiana University

Bloomington, Indiana, USA

MASTER STUDENT IN COMPUTER SCIENCE

Aug. 2015 - May. 2016

- Department of Computer Science

Harbin University of Science and Technology

Harbin, HeiLongJiang, China

B.E. IN COMPUTER SCIENCE AND ENGINEERING

Aug. 2008 - Jul. 2012

- Department of Computer Science and Engineering

Appointments

The University of Arizona

Tucson, Arizona, USA

TENURE-TRACK ASSISTANT PROFESSOR

Jul. 2025 - Present

- Department of Electrical and Computer Engineering, Software Engineering Program

The University of Arizona

Tucson, Arizona, USA

TENURE-TRACK ASSISTANT PROFESSOR

Aug. 2023 - Jun. 2025

- Department of Systems and Industrial Engineering, Software Engineering Program

Augusta University

Augusta, Georgia, USA

TENURE-TRACK ASSISTANT PROFESSOR

Aug. 2022 - Jul. 2023

- School of Computer and Cyber Sciences

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

TMC' 26

Dynamics

IEEE TRANSACTIONS ON MOBILE COMPUTING

February. 2026

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

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

EMSE' 26

EMPIRICAL SOFTWARE ENGINEERING

January. 2026

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

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 Wei Yi 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

EUROPEAN CONFERENCE ON COMPUTER VISION

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

ECCV' 22

October. 2022

Performance Testing for Cloud Computing with Dependent Data Bootstrapping

IEEE/ACM INTERNATIONAL CONFERENCE ON AUTOMATED SOFTWARE ENGINEERING

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

ASE' 21

November. 2021

A Benchmarking Framework for Interactive 3D Applications in the Cloud

IEEE/ACM INTERNATIONAL SYMPOSIUM ON MICROARCHITECTURE

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

MICRO' 20

October. 2020

A Statistics-based Performance Testing Methodology for Cloud Applications

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

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

ESEC/FSE' 19

August. 2019

Testing Cloud Applications under Cloud-Uncertainty Performance Effect

IEEE CONFERENCE ON SOFTWARE TESTING, VALIDATION AND VERIFICATION

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

ICST' 18

April. 2018

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

INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING AND KNOWLEDGE ENGINEERING

• Zeyad Alshaikh, Shaikh Mostafa, Xiaoyin Wang, and **Sen He**

SEKE' 15

October. 2015

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 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 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 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*