The 4<sup>th</sup> International Conference on Ubiquitous Security (UbiSec 2024) December 29 - 31, 2024

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# **Advance Program**



# TABLE OF CONTENTS

Program at a Glance	Page 01
Quick Guide to Meeting Rooms	Page 02
Program Preview	Page 04
Keynote Speeches	Page 05
Invited Talks	Page 08
Technical Sessions and Papers	Page 10
Organizing Committees	Page 12
Program Committee	Page 14
Conference Venue	Page 17
Introduction to Hunan University	Page 19
Introduction to College of Computer Science and Electronic Engineering at Hunan University	Page 24
Introduction to Hunan University of Technology and Business	Page 27
Sponsors and Organizers	Back-Cover Page

# UbiSec 2024

# **Program at a Glance**

16:00-20:00     On-Site Registration (First Floor Hall of Hotel)       18:00-20:00     Reception @ Hotel       December 30 (Monday)       08:30-20:00     On-Site Registration (Outside Conference Room)       08:30-20:00     On-Site Registration (Outside Conference Room)       Opening Ceremony       Welcome Speech from Vice Dean of College of Computer Science and Electronic Engineering at Hunan University, Pof. Xin Liao       08:30-08:50     Welcome Speech from Dean of School of Computer Science at Hunan University of Technology and Business, Prof. Xin Liao       08:30-08:50     Welcome Speech from Program Chair: Prof. Zheng Yan, Xidian University, China       08:50-09:53     Keynote 1: Private Service Discovery, Access Control, and Authentication in IoT Networks       08:50-09:53     Speaker: Prof. Robert H. Deng, Singapore Management University, Singapore       09:35-10:20     Speaker: Prof. Robert H. Deng, Singapore Management University, China       09:35-10:20     Speaker: Prof. Zheng Yan, Xidian University, China       10:20-10:35     Chair: Prof. Zheng Yan, Xidian University, China       10:20-10:31     Keynote 3: Continuous Whole Area Authentication with WFi-Enabled IoT Networks       10:35-11:20     Speaker: Prof. Zakirul Alam Bhutyan, Fordham University, USA       10:20-10:35     Speaker: Prof. Zakirul Alam Bhutyan, Fordham University, USA       11:20-11:40     Chair: Prof. Xiangyong Lia, Guangzhou University, China       11:20-11	December 29 (Sunday)					
Isoo-20.00         Reception @ Hotel           08:30-20.00         On-Site Registration (Outside Conference Room)           08:30-20.00         On-Site Registration (Outside Conference Room)           08:30-00.50         Welcome Speech from Vice Dean of College of Computer Science and Electronic Engineering at Hunan University, Prof. Xin Liao           08:30-08:50         Welcome Speech from Dean of School of Computer Science at Hunan University of Technology and Business, Prof. Wei Liang           Welcome Speech from Program Chair: Prof. Zheng Yan, Xidiau University, China         Chair: Prof. Tian Wang, Beijing Normal University, China           08:50-09:35         Speaker: Prof. Robert H. Deng, Singapore Management University, Singapore           Chair: Prof. Robert H. Deng, Singapore Management University, China         Keynote 2: Al-empowered Trust and Trustworthy AI           09:35-10:20         Speaker: Prof. Zheng Yan, Xidiau University, China           10:20-10:35         Coffee/Tea Break           Keynote 3: Continuous Whole Area Authentication with WFi-Enabled IoT Networks           10:35-11:20         Speaker: Prof. Zakirul Alam Bubuyan, Fordham University, USA           11:20-12:00         Speaker: Prof. Zakirul Alam Bubuyan, Fordham University, China           11:20-12:00         Speaker: Prof. Wenjia Li, New York Institute of Technology, USA           11:20-12:00         Speaker: Prof. Wenjia Li, New York Institute of Technology, USA           11:20-12:00	16:00-20:00	On-Site Registration (First Floor Hall of Hotel)				
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Chair: Prof. Qin Liu, Hunan University, China Room 1 Room 1 Ul (0 1)	14:00-14:40	Speaker: Prof. Scott Fowler, Linköping University. Sweden				
Room 1 Room 2		Chair: Prof. Qin Liu, Hunan University, China				
		Room 1	Room 2			
14:40-16:05 Ubisec-1 Ubisec-4	14:40-16:05	UbiSec-1	UbiSec-4			
16:05-16:20 Break	16:05-16:20	Break				
Room 1 Room 2		Room 1	Room 2			
16:20-18:00 UbiSec-1 UbiSec-4	16:20-18:00	UbiSec-1	UbiSec-4			
18:00-20:00 Banquet @ Hotel	18:00-20:00	Banquet	@ Hotel			
December 31 (Tuesday)						
Time Conference Room (Room 1)	Time	Conference R	coom (Room 1)			
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8:30-10:30 UbiSec-2 UbiSec-5	8:30-10:30	UbiSec-2	UbiSec-5			
10:50-10:40 Coffee/Tea Break	10:30-10:40	Coffee/T	ea Break			
12:00.14:00 UDISec-3 UDISec-3	10:40-12:00	UDISEC-3	UDISec-3			
Conference Closing	12.00-14:00					

# **Quick Guide to Meeting Rooms**

Room Number	<b>Room Name</b>	Floor
Room 1	Conference Room	Room 1511, Tower A, Xiangjiang Building, Hunan University of Technology and Business. (湖南工商大学湘江楼 A 座 1511)
Room 2	Virtual Room	http://ubisecurity.org/2024/





### <sup>•</sup>UbiSec 2024 Program Preview

#### **Keynotes**

Keynote 1: Prof. Robert H. Deng, Singapore Management University, Singapore Title: Private Service Discovery, Access Control, and Authentication in IoT Networks

Chair: Prof. Wenjun Jiang, Hunan University, China

Keynote 2: Prof. Zheng Yan, Xidian University, China

Title: AI-empowered Trust and Trustworthy AI

Chair: Prof. Tao Peng, Guangzhou University, China

Keynote 3: Prof. Zakirul Alam Bhuiyan, Fordham University, USA Title: Continuous Whole Area Authentication with WiFi-Enabled IoT Networks Chair: Dr. Xiangyong Liu, Guangzhou University, China

#### **Invited Talks**

#### 11:20-12:00, December 30 (Monday), Room 1

Session Invited Talks -1: Prof. Wenjia Li, New York Institute of Technology, USA Title: Toward Secure and Trustworthy Internet of Vehicles (IoVs) Using Blockchain and Federated Learning

Chair: Prof. Xiaofei Xing, Guangzhou University, China

#### 14:00-14:40, December 30 (Monday), Room 1

Session Invited Talks -2: Prof. Scott Fowler, Linköping University, Sweden

Title: Enhancing QoE in Virtual Reality Gaming: Bridging Technology and Sociality Chair: Prof. Qin Liu, Hunan University, China

#### Paper Sessions

Session UbiSec-1: 14:40-17:40, December 30 (Monday), Room 1 Session UbiSec-2: 8:30-10:30, December 31 (Tuesday), Room 1 Session UbiSec-3: 10:40-12:00, December 31 (Tuesday), Room 1 Session UbiSec-4: 14:40-17:15, December 30 (Monday), Room 2

Session UbiSec-5: 8:30-12:00, December 31 (Tuesday), Room 2

### Keynote 1: Private Service Discovery, Access Control, and Authentication in IoT Networks

Speaker: Prof. Robert H. Deng, Singapore Management University, Singapore

Chair: Prof. Wenjun Jiang, Hunan University, China

# About the Keynote Speaker



Professor Robert Deng is AXA Chair Professor of Cybersecurity, Deputy Dean for Faculty & Research, School of Computing and Information Systems, Singapore Management University (SMU). His research interests are in the areas of data security and privacy, network and distributed system security, and applied cryptography. He received the Outstanding University Researcher Award from National University of Singapore, Lee Kuan Yew Fellowship for Research Excellence from SMU, Asia-Pacific Information Security Leadership Achievements and Community Service Star from International Information Systems Security Certification Consortium (ISC2), and the Public Administration Medal (Silver), Singapore National Day Awards. He serves/served on the editorial boards of ACM Transactions on Privacy and Security, IEEE Security & Privacy, IEEE Transactions on

Dependable and Secure Computing, IEEE Transactions on Information Forensics and Security, Journal of Computer Science and Technology, and Steering Committee Chair of the ACM Asia Conference on Computer and Communications Security. He is a Fellow of IEEE and Fellow of Academy of Engineering Singapore.

#### Abstract:

Service discovery is essential in wireless communications. However, existing service discovery protocols provide no or very limited privacy protection for service providers and clients, and they often leak sensitive information (e.g., service type, client's identity and mobility pattern), which leads to various network-based attacks (e.g., spoofing, man-in-the-middle, identification and tracking). In this talk, we will first review some of the existing privacy preserving service discovery protocols in the literature and point out their limitations. We will then present PriSrv which allows a service provider and a client to respectively specify a fine-grained authentication policy that the other party must satisfy before a connection is established. PriSrv consists of a private service broadcast phase and an anonymous mutual authentication phase with bilateral control, where the private information of both parties is hidden beyond the fact that a mutual match to the respective authentication policy occurred. PriSrv is interoperable with popular wireless communication protocols, such as WiFi Extensible Authentication Protocol (EAP), mDNS, BLE and Airdrop, to offer privacy-enhanced protection.

### Keynote 2: AI-empowered Trust and Trustworthy AI

Speaker: Prof. Zheng Yan, Xidian University, China

Chair: Prof. Tao Peng, Guangzhou University, China

### About the Keynote Speaker



Dr. Zheng Yan, Distinguished Professor at Xidian University, is an IEEE Fellow, IET Fellow, AAIA Fellow, and AIIA Fellow. She is a Stanford World top 2% scientist, and a highly cited researcher by Elsevier in China. Her research interests are in trust management, information and network security, privacy protection, and data analysis. She has published more than 400 papers in prestigious journals and conferences worldwide, including IEEE SP, IEEE TIFS, IEEE TDSC, INFOCOM, and ICSE, with over 270 as first or corresponding author. She has authored two English books, used for teaching for nearly a decade. She holds 110+ international and domestic patents, including 50 PCT patents, with more than150 patents adopted by industry, most of them are solely invented by her.

Some of these patents have entered international standards or are widely used. Her U.S. patents are tracked by over 60 Fortune Global 500 companies. She has received numerous awards, including the Nokia Distinguished Inventor Award, three EU awards, N<sup>2</sup> Women Star in Computer Networking and Communications, IEEE TCSC Award for Excellence in Scalable Computing, IEEE TEMS Distinguished Leadership Award, 18 times of IEEE Outstanding Leadership and Service Awards, AALTO ELEC Impact Award, IEEE ComSoc Big Data Technical Committee Best Journal Paper, IEEE TrustCom Outstanding Paper, Shaanxi Natural Science Award, and Outstanding Doctoral Dissertation Supervisor by the Electronic Association of China. She founded the first IEEE Blockchain International Conference and serves as a Steering Committee Co-chair. She serves as an Executive Editor-in-Chief of Information Sciences and Area Editor/Associate Editor/Editor Board Member for over 60 journals, including ACM Computing Surveys, Information Fusion, IEEE IoT Journal, IEEE Network Magazine, etc. She has served as a General Chair or Program Committee Chair for over 40 international conferences and has delivered over 30 keynote and invited talks at international conferences.

#### Abstract:

While artificial intelligence (AI) is contributing to the advancement of human society, it also presents us with new challenges. Its trustworthiness is worthy of in-depth exploration. This talk elucidates the aids of AI for trust and indicates the problems of AI trust, especially potential attacks on AI and the factors that impact AI trust. I will introduce recent research achievements of my team, including a GNN-based robust and explainable trust evaluation model and a stealthy and practical audio backdoor attack with limited knowledge. Finally, several insights are proposed regarding AI trust management.

## Keynote 3: Continuous Whole Area Authentication with WiFi-Enabled IoT Networks

Speaker: Prof. Zakirul Alam Bhuiyan, Fordham University, USA

Chair: Dr. Xiangyong Liu, Guangzhou University, China

### About the Keynote Speaker



Dr. Zakirul Alam Bhuiyan is an Associate Professor of Cybersecurity at the Department of Computer and Information Sciences at Fordham University, NY, USA. He is the Director of the Dependable and Secure System Research (DependSys) Lab and is affiliated with the Fordham Center for Cybersecurity. His research focuses on cybersecurity & privacy, data-driven dependability, trustworthy AI/ML, and emerging IoT/CPS applications. Dr. Bhuiyan authored/co-authored over 250 publications that appeared in many prestigious journals. He has been identified as the High-Cited Researcher for several years and ranked as the "World's Rising Stars of Science" (2022-2024). He has served as an organizer, general

chair, program chair, workshop chair, and TPC member of various international conferences, including IEEE INFOCOM. He is a Senior Member of IEEE and a member of ACM.

#### Abstract:

Most existing authentication systems operate on a "one-time" basis, allowing users to access systems even after they have left the physical location or system. However, this approach poses significant security and privacy risks, including information leakage and unauthorized modifications. The concept of "continuous authentication" was introduced to address these concerns. The system verifies the user's identity through continuous authentication throughout its operation. The system automatically locks if the user leaves the designated area or station. Unfortunately, this authentication method (whether via password, facial recognition, Windows Hello, or fingerprint) can disrupt normal system operations, significantly compromise user privacy, and necessitate user attention. In this talk, we will explore the potential of achieving continuous user authentication using commodity wireless techniques, specifically Wi-Fi, through signal analysis. Wi-Fi signals are now ubiquitous, permeating homes, offices, and industries. They either pass through us or bounce off our surroundings. Recent technological advancements have revealed that these signals can be leveraged for various beneficial applications, including healthcare monitoring, motion detection, and gesture recognition. This has motivated us to consider continuous authentication in IoT environments. We will also discuss whether this attention-free, touch-free Wi-Fi signals-based solution should preserve the merits of prior wireless system designs, reduce system costs, and maintain user privacy. Additionally, we will illustrate the current state-of-the-art and highlight future research directions.



# Invited Speaker 1: Prof. Wenjia Li, New York Institute of Technology, USA

#### Title: Toward Secure and Trustworthy Internet of Vehicles (IoVs) Using Blockchain and Federated Learning

Chair: Prof. Xiaofei Xing, Guangzhou University, China

**Abstract:** The Internet of Vehicles (IoVs) has revolutionized connected transportation by enabling large-scale data collection and analysis, fostering advancements in traffic management, autonomous driving, and smart cities. However, the proliferation of IoV data presents critical challenges, particularly concerning security, privacy and trustworthiness. To address these issues, this talk explores a novel integration of blockchain technology with federated learning to establish a secure and decentralized framework for IoV data management and analysis. Blockchain's immutable and transparent nature ensures data integrity and trust among IoV nodes, while federated learning enables collaborative machine learning without exposing individual data. By employing cryptographic techniques and consensus mechanisms, the proposed system mitigates adversarial attacks, secures data aggregation, and strengthens network resilience. Performance evaluations through simulations demonstrate the framework's efficacy in enhancing IoV security and scalability. This work underscores the potential of blockchain-enabled federated learning to address pressing IoV challenges, paving the way for robust, privacy-preserving, and trustworthy IoV ecosystems.

Short-Bio: Dr. Wenjia Li received his Ph.D. degree in computer science from the University of Maryland Baltimore County (UMBC), Baltimore, MD, USA, in 2011. In 2014, he joined the Department of Computer Science, New York Institute of Technology, New York, NY, USA as a tenure-track assistant professor, and he is currently a tenured associate professor since September 2020. Prior to joining NYIT, he was a tenure-track Assistant Professor of computer science at Georgia Southern University, Statesboro, GA, USA, from 2011 to 2014. He has authored or co-authored over 100 peer-reviewed publications in various journals and conference proceedings. His current research interests include cyber security, mobile computing, and wireless networking, particularly security, trust, and policy issues for wireless networks, cyber-physical systems, Internet of Things, and intelligent transportation systems. His research has been supported by the National Institute of Health (NIH) and the U.S. Department of Transportation Region 2 University Transportation Research Center (UTRC). He was the recipient of the 2019 IEEE Region 1 Technological Innovation (Academic) Award. He also received the 2020 NYIT Presidential Award for excellence in Student Engagement in Research, Scholarship, or Creative Activities. Recently, he received the 2023 IEEE Region 1 Outstanding Teaching in an IEEE area of interest (University or College) Award. Dr. Li is a Senior Member of the IEEE and a Fellow of the European Alliance for Innovation (EAI).



#### Invited Speaker 2: Prof. Scott Fowler, Linköping University, Sweden

#### Title: Enhancing QoE in Virtual Reality Gaming: Bridging Technology and Sociality

Chair: Prof. Qin Liu, Hunan University, China

Abstract: This talk delves into enhancing the Quality of Experience (QoE) in Virtual Reality (VR) gaming by integrating cutting-edge technology with sociality. VR gaming demands ultra-low latency,

high-quality rendering, and seamless interactivity—requirements that challenge conventional network infrastructures. By leveraging mobile edge networks, this work tackles these challenges through distributed edge computing, reducing latency and delivering immersive user experiences. The talk presents a comprehensive framework for optimizing network resource allocation, balancing processing demands, bandwidth distribution, and delay constraints to sustain superior QoE. Findings reveal how efficient resource management not only elevates user satisfaction but also ensures scalability for large and diverse player bases. Beyond technical advancements, the discussion underscores the role of VR gaming in fostering social connections and collaborative interactions within virtual environments. By aligning technological innovation with societal needs, VR gaming transcends entertainment to become a platform for building meaningful and shared experiences. This exploration highlights the transformative potential of VR gaming in addressing societal challenges through immersive and interactive technology. By combining advanced computational techniques with a strong focus on social engagement, this talk offers insights into designing VR experiences that are both technically groundbreaking and socially impactful.

Short-Bio: Scott Fowler (Senior Member, IEEE, ACM) received his Ph.D. in Computer Science from Wayne State University, Detroit, MI, USA, in 2006. Prior to joining Linköping University (LiU), Campus Norrköping, Sweden, in 2010, he was a Research Fellow at Aston University and Sony Ericsson R&D Lab in the UK, where he collaborated with interdisciplinary academic and industry teams on Next Generation Networks (NGNs). At LiU, he serves as an Associate Professor in the Department of Science and Technology, specializing in Communications and Transport Systems (KTS). Dr. Fowler's research spans Quality of Service (QoS), Quality of Experience (QoE), computer networks (wired and wireless), energy management, cloud computing, the Internet of Things (IoT), optimization, machine learning, network analytics, and security. He has significantly advanced these fields through impactful research and leadership initiatives. An active contributor to the IEEE community, Dr. Fowler has served as Chair/Co-Chair for technical programs at prestigious conferences, including IEEE ICC and IEEE GlobeCom. Additionally, he has held leadership roles, such as Special Interest Groups Coordinator for the IEEE Communications Software (CommSoft) Technical Committee (2012-2017) and Vice-Chair of the IEEE Communications Software and Reliability (CSR) Technical Committee, following terms as Executive Secretary (2021-2023). Dr. Fowler's research has been funded by renowned organizations, including the European Union, Vinnova, Ericsson, Swerock, Heidelberg Materials, Cementa, and SmartBuild. Bridging academia and industry, his work addresses real-world challenges and fosters innovative solutions in technology and infrastructure.

### **SESSIONS AND PAPERS IN UbiSec 2024**

#### The 4<sup>th</sup> International Conference on Ubiquitous Security (UbiSec 2024)

Session UbiSec-1: 14:40-17:40, December 30 (Monday), Room 1

Chair: Mr. Yuheng Zhang, Guangzhou University, China

Enhancing Data Security and Efficiency in Digital Economy: A Blockchain-Based Data Trading System Weichuan Mo, Li Hu, Bing Mi and Kongyang Chen
On the Effectiveness of Invisible Backdoor Attacks in Federated Learning Matthijs Marinus, Vasileios Tsouvalas and Nirvana Meratnia
SADT: Sandwich Attack Detection for Transactions on Decentralized Exchanges Yuheng Zhang, Guojun Wang, Peiqiang Li, Houji Chen, Zhuoyi Wu and Jinrong Kong
A New Generation Wireless Biometric System with Deep Feature Fusion in IoT Zakirul Alam Bhuiyan, Muhammad Ehsan, Yuanfang Chen, Jian Shen and Md Arafatur Rahman
Fast and Efficient Layer-aware Container Vulnerability Patching in Edge Computing Xuan Xie, Yuting Hu, Xinpu Chen, Yumin Lin, Zhiqing Tang, Jianxiong Guo and Tian Wang
Auditing the Auditor: Heuristics for Testing Password Auditing System Security Taejun Choi, Daniel Van Niekerk, Octav Opaschi, Costin Enache and Ryan K L Ko
Can We Use Smart Contracts to Improve Security of IoT Apps? Alkhansaa Abuhashim, Hassan Shafei and Chiu Tan

#### Session UbiSec-2: 8:30-10:30, December 31 (Tuesday), Room 1

#### Chair: Prof. Junwei Zhou, Wuhan University of Technology, China

SEQDroid: A Deep Learning Approach for Android Malware Detection Based on API Sequences *Zhuoyi Wu, Guojun Wang, Xuelei Liu, Yuheng Zhang, Mingfei Chen, Jinrong Kong and Wanyi Gu* Towards Tightly Secure Strongly Unforgeable Short Lattice Signatures

Wenbin Chen, Zhibo Li, Guolong Zeng and Yutao Qi

DQSroid: Dynamic Android Malware Detection Based on Quadruple Sequences and Data Augmentation Jinrong Kong, Guojun Wang, Mingfei Chen, Yuheng Zhang, Zhuoyi Wu and Wanyi Gu

Fast Encrypted Image Classification Based on Approximate Matrix Multiplication without Multiplying Junwei Zhou, Kai Song and Botian Lei

Closed-loop Policy Safety Correction

Zhi Yi, Qi Lv, Shuhong Chen, Yinglong Dai and Ying Liang

Pedestrian Detection Approach with Multi-strategy Image Recognition Improvement Mechanism for Safe Truck Driving Mingfeng Su, Cui Wang, Wenjun Yang, Zhimin Liu, Cong Zhou and Xiaoyu Zhu

#### Session UbiSec-3: 10:40-12:00, December 31 (Tuesday), Room 1

#### Chair: Dr. Guanghui Feng, Guangzhou University, China

Multidimensional features based knowledge tracing Zijian Guo, Xin Yin, Wenjun Jiang and Jingjing Wang Enhancing Personalized Bundle Recommendation with Serendipity

Yuqing Zeng, Muying Zhao, Wenjun Jiang and Jingjing Wang

A Blockchain-based Selective Disclosure Authentication System: A Self-Sovereign Credential Scheme Combining Decentralized Identity and Zero-Knowledge Proofs

Haojie Yin, Shuhong Chen, Zhenkun Luo, Mengmeng Tang, Sipeng Zhang and Zhuyi Yao

#### Session UbiSec-4: 14:40-17:15, December 30 (Monday), Room 2 Chair: Prof. Shuhong Chen, Guangzhou University, China

Enhanced K-means Clustering Algorithm Integrating Outlier Detection and Density Peaks

Yuxing Li, Chongtao Zhu, Xiaoyan Liao, Qi Liu and Shaobo Zhang

Marriage Matching For Bipartite Graphs Under Condensed Local Differential Privacy

Li Binghan, Zhu Youwen and Guo Jing

Optimizing Task Allocation with Privacy-Preserving Using Fuzzy Inference Wei You, Tao Peng, Zhidong Xie and Houji Chen

Privacy-preserving Cluster Similarity Model for Multi-user and Multi-data Jiazhao Ma, Zhuowen Ma and Shaohong Zhang

Blockchain-Based Secure Spectrum Sensing and Sharing Mechanism Kelu Ye, Youwen Zhu and Jing Guo Session UbiSec-5: 8:30-12:00, December 31 (Tuesday), Room 2 Chair: Prof. Tao Peng, Guangzhou University, China Enhancing Network Robustness through Feature Normalization and Improved Data Augmentation Canbin Zhou, Jun Bao and Chongzhi Gao TNSSL: TrojanNet Attack in Self-Supervised Learning Wenyin Yang, Guihong Sun, Li Ma, Zikai Zhao, Xianxi Liang and Yali Ma Single sign-on Security: An empirical study of Sign in with Apple Michael Okyere and Wanpeng Li A Data-free Backdoor Attack Approach in Self-Supervised Models Li Ma, Zhenghao Yu, Wenyin Yang, Sipei Wu, Meifang Xie, Baoyao Yang and Chunrong Lai Ghaos: Phishing Detection on Ethereum Using Opcode Sequences with GraphSAGE-Attention Houji Chen, Tao Peng, Yuheng Zhang, Zhidong Xie and Wei You FCFuzz: Format Constrained Fuzzing for Network Protocol Implementations Chengnuo Cai, Bo Yu, Lei Zhou and Yeqi Mou FSFuzzer: A High-Performance Greybox Fuzzer for Stateful Network Protocol Qian Liu, Lei Zhou, Xu Zhou, Yuan Wei and Danjun Liu A Multi-Subset Privacy-Preserving Data Aggregation Scheme with Enhanced Statistical Analysis Capabilities for IoT Jingwen Tuo and Mingwu Zhang FT-SPC: A Fine-tuning Approach for Backdoor Defense via Adversarial Sample Selection Shichang Chen and Ya Li Improving transferability of adversarial examples by SVD transformation Xiaoyu Li, Junjie Mai and Chongzhi Gao A Meta-Learning-Based Fault Waveform Detection Method for Distribution Lines Security Mingyang Li, Haodong Ren, Yijie He and Jie Chen

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#### **Track 2: Cyberspace Privacy**

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#### **Track 3: Cyberspace Anonymity**

Wenxiu Ding, Xidian University, China Antonio Esposito, Università degli Studi della Campania Luigi Vanvitelli, Italy Jiajia Jiao, Shanghai Maritime University, China Florin Pop, Polytechnic University of Bucharest (UPB), Romania Zhe Qu, Central South University, China Guohua Tian, Xidian University, China

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### **Track3: Cyberspace Anonymity**

#### **Track Chairs**

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# **Conference Venue**

Microtel By Wyndham Changsha West, Changsha, China (长沙岳麓麦客达温德姆酒店)

Website: https://hotels.ctrip.com/hotels/102791231.html

Address: No.138 Tongzhiqiao West Road, Yuelu District, Changsha, Hunan, China

(湖南长沙岳麓区桐梓坡西路 138 号)





### **Public Transportation**

### 🖻 Metro

Take the Changsha Metro Line 6 to **JIANTANG** Station (Entry 1),and walk around 360m to the hotel.

乘坐长沙轨道交通地铁6号线到涧塘站(从1口出站),下车后步行360米可达酒店。

### 🛪 Airport

From Changsha Huanghua International Airport to Microtel Hotel in Changsha West: Take a taxi (around RMB 70); or take the Changsha Metro Line 6 at HUANGHUA AIRPORT T1&T2 Station, and get off at **JIANTANG** Station, then walk around 360m to the hotel; Similar for the return trip.

长沙黄花国际机场到长沙岳麓麦客达温德姆酒店:大约 35 公里,可乘坐的士,车程大概 50 分钟(约 70 元人民币);也可以乘坐长沙轨道交通地铁 6 号线,从黄花机场 T1T2 站坐到涧塘站,从1 口出站(24 站,约 75 分钟),再步行 360 米可达酒店;返程类似。

### 🛱 Railway

From Changsha South Railway Station to Changsha Microtel Hotel in Changsha West: Take a taxi around 40 minutes, about RMB 50); or take Changsha Metro Line 2 to RENMIN EAST ROAD Station, then transfer to Metro Line 6 to JIANTANG Station. After exiting from Exit 1, walk 360 meters to reach the hotel (totally 16 stops, about 50 mins); Similar for the return trip.

长沙火车南站到长沙岳麓麦客达温德姆酒店:大约 30 公里,可乘坐的士,车程大概 40 分钟(约50 元人民币);也可以乘坐长沙轨道交通地铁 2 号线,到达人民东路站,再换乘从地铁 6 号 线到涧塘站,从1 口出站后步行 360 米可达酒店(全程共 16 站,约 50 分钟);返程类似。

From Changsha Railway Station to Changsha Microtel Hotel in Changsha West: Take a taxi around 40 minutes, about RMB 30); or take Changsha Metro Line 2 to YINGBIN ROAD Station, then transfer to Metro Line 6 to JIANTANG Station. After exiting from Exit 1, walk 360 meters to reach the hotel (totally 10 stops, about 40 mins); Similar for the return trip.

长沙火车站到长沙岳麓麦客达温德姆酒店:大约15公里,可乘坐的士,车程大概40分钟(约30元人民币);也可以乘坐长沙轨道交通地铁2号线,到达迎宾路口站,再换乘从地铁6号线到涧塘站,从1口出站后步行360米可达酒店(全程共10站,约40分钟);返程类似。

### **Introduction to Hunan University**

Hunan University (HNU) is situated in Changsha, a renowned historical and cultural city. It is adjacent to the rippling Xiangjiang River on its front and picturesque Yuelu Mountain at its back. It is reputed as an "Ancient Millenarian Academy and Famous Centennial University".

Originated from Yuelu Academy, founded in 976 AD., HNU is an institution of



higher education run at a permanent location for the longest time in China. It has maintained cultural education for thousands of years and illustrated an embodiment of China's higher education development and rare history in the world's higher education. HNU was reconstructed into the Hunan Institute of Higher Learning in 1903; renamed Hunan University in 1926; and was designated as one of the 16 state universities in 1937. After the founding of the People's Republic of China in 1949, Li Da, one of the major founders and early leaders of the Communist Party of China, was appointed as the first president of HNU. Late Chairman Mao Zedong inscribed the name of the university. In 2000, HNU and the Hunan Institute of Finance and Economics merged to form the HNU of today. Since the launch of reform and opening up in 1978, HNU has been designated as a state key university and listed under the "Project 211" "Project 985" and "Project Double First-Class". Chinese President Xi Jinping inspected HNU on September 17th, 2020. He spoke highly of personnel cultivation and cultural inheritance of the university, and put forward that Yuelu Academy is the origin of the ideological line "Seeking Truth from Facts" of the Party.

Carrying forward the celebrated traditions of quality education and personnel cultivation, HNU has been continuing the essence of the motto "seeking truth from facts, and daring to be pioneers" and the spirit of "to be profound, intelligent, diligent, and dedicated in the pursuit of knowledge". A number of celebrities who had made tremendous and historical contributions in Chinese history were fostered, including Wang Fuzhi, Tao Shu, Wei Yuan, He Changling, Zeng Guofan, Zuo Zongtang, Guo Songtao, Tan Sitong, Huang Xing, Cai E, Yang Changji, Mao Zedong, He Shuheng, Cai Hesen, Deng Zhongxia, and Li Da. Forty-two faculty and alumni members have been elected as members of the Chinese Academy of Social Sciences and academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering. These symbolized "the Kingdom of the Chu, the home of talents".

HNU has 27 colleges and schools. The professional disciplines cover twelve subject categories: philosophy, economics, law, education, literature, history, science, engineering, management, medicine, arts, and interdiscipline. A system of academic

disciplines with a solid foundation of sciences, strong engineering strength, featured humanistic and social science, emerging life and medical science, and active emerging interdisciplinary study has taken shape. HNU offers 80 undergraduate programs, 37 first-level disciplines authorized to confer master's degrees, and 30 first-level disciplines to confer doctorates. Chemistry, mechanical engineering, and electric engineering are listed as "world-class disciplines" of the Ministry of Education.

The full-time students total more than 37,000, of which over 22,000 are undergraduates, and 15,000 are postgraduates. HNU has two 2.0 bases of the Ministry of Education for top-notch student cultivation programs in basic disciplines and four national experiment and teaching demonstration centers. The Marxism School of HNU was selected as a national essential school on Marxism. Over the past five years, HNU has won 16 National Teaching Achievement Awards, and four national awards for teaching materials construction. It was approved as a pilot university involved in the national plan for strengthening basic academic disciplines. Fifty-four undergraduate majors were shortlisted for the first-batch national first-class majors, and 70 undergraduate courses were selected as the national first-class undergraduate courses. HNU students won 9 national gold awards in the "Internet+", and "Challenge Cup" and its upgrading version "Chuang Qing Chun" China College Students' Entrepreneurship Competition. HNU attaches great importance to international exchange and cooperation. It has established cooperation relationships with over 130 overseas universities, such as the University of California, Berkeley, National University of Singapore, and Imperial College London, and enrolled international students from over 80 countries and regions.

HNU has a staff of more than 4,300, of whom over 2,300 are full-time teachers. The HNU faculty has received 297 national high-level talent awards, including six full-time memberships in the Chinese Academy of Sciences and the Chinese Academy of Engineering; 29 National Science Foundation Awards for Distinguished Young Scholars; and 45 National Science Foundation Awards for Excellent Young Scholars. Five teachers have received National Outstanding Teacher Award. In addition, HNU has six innovative research groups supported by the Natural Science Foundation of China (NSFC), 13 national teaching groups and one innovative team recognized by the State Administration of Science, Technology and Industry for National Defense.

Strong research lays a solid foundation for fruitful achievements of results. HNU has six state key laboratories; two national engineering technology research centers; one state engineering research center; two state energy R&D and innovation platforms; one integrated platform for major sci-tech breakthroughs approved by the Ministry of Education; three national-level international cooperation centers; one key discipline laboratory of the State Administration of Science, Technology and Industry for National Defense; thirteen key laboratories and engineering research centers of the Ministry of Education; six discipline innovation and talent introduction bases in higher

educational institutions under the Ministry of Education; and, one key laboratory of the Ministry of Culture and Tourism. In the past five years, HNU has 11 research projects winning the national science and technology awards, and nine projects being granted with the humanities and social sciences awards of the Ministry of Education. HNU has been integrating production, education, and research, and made solid efforts in promoting commercialization of research findings. It has a national-level science and technology park, and was approved by the Ministry of Education as one of the first batch of university bases for commercialization of research findings and transfer of technologies, and a national demonstration university of intellectual property. The National Supercomputing Center in Changsha, the third supercomputing center in China, is operated and managed by HNU. The new generation of supercomputer Tianhe in the center reaches a computing performance at world-class and domestically-leading level. In 2023, the center was approved to build a national open innovation platform for a new generation of AI public computing power.

Elegant landscapes and a rich cultural atmosphere are integrated in the campus. HNU is located in a national 5A-level scenic area, covering 2.41 million square meters, with the school buildings occupying 1.35 million square meters. Harmonious combinations of ancient architectural complex and modern buildings, natural sceneries, and cultural landscapes make HNU the "most poetic and picturesque university in China".

Evolved from an ancient academy to a modern university, HNU has firmly pursued excellence and been in the front rank in China's higher education. At this new historical starting point, under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, HNU will firmly take root in China, remain devoted to building itself into a world-class university with Chinese characteristics and profound historical and cultural inheritance, and cultivating a new generation of young people capable of shouldering the mission of national rejuvenation.

## 湖南大学简介

湖南大学坐落于中国历史文化名城长沙,前临碧波荡漾的湘江,后倚秀如琢 玉的岳麓山,素有"千年学府、百年名校"之称。

学校办学起源于公元 976 年创办的岳麓书院,是中国同址办学时间最长的高 等学府,历经千年变迁,弦歌不绝,始终保持文化教育的连续性,是中国高等教 育发展的生动缩影和世界高等教育的罕见奇迹。1903 年改制为湖南高等学堂, 1926 年正式定名湖南大学,1937 年成为全国 16 所国立大学之一。新中国成立后, 中国共产党主要创始人和早期领导人之一的李达担任第一任校长,毛泽东亲笔题 写"湖南大学"校名。2000 年,湖南大学与湖南财经学院合并组建成新的湖南大 学。改革开放以来,学校先后进入全国重点大学、"211 工程"、"985 工程" 和"世界一流大学"建设高校行列。2020 年 9 月 17 日,习近平总书记来校考察 调研,对学校人才培养、文化传承等给予高度评价,提出岳麓书院是党的实事求 是思想路线策源地。

在长期的办学历程中,学校形成了"传道济民、爱国务实、经世致用、兼容 并蓄"的教育传统,积淀了以校训"实事求是、敢为人先"、校风"博学、睿思、 勤勉、致知"为核心的湖大精神,培育和熏陶了以王夫之、陶澍、魏源、贺长龄、 曾国藩、左宗棠、郭嵩焘、谭嗣同、黄兴、蔡锷、杨昌济、毛泽东、何叔衡、蔡 和森、邓中夏、李达等为代表的一大批彪炳史册的杰出人才。师生中涌现出 42 位学部委员和"两院"院士,"惟楚有材,于斯为盛"成为学校人才辈出的生动 写照。

学校下设 27 个学院,学科专业涵盖哲学、经济学、法学、教育学、文学、 历史学、理学、工学、管理学、医学、艺术学、交叉学科等 12 大门类,形成了 理科基础坚实、工科实力雄厚、人文社会学科独具特色、生命医学学科兴起、新 兴交叉学科活跃的学科布局。拥有本科专业 80 个,硕士学位授权一级学科 37 个、 博士学位授权一级学科 30 个。化学、机械工程、电气工程学科进入"世界一流 学科"建设行列。

学校现有全日制在校学生 37000 余人,其中本科生 22000 余人,研究生 15000 余人。建有 2 个教育部基础学科拔尖学生培养计划 2.0 基地,4 个国家级实验教 学示范中心,马克思主义学院入选全国重点马克思主义学院。近五年,获国家级 教学成果奖 16 项,首届全国教材建设奖 4 项,获批"强基计划"招生改革试点, 入选国家级一流本科专业建设点 54 个,国家级一流本科课程 70 门,获"互联网 +""挑战杯""创青春"创新创业竞赛国家级金奖 9 项。学校高度重视国际交 流与合作,与加州大学伯克利分校、新加坡国立大学、帝国理工学院等海外130 余所高校建立合作关系,招收来自80余个国家和地区的留学生。

学校现有教职工 4300 余人,其中专任教师 2300 余人,国家级高层次人才达 297 人次,其中两院院士全职 6 人、国家杰出青年科学基金获得者 29 人次、国家 优秀青年科学基金获得者 45 人次,国家级教学名师 5 人。拥有国家自然科学基 金"创新研究群体"项目 6 个、国家级教学团队 13 个,国防科技工业局创新团 队 1 个。

学校科研实力雄厚,科技成果突出。拥有全国(国家)重点实验室6个(含 共建)、国家工程技术研究中心2个、国家工程研究中心1个、国家能源研发创新 平台1个、教育部集成攻关大平台1个、国家级国际合作基地3个、国防科工局 国防重点学科实验室1个、教育部重点实验室和工程研究中心13个、教育部高 等学校学科创新引智基地6个、文化和旅游部重点实验室1个。近五年获国家科 学技术奖11项,教育部人文社科奖9项。学校坚持产学研相结合,大力促进科 技成果转化,建有国家级大学科技园,获批教育部首批高等学校科技成果转化和 技术转移基地、国家知识产权示范高校。学校运营管理的国家超级计算长沙中心 是第三家国家超级计算中心,天河新一代超级计算机系统算力水平国际先进、国 内领先。2023年获批建设国家新一代人工智能公共算力开放创新平台(筹)。

学校校园环境优美,人文气息浓郁。校园占地面积 241 万平方米,校舍建筑面积 135 万平方米,典雅厚重的古建筑群与时尚新锐的新建筑体交相辉映,自然风光与人文景观深度融合,被誉为"中国最诗情画意的高校"。

"麓山巍巍,湘水泱泱,宏开学府,济济沧沧;承朱张之绪,取欧美之长", 从古代书院到近代学堂再到现代大学,湖南大学坚持追求卓越,始终处在中国高 等教育的第一方阵。在新的历史起点上,湖南大学坚持以习近平新时代中国特色 社会主义思想为指导,扎根中国大地,矢志一流目标,为把湖南大学早日建成富 有历史文化传承的中国特色世界一流大学、培养更多堪当民族复兴大任的建设者 和接班人而努力奋进。

## Introduction to College of Computer Science and Electronic Engineering at Hunan University

The College of Computer Science and Electronic Engineering at Hunan University was established in 2010, evolving from the original Department of Computer Science at Hunan University, which was founded in 1981. The professional construction can be traced back to the Computer Teaching and Research Section established in 1978. After nearly fifty years of construction and development, there are now two postdoctoral research stations, two first-level doctoral degree authorization programs, four first-level master's degree authorization programs, and nine undergraduate majors. Among these, Computer Science and Technology, Software Engineering, Communication Engineering, Intelligent Science and Technology, Digital Media Technology, and Information Security have been recognized as national first-class undergraduate major construction points. Communication Engineering and Software Engineering are designated as national special majors, while Computer System Architecture is a national defense specialty discipline. There are 18 national-level talents such as National Distinguished Young Scholars and Chang Jiang Scholars.

The college hosts the National Exemplary School of Software, the National College of Confidentiality, and the Xiangjiang Artificial Intelligence Academy. Its Computer Science Basic Discipline Talent Training Base is part of the "Top Talent Training Program 2.0 Base" for national fundamental disciplines. It has also been selected as one of the Ministry of Education's first distinctive exemplary software schools and as a national first-class cybersecurity academy. Supported by the National Supercomputing Center in Changsha and the National First-Class Cyberspace Security Academy, the college builds platforms for teaching and research, conducting studies and training talents in the fields of cyberspace security and cryptography as well as high-performance computing and cloud computing. It supports the national AI strategy through the National New Generation Artificial Intelligence Open Innovation Platform (under preparation) and has established seven national research and education bases, including the "111 Project" Innovation and Intelligence Base, the Ministry of Education Key Laboratory for Fusion Computing of Supercomputing and Artificial Intelligence, and the Ministry of Education Engineering Research Center for High-Performance Computing Application Software Technology.

With a focus on international frontiers and national strategic needs, the college has achieved significant research results. Its Computer Science program ranks in the top 0.1% globally in the ESI (Essential Science Indicators). The college has been awarded the National Natural Science Foundation Innovation Research Group and the National Innovation Award. In recent years, it has led more than 160 national-level projects, including key R&D programs and projects funded by the National Natural Science Foundation. Its achievements include two National Science and Technology Progress Second Prizes, one China Patent Gold Award, and over 200 authorized invention patents. The college has published over 2,000 papers in prestigious academic journals and conferences worldwide, received over ten provincial and ministerial-level awards, ranked among the top nationally in research funding, and established strong partnerships with leading enterprises such as IBM, Microsoft, Huawei, Baidu, Tencent, Donghua Software, and 360.

The college has implemented a talent cultivation quality project, aiming to develop students' research, innovation, management, and internationalization capabilities. Guided by international engineering education accreditation standards, the college strengthens the professional core and innovates its talent cultivation model. It has received one national teaching achievement award, five national first-class courses, two national high-quality resource-sharing courses, and one Ministry of Education premium online open course. Additionally, the college has been selected for the first batch

of national virtual teaching and research office pilot projects and has won multiple provincial-level teaching achievement awards. Five programs—Computer Science and Technology, Software Engineering, Communication Engineering, Internet of Things Engineering, and Information Security have obtained engineering education accreditation. The college has also won the CCF-CSP Certification Best Collaboration Award and serves as a standing committee member institution.

# 湖南大学信息科学与工程学院简介

湖南大学信息科学与工程学院成立于 2010 年,其前身是湖南大学原计算机 科学系(成立于 1981 年),专业建设最早可追溯到 1978 年成立的计算机教研室。 历经近五十年的建设发展,现有 2 个博士后流动站; 2 个一级博士授权点; 4 个 一级学科硕士授权点; 9 个本科专业,其中计算机科学与技术、软件工程、通信 工程、智能科学与技术、数字媒体技术、信息安全入选国家级一流本科专业建设 点,通信工程、软件工程为国家特色专业,计算机系统结构为国家国防特色学科。 拥有国家杰青、长江学者等各类国家级人才 18 人。

学院建设有国家示范性软件学院、国家保密学院、湘江人工智能学院,计算 机科学基础学科人才培养基地入选"国家基础学科拔尖学生培养计划 2.0 基地", 入选教育部首批特色化示范性软件学院,入选国家一流网络安全学院。学院依托 国家超级计算长沙中心、国家一流网络空间安全学院搭建教学科研平台,开展网 络空间安全与密码学、高性能计算与云计算领域的科学研究与人才培养;以国家 新一代人工智能开放创新平台(筹)为支撑,服务人工智能国家战略;建设有国 家"111 计划"创新引智基地、超算与人工智能融合计算教育部重点实验室、高 性能计算应用软件技术教育部工程研究中心等 7 个国家科研和教育基地。

学院立足国际前沿、面向国家战略需求开展科学研究,成果丰硕。计算机科 学跻身 ESI 全球前 1%;获批国家自然科学基金创新研究群体、全国创新争先奖 状;近年牵头主持重点研发项目、自然科学基金等国家级项目 160 余项;主持的 成果获国家科技进步二等奖 2 项,获中国专利金奖 1 项,授权发明专利 200 多项; 在国内外重要学术期刊/会议上发表论文 2000 多篇;获各类省部级及以上奖励 10 余项;科研经费居全国前列;与 IBM、微软、华为、百度、腾讯、东华软件、360 等国内外知名企业建立紧密合作。

学院实施人才培养质量工程,以"培养研究能力、创新能力、管理能力、国际化能力"为目标,以"国际工程教育专业认证标准"为准则,强化专业内涵,构建人才培养模式。获评国家级教学成果奖1项;入选国家级一流课程5门;拥有国家级精品资源共享课2门;教育部精品视频公开课1门;入选首批国家级虚拟教研室试点项目1个;多次获评省级教学成果奖。计算机科学与技术、软件工程、通信工程、物联网工程、信息安全五个专业通过工程教育专业认证,获CCF-CSP认证最佳合作奖并任常任委员单位。

## **Introduction to Hunan University of Technology and Business**

Inheriting the millennium context and promoting the spirit of Huxiang, Hunan University of Technology and Business (HUTB), located in Changsha, a famous historical and cultural city, was founded in 1949 and enjoys the high reputation of the "Base of Economic Xiang Army and Cradle of Famous Enterprises". HUTB is a



financial and economic university led by academician with distinctive characteristics and mutually-supporting coordinately developing disciplines in management, economics, engineering, science, law, literature, art, inter-discipline and other disciplines. HUTB is a doctoral degree granting unit and one of the first-batch groups to enroll students in the province, has been appraised by the Ministry of Education as "Excellence" in the undergraduate teaching quality evaluation and is also awarded as an Applied University of National Industry-Education Integrated Development Project in the 13th Five-Year Plan, one of the national first-batch top 100 "Model Universities in Deepening Innovation and Entrepreneurship Education Reform", the "National Innovation and Entrepreneurship Base of Practical Education" and Outstanding Achievement Award of Humanities and Social Sciences of the Ministry of Education (one of the universities winning the Grand Slam in this award).

HUTB has a group of high-level talents represented by Chen Xiaohong, CAE Academician, including the convener of Management Science and Engineering Discipline Review Group of Academic Degrees Committee of the State Council, the member of the plenary committee of the National Natural Science Foundation of China, the deputy director of Teaching Steering Committee of Engineering Management Science and Specialties of the Ministry of Education, the deputy director of Management Department of Science and Technology Commission of the Ministry of Education, the director of National Center for Basic Science, the head of the national first-class key discipline "Management Science and Engineering" and the innovation research group of the National Natural Science Foundation of China, the chief professor of "Changjiang Scholars Innovation Team" of the Ministry of Education, leading talent of the "National Ten Thousand Talents Program", talent in the National Cultural Expert Program and the "Four First-Batch" Program, and the first level national candidate in the national "Ten Million Talent Project"; there are nearly 500 teachers with senior professional titles, nearly 800 teachers with doctoral degrees, 9 academicians introduced as international talents, 70 experts, scholars and outstanding entrepreneurs such as the "Distinguished Young Scholar" and "Changjiang Scholar"; the academician team was selected as "Huang Danian Teacher Team in National Universities".

There are 120 national and provincial-level teaching and research platforms,

including the National Basic Science Center and the National Key Laboratory (Cultivation) in HUTB. It takes the lead in building a major scientific deployment of the provincial party committee and the provincial government-the Xiangjiang Laboratory—and has established 34 key research institutes (centers) at the university level. In the past five years, the number of national-level research projects has been at the forefront among provincial universities, including 4 major projects (including the ones led by HUTB) from the National Natural Science Foundation of China, 3 major projects and 11 key projects from the National Social Science Fund, 9 projects (including the ones led by HUTB) from the Ministry of Science and Technology's National Key R&D Program, and 9 major key consulting projects from the Chinese Academy of Engineering. Faculty members have won the second prize of National Science and Technology Award, the 2nd prize of National Teaching Achievement Award (3 items), the Hunan Science and Technology Outstanding Contribution Award, the Prize for Scientific and Technological Progress of Ho Leung Ho Lee Foundation, Fudan Prize for Eminent Contributions to Management Science, the Guangzhao Science and Technology Award, the first prize of the Ministry of Education's Scientific Research Outstanding Achievement Award (Humanities and Social Sciences) (2 items), the first prize of the Ministry of Education's Science and Technology Progress Award, the first prize of the Hunan Science and Technology Progress Award, and the "Top Ten Golden Strategies" from the Huxiang Think Tank Research, among other awards. A number of think tank achievements have contributed to the decision-making of the Party and the state.

Currently, there are 23 schools, 77 undergraduate specialties (including 3 Sino-foreign cooperation undergraduate specialties), 19 national first-class specialties and 33 provincial first-class specialties. At present, there are nearly 30,000 graduate students and undergraduate students. Following the motto of "Sincerity and Credibility, Pragmatism and Innovation", all the students have been forging ahead with enterprise and fortitude. In the past five years, they have won 900 national awards, such as the National "Challenge Cup" Competition Grand Prize and the "Progressive Innovation Gold Award". The number of awards has ranked among the top 10 in the 2019-2023 ranking list of National Undergraduate Competition of Humanities and Social Sciences Universities. HUTB recruits students from 31 provinces, municipalities and autonomous regions of the whole country with employment rate ranking among the top universities in the province. We have delivered more than 200,000 outstanding talents for economic and social development.

Tide rises in Xiangjiang River, and a great hawk spreads its wings. Adhering to the idea of integrated development of "new engineering + new business + new liberal arts" and science, HUTB strives to form first-class concepts, goals, standards, quality and mechanisms, create a new HUTB of innovation, humanities, art, sports, digital intelligence, green, and happiness, and build a good garden for reading and seeking knowledge. Taking advantage of the east wind of higher education reform and advancement, HUTB is sailing towards the vision of an innovative first-class technological and business university.

## 湖南工商大学简介

承千年文脉,扬湖湘精神。湖南工商大学坐落在历史文化名城长沙,创建于 1949年,享有"经济湘军基地,企业名家摇篮"的盛誉。她是一所院士领衔的涵 盖管理学、经济学、工学、理学、法学、文学、艺术学、交叉学科等多学科相互 支撑、协调发展、特色鲜明的财经类大学,是博士学位授予单位、湖南省本科一 批招生高校、教育部本科教学工作水平评估优秀高校、"十三五"国家产教融合 发展工程应用型本科高校、全国首批百强"深化创新创业教育改革示范高校"、 全国高校实践育人创新创业基地、教育部人文社会科学优秀成果奖大满贯高校。

学校拥有一批以中国工程院院士陈晓红为代表,包括国务院学位委员会管理 科学与工程学科评议组召集人、国家自然科学基金委员会委员、教育部管理科学 与工程类专业教学指导委员会副主任委员、教育部科技委管理学部副主任、国家 基础科学中心主任、国家一级重点学科"管理科学与工程"和国家自然科学基金 委创新研究群体负责人、教育部"长江学者创新团队"首席教授、国家"万人计 划"领军人才、全国文化名家暨"四个一批"人才、国家首批"百千万人才工程" 第一层次人选等在内的国家级高层次人才;引智院士9名、"杰青""长江"等 专家学者和优秀企业家70人;"绿色与智慧管理"院士团队、"习近平新时代 中国特色社会主义思想概论"课教师团队入选"全国高校黄大年式教师团队"。

学校拥有国家基础科学中心、国家重点实验室(培育)等120个国家级、省部级教学科研平台,牵头建设省委省政府重大科技部署——湘江实验室,设有34个校级重点研究院(中心)。近五年国家级课题数量在省属高校中名列前茅,其中国家自然科学基金重大项目(含项目总牵头)4项,国家社会科学基金重大项目3项、重点项目11项,科技部国家重点研发计划项目(含项目总牵头)9项,中国工程院重大重点咨询项目9项。学校教师荣获国家科技进步二等奖、国家教学成果二等奖(3项)、湖南省科学技术杰出贡献奖、何梁何利基金科学与技术进步奖、复旦管理学杰出贡献奖、光召科技奖、教育部高校科研优秀成果奖(人文社科)一等奖(2项)、教育部科技进步一等奖、湖南省科技进步一等奖、湖

学校设有 25 个二级学院,拥有 77 个本科专业(含 3 个中外合作办学本科专业),19 个国家级一流专业,33 个省级一流专业。现有在校研究生和本科生近 3 万名,莘莘学子秉承"至诚至信 为实为新"的校训,踔厉奋发、勇毅前行,近五年获全国"挑战杯"大赛特等奖、"累进创新金奖"等国家级奖励 900 项,获 奖数跻身 2019-2023 年全国人文社科类本科院校大学生竞赛排行榜的前十。学校 面向 31 个省、直辖市、自治区招生,就业率稳居全省高校前列。为经济社会发 展输送了 20 余万名优秀人才。

29

潮涌湘江阔, 鹏翔天地宽。湖南工商大学正以习近平新时代中国特色社会主 义思想为指引, 秉持"新工科+新商科+新文科"与理科融合发展的思路, 努力形 成一流的理念、一流的目标、一流的标准、一流的质量、一流的机制, 打造创新 工商、人文工商、艺术工商、体育工商、数智工商、绿色工商、幸福工商, 建设 读书求知的好园地, 乘高等教育改革奋进的东风, 朝着创新型一流工商大学的愿 景扬帆远航。

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