

HONGLU JIANG, PH.D.

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Assistant Professor, Department of Computer Science and Software Engineering

Miami University

EDUCATION

- The George Washington University, Washington, DC May, 2021
Ph.D., Computer Science
- Qufu Normal University, Shandong, China June, 2012
M.S., Computer Applied Technology
- Qufu Normal University, Shandong, China July, 2009
B.E., Network Engineering

WORKING EXPERIENCE

- Assistant Professor (Sep. 2022-)
Miami University, Oxford, Ohio
- Assistant Professor (Sep. 2021-Aug. 2022)
The University of Texas Rio Grande Valley, Brownsville, Texas
- Graduate Research Assistant (Jan. 2019-May. 2021)
The George Washington University, Washington, DC

RESEARCH INTERESTS

- Privacy Preservation and Data Security
- Social Network and Big Data
- Hierarchical Management for Wireless Networks
- IoT Privacy and Security
- Edge Computing

GRANT AWARDS

- Privacy-Preserving and Robust Federated Learning for IoT Systems, Miami University Research, Scholarship, and Artistry (RSA) Grant: PI, 06/01/2023-12/31/2024, \$12,942.
- Examining the Privacy Implications from the Use of Wearables in Human Performance Modeling for Occupational Purposes, Miami University Advanced Research Team (ART) grant: Co-PI, 02/01/2023-06/30/2024, \$59,339.

TEACHING

- Instructor of CYB 235 Computer Network Design and Administration, Spring 2023 at Miami University.
- Instructor of CYB 234 System Administration and Scripting for Cybersecurity, Fall 2022, Fall 2023 at Miami University.
- Instructor of CSCI 4341 IoT Principles & Hacking, Spring 2022 at UTRGV.

- Instructor of CSCI 3333 Algorithms & Data Structures, Spring 2022 at UTRGV.
- Instructor of CSCI 2344 Programming in Unix/Linux Environment, Fall 2021 at UTRGV.
- Teaching Assistant of CSCI 1311 Discrete Structures, Spring 2020 at GWU.
- Teaching Assistant of CSCI 4431 Computer Networks, Fall 2020 at GWU.
- Teaching Assistant of CSCI 4331 Cryptography, Fall 2019 at GWU.

STUDENTS SUPERVISION

Ph.D. Students:

- Nov. 2021-, Jianan Chen, Indiana University–Purdue University Indianapolis

Master Students:

- Sep. 2022-, Rachishun Banerjee, Miami University
- Mar. 2023-, Huy Tran, Miami University
- Sep. 2021- Aug. 2022, S. M. Sarwar, The University of Texas Rio Grande Valley

Undergraduate Students:

- Sep. 2022-, Jenna Sayle, Miami University

PUBLICATIONS

Book

1. Jiguo Yu, Xiuzhen Cheng, Honglu Jiang, Dongxiao Yu, “Hierarchical Topology Control for Wireless Networks: Theory, Algorithms, and Simulation,” *CRC Press*, Feb 2018.

Journal Articles

2. Honglu Jiang, Haotian Yu, Xiuzhen Cheng, Jian Pei, Robert Pless Jiguo Yu, “DP2-Pub: Differentially Private High-Dimensional Data Publication with Invariant Post Randomization,” *IEEE transactions on Knowledge and Data Engineering*, 2023.
3. Honglu Jiang, Jian Pei, Dongxiao Yu, Jiguo Yu, Bei Gong, Xiuzhen Cheng, “Applications of Differential Privacy in Social Network Analysis: A Survey,” *IEEE transactions on Knowledge and Data Engineering*, 35(1):108-27 2021.
4. Honglu Jiang, Jiguo Yu, Xiuzhen Cheng, Cheng Zhang, Bei Gong, Haotian Yu, “Structure-Attribute Based Social Network De-Anonymization with Spectral Graph Partitioning,” *IEEE Transactions on Computational Social Systems*, 2021.
5. Honglu Jiang, S M Sarwar, Haotian Yu, Sheikh Arif Islam, “Differentially private data publication with multi-level data utility,” *High Confidence Computing*, 2022.
6. Cheng Zhang, Honglu Jiang, Xiuzhen Cheng, Feng Zhao, Zhipeng Cai, Zhi Tian, “Utility Analysis on Privacy-Preservation Algorithms for Online Social Networks: An Empirical Study,” *Personal and Ubiquitous Computing*, Aug. 2019, pp.1-17.
7. Jianan Chen, Qin Hu, Honglu Jiang, “Strategic signaling for utility control in audit games,” *Computers & Security*, 2022.
8. Surendra Pathak, Sheikh Ariful Islam, Honglu Jiang, Lei Xu, Emmett Tomai, A survey on security analysis of Amazon echo devices, *High Confidence Computing*, 2022.
9. Lina Ni, Chao Li, Xiao Wang, Honglu Jiang, Jiguo Yu, “DP-MCDBSCAN: Differential Privacy Preserving Multi-core DBSCAN Clustering for Network User Data,” *IEEE Access*, Vol. 6, 2018, pp. 21053-21063.

10. Biwei Yan, Jiguo Yu, Meihong Yang, Honglu Jiang, Zhiguo Wan, Lina Ni, "A Novel Distributed Social Internet of Things Service Recommendation Scheme Based on LSH Forest," *Personal and Ubiquitous Computing*, 2019, pp. 1-14.
11. Kan Yu, Meng Gao, Honglu Jiang, Guangshun Li, "Multi-Leader Election in Dynamic Sensor Networks," *EURASIP Journal on Wireless Communications and Networking*, 2017(1), pp.1-14.
12. Yuhong Sun, Ruinian Li, Honglu Jiang, Jianchao Zheng, Lina Ni, "Modeling and Analysis of Random Dense CSMA Networks," *EURASIP Journal on Wireless Communications and Networking*, 2018(1), pp. 1-17.
13. Feng Li, Jiguo Yu, Feng Zhao, Honglu Jiang, "A Novel Analysis of Delay and Power Consumption for Polling Schemes in the IoT," *Tsinghua Science and Technology*, Vol. 22, No. 4, 2017, pp. 368-378.
14. Jiguo Yu, Honglu Jiang, Guanghui Wang, Qiang Guo, "Clustering-based energy-efficient broadcast tree in wireless networks," *INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL* Vol. 7 (4), 2014, pp. 785-790.

Conference Papers

15. Jianan Chen, Qin Hu, Honglu Jiang, "Social Welfare Maximization in Cross-Silo Federated Learning", *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2022.
16. Zhiling Wang, Qin Hu, Minghui Xu, Honglu Jiang, "Blockchain-based Edge Resource Sharing for Metaverse," *IEEE 19th International Conference on Mobile Ad Hoc and Smart Systems (MASS)* pp. 620-626, 2022.
17. Honglu Jiang, Yifeng Gao, S M Sarwar, Luis GarzaPerez, Mahmudul Robin, Differential Privacy in Privacy-Preserving Big Data and Learning: Challenge and Opportunity, Silicon Valley Cyberse-curity Conference, 2021.
18. Honglu Jiang, Jiguo Yu, Chunqiang Hu, Cheng Zhang, Xiuzhen Cheng, "SA Framework Based De-Anonymization of Social Networks," *Procedia Computer Science*, Vol. 129, 2018, pp. 358-363.
19. Cheng Zhang, Honglu Jiang, Yawei Wang, Qin Hu, Jiguo Yu, Xiuzhen Cheng, "User Identity De-Anonymization Based on Attributes," *International Conference on Wireless Algorithms, Systems, and Applications*, Springer, 2019, pp. 458-469.
20. Cheng Zhang, Shang Wu, Honglu Jiang, Yawei Wang, Jiguo Yu, Xiuzhen Cheng, "Attribute-Enhanced De-Anonymization of Online Social Networks," *International Conference on Computational Data and Social Networks*, Springer, 2019, pp. 256-267.
21. Qi Sun, Jiguo Yu, Honglu Jiang, Yixian Chen, Xiuzhen Cheng, "De-anonymizing Scale-Free Social Networks by Using Spectrum Partitioning Method," *Procedia Computer Science*, Vol. 147, 2019, pp. 441-445.
22. Jianchao Zheng, Jiguo Yu, Honglu Jiang, Yunchuan Sun, "Modeling and Analysis of Two-tier MIMO Heterogeneous Cellular Network", *Procedia Computer Science*, Vol. 129, 2018, pp. 364-367.
23. Lu Zhang, Jiguo Yu, Chunqing Hu, Honglu Jiang, Qi Sun, "Fine-grained access control with privacy support and network service optimization in ad hoc networks," *Procedia Computer Science*, Vol. 129, 2018, pp. 372-374.
24. Yuhong Sun, Tianyi Song, Honglu Jiang, Jianchao Zheng, "Modeling of Random Dense CSMA Networks," *International Conference on Wireless Algorithms, Systems, and Applications*, 2017, pp. 71-82.

Selected Editorial Board Member

- Editor Board, Intelligent Information Management (IIM)

Guest Editor

- High Confidence Computing
- Special Issue on “Advances in 5G/6G-enabled Crowd Sensing IoT for *Digital Communications and Networks*, 2022
- Special Issue on “Advances in Sensing, Imaging, and Computing for Autonomous Driving” for *Sensors*, 2022

Paper Reviewer

- IEEE Internet of Things Journal
- IEEE Transactions on Knowledge and Data Engineering
- IEEE Transactions on Wireless Communications
- IEEE Transactions on Industrial Informatics
- IEEE Transactions on Vehicular Technology
- IEEE Transactions on Neural Networks and Learning Systems
- Computers & Security
- IEEE Transactions on Computational Social Systems
- IEEE Transactions on Network Science and Engineering
- ACM Transactions on Cyber-Physical Systems
- EURASIP Journal on Wireless Communications and Networking
- Frontiers of Information Technology & Electronic Engineering
- Digital Communications and Networks
- Computer Communications
- High Confidence Computing
- International Journal of Intelligent Systems
- Complexity
- Wireless Communications and Mobile Computing
- CCF Transactions on Networking
- Informs Journal on Computing
- IEEE INFOCOM 2022
- IEEE INFOCOM 2023

Program Committee Member

- ACM SIGKDD 2022
- REU Research in Networking and Systems (REUNS) 2022
- ICCCN 2023
- IIKI 2017

Panelist

- NSF Panelist, 2022

Membership

- Senior Member, IEEE

PRESENTATIONS AND INVITED TALKS

- “On Using Differential Privacy,” Department of Computer Science, Saint Joseph’s University, December 2022. Invited Talk
- “Women in CyberSecurity,” CyberSecurity Club, Miami University, Nov 2022. Invited Talk, Panelist
- “Blockchain-based Edge Resource Sharing for Metaverse,” IEEE MASS 2022, Denver, USA. Conference talk
- “User identity de-anonymization based on attributes,” International Conference on Wireless Algorithms, Systems, and Applications, 2019, Hawaii, USA. Conference talk