Hanzhou Wu

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https://hzwu.github.io

EDUCATION

Southwest Jiaotong University — September 2011 – June 2017
Ph.D. in Information Security — *Chengdu 611756, Sichuan, China*

Southwest Jiaotong University — September 2007 – June 2011
B.Sc. in Information Security (with Mao Yisheng Honors Class) — *Chengdu 611756, Sichuan, China*

PROFESSIONAL EXPERIENCE

Associate Professor — March 2021 – Present
School of Communication and Information Engineering, Shanghai University — *Shanghai 200444, China*

Assistant Professor — March 2019 – February 2021
School of Communication and Information Engineering, Shanghai University — *Shanghai 200444, China*

Research Scientist — July 2017 – February 2019
Institute of Automation, Chinese Academy of Sciences — *Beijing 100190, China*

Visiting Scholar — October 2014 – October 2016
Dept. of Electrical and Computer Engineering, New Jersey Institute of Technology — *Newark 07102, NJ, USA*

RESEARCH INTERESTS

digital watermarking, *steganography*, *steganalysis*, *reversible data hiding*, and *digital forensics*.
Teaching at Shanghai University: *Information Network and Security*, *Multimedia Infomation Security*.

SELECTED AWARDS AND HONORS

CCF-Tencent Rhino-Bird Young Faculty Open Research Fund
Principal Investigator, supported by Tencent Inc. — *August 2022*

Best Presentation Award
first author, in China Media Forensics and Security Workshop — *November 2021*

Outstanding Paper Award
first author, in China Information Hiding and Multimedia Security Workshop — *October 2019*

Shanghai "Chenguang" Program
Principal Investigator, supported by Shanghai Municipal Education Commission — *December 2019*

Silver Medal
contestant, 36th ACM-ICPC Asia Regional Programming Contest (Chengdu Site) — *November 2011*

Silver Medal
contestant, 36th ACM-ICPC Beijing Invitational Programming Contest — *June 2011*

Silver Medal
contestant, "Google Cup" ACM-ICPC Fudan Invitational Programming Contest — *May 2011*

Bronze Medal
contestant, 35th ACM-ICPC Asia Regional Programming Contest (Hangzhou Site) — *October 2010*

Bronze Medal
contestant, 35th ACM-ICPC Asia Regional Programming Contest (Tianjin Site) — *September 2010*

SELECTED ACTIVITIES AND SERVICES

Invited Speech
A2M Summit (Shanghai, China) *2023*

Steering Committee Member
15th International Conference on Advances in Multimedia (Venice, Italy) *2023*

Keynote Speaker
14th International Conference on Advances in Multimedia (Barcelona, Spain) *2022*

Steering Committee Member
14th International Conference on Advances in Multimedia (Barcelona, Spain) *2022*

Local Organization Chair
14th IEEE International Workshop on Information Forensics and Security (Shanghai, China) *2022*

Lead Guest Editor
Advances in AI-related Information Forensics and Security, Security and Communication Networks *2022*

Lead Guest Editor
Information Hiding - New Applications and Solutions, International Journal of Distributed Sensor Networks *2021*

BOOK CHAPTERS

1. H. Wu. Unsupervised steganographer identification via clustering and outlier detection. In: *Digital Media Steganography (Chapter 13)*, Elsevier, 2020.

2. H. Wu. Recent advances in reversible watermarking in an encrypted domain. In: *Advanced Security Solutions for Multimedia (Chapter 4)*, IOP Science, 2021.

3. H. Wu. Graph models in information hiding. In: *Recent Applications in Graph Theory (Chapter 1)*, IntechOpen, 2021.

4. H. Wu, T. Yang, X. Zheng, Y. Fang. Linguistic steganography and linguistic steganalysis. In: *Adversarial Multimedia Forensics*, Springer, to appear, 2023.

SELECTED PUBLICATIONS

J1 G. Xu, H. Wu, Y. Shi. Structural design of convolutional neural networks for steganalysis. *IEEE Signal Processing Letters*, vol. 23, no. 5, pp. 708-712, 2016.

J2 H. Wu, Y. Shi, H. Wang, L. Zhou. Separable reversible data hiding for encrypted palette images with color partitioning and flipping verification. *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 27, no. 8, pp. 1620-1631, 2017.

J3 H. Wu, X. Zhang. Game-theoretic analysis to parameterized reversible watermarking. *IETE Technical Review*, vol. 38, no. 1, pp. 26-35, 2021.

J4 H. Wu, B. Yi, F. Ding, G. Feng, X. Zhang. Linguistic steganalysis with graph neural networks. *IEEE Signal Processing Letters*, vol. 28, pp. 558-562, 2021.

J5 H. Wu, G. Liu, Y. Yao, X. Zhang. Watermarking neural networks with watermarked images. *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 31, no. 7, pp. 2591-2601, 2021.

J6 B. Yi, H. Wu, G. Feng, X. Zhang. ALiSa: Acrostic linguistic steganography based on BERT and Gibbs sampling. *IEEE Signal Processing Letters*, vol. 29, pp. 687-691, 2022.

J7 H. Wu, C. Li, G. Liu, X. Zhang. Hiding data hiding. *Pattern Recognition Letters*, vol. 165, pp. 122-127, 2023.

J8 T. Yang, H. Wu, B. Yi, G. Feng, X. Zhang. Semantic-preserving linguistic steganography by pivot translation and semantic-aware bins coding. *IEEE Transactions on Dependable and Secure Computing*, Early Access, 2023.

J9 S. Chen, A. Malik, X. Zhang, G. Feng, H. Wu. A fast method for robust video watermarking based on Zernike moments. *IEEE Transactions on Circuits and Systems for Video Technology*, Early Access, 2023.

C1 H. Wu, H. Wang, Y. Shi. PPE-based reversible data hiding. *ACM Workshop on Information Hiding and Multimedia Security*, pp. 187-188, 2016.

C2 G. Xu, H. Wu, Y. Shi. Ensemble of CNNs for steganalysis: an empirical study. *ACM Workshop on Information Hiding and Multimedia Security*, pp. 103-107, 2016.

C3 H. Wu, H. Wang, Y. Shi. Dynamic content selection-and-prediction framework applied to reversible data hiding. *IEEE International Workshop on Information Forensics and Security*, pp. 1-6, 2016.

C4 H. Wu, W. Wang, J. Dong, H. Wang. New graph-theoretic approach to social steganography. *IS&T Electronic Imaging, Media Watermarking, Security and Forensics*, pp. 539-1-539-7, 2019.

C5 H. Wu, X. Zhang. Reducing invertible embedding distortion using graph matching model. *IS&T Electronic Imaging, Media Watermarking, Security and Forensics*, pp. 21-1-21-10, 2020.

C6 J. Wang, H. Wu, X. Zhang, Y. Yao. Watermarking in deep neural networks via error back-propagation. *IS&T Electronic Imaging, Media Watermarking, Security and Forensics*, pp. 22-1-22-9, 2020.

C7 H. Kang, H. Wu, X. Zhang. Generative text steganography based on LSTM network and attention mechanism with keywords. *IS&T Electronic Imaging, Media Watermarking, Security and Forensics*, pp. 291-1-291-8, 2020.

C8 H. Wu. Patch-level selection and breadth-first prediction strategy for reversible data hiding. *IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 2837-2841, 2020.

C9 X. Zhao, Y. Yao, H. Wu, X. Zhang. Structural watermarking to deep neural networks via network channel pruning. *IEEE International Workshop on Information Forensics and Security*, pp. 1-6, 2021.

C10 B. Yi, H. Wu, G. Feng, X. Zhang. Exploiting language model for efficient linguistic steganalysis. *IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 3074-3078, 2022.

C11 H. Wu. Robust and lossless fingerprinting of deep neural networks via pooled membership inference. *IEEE International Conference on High Performance Computing and Communications*, pp. 1042-1049, 2022.

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