

Hang ZHOU

Curriculum Vitae

Burnaby, BC

V5A 1S6 Canada

☎ (+1) 778 316-9862

✉ zhouhang2991@gmail.com

🏠 home.ustc.edu.cn/~zh2991/

Experience

- 1/2021–Now **Postdoc Researcher**, *Simon Fraser University*, Vancouver, Canada.
Collaborated with Distinguished SFU Professor Hao (Richard) Zhang.
- 10/2017– **Research Intern**, *Microsoft Research Asia*, Beijing, China.
- 01/2018 Member of the Machine Learning group (ML-3), supervised by Taifeng Wang. Research in generative adversarial networks for steganography.

Education

- 09/2015– **PhD of Information Security**, *University of Science and Technology of China*, Hefei, China,
07/2020 supervised by Professor Nenghai Yu and Professor Weiming Zhang, *GPA – 3.81/4.3*.
- 09/2011– **Bachelor of Communication Engineering**, *Shanghai University*, Shanghai, China, *GPA –*
06/2015 *3.66/4.0*.

Research

Deep Learning and 3D Vision
Trustworthy Machine Learning
Steganography and Steganalysis
Watermarking

Publications

- ★ **Hang Zhou***, Dongdong Chen*, Jing Liao, Kejiang Chen, Xiaoyi Dong, Kunlin Liu, Weiming Zhang, Gang Hua, Nenghai Yu, LG-GAN: Label Guided Adversarial Network for Flexible Targeted Attack of Point Cloud-based Deep Networks, *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- ★ **Hang Zhou**, Kejiang Chen, Weiming Zhang, Han Fang, Wenbo Zhou, Nenghai Yu, DUP-Net: Denoiser and Upsampler Network for 3D Adversarial Point Clouds Defense, *IEEE/CVF International Conference on Computer Vision (ICCV)*, 2019.
- ★ **Hang Zhou**, Kejiang Chen, Weiming Zhang, Chuan Qin, Nenghai Yu, Feature-Preserving Tensor Voting Model for Mesh Steganalysis, *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2019.

- ★ **Hang Zhou**, Kejiang Chen, Weiming Zhang, Yuanzhi Yao, Nenghai Yu, Distortion Design for Secure Adaptive 3D Mesh Steganography, *IEEE Transactions on Multimedia (TMM)*, 2018.
- ★ **Hang Zhou**, Kejiang Chen, Weiming Zhang, Nenghai Yu, Comments on 'Steganography Using Reversible Texture Synthesis', *IEEE Transactions on Image Processing (TIP)*, 2017.
- ★ **Hang Zhou**, Kejiang Chen, Weiming Zhang, Zhenxing Qian, Nenghai Yu, Targeted Attack and Security Enhancement on Texture Synthesis Based Steganography, *Journal of Visual Communication and Image Representation (JVCIR)*, 2018.
- ★ Kejiang Chen, Yuefeng Chen, **Hang Zhou**, Chuan Qin, Xiaofeng Mao, Weiming Zhang, Nenghai Yu, Adversarial Examples Detection beyond Image Space, *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2021.
- ★ Kejiang Chen, **Hang Zhou**, Dongdong Hou, Weiming Zhang, Nenghai Yu, Reversible Data Hiding in JPEG Images under Multi-Distortion Metric, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, 2020.
- ★ Xiquan Guan, Weiming Zhang, Huaming Feng, **Hang Zhou**, Jie Zhang, Nenghai Yu, Reversible Watermarking in Deep Convolutional Neural Networks for Integrity Authentication, *ACM Multimedia (MM)*, 2020.
- ★ Weixiang Li, Weiming Zhang, Li Li, **Hang Zhou**, Nenghai Yu, Designing Near-Optimal Steganographic Codes in Practice Based on Polar Codes, *IEEE Transactions on Communications (TCOM)*, 2020.
- ★ Xiaoyi Dong, Dongdong Chen, **Hang Zhou**, Gang Hua, Weiming Zhang, Nenghai Yu, Self-Robust 3D Point Recognition via Gather-vector Guidance, *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- ★ Kejiang Chen, Yuefeng Chen, **Hang Zhou**, Xiaofeng Mao, Yuhong Li, Yuan He, Hui Xue, Weiming Zhang, Nenghai Yu, Self-supervised Adversarial Training, *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2020.
- ★ Han Fang, Weiming Zhang, Zehua Ma, **Hang Zhou**, Shan Sun, Hao Cui, Nenghai Yu, A Camera Shooting Resilient Watermarking Scheme for Underpainting Documents, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, 2019.
- ★ Yong Zhou, Zhimin Feng, Xiaofeng Liu, **Hang Zhou**, Min Hu, Dynamic Modeling and Simulation of Magneto-rheological Damper Based on Improved RBF Neural Network, *Ship Engineering*, 2019.
- ★ Yuanzhi Yao, Weiming Zhang, Hui Wang, **Hang Zhou**, Nenghai Yu, Content-Adaptive Reversible Visible Watermarking in Encrypted Images, *Signal Processing*, 2019.
- ★ Weixiang Li, Kejiang Chen, Weiming Zhang, **Hang Zhou**, Yaofei Wang, Nenghai Yu, JPEG Steganography with Estimated Side-information, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, 2019.

- ★ Kejiang Chen, **Hang Zhou**, Weixiang Li, Kuan Yang, Weiming Zhang, Nenghai Yu, Derivative-based Steganographic Distortion and Its Non-additive Extensions for Audio, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, 2019.
- ★ Han Fang, Weiming Zhang, **Hang Zhou**, Hao Cui, Nenghai Yu, Screen-Shooting Resilient Watermarking, *IEEE Transactions on Information Forensics and Security (TIFS)*, 2018.
- ★ Wenbo Zhou, Weixiang Li, Kejiang Chen, **Hang Zhou**, Weiming Zhang, Nenghai Yu, Controversial 'Pixel' Prior Rule for JPEG Adaptive Steganography, *IET Image Processing*, 2018.
- ★ Kejiang Chen, **Hang Zhou**, Wenbo Zhou, Weiming Zhang, Nenghai Yu, Defining Cost Functions for Adaptive JPEG Steganography at the Microscale, *IEEE Transactions on Information Forensics and Security (TIFS)*, 2018.
- ★ Han Fang, **Hang Zhou**, Zehua Ma, Weiming Zhang, Nenghai Yu, A Robust Image Watermarking Scheme in DCT Domain Based on Adaptive Texture Direction Quantization, *Multimedia Tools and Applications (MTA)*, 2018.
- ★ Mohsin Shah, Weiming Zhang, Honggang Hu, **Hang Zhou**, Toqeer Mahmood, Homomorphic, Encryption-Based Reversible Data Hiding for 3D Mesh Models, *Arabian Journal for Science and Engineering (AJSE)*, 2018.
- ★ Ruiqi Jiang, **Hang Zhou**, Weiming Zhang, Nenghai Yu, Reversible Data Hiding in Encrypted Three-Dimensional Mesh Models, *IEEE Transactions on Multimedia (TMM)*, 2017.
- ★ Zhenxing Qian, **Hang Zhou**, Weiming Zhang, Xinpeng Zhang, Robust Steganography Using Texture Synthesis, *Intelligent Information Hiding and Multimedia Signal Processing (IIH-MSP 2017)*
- ★ Zhenxing Qian, **Hang Zhou**, Xinpeng Zhang, Weiming Zhang, Separable Reversible Data Hiding in Encrypted JPEG Bitstreams, *IEEE Transactions on Dependable and Secure Computing (TDSC)*, 2016.
- ★ Jiajia Xu, **Hang Zhou**, Weiming Zhang, Ruiqi Jiang, Guoli Ma, Nenghai Yu, Second Order Predicting-Error Sorting for Reversible Data Hiding, *International Workshop on Digital Watermarking (IWDW 2016)*.
- ★ Kejiang Chen, Weiming Zhang, **Hang Zhou**, Nenghai Yu, Guorui Feng, Defining Cost Functions for Adaptive Steganography at the Microscale, *IEEE International Workshop on Information Forensics and Security (WIFS 2016)*.

Skills

Programming Language: C++, Python, Matlab, Verilog

Deep Learning Framework: Tensorflow, Pytorch

Services

- ★ Reviewer for IJCAI 2021, CVPR 2021, AAI 2021, ICLR 2021, ICLR 2020
- ★ Reviewer for IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)

- ★ Reviewer for IEEE/ACM Transactions on Audio, Speech and Language Processing (TASLP)
- ★ Reviewer for Security and Communication Networks (SCN)

Awards & Honors

- 2020 DMFS Outstanding Doctoral Dissertation, China Society of Image and Graphics (CSIG)
- 2020 Second Prize of “Internet+” College Students Innovation and Entrepreneurship Competition, Anhui Province
- 2020 Outstanding Doctoral Dissertation, University of Science and Technology of China
- 2020 Outstanding Graduate, Anhui Province
- 2020 Outstanding Graduate, University of Science and Technology of China
- 2020 The President Scholarship, Chinese Academy of Sciences (CAS)
- 2019 First-Class Scholarship, University of Science and Technology of China
- 2019 National Scholarship for Doctoral Students, China
- 2019 (4/2520) IJCAI-2019 Alibaba Adversarial AI Challenge (AAAC2019) on Model Defence Track
- 2018 Cyberspace Security Scholarship, China
- 2018 CLP Instrument Scholarship, University of Science and Technology of China
- 2018 First-Class Scholarship, University of Science and Technology of China
- 2017 First-Class Scholarship, University of Science and Technology of China
- 2016 First-Class Scholarship, University of Science and Technology of China
- 2014 Third Prize of China University IOT Innovation and Entrepreneurship Competition Finals, China
- 2014 First Prize, Shanghai University Student Electronic Design Competition (TI Cup), Shanghai
- 2014 Guanghua Scholarship, Shanghai University
- 2014 Second Prize of University Student Electronic Design Competition, Shanghai University
- 2014 First-Class Scholarship, Shanghai University
- 2014 Academic Innovation Scholarship, Shanghai University
- 2013 Second-Class Scholarship, Shanghai University
- 2012 Special Scholarship, Shanghai University
- 2012 Self-Improvement Scholarship, Shanghai University
- 2012 Public Welfare Activities Scholarship, Shanghai University

Grants

- 01/2019–12/2020 **Research on 3D Steganography Model and Method**, *the Fundamental Research Funds for the Central Universities*, No. WK6030000136.