Kai Zeng

Curriculum Vitae

University of Siena
Siena, Italy
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EDUCATION

09/2019–
06/2024
Doctor, Cyberspace Security, *University of Science and Technology of China.*
Supervisor: Prof. Zhang Weiming, Prof. Yu Nenghai

09/2015–
06/2019
Bachelor, Information Security, *University of Science and Technology of China.*
Supervisor: Prof. Zhang Weiming

WORK EXPERIENCE

07/2024–
Now
Post-doctoral Researcher, *University of Siena*, Siena, Italy.
Research Area: Robust Forensic Techniques against Adversarial Attacks.

RESEARCH INTEREST

Digital Image Steganography and Steganalysis

Generated Content Detection and Copyright Protection

PUBLICATIONS

★ **Kai Zeng**, Kejiang Chen, Jiansong Zhang, Weiming Zhang and Nenghai Yu, Towards Secure and Robust Steganography for Black-box Generated Images, *IEEE Transactions on Information Forensics and Security (**TIFS, IF: 6.8**), 2024.*

★ **Kai Zeng**, Kejiang Chen, Weiming Zhang and Yaofei Wang, Upward Robust Steganography Based on Overflow Alleviation, *IEEE Transactions on Multimedia (**TMM, IF: 7.3**), 2023.*

★ **Kai Zeng**, Kejiang Chen, Weiming Zhang, Yaofei Wang and Nenghai Yu, Robust Steganography for High Quality Images, *IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT, IF: 8.4**), 2023.*

★ **Kai Zeng**, Kejiang Chen, Weiming Zhang, Yaofei Wang and Nenghai Yu, Improving Robust Adaptive Steganography via Minimizing Channel Errors, ***Signal Processing, IF: 4.4**, 2022.*

★ Zijin Yang, **Kai Zeng**, Kejiang Chen, Han Fang, Weiming Zhang and Nenghai Yu, Gaussian Shading: Provable Performance-Lossless Image Watermarking for Diffusion Models, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024*

- ★ Qiyi Yao, **Kai Zeng**, Weiming Zhang and, Kejiang Chen, Reliable Robust Adaptive Steganographic Coding Based on Nested Polar Codes, *IEEE Transactions on Signal Processing (**TSP, IF: 4.6**), 2024.*

- ★ Yuang Qi, Kejiang Chen, **Kai Zeng**, Weiming Zhang and Nenghai Yu, Provably Secure Disambiguating Neural Linguistic Steganography, *IEEE Transactions on Dependable and Secure Computing (**TDSC, IF: 7**), 2024.*

- ★ Xiao Yu, Kejiang Chen, **Kai Zeng**, Han Fang, Zijin Yang, Yuang Qi, Weiming Zhang and Nenghai Yu, SemGIR: Semantic-Guided Image Regeneration based method for AI-generated Image Detection and Attribution, *ACM Multimedia (MM), 2024*

- ★ Zexin Fan, Kejiang Chen, **Kai Zeng**, Weiming Zhang and Nenghai Yu, Natias: Neuron Attribution based Transferable Image Adversarial Steganography, *IEEE Transactions on Information Forensics and Security (**TIFS, IF: 6.8**), 2024.*

- ★ Zijin Yang, Kejiang Chen, **Kai Zeng**, Weiming Zhang, Nenghai Yu, Provably Secure Robust Image Steganography, *IEEE Transactions on Multimedia (TMM, IF: 7.3), 2023.*

- ★ Zexin Fan, Kejiang Chen, Chuan Qin, **Kai Zeng**, Weiming Zhang and Nenghai Yu, Image Adversarial Steganography Based on Joint Distortion, *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2023.*

- ★ Yue Jiang, Kejiang Chen, Xuehu Yan, Guozheng Yang, **Kai Zeng**, Robust Secret Image Sharing Resistant to JPEG Recompression Based on Stable Block Condition, *IEEE Transactions on Multimedia, (TMM, IF: 7.3), 2024.*

HONORS & AWARDS

2023	CETC The 14TH Research Institute Glarun Scholarship
2022	Anhui Students 'Internet+' Innovation and Entrepreneurship Competition (Bronze)
2021-2023	Outstanding Student Scholarship of USTC (Grade 1)
2019	Outstanding Graduates of USTC

PROJECTS

2022-Now	Research on Secure Robust Image Steganography Modeling Methods (participation)
2022-Now	Provably Secure Steganography (participation)
2021-Now	Steganography Software Development (participation)
2022	Data Transfer and Protection based on Information Hiding (participation)
2019-2021	Robust Steganography (participation)