

# ZHANHAO HU

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## EDUCATION

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**Tsinghua University, Beijing**

*2017 - Present*

Ph.D., Computer Science and Technology

Advisor: Bo Zhang and Xiaolin Hu

Dertation: The Practicality of Physical Adversarial Examples for Deep Learning Models.

**Tsinghua University, Beijing**

*2013 - 2017*

B.S., Mathematics and Physics

Advisor: Xiaolin Hu

Dertation: STDP-based learning for spiking neural networks

## PUBLICATIONS

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### *Under review & Preprint*

Qiongxiu Li, Xia Li, **Zhanhao Hu**, Xiao Li, Xiaolin Hu, Jie Shi. (under review). On the Hardness of Input Reconstruction Attack via Gradient Sharing in Federated Learning: A Cryptographic View.

Tong Wang, Xiaohui Kuang, Qianjin Du, **Zhanhao Hu**, Huan Deng, Gang Zhao. (under review). Driving into Danger: Adversarial Patch Attack on End-To-End Autonomous Driving Systems Using Deep Learning

Xiao Li, Wei Zhang, Yining Liu, **Zhanhao Hu**, Bo Zhang, Xiaolin Hu. (preprint). Language-Driven Anchors for Zero-Shot Adversarial Robustness. arXiv:2301.13096.

Xiaopei Zhu, **Zhanhao Hu**, Siyuan Huang, Jianmin Li, Xiaolin Hu. (under review). Hiding from Infrared Detectors in Real World with Adversarial Clothes.

Xiaopei Zhu, Siyuan Huang, **Zhanhao Hu**, Jianmin Li, Xiaolin Hu. (under review). Physical Adversarial Attack to Person Detectors in Infrared Images based on 3D Modeling.

Xiao Li, Qiongxiu Li, **Zhanhao Hu**, Xiaolin Hu. (preprint). On the Privacy Effect of Data Enhancement via the Lens of Memorization. arXiv:2208.08270.

### *Published*

**Zhanhao Hu**, Wenda Chu, Xiaopei Zhu, Hui Zhang, Bo Zhang, Xiaolin Hu (2023). Physically Realizable Natural-Looking Clothing Textures Evade Person Detectors via 3D Modeling. In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

**Zhanhao Hu**, Jun Zhu, Bo Zhang, Xiaolin Hu (2022). Amplification trojan network: Attack deep neural networks by amplifying their inherent weakness. *Neurocomputing*, 505, 142-153.

**Zhanhao Hu**, Siyuan Huang, Xiaopei Zhu, Fuchun Sun, Bo Zhang, Xiaolin Hu (2022). Adversarial texture for fooling person detectors in the physical world. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR Oral)*.

Xiaopei Zhu, **Zhanhao Hu**, Siyuan Huang, Jianmin Li, Xiaolin Hu (2022). Infrared invisible clothing: Hiding from infrared detectors at multiple angles in real world. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR Oral)*.

**Zhanhao Hu**, Tao Wang, Xiaolin Hu (2017). An stdp-based supervised learning algorithm for spiking neural networks. In *Neural Information Processing: 24th International Conference (ICONIP)*.

## TALKS AND SYMPOSIA

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Adversarial texture for fooling person detectors in the physical world. Oral Presentation at the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR). 2022/06

Adversarial texture for fooling person detectors in the physical world. Shield Laboratory. 2022/06

Adversarial texture for fooling person detectors in the physical world. Beijing RealAI Intelligent Technology Co., Ltd. 2022/05

Adversarial texture for fooling person detectors in the physical world. Beijing Jiangmen Development Venture Capital Center, L.P. 2022/05

Defend Adversarial Examples by Robust Sparse Coding Neural Networks. Poster Presentation at the McGovern Institutes Joint Neuroscience Symposium, MIT. 2019/03

## TEACHING EXPERIENCE

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Neural and Cognitive Computation (No.80240642), Tsinghua University 2019 Autumn  
**Teaching Assistant**

Neural and Cognitive Computation (No.80240642), Tsinghua University 2018 Autumn  
**Teaching Assistant**

## PROFESSIONAL SERVICE

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### Journal Reviewer

- TIP, TPAMI, TNNLS

### Conference Reviewer

- CVPR, ECCV, AAAI, ICML, ICIST, ICACI, ICICIP, ISNN

### Workshop Reviewer

- ICML2021 adversarial ML workshop