

# YIFEI WANG

Beijing, China

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## EDUCATION

**Peking University, School of Mathematical Sciences**

**09 2017 – 07 2023 (expected)**

*Ph.D. Candidate in Applied Math*

*Beijing, China*

*Member of ZERO Lab. Advisors: Yisen Wang, Jiansheng Yang, Zhouchen Lin*

**Peking University, School of Mathematical Sciences**

**09 2013 – 07 2017**

*Bachelor of Science*

*Beijing, China*

**Peking University, Department of Philosophy**

**09 2014 – 07 2017**

*Bachelor of Art (Double Degree)*

*Beijing, China*

## RESEARCH INTERESTS

- Self-Supervised Representation Learning
- Self-Supervised Generative Models
- Trustworthy Machine Learning
- Graph Neural Networks

## HONORS AND AWARDS

- **National Fellowship**, Ministry of Education (**top 1%**), 2021, 2022.
- **President's Fellowship**, Peking University (**top 1%**), 2022.
- **Best (Student) Machine Learning Paper Award**, ECML-PKDD 2021 (**1/685**).
- **Silver Best Paper Award**, ICML 2021 workshop on AML.
- **Meritorious Winner (First Prize)**, Mathematical Contest in Modeling, 2016.

## PUBLICATIONS

*How Mask Matters: Towards Theoretical Understandings of Masked Autoencoders*

**2022**

- Qi Zhang\*, **Yifei Wang\***, Yisen Wang
- Advances in Neural Information Processing Systems (**NeurIPS**)

*Improving Out-of-distribution Robustness by Adversarial Training with Structured Priors*

**2022**

- Qixun Wang\*, **Yifei Wang\***, Hong Zhu, Yisen Wang
- Advances in Neural Information Processing Systems (**NeurIPS**)

*Chaos is a Ladder: A New Theoretical Understanding of Contrastive Learning via Augmentation Overlap*

**2022**

- **Yifei Wang\***, Qi Zhang\*, Yisen Wang, Jiansheng Yang, Zhouchen Lin
- International Conference on Learning Representations (**ICLR**)

*A Unified Contrastive Energy-based Model for Understanding the Generative Ability of Adversarial Training*

**2022**

- **Yifei Wang**, Yisen Wang, Jiansheng Yang, Zhouchen Lin
- International Conference on Learning Representations (**ICLR**)

*Residual Relaxation for Multi-view Representation Learning*

**2021**

- **Yifei Wang**, Zhengyang Geng, Feng Jiang, Chuming Li, Yisen Wang, Jiansheng Yang, Zhouchen Lin
- Advances in Neural Information Processing Systems (**NeurIPS**)

*Dissecting the Diffusion Process in Linear Graph Convolutional Networks*

**2021**

- **Yifei Wang**, Yisen Wang, Jiansheng Yang, Zhouchen Lin
- Advances in Neural Information Processing Systems (**NeurIPS**)

<i>Demystifying Adversarial Training via A Unified Probabilistic Framework</i>	<b>2021</b>
<ul style="list-style-type: none"> <li>• <b>Yifei Wang</b>, Yisen Wang, Jiansheng Yang, Zhouchen Lin</li> <li>• International Conference on Machine Learning AML Workshop (<b>ICML-W</b>)</li> <li>• <b>SILVER BEST PAPER AWARD</b></li> </ul>	
<i>Improving Adversarial Robustness of Vision Transformers</i>	<b>2022</b>
<ul style="list-style-type: none"> <li>• Yichuan Mo, Dongxian Wu, <b>Yifei Wang</b>, Yiwen Guo, Yisen Wang</li> <li>• Advances in Neural Information Processing Systems (<b>NeurIPS</b>)</li> </ul>	
<i>Optimization-induced Graph Implicit Nonlinear Diffusion</i>	<b>2022</b>
<ul style="list-style-type: none"> <li>• Qi Chen, <b>Yifei Wang</b>, Yisen Wang, Zhouchen Lin</li> <li>• International Conference on Machine Learning (<b>ICML</b>)</li> </ul>	
<i>G<sup>2</sup>CN: Graph Gaussian Convolution Networks with Concentrated Graph Filters</i>	<b>2022</b>
<ul style="list-style-type: none"> <li>• Mingjie Li, Xiaojun Guo, <b>Yifei Wang</b>, Yisen Wang, Zhouchen Lin</li> <li>• International Conference on Machine Learning (<b>ICML</b>)</li> </ul>	
<i>Train Once, and Decode as You Like</i>	<b>2020</b>
<ul style="list-style-type: none"> <li>• Chao Tian, <b>Yifei Wang</b>, Hao Cheng, Yijiang Lian, Zhihua Zhang</li> <li>• International Committee on Computational Linguistics (<b>COLING</b>)</li> </ul>	

## INTERNSHIP

<b>Huawei Noah's Arch Lab</b>	<b>09 2021 – now</b>
<i>Research Intern</i>	<i>Beijing, China</i>
<ul style="list-style-type: none"> <li>• Research on Self-supervised Learning.</li> </ul>	
<b>Huawei Noah's Arch Lab</b>	<b>09 2019 – 03 2020</b>
<i>Research Intern</i>	<i>Beijing, China</i>
<ul style="list-style-type: none"> <li>• Research on Representation Disentanglement of Robust and Sensitive Features.</li> </ul>	
<b>Baidu's Phoenix Nest</b>	<b>09 2018 – 03 2019</b>
<i>Research Intern</i>	<i>Beijing, China</i>
<ul style="list-style-type: none"> <li>• Research on End-to-end AD Selection with Reinforcement Learning.</li> </ul>	

## TECHNICAL SKILLS

**Languages:** Python, MATLAB, C

**Technologies/Frameworks:** Linux, Git, PyTorch, TensorFlow