

Wenyuan Zhao

Curriculum Vitae

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Research Interest

Bayesian Deep Learning: Designing systematic approaches and algorithms for constructing Bayesian inference that are amenable to efficient training and uncertainty quantification.

Information Theory: Providing security and privacy guarantees in modern information systems, in addition to the regular data retrieval functionality.

Education

2023 – Now **Ph.D., Texas A&M University**, College Station, United States
Information Science and Learning Systems
Advisor: *Dr. Chao Tian*
GPA: 4.0/4.0

2021 – 2023 **M.S., University of California San Diego**, La Jolla, United States
Communication Theory and Systems
Research: AI-driven Dynamic mmWave Mesh Backhaul
Advisor: *Dr. Xinyu Zhang*

2017 – 2021 **B.E., Southeast University**, Nanjing, China
Information Engineering
Thesis: Machine Learning-based Matrix Optimization in Massive MIMO
Advisor: *Dr. Cheng Zhang*

Selected Publications

AISTATS 2025 “From Deep Additive Kernel Learning to Last-layer Bayesian Neural Networks via Induced Prior Approximation”
Wenyuan Zhao, Haoyuan Chen, Tie Liu, Rui Tuo, Chao Tian
International Conference on Artificial Intelligence and Statistics (AISTATS), 2025.

ISIT 2024 “Weakly Private Information Retrieval from Heterogeneously Trusted Servers”
Yu-Shin Huang, **Wenyuan Zhao**, Ruida Zhou, Chao Tian
IEEE International Symposium on Information Theory (ISIT), 2024.

Other Publications

arXiv “Optimizing Leaky Private Information Retrieval Codes to Achieve $O(\log K)$ Leakage Ratio Exponent”

Wenyuan Zhao, Yu-Shin Huang, Chao Tian, Alex Sprintson

arXiv preprint, submitted to *ISIT 2025*.

(Preprint. Under review.)

arXiv “Weakly Private Information Retrieval from Heterogeneously Trusted Servers”

Wenyuan Zhao, Yu-Shin Huang, Ruida Zhou, Chao Tian

arXiv preprint, submitted to *IEEE Transactions on Information Theory*.

(Extended version of ISIT24 paper. Under review.)

BE Thesis “Machine Learning-based Matrix Optimization Algorithm in Massive MIMO”

Wenyuan Zhao

Undergraduate Thesis at Southeast University, 2021

ICCDS 2021 “A Survey on Fog Computing Applications in Internet of Vehicles”

Wenyuan Zhao

International Conference on Computing and Data Science (ICCDS), Stanford 2021

JOP 2020 “Classification of Customer Reviews on E-commerce Platforms Based on Naive Bayesian Algorithm and Support Vector Machine”

Wenyuan Zhao

Journal of Physics: Conference Series (JOP), IOP Publishing, 2020

Graduate Research

2023 – **Bayesian Deep Learning and Uncertainty Quantification**

- Sparse expansions for deep Gaussian processes (DGPs) as BNNs
- Deep additive kernel learning as last-layer Bayesian neural networks
- Uncertainty quantification in large language models

2023 – 2025 **Private Information Retrieval**

- Weakly private information retrieval with heterogeneity in server trustfulness
- Leaky private information retrieval with $O(\log K)$ privacy leakage

2022 – 2023 **Dynamic mmWave Mesh Network.**

- Highly-dynamic mmWave mesh network control by reinforcement learning
- Bridging the Simulation-to-Reality gap by self-supervised learning
- System-level modules for software-defined mmWave mesh network

2020 – 2021 **Machine learning-based Matrix Optimization in Massive MIMO.**

- Complex matrix inversion in massive MIMO downlink precoding
- Complex-valued Gradient Neural Network (CVGNN)

2019 – 2020 **Large-scale mmWave Beamforming.**

- Beam alignment and tracking (BA/T) as a stochastic bandit learning problem
- Greedy and upper confidence bound strategy for optimal beam searching

Awards

2020 Sun Qingyun Scholarship for Academic Achievement

2019 **First Prize (Top 0.7%)** of Mathematical Contest in Modeling (CUMCM)

2019 Mitsubishi Electric Corporation Scholarship

2018 University Scholarship for Excellent Academic

Skills

Programming C/C++, Python, Matlab, Java, Shell scripting

ML Tools PyTorch, TensorFlow, GPytorch, Pyro

IDEs \LaTeX , VSCode, Verilog

Services

Reviewer ISIT 2024, IEEE Transactions on Information Theory
IIEE Transactions