

# 学术报告会

时间: 2024年8月7日 10:00

地点: 电信群楼2-410会议室

## Learning with norm-based neural networks: model capacity and computational-statistical gaps



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### 摘要:

In this talk, I will discuss some fundamental questions in modern machine learning:

- What is the suitable model capacity of over-parameterized models?
- What is the suitable function space for feature learning?
- Which function can be learned by two-layer neural networks, statistical and/or computational efficiently?
- What is the computational-statistical gap behind this?

My talk will partly answer the above questions, both theoretically and empirically.

### 简介:

Dr. Fanghui Liu is currently an Assistant Professor at University of Warwick, UK, a member of Centre for Discrete Mathematics and its Applications (DIMAP). His research interests focus on machine learning theory as well as theoretical-oriented applications, e.g., trustworthy machine learning. He was a recipient of AAAI24 New Faculty Award, DAAD AINet Fellowship 2024, Rising Star in AI (KAUST 2023). He has presented three tutorials at ISIT' 24 on foundations of trustworthy machine learning, CVPR' 23 on deep learning theory, and ICASSP' 23 on statistical learning theory, respectively. He will be an area chair at AAMAS 2025 and co-organize a workshop at NeurIPS 2024 on fine-tuning from principles to scalability. Prior to his current position, he worked as a postdoc researcher at EPFL (2021-2023) and KU Leuven (2019-2023), respectively. He received his PhD from Shanghai Jiao Tong University (China) in 2019 and bachelor's degree from Harbin Institute of Technology (China) in 2014.