

TINGYU MO

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EDUCATION

M.Eng. in Electronic and Information Engineering

Beihang University

Advisor: Prof. Lei Ren

Published papers at TH

Expected Jan. 2024

Beijing, China

B.Eng. in Intelligence Science and Technology

University of Science and Technology Beijing

Thesis: Deep Adversarial Transfer Learning under Weak Supervision

Advisor: Prof. Yanling Zhang

GPA: 3.7/4.0

Sep. 2017 - Jun. 2021

Beijing, China

PUBLICATIONS

[1] **Meta-Learning Based Domain Generalization Framework for Fault Diagnosis with Gradient Aligning and Semantic Matching.**

Lei Ren*, **Tingyu Mo***, Xuejun Cheng

IEEE Transactions on Industrial Informatics. 2023. (IF: 11.648)

[2] **Temporal-Frequency Attention Focusing for Time Series Extrinsic Regression via Auxiliary Task.**

Lei Ren*, **Tingyu Mo***, Xuejun Cheng

IEEE Transactions on Neural Networks and Learning Systems. 2023. (IF: 14.225), Minor Revision.

[3] **A Wavelet-Enhanced Curriculum Domain Adaptation Model for Time-Series Sensor Data.**

Lei Ren, Xuejun Cheng, **Tingyu Mo**

IEEE Transactions on Industrial Informatics. 2023. Under Review.

[4] **LMRformer: Lightweight Multi-hierarchy Time Series Reduction Transformer for Efficient Remaining Useful Life Prediction.**

Lei Ren, Haiteng Wang, **Tingyu Mo**

IEEE Transactions on Industrial Informatics. 2023. Under Review.

[5] **A Survey of Evolutionary Game and Resource Allocation.**

Yanling Zhang, **Tingyu Mo**, Songtao Li, Yan Zhang, Qing Li

Chinese Journal of Engineering. 2022, 44(3): 402-410.

RESEARCH EXPERIENCE

Research Intern in Transfer Learning

Nov. 2021 - Mar. 2023

Instructor: Prof. Lei Ren

Mainly focus on Domain Generalization and Domain Adaptation. Proposed a cross-domain generalization method Meta-GENE[1] to achieve the heterogeneous domain generalization problem via utilizing multi-source data with semantic shift. Introduced a progressive knowledge transfer strategy[3] based on curriculum learning in the adversarial domain adaptation framework to address the unsupervised domain adaptation problem.

Research Intern in Time Series Prediction

Feb. 2022 - Sept. 2022

Instructor: Prof. Lei Ren

Mainly focus on Time Series Forecasting and Extrinsic Regression [2][4]. Designed an auxiliary task within the multi-task learning framework for time series extrinsic regression task to reconstruct critical information in the temporal-frequency domain, which aimed at redirecting regression model's attention towards the most essential information so as to predict external label precisely.

Research Intern in Multi-Agent Game Theory

Nov. 2019 - May. 2020

Instructor: Prof. Yanling Zhang

Mainly focus on Evolutionary Game Theory, Multi-Agent Ultimate Game under Complex Network [5]. Studied the factors affecting the emergence of fairness in a variety of complex networks within the framework of evolutionary game theory and under the setting of ultimatum game, such as changes in edge weights and the dynamic benefits structure of the game. Carried on numerical simulation, experimental data recording and visualization analysis of the evolutionary process.

AWARDS AND HONORS

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|---|-------------|
| • Academic Scholarship, Beihang University | 2022 |
| • Outstanding Graduate, University of Science and Technology Beijing | 2021 |
| • Third Prize in the "Huawei Cup" Graduate Mathematical Modeling Competition | 2021 |
| • Second Prize in Undergraduate Research Training Program, National Level Project | 2020 |
| • First Prize in iCAN International Innovation and Entrepreneurship Competition, Beijing Division | 2019 |
| • Third prize in the "dream +" innovation and entrepreneurship competition | 2019 |
| • Merit Student, University of Science and Technology Beijing | 2017 - 2020 |
| • Excellent Individual in Social Practice, University of Science and Technology Beijing | 2018 |

SKILLS

Programming Languages:	Python, C, Shell
Language Skills:	CET-4 (575), CET6 (515), Cantonese
Tools for ML/DL:	PyTorch, Tensorflow, wandb, tsai
Others and Soft Skills:	LaTex, Markdown, Linux