

## RESEARCH INTERESTS

Multi-agent Reinforcement Learning, MARL (Pre-training) on video game, Automatic Speech Recognition (ASR), Probabilistic graphical model, Generative Models, and Contrastive Learning

## INTERNSHIP

2021, **Huawei Noah'S Ark Lab**, Research Internship (mentor: Jun Wang)

2020, **MSRA**, Research Internship (mentor: Xu Tan)

2018, **CASIA**, Research Internship (mentor: Shiyu Zhou)

## EDUCATION

2019 - Now, **Ph.D. Student**, Patern Recognition and Intelligent Systems, Institute of Automation, Chinese Academy of Sciences. Supervised by Prof. Bo Xu (<https://peopleucas.ac.cn/xubo>).

2015 - 2019, **B.E.**, Rail Transit Signal and Control, Beijing Jiao Tong University.

## AWARDS

2021, A member of the first experimental class of direct doctoral students in CASIA.

2019, Excellent Student (University, top 2%)

2018, National Undergraduate Electronics Design Contest (National, First Prize)

2018, National Encouragement Scholarship

## PROFESSIONAL EXPERIENCE

**End-to-end ASR**    Research Intership (MSRA)    2018 - 2020

Speech augmentation for low resource speech recognition, supervised by Xu Tan ([Homepage](#)).

**MARL on Football** Research Intership (Huawei Cloud)    2021

Integrating reward shaping and population-based training for MARL on Football Game.

**Asynchronous RL**    Ph.D. Student (CASIA)    2021

Enforcing the gradient messaging between multiple devices for efficient reinforcement learning on the Wargame.

**Safety RL**    Research Intership (Huawei London)    2021

Working on intervent the agent avoiding taking the dangerous actions and submitted a paper.

**MARL baselines**    Ph.D. Student (CASIA)    2021

Implementing the discrete version of optimal baselines for multi-agent policy gradient methods.

## PUBLICATIONS

**M3: Modularization for Offline Multi-task Multi-agent Reinforcement Learning**, Linghui Meng, Jingqing Ruan, Xuantang Xiong, Xiyun Li, Xi Zhang, Dengpeng Xing, Bo Xu  
AAMAS 2023

**Learning in Bi-level Markov Games**, Linghui Meng, Jingqing Ruan, Dengpeng Xing, Bo Xu  
IJCNN 2022

**Promoting Coordination Through Electing First-move Agent in Multi-Agent Reinforcement Learning**, Jingqing Ruan\*, Linghui Meng\*, Xuantang Xiong, Dengpeng Xing, Bo Xu  
ICAPS 2022

**GCS: Graph-based Coordination Strategy for Multi-Agent Reinforcement Learning**, Jingqing Ruan, Yali Du, Xuantang Xiong, Dengpeng Xing, Xiyun Li, Linghui Meng, Haifeng Zhang, Jun Wang, Bo Xu  
AAMAS 2022

**Offline Pre-trained Multi-Agent Decision Transformer: One Big Sequence Model Conquers All StarCraftII Tasks**, Linghui Meng, Muning Wen, Yaodong Yang, Chenyang Le, Xiyun Li, Weinan Zhang, Ying Wen, Haifeng Zhang, Jun Wang, Bo Xu  
Submitted to ICML 2022

**Settling the Variance of Multi-Agent Policy Gradients**, Jakub Grudzien Kuba, Muning Wen, Linghui Meng, Shangding Gu, Haifeng Zhang, David Henry Mguni, Jun Wang, Yaodong Yang  
NeurIPS 2021

**MixSpeech: Data Augmentation for Low-resource Automatic Speech Recognition**, Linghui Meng, Jin Xu, Xu Tan, Jindong Wang, Tao Qin, Bo Xu  
ICASSP 2021

Two papers submitted