Jia-Fong Yeh

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Computer Vision, Deep Robotics, Policy Learning

Education

National Taiwan University (NTU), Taipei, Taiwan *Fall 2019 – present*

Ph.D. Candidate, Department of Computer Science and Information Engineering

Advisor: **Prof. Winston H. Hsu**

Topics: *Few-shot learning, computer vision, robotics*

National Taiwan Normal University (NTNU), Taipei, Taiwan *Fall 2013 – Spring 2019*

B.S. & M.S., Department of Computer Science and Information Engineering

Advisor: **Prof. Tsung-Che Chiang** and **Prof. Shun-Shii Lin**

Topics: *Evolutionary computation, computer games*

Research Interest

Computer Vision and Robotics – few-shot learning, imitation learning

Evolutionary Computation – real-parameters optimization, adaptive control

Computer Games – Surakarta chess, endgame database, parallel tree search

Experiences & Services

Research Intern, *Sony Group Corporation*, Tokyo, Japan *2023/10 – 2024/03*

- Mentor: Dr. Wang Zhao and Shingo Takamatsu
- Topic: *Reinforcement Learning with multi-modal inputs*

Graduate researcher, *NTU*, Taipei, Taiwan *2019/08 – present*

- Advisor: Prof. Winston Hsu and Prof. Yi-Ting Chen (NYCU)
- Topic: *Computer Vision, Machine Learning, Deep Robotics*

Graduate researcher, *NTNU*, Taipei, Taiwan *2017/09 – 2019/07*

- Advisor: Prof. Tsung-Che Chiang and Prof. Shun-Shii Lin
- Topic: *Evolutionary Computation, Computer Games*

Journal reviewers

- neurocomputing
- soft computing

Conference reviewers

- IEEE Conference on Computer Vision and Pattern Recognition (2024)
- AAAI Conference on Artificial Intelligence (2023 - 2024)
- IEEE Winter Conference on Applications of Computer Vision (2024)
- IEEE International Conference on Acoustics, Speech and Signal Processing (2024)
- IEEE International Conference on Development and Learning (2024)
- IEEE Conference on Computer Vision and Pattern Recognition Workshops (2022)

Publications - 14 publications | citations: 220+ | h-index: 6 | i-10 index: 6 | Google Scholar

2024

Arxiv	Tracking-Assisted Object Detection with Event Cameras
Arxiv	AED: Adaptable Error Detection for Few-shot Imitation Policy **(*)**

2023

Arxiv	Multi-Task Reinforcement Learning with Shared-Unique Features and Task-Aware Prioritized Experience Replay
Arxiv	MuRAL: Multi-Scale Region-based Active Learning for Object Detection
TMM	Dual-Awareness Attention for Few-Shot Object Detection
ICASSP	BIRD-PCC: Bi-directional Range Image-based Deep LiDAR Point Cloud Compression
ICRA	Orbeez-SLAM: A Real-time Monocular Visual SLAM with ORB Features and NeRF-realized Mapping

2022

BMVC	Free-form 3D Scene Inpainting with Dual-stream GAN
BMVC	Learning Fine-Grained Visual Understanding for Video Question Answering via Decoupling Spatial-Temporal Modeling
ICIP	SeqDNet: Improving Missing Value by Sequential Depth Network
AAAI	Stage Conscious Attention Network (SCAN): A Demonstration-conditioned Policy for Few-shot Imitation **(*, AR: 15%)**

Before 2022

ICASSP	Role Aware Multi-Party Dialogue Question Answering
CEC	Multi-population Modified L-SHADE for Single Objective Bound Constrained Optimization
Arxiv	Large Margin Mechanism and Pseudo Query Set on Cross-Domain Few-Shot Learning **(*)**
TAAI	Parameter Setting of CMA-ES: A Numerical Study on CEC2019 100-Digit Challenge
CEC	Modified L-SHADE for Single Objective Real-Parameter Optimization **(*)**
ICGA	Design and implementation aspects of a Surakarta program
ICGEC	Many-Objective Evolutionary Algorithm with Reference Point-based and Vector Angle-

	Based Selection
TAAI	Snake Game AI: Movement Rating Functions and Evolutionary Algorithm-Based Optimization **(*)**

(***** = first-author or co-first authors, AR = acceptance rate)

Selected Awards

2022 | **NOVATEK PhD Scholarship** - *NOVATEK*, one of eight recipients [link]

2019 | **Master Thesis Award** - *Operations Research Society of Taiwan* [link]

2018 | **ITSA Programing Contest** - *ITSA Annual Collegiate Programming Contest* [link]

2016-2022 | **Computer Games** – 16 medals in ICGA, TCGA, TAAI Competitions

Skills

Programming Languages - C/C++ (familiar)、Python (familiar)、C# (knowledge of)

ML Packages - PyTorch (familiar)、TensorFlow (knowledge of)、scikit-learn (familiar)

Others - HTML (familiar)、CSS (familiar)、mysql (studied)、OpenMP (knowledge of)、WebGL (studied)