

FENG-YI LIAO

Email: fliao@ucsd.edu

EDUCATION

University of California San Diego

M.S., Electrical and Computer Engineering (Intelligent Systems, Robotics & Control)

United States

Sep. 2021 – Present

National Chung Hsing University

B.S., Bio-Industrial Mechatronics Engineering

Taichung, Taiwan

2016 – 2020

PUBLICATIONS

Preprint

1. **Liao, F. Y.**, & Zheng, Y. (2022). Iterative Inner/outer Approximations for Scalable Semidefinite Programs using Block Factor-width-two Matrices. arXiv preprint arXiv:2204.06759 [PDF][CODE]

Journal

1. Xu, A. Q., Luo, S. J., **Liao, F. Y.**, Chen, I. C., Chien, M. C., & Huang, K. Y. (2020). Development of a Novel Autoinspection System for Paddy Seed Early-germination Performance. *Sensors and Materials*, 32(11), 3647-3657 [PDF]

RESEARCH EXPERIENCES

Scalable Optimization and Control (SOC) Lab, UCSD

Advisor: Prof. Yang, Zheng

Oct. 2021 – Present

- Develop efficient algorithms for semidefinite programs (SDPs)

Image and Signal Processing Lab, NCHU

Advisor: Prof. Kuo-Yi Huang

July 2020 – Feb. 2021

- Develop machine vision systems to achieve agriculture automation

AWARDS

- NCHU Golden Key award (top 5% of class) 2020
- Second place award, smart agricultural robotic competition 2019
- NCHU Ching-O award, NCHU (top 5% of class) 2019
- NCHU Academic Excellence award (top 10% of class) 2018

TEACHING EXPERIENCE

Teaching Assistant at National Chung Hsing University

- **Artificial Intelligence of Things**, *Prof. Tshen-Chan Lin*

SELECTED PROJECTS

Sensing and Estimation in Robotics

- Implement **Particle Filter and Visual-Inertial SLAM**

Semidefinite and Sum-of-squares Optimization

- Implement **ADMM** for large-scale SDPs

Convex Optimization

- Implement **Coordinate descent, Dystra's projection algorithm, and ADMM**