

ZHIYUAN LIANG

liangzy512@gmail.com / 

EDUCATION

Beijing Institute of Technology (BIT), Beijing, China Sep. 2020 – Jun. 2023 (Expected)

Master student in Computer Technology

Hefei University of Technology (HFUT), Anhui, China Sep. 2016 – Jun. 2020

Bachelor in Internet of Things Engineering (Ranking: 3/97)

EXPERIENCE

Feng Chia University, Taiwan (*Exchange student*) Feb. 2018 – Jul. 2018

Social Research in the U.S., Los Angeles Jan. 2017 – Feb. 2017

PUBLICATIONS

Bidirectional 3D Quasi-Recurrent Neural Network for Hyperspectral Image Super-Resolution (IEEE J-STARS 2021). Ying Fu, [Zhiyuan Liang](#), Shaodi You.

- Designed a single hyperspectral image super-resolution method, using 3D convolutions to extract spatial-spectral correlation and bidirectional quasi-recurrent units to exploit the global correlation along spectra.
- Proposed a training strategy for remote sensed images by pre-training the model on hyperspectral data and fine-tuning on remote sensed data, which solves the problem of insufficient remote sensing images.

Joint Spatial-Spectral Pattern Optimization and Hyperspectral Image Reconstruction

(IEEE JSTSP 2022). Tao Zhang, [Zhiyuan Liang](#), Ying Fu.

- Proposed a snapshot hyperspectral imaging method based on jointly optimization and reconstruction that designs the patterns in hardware and reconstruction algorithm in software together.
- The multispectral filter array, spectral sensitivity function, and spatial-spectral reconstruction algorithm are jointly learned in the proposed method.

PROJECTS

Blind Single Hyperspectral Image Super-Resolution Nov. 2021 – Apr. 2022

- Unsupervised learning for blind hyperspectral image super-resolution where the degradation is unknown.

SignNet | Course project of Computer Vision Oct. 2020 – Nov. 2020

- Proposed a deep-learning framework for American sign language recognition, using an enhanced VGG network for feature extraction and average background subtraction algorithm for background removal.
- Achieved real-time recognition on a single CPU with 85% accuracy.

SKILLS

- Programming Languages: C++, Python, Pytorch, Matlab, Java
- Course: Advanced Mathematics (93), Complex Variables (97), Probability and Statistic (98), Computer Graphics (94), Computer Vision (93), Big Data (95), JAVA (100)
- Interests: Low-level Computer Vision, Computational Imaging

HONORS AND AWARDS

China National Scholarship, Ministry of Education 2021

Provincial Outstanding College Students, Anhui 2019

4th Prize in National Chess Association Masters Tournament 2018

2nd Prize in National Chess Association Masters Tournament. Award on National Chess Master 2016