# YUWEI ZHUO

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## **EDUCATION**

#### Tsinghua University, Beijing, China

09/2023 -

Information and Communication Engineering in Department of Electronic Engineering

**University of Electronic Science and Technology of China**, Sichuan, China 09/2019 – 06/2023

Computer science and Technology in Yingcai Honors College

**GPA: 3.98/4.00** Ranked 2/186 (2%) Average Score: 92.13 CET4: 577 CET6: 493

#### HONORS AND AWARDS

Excellent Student Scholarship	2020 & 2021
Top Ten League Branch Member	2020 & 2021
Excellent practice team member	2020
National First Prize, China Undergraduate Mathematical Contest in Modeling	2021
Meritorious Winner, Interdisciplinary Contest in Modeling	2022
First Prize in Sichuan Province, The 13th Blue Bridge Cup Competition Software Category	2022
National Second Prize, The 13th Blue Bridge Cup Competition Software Category	2022
The Third Prize Scholarship, The 21st Mathematical Contest in Modeling of UESTC	2021
The Third Prize Scholarship, The 3rd Peer heart growth style contest of UESTC	2021

# RESEARCH EXPERIENCE

#### Remote Sensing Image processing and machine learning

09/2020 - Present

Combined with the method of deep learning, research on remote sensing image super-resolution and image fusion (pan-sharpening) is carried out, trying to solve the problems in the existing methods, such as the inability to effectively extract and utilize detailed information, aiming to propose a fusion method that both preserves spectral features and improves spatial resolution.

Studying with Prof. LiangJian Deng, School of Mathematical Sciences, UESTC

#### **Intelligent Transportation System Based on YOLOv5**

10/2020 - 10/2021

A real-time control scheme of intelligent traffic lights based on YOLOv5 algorithm is proposed, which integrates the functions of target recognition and real-time counting. The project successfully applied for the innovation and entrepreneurship project of college students and successfully concluded.

Studying with Prof. GuoLiang He, School of Mathematical Sciences, UESTC

#### **Design of Pipeline Microprocessor Based on MIPS Architecture**

03/2021 - 08/2021

The multi-core 64-bit MIPS processor architecture including ALU and MCU modules is realized by using Vivado software in VHDL language, and finally the random number sorting algorithm is written in assembly language. In the grade assessment, the algorithm speed ranks **the first**, and the hardware efficiency ranks **the second**.

Studying with Prof. Jianhao Hu, School of Information and Communication Engineering, UESTC

# ○ JOURNAL AND CONFERENCE

- 1. **Yu-wei Zhuo**, Tian-Jing Zhang, Jin-Fan Hu, Hong-Xia Dou, Ting-Zhu Huang and Liang-Jian Deng. "A Deep-Shallow Fusion Network with Multi-Detail Extractor and Spectral Attention for Hyperspectral Pansharpening." in IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, vol. 15, pp. 7539-7555, 2022, doi: 10.1109/JSTARS.2022.3202866.
- 2. Jin, Z.-R.<sup>1</sup>, **Zhuo, Y.-W.**<sup>1</sup>, Zhang, T.-J., Jin, X.-X., Jing, S., Deng, L.-J. "Remote Sensing Pansharpening by Full-Depth Feature Fusion." **Remote Sensing**. 2022; 14(3):466. https://doi.org/10.3390/rs14030466 (1: **Co-first Auther**)
- 3. Si-Ran Peng, Liang-Jian Deng, Jin-Fan Hu and **Yu-wei Zhuo**. "Source-Adaptive Discriminative Kernels based Network for Remote Sensing Pansharpening" Submitted to **IJCAI-2022** (CCF-A). (**Accepted**)
- 4. Hong-Xia Dou, **Yu-Wei Zhuo**, Zhong-Cheng Wu, Liang-Jian Deng, Gemine Vivone. "Dynamical Fusion Model with Jointly Variational and Deep Priors for Hyperspectral Image Super-Resolution." Submitted to IEEE Signal Processing Letters (**IEEE SPL**). (In Peer Review)

## **♡** Working Experience

Psychological Committee Member of Yingcai Honors College	2020 & 2021
Deputy Minister of Innovation and Entrepreneurship Center	2020 &2021
Group leader of Xihe practice team	2020

### PROFESSIONAL COURSE GRADE

Calculus:	97	The C++ Programming:	98	Random Mathematics:	93
Data Structure and Algorithm:	96	Computer Networks:	96	Discrete Mathematics:	95
Python Language Programming:	95	Software Engineering:	98	Artificial Intelligence:	98
Principles of Computer Organization:	97	Computer Graphics:	98	Basic Academic Training:	96

#### SKILLS

Programming: Python (Pytorch, Tensorflow), MATLAB, C language, SQL, JAVA, VHDL

Research software: LaTex, PowerPoint, Excel, Word, Origin, Gephi

Language Skills: English

**Interests**: Sports (running, table tennis, basketball), music (singing, guitar, piano)

Others: Psychological Quality Development Engineering Advanced Skills Certificate

#### i Self-evaluation

Strong learning ability, solid mathematical foundation, strong logical thinking ability;

Have the spirit of study, like to think, love scientific research;

Strong teamwork ability, good at communicating with people, willing to help others;

Strong motivation and love of innovative practice.