EI CHEN

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Education

Ecole Centrale de Nantes (ECN)

September 2022 – September 2024 (Expected)

MSc Signal and Image Processing

Nantes. France

• Key courses: Computer Vision, Spectral and Time-Frequency Analysis, Signal Processing, Artificial Intelligence, Design of Signal and Image Representations, Statistical Signal Processing and Estimation Theory, Machine Learning, Data Analysis and Information Retrieval.

Ecole Centrale de Nantes (ECN)

September 2021 – June 2022

Foundation Master In Control and Robotic

Nantes, France

* Key courses: Mathematics, Image Methodology, Control System.

Harbin Institute of Technology

September 2018 – July 2022

Bachelor of Mechatronics Engineering

Harbin, China

- Key courses: Calculus, Probability Theory, Mechanical Design, Mechanical Principle, Dynamics, Mechanical Materials, Control System, The Control Theory for Electromechanical Systems, Fluid Mechanics in Mechanical Engineering
- Awards: Second Prize of China University Intelligent Robot Competition (National), One of the runners-up of the 13th International Underwater Robot Competition, two second prizes, one-third prize(National), Second Prize in Engineering Training Competition(Provincial)

Course Project and Internship

Applications of artificial intelligence techniques to undersea optical links

March 2024-Present

Internship (Supervisor: Mohammad-Ali Khalighi)

Marseille, France

- Study and implement data transmission techniques based on artificial intelligence to improve the performance of these links in complex transmission environments.
- A precise analysis of the real contribution of these solutions will have to be carried out.

Ultrasonic imaging by filtered beamforming

October 2023-January 2024

Independent Work (Supervisor:Sébastien Bourguignon)

Nantes, France

• Time-domain beamforming is a classical method for computing echographic images from ultrasonic data. Studied the differences, pros, and cons of standard, CC, and GCC beamforming techniques and completed the relevant literature

Unmixing of Remote Sensing Data with Sparse Optimization Algorithms

May 2023 - June 2023

Team Member

Nantes, France

- Evaluating a dedicated algorithm performance on remote sensing unmixing data typical from satellite measurements of the Mars surface.
- Debugging the algorithm.

Inverted Pendulum

January 2022 - May 2022

Team Member

Nantes, France

- Conducted in-depth analysis of the mechanical configuration and control board
- Spearhead the definition of advanced technical enhancements for the device, encompassing motor power augmentation.
- Developed a comprehensive operational control board within the STM32 environment.

International Underwater Robot Competition

August 2020 - April 2021

Team Leader

Qingdao, China

- Programmed with C to control robot fish which is driven by stm32 under the assistance of a camera to complete designed tasks.
- Enhanced the rapidity and anti-interference of mechanical fish.

Skills

Languages: Fluent in English(B2) and Native in Chinese, French (A2)

Technical Skills: MATLAB, Python, Anaconda, CAD, SolidWorks, LaTeX, C++, C

Extracurricular activity

Photgraphy