

Zhengqi WANG(Tyler)

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EDUCATION

Harbin Institute of Technology (Weihai)

2022.08 – 2026.06 (Expected)

Major in Optoelectronic Information Science and Engineering

B.S. Degree

GPA: 3.65/4.0, 87.10/100

Main courses: Semiconductor Optic Electronics, Nano-optoelectronics, Photoelectric Functional Materials and Devices, Information Optics, Electrodynamics, Laser Principle

ACADEMIC PROJECTS

Femtosecond laser processing

12/2024-06/2025

- *Femtosecond etching of optical fiber structure(Twin-core side hole fiber and coreless fiber);*
- *Silicon substrate (quartz glass) etched grating structure.*

Development of Fabry-Perot interferometric ethanol microcavity fiber optic temperature sensor

03/2024-03/2025

- Structure the overall process as a leader;
- *Multi-order interference demodulation* is introduced to expand the temperature measurement range (from -20°C to 80°C);
- Derivation of principles and related simulations;
- Expand the original application field (Add measurement of thermo-optic coefficients).

Detection of methane gas concentration by photoacoustic spectroscopy

08/2023-01/2024

- Structural design of *photoacoustic resonance cavities* (photoacoustic cells);
- Build a total gas detection system (Utilizing the photoacoustic spectroscopy of optical fibers).

Fabrication of optical fiber microphones based on graphene oxide and gold nanocoating

01/2023-07/2023

- Fabrication of optical fiber sensing *structure*;
- Related Characteristics Testing (Test of different sound frequencies).

The design and integrated structure of the optical demodulator

12/2022-06/2023

- Learning and construction of *optical Demodulator principle*;
- Demodulator product packaging (for commercial use).

Integrated design of constant temperature device based on LabView program

10/2022-04/2023

- Take the lead in building *a set of photoelectric detection equipment*;
- Designing the software and beautifying the user interface;
- Perform equipment commissioning and packaging(for commercial use).

PUBLICATIONS AND PATENTS

- **Publication:** Z. Wang *et al.*, "High-Sensitive Fiber Optic Temperature Sensor Based on Range-Extended Multiorder Interference Demodulation," in *IEEE Sensors Journal*, vol. 25, no. 12, pp. 21642-21648, 15 June 2025, doi: 10.1109/JSEN.2025.3565165.
- **Patent 1:** Li, Su Mei, et al. 2024. Streamlined Design of Racing Boat Model. Patent No. ZL 202430144127.5, issued September 20, 2024. China National Intellectual Property Administration. (<https://www.cnipa.gov.cn/>)
- **Patent 2:** Yu Tieqi, Wang Hongyu, Wang Zhengqi, et al. An Easy-to-Control Constant Temperature Water Chamber: 202520920743.4 [P]. 2025-05-12. (<https://www.cnipa.gov.cn/>)

INTERSHIP EXPERIENCE

Microelectronics of HKUST(GZ)

Research Assistant

Guangzhou, China

07/2025-Now

- Diffractive neural network;
- HZO-LNOI integrated ferroelectric electro-optic modulator and memory

Ultrafast photon Technology Laboratory

Undergraduate researcher

Weihai, China

10/2022 – 06/2025

- Design and preparation of optical fiber sensors structure;
- Femtosecond technology;
- Construction of photoelectric equipment.

Lenovo (Beijing) Co. LTD

Hardware development engineer

Beijing, China

01/2025 – 03/2025

- Responsible for the assembly of optical lenses;
- Optical identification system testing;
- Familiar with hardware design process.

Wuxi Kuangsheng Technology Co. LTD

Engineer assistant

Wuxi, China

07/2024 – 09/2024

- Assisting the company with equipment commissioning;
- Test the feasibility of the designed software.

China Mobile Communications Group Gansu Co., LTD. Tianshui branch

Hardware engineer assistant

Tianshui, China

02/2024 – 03/2024

- Communication equipment debugging;
- Construction of communication devices between different devices.

AWARDS

2025

- People's third-class scholarship;
- Outstanding student leader;

2024

- **First prize** of the China Undergraduate Physics Experiment Competition (national level);

- **First prize** of the 2024 China Undergraduate Physics Tournament (national level);
- People's second-class scholarship;
- People's third-class scholarship;

2023

- Provincial-level second prize of China University Students Mathematical Contest in Modeling;
- Outstanding Student Leader of Harbin Institute of Technology 2023;
- People's second-class scholarship;
- Outstanding Scholarship in Social Work;

VOLUNTEER EXPERIENCE

- Harbin Institute of Technology (Weihai) Love Station (*President: 08/2023 – 08/2024*)
- 2024 PMPIS Conference (Photonics and Modern Physics Innovation Forum) (*Volunteer: 08/2024*)
- 2023 China Weihai Super Triathlon (*Group Leader: 08/2023*)

SKILLS AND INTERESTS

Languages: Chinese(Native speaker), English

Skills: Rsoft, FDTD, Latex, LabVIEW, Keil5, MATLAB, COMSOL Multiphysics, C language,etc.