

Zhe Chen



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<https://zhechen1999.github.io/>

EDUCATION

- **B.S Major in Optics ENGINEERING** GPA: 3.43 Sep.2017 – Jun.2021
South-Central University for Nationalities
Wuhan, China
- **Visiting Student Computer Science** Sep.2019 – Mar.2020
University of Chester
Chester, UK
- **Visiting Student Computer Science** Sep.2020 – Mar.2021
Wuhan University
Wuhan, China
- **Master Major in Optics ENGINEERING** GPA: 3.5 Sep.2021 – Now
University of Chinese Academy of Sciences
Beijing, China

PROGRAMMING LANGUAGES AND OTHER SKILL

- Python; C++; C; HTML; Verilog(VHDL); Computer Version; Machine Learning; Object detection; Classification;
- Pytorch; Opencv; Zemax; Comsol; SolidWorks; Git; Markdown; Microscopy imaging;

Research EXPERIENCE

- Master student – SIAT @ Chinese Academy of Sciences** Apr.2021 – Present
- Conducted research on developing instruments that can observe zooplankton in situ underwater.
- Research Assistant–APM @ Chinese Academy of Sciences** Sep.2020 – Apr.2021
- Conducted research on the Patch and pixel deep learning classification algorithm for glacier crevasses extraction and natural landform extraction.
- Research Assistant – THz Lab @ University of Chester** Sep.2019 – Mar.2020
- Conducted research on Post security Check technology based on terahertz technology and Machine learning.

ACADEMIC PROJECTS

- In situ observation of underwater plankton** Apr.2021 – Present
- Proposed and developed a instruments to observing plankton, especially optics sheet imaging methods.
 - Computer vision methods are used to identify and classify plankton.
- Post security Check based on terahertz technology** Sep.2019 – Jun.2020
- Proposed and developed security checks on the Post based on the terahertz, which is radiation-free, fast and low-cost.
 - Combined with the existing advanced deep learning target detection framework YOLOv3, real-time detection speed and high precision can be achieved.
- Dielectric response of ferroelectric materials at Terahertz frequencies** Sep.2019 – Mar.2020
- The changes of dielectric constant and dielectric loss of ferroelectric materials under different conditions were measured respectively, and it was found that the dielectric constant sent a jump at low frequency and terahertz frequency.
- Intelligent sorting garbage cans based on deep learning** June.2019 – Sep.2019
- The neural network model is used to predict the corresponding classification results, and the embedded processor processes the network prediction results and controls the corresponding steering gear to complete the classification task. This project has pre-collected 3,000 pieces of garbage data sets of different types. [ZheChen1999 \(EasonChan\) \(github.com\)](#)

PUBLICATIONS AND PATENTS

- Zhang M, **Chen Z**, Yue Y, Chen T, Yan Z, Jiang Q, Yang B, Eriksson M, Tang J, Zhang D, Shen Z, Abrahams I, Yan H. Terahertz Reading of Ferroelectric Domain Wall Dielectric Switching. ACS Appl Mater Interfaces. 2021 Mar 17;13(10):12622-12628. doi: 10.1021/acsami.1c00523. Epub 2021 Mar 8. PMID: 33685119.
- Bin Yang, **Zhe Chen**. Terahertz linear array imaging system. CN202121223569.6. Chinese Patent. 2021.11
- Bin Yang, **Zhe Chen**. Bandpass filter for high power circuit reading. CN202121196581.2. Chinese Patent. 2021.11
- Bin Yang, Zhiyong Tang, **Zhe Chen**. Ultra-low temperature millimeter wave narrowband bandpass frequency selective surface filter. CN202110571948.2. Chinese Patent. 2021.9
- Eyldg, **Zhe Chen**. The utility model relates to an energy saving and environmental protection garbage can. CN202021131687.X. Chinese Patent. 2020.6

AWARDS AND HONORS

- Received Excellent Graduation Thesis from SCUCC 2021
- Received First-Class Scholarship from SCUCC 2019 / 2020
- Received First-Class Scholarship from SCUCC 2017 / 2018
- Received National Scholarship from Chinese Ministry of Education 2017/ 2018
- Received Full Scholarship to visit University of Chester from SCUCC 2019