Yu Huang

Email: 162540411@st.usst.edu.cn

Tel: +86-18608809175

Personal homepage: julianwong.wiki

EDUCATION

2016-present

Master of Signal and Information Processing

School of Optical-electronic and Computer Engineering

University of Shanghai for Science and Technology

Thesis: *Research on optical en/decoding techniques in secure optical communication*

Supervisor: Dr. Bo Dai

Grade: 83.5/100

2011-2015

Bachelor of Information engineering

The School of Electronic and Information Engineering

Xi'an JiaoTong University

Thesis: *Space shift keying based MIMO wireless communication system*

RESEARCH INTERESTS

- Optical communication
- Micro/nano optics
- Micro/optofluidics for biomedical diagnosis and detection

PROJECT EXPERIENCES

2018-Present

Research Assistant, Key Laboratory of Modern Optical Systems, University of Shanghai for Science and Technology

Project: Diagnosis and detection of swine diseases, supported by National Key Research and Development Program of China

- Invented a microplate reader for point of care testing of Enzyme-Linked Immunosorbent Assays (ELISA).
- Designed the electrical hardware of the microplate reader.
- Programmed and debugged the bundled Windows application for the microplate reader using

C# and programmed its core algorithm based on artificial neural network.

- Jointly designed and fabricated the microlens array for light coupling.

2017-2018

Research Assistant, Key Laboratory of Modern Optical Systems, University of Shanghai for Science and Technology

Project: Secure optical communication based on one-time-password symbol-overlapping en/decoding technique, supported by National Natural Science Foundation of China

- Designed and experimentally set up a repetition-rate/center wavelength tunable pulse generator system for the high-speed (>20 Gbit/s) optical communication system.
- Theoretically validated the enhancement of confidentiality in overlapping en/decoding scheme based system.

2016-Present

Master Candidate Key Laboratory of Modern Optical Systems, University of Shanghai for Science and Technology

Project: The confidentiality and en/decoding performance of coherent spectral coding technology, supported by Shanghai Municipal Education Commission

- Built a theoretical model of confidentiality analysis of spectral en/decoding based optical secure communication system.
- Analyzed the secrecy and transmission performance of the system using Matlab.

SELECTED HONOURS AND AWARDS

2018 Gold Prize
"Challenge Cup" National Academic Science and Technology Competition
Entries name: Microplate reader covering the entire visible spectrum

2014 2nd Prize
National Undergraduate Electronics Design Contest
Entries name: Audio power amplifier with howling detection and suppression

2014 1st Prize
Undergraduate Electronics Design Contest
Entries name: Broadband amplifier

PUBLICATIONS

1. Qiao Xu, Bo Dai, **Yu Huang**, Huansi Wang, Zhuoqing Yang, Kaimin Wang, Songlin Zhuang, and Dawei Zhang, "Fabrication of polymer microlens array with controllable focal length by modifying

surface wettability," *Optics Express* 26, 4172-4182 (2018). DOI: 10.1364/OE.26.004172.

2. Bo Dai, **Yu Huang**, Ziao Jiao, Kaimin Wang, Dawei Zhang, and Xu Wang, “Confidentiality analysis of optical code based secure optical communication system,” *Optical Engineering* (Accepted)

3. Bo Dai, **Yu Huang**, Ziao Jiao, Kaimin Wang, Dawei Zhang, and Xu Wang, “Generation of short optical pulse with independent tuning of center wavelength and repetition rate by effectively compressing chirped CW light”, *Optics Letters* (Under review).

4. Amir Matin, Bo Dai, **Yu Huang**, and Xu Wang, “Ultra-fast imaging with optical encoding and compressive sensing”, *Journal of Lightwave Technology* (Under review)

5. **Yu Huang**, Bo Dai, Dawei Zhang ,and Xu Wang, “Simultaneous chromatic dispersion and spectral response measurement of fiber Bragg grating”, *Electronics Letters* (Under review)

6. **Yu Huang**, Xuhua Wang, Kaimin Wang, Dawei Zhang, and Bo Dai , “A Novel Optical Encoding Scheme based on Spectral Phase Encoding for Secure Optical Communication,” *ICOCN International Conference on Optical Communication Networks,* November 27 (2017). DOI: 10.1109/ICOCN.2017.8121476.

CONFERENCES ATTENDED

2017 International Conference on Optical Communications and Networks
Wuzhen, China.

2018 International Symposium on Optoelectronic Technology and Application
Beijing, China.

2018 International Multidiscipline Conference on Optofluidics
Shanghai, China.

SKILLS

Language: English: IELTS (6.5); Germany: B1.

Programming: C#, Matlab, LabVIEW

Software: Inventor, Auto CAD, Photoshop, Altium Designer.

REFERENCES

- Dr. Bo Dai, Associate Professor, Associated director of Engineering center of the Ministry of Education for Optical Instrument and System, University of Shanghai for Science and Technology. E-mail: lioneldai2014@163.com.
- Prof. Dawei Zhang, Professor, Director of Science and Technology Department, University of Shanghai for Science and Technology. E-mail: dwzhang@usst.edu.cn