

Ruixuan ZHAO

contact information:
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EDUCATION

HuaZhong University of Science and Technology (HUST)

HUST, September 2015 - Present

B.E. in Optical and Electronic Information

Rank: 2/28

GPA: 3.94/4.00 or 92.4/100

RESEARCH

Generation of Orbital Angular Momentum(OAM) Beam

Advisor: Shuhui Li, Assistant Professor

Undergraduate research assistant

HUST, October 2016 - August 2017

- * Established optical system for beam transfer
- * Developed fusion splicer's manual mode
- * Assisted a MS student to finish asymmetrical fusion experiment

Optical Tweezer and Spanner

Advisor: Shuhui Li, Assistant Professor

Undergraduate research assistant

HUST, July 2017 - August 2018

- * Designed and optimized structure for optical lens with Matlab and FDTD
- * Fabricated fiber lens via fiber fusion splicer
- * Experimentally realized stable particle trapping and rotation

Fault Detection Based On POTDR

Advisor: Ming Tang, Professor

Undergraduate research assistant

HUST, June 2018 - Present

- * Built simulation environment about signal transmission with Matlab
- * Used POTDR to realize distributed fiber sensor
- * Combined with Kalman filter

Microcontroller's Application Designing Project

Advisor: YuBin Wu, Senior Engineer

Undergraduate research assistant

HUST, April 2018 - July 2018

- * Did schematic, PCB design, circuit soldering
- * Realized arbitrary waveform generation function by coding in Keils 4
- * Developed GUI for PC controlling in Matlab

HONORS/AWARDS

"Outstanding Student"

HUST, 2017

"Scholarship of Academic Excellence"

HUST, 2017

"National Scholarship"

HUST, 2018

PUBLICATIONS

* Zhao, R., Xu, Z., Li, S., Shen, L., Du, C., & Wang, J. **Design of All-fiber spanner using high-index parabolic tip**. *Optical Express*(submitted)

* Xu, Z#, Zhao, R#, Li, S., Shen, L., Du, C., & Wang, J. **Generation of optical vortices using asymmetrically spliced fibers**. *Journal of optics* (#Contributed equally author) (under revision)

* Li, S., Xu, Z., Zhao, R., Shen, L., Du, C., & Wang, J. (2018). **Generation of Orbital Angular Momentum Beam Using Fiber-to-Fiber Butt Coupling**. *IEEE Photonics Journal*

* Xu, Z., Li, S., Zhao, R., Shen, L., Du, C., & Wang, J. (2018, February). **Experimental demonstration of broadband generation of optical vortices using asymmetrically spliced fibers**. In *Complex Light and Optical Forces XII* (Vol. 10549, p. 105490J). International Society for Optics and Photonics.

SKILLS

Technical: MATLAB, ZEMAX, FDTD Solutions, ISE Design suit, Altim Designer(basic), Multisim

Language: Verilog, Assembly Language, C