Yue Zhang

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Education

Institute of Semiconductors, Chinese Academy of Sciences & University of Chinese Academy of Sciences — *Beijing*
PhD in Physical Electronics — Sep. 2018 - Jun. 2023 (expected)

University of Chinese Academy of Sciences — *Beijing*
Minor in Computer Science — Sep. 2018 - Jun. 2019

Nankai University — *Tianjin*
BSc-Honours in Physics — Sep. 2014 - Jun. 2018

Technical Skills

Programming	C++, Python, OpenCV, Linux, PyTorch, Web development
Professional Softwares	MATLAB, Zemax
Other	Hardware development

Publications

[1] **Zhang, Y.**, Wang, X., Lei, P., Wang, S., Yang, Y., Sun, L. and Zhou, Y., "Smart vector-inspired optical vision guiding method for autonomous underwater vehicle docking and formation," *Opt. Lett.*, 47(11), 2919 (2022).

[2] **Zhang, Y.**, Wang, X. and Zhou, Y., "Monte-Carlo simulation for range intensity profile of underwater range gated imaging," *Eighth Symposium on Novel Photoelectronic Detection Technology and Applications 12169*, 2739–2747, SPIE (2022).

[3] **Zhang, Y.**, Wang, X., Sun, L., Lei, P., Yang, Y., Chen, J., He, J., Zhou, Y. and Liu, Y., "Mask-guided deep learning fishing net detection and recognition based on underwater range gated laser imaging," *Opt. Express*, under review.

[4] Wang, M., Wang, X., **Zhang, Y.**, Sun, L., Lei, P., Yang, Y., Chen, J., He, J. and Zhou, Y., "Range-intensity-profile prior dehazing method for underwater range-gated imaging," *Opt. Express*, 29(5), 7630 (2021).

[5] Wang Xinwei, Sun Liang, Lei Pingshun, Chen Jianan, Yang Yuqing, **Zhang Yue**, Zhong Xin, He Jun, Wang Minmin and Zhou Yan., "Underwater light ranging and imaging for macro marine life in-situ observation and measurement," *Infrared and Laser Engineering*, 29(5), 7630 (2021).

[6] He, X.-L., Weng, X.-J., **Zhang, Y.**, Zhao, Z., Wang, Z., Xu, B., Oganov, A. R., Tian, Y., Zhou, X.-F. and Wang, H.-T., "Two-dimensional boron on Pb (1 1 0) surface," *FlatChem*, 7, 34–41 (2018).

[7] **Zhang, Y.**, Wang X., Lei, P., Zhou, Y., "An underwater optical fairing," *Chinese Patent*, CN113071636A (2021).

[8] Wang X., Wang, S., **Zhang, Y.**, Lei, P., Zhou, Y., "Underwater vector-inspired optical vision guidance method and device," *Chinese Patent*, CN111498070A (2021).

Research & Engineering Projects

Smart underwater vector-inspired optical vision guiding method — *Beijing, China*
Design, simulation, and algorithm — Aug. 202x - Jan. 2021

Monte-Carlo simulation of underwater range-gated imaging — *Beijing, China*
Modeling, programming, system parameter optimization — Jul. 2019 - Jun. 2021

Underwater low resistance optical fairing — *Beijing, China*
Zemax optical design, imaging performance simulation — Apr. 2021 - Jul. 2021

Underwater color image enhancement — *Beijing, China*
Dataset acquisition, algorithm and training — Jan. 2021 - Now

Underwater fishing net detection — *Beijing, China*
Algorithm design, dataset collection and annotation, model training and deployment — Sept. 2020 - May. 2021

Awards and Honors

2014-2022	**Scholarship**: Different scholarships for 8 times	*NKU, CAS*
Jun. 2019	**Contest**: First Prize in SeeLight Optical System Simulation Competition of UCAS	*UCAS*
Jun. 2018	**Honor**: Excellent Graduate of Nankai University	*NKU*
Apr. 2016	**Contest**: 12th place in the 8th International Physicists Tournament (Team)	*Paris*
Apr. 2015	**Contest**: Second Prize in Tianjin Undergraduate Students Mathematics Contest	*Tianjin*