

# Ziwei Wang

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## Education

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<b>Department of Automation, Tsinghua University</b> PhD student in Computer Vision Advisor: Prof. Jiwen Lu	Beijing, China 2018-present
<b>Department of Physics, Tsinghua University</b> B.E. in Maths and Physics	Beijing, China 2014-2018
<b>School of Economics and Management, Tsinghua University</b> B.E. in Finance	Beijing, China 2015-2018

## Publications

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### Peer-Reviewed Conference Publications

- [1] Quan Zheng, **Ziwei Wang**, Jie Zhou and Jiwen Lu  
**Shap-CAM: Visual Explanations for Convolutional Neural Networks based on Shapley Value**  
17<sup>th</sup> European Conference on Computer Vision (ECCV), 2022
- [2] Zhenyu Wu\*, **Ziwei Wang\***, Zibu Wei, Yi Wei and Haibin Yan  
**Smart Explorer: Recognizing Objects in Dense Clutter via Interactive Exploration**  
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2022
- [3] Zhan Liu, **Ziwei Wang**, Sichao Huang, Jie Zhou and Jiwen Lu  
**GE-Grasp: Efficient Target-Oriented Grasping in Dense Clutters**  
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2022
- [4] Han Xiao, **Ziwei Wang**, Zheng Zhu, Jie Zhou, and Jiwen Lu  
**Shapley-NAS: Discovering Operation Contribution for Neural Architecture Search**  
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022
- [5] **Ziwei Wang**, Han Xiao, Jiwen Lu and Jie Zhou  
**Generalizable Mixed-Precision Quantization via Attribution Rank Preservation**  
IEEE International Conference on Computer Vision (ICCV), 2021
- [6] **Ziwei Wang**, Yunsong Wang, Ziyi Wu, Jiwen Lu and Jie Zhou  
**Instance Similarity Learning for Unsupervised Feature Representation**  
IEEE International Conference on Computer Vision (ICCV), 2021
- [7] **Ziwei Wang**, Quan Zheng, Jiwen Lu and Jie Zhou  
**Deep Hashing with Active Pairwise Supervision**  
16<sup>th</sup> European Conference on Computer Vision (ECCV), 2020
- [8] **Ziwei Wang**, Ziyi Wu, Jiwen Lu and Jie Zhou  
**BiDet: An Efficient Binarized Object Detector**  
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2020
- [9] **Ziwei Wang**, Jiwen Lu, Chenxin Tao and Jie Zhou  
**Learning Channel-wise Interactions for Binary Convolutional Neural Networks**  
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2019
- [10] Yueqi Duan, **Ziwei Wang**, Jiwen Lu, Xudong Lin and Jie Zhou  
**GraphBit: Bitwise Interaction Mining via Deep Reinforcement Learning**  
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2018

- [11] Yueqi Duan, Jiwen Lu, **Ziwei Wang**, Jianjiang Feng and Jie Zhou  
**Learning Deep Binary Descriptor with Multi-Quantization**  
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2017

### Peer-Reviewed Journal Publications

- [12] **Ziwei Wang**, Han Xiao, Yueqi Duan, Jie Zhou and Jiwen Lu  
**Learning Deep Binary Descriptors via Bitwise Interaction Mining**  
IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI, IF: 24.31), 2022
- [13] **Ziwei Wang**, Jiwen Lu, Ziyi Wu and Jie Zhou  
**Learning Efficient Binarized Object Detectors with Information Compression**  
IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI, IF: 24.31), 2022
- [14] **Ziwei Wang**, Jiwen Lu, and Jie Zhou  
**Learning Channel-wise Interactions for Binary Convolutional Neural Networks**  
IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI, IF: 24.31), 2021
- [15] Yueqi Duan, Jiwen Lu, **Ziwei Wang**, Jianjiang Feng and Jie Zhou  
**Learning Deep Binary Descriptor with Multi-Quantization**  
IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI, IF: 24.31), 2019

### Honors and Awards

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|---------------------------|------|
| ◦ National Scholarship    | 2020 |
| ◦ Chi-Sun Yeh Scholarship | 2018 |
| ◦ Qualcomm Scholarship    | 2016 |

### Academic Services

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#### Journal Reviewer

- IEEE Transactions on Image Processing
- IEEE Transactions on Circuits and Systems for Video Technology
- IEEE Transactions on Biometrics, Behavior, and Identity Science
- Pattern Recognition Letters
- Journal of Visual Communication and Image Representation

#### Conference Reviewer

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR 2020, 2021, 2022)
- Neural Information Processing Systems (NeurIPS 2020, 2021, 2022)
- IEEE International Conference on Computer Vision (ICCV 2021)
- European Conference on Computer Vision (ECCV 2022)
- International Conference on Machine Learning (ICML 2021, 2022)
- International Conference on Representation Learning (ICLR 2021, 2022)
- IEEE International Conference on Multimedia & Expo (ICME 2019, 2020, 2021, 2022)
- IEEE Winter Conference on Applications of Computer Vision (WACV 2020, 2021, 2022, 2023)
- Asian Conference on Computer Vision (ACCV 2020)
- International Conference on Pattern Recognition (ICPR 2018, 2020)
- IEEE International Conference on Image Processing (ICIP 2018, 2019)