Yong Guo

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PARTICULARS

EDUCATION & RESEARCH EXPERIENCE

Max Planck Institute for Informatics — Saarbrucken, Germany
Postdoc in Prof. Bernt Schiele's Group — *July 2021 - Now*

South China University of Technology — Guangzhou, China
Ph. D. in Software Engineering — *Sep. 2016 - July 2021*

South China University of Technology — Guangzhou, China
B.A. in Software Engineering — *Sep. 2012 - July 2016*

INTERN EXPERIENCE

Tencent AI Lab — Shenzhen, China
Intern in Machine Learning Group — *Oct. 2018 - July 2021*

RESEARCH INTERESTS

My research mainly focuses on **developing compact and robust deep neural networks** for a wide span of applications, including image classification, image super-resolution, and image synthesis. My works have been published in several top-tier conferences and journals, including **CVPR**, **ECCV**, **NeurIPS**, **ICML**, **AAAI**, **TPAMI**, **TMM**, *etc*.

PUBLICATIONS

1. **Improving Robustness by Enhancing Weak Subnets** (*Oral Presentation*)
   Yong Guo, David Stutz, Bernt Schiele
   European Conference on Computer Vision (ECCV), 2022.

2. **Towards Accurate and Compact Architectures via Neural Architecture Transformer**
   Yong Guo, Yin Zheng, Mingkui Tan, Qi Chen, Zhipeng Li, Jian Chen, Peilin Zhao, Junzhou Huang
   IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2021.

3. **NAT: Neural Architecture Transformer for Accurate and Compact Architectures**
   Yong Guo, Yin Zheng, Mingkui Tan, Qi Chen, Jian Chen, Peilin Zhao, Junzhou Huang
   Advances in Neural Information Processing Systems (NeurIPS), 2019.

4. **Closed-loop Matters: Dual Regression Networks for Single Image Super-Resolution**
   Yong Guo, Jian Chen, Jingdong Wang, Qi Chen, Jiezhang Cao, Zeshuai Deng, Yanwu Xu, Mingkui Tan
   the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020.

5. **Breaking the Curse of Space Explosion: Towards Efficient NAS with Curriculum Search**
   Yong Guo, Yaofo Chen, Yin Zheng, Peilin Zhao, Jian Chen, Junzhou Huang, Mingkui Tan
   International Conference on Machine Learning (ICML), 2020.

6. **Double Forward Propagation for Memorized Batch Normalization** (*Oral Presentation*)
   Yong Guo, Qingyao Wu, Chaorui Deng, Jian Chen, Mingkui Tan
   AAAI Conference on Artificial Intelligence (AAAI), 2018.

7. **Auto-Embedding Generative Adversarial Networks for High Resolution Image Synthesis**
   Yong Guo, Qi Chen, Jian Chen, Qingyao Wu, Qinfeng Shi, Mingkui Tan
   IEEE Transactions on Multimedia (TMM), 2019.

8. **Content-aware Convolutional Neural Networks**
   Yong Guo, Yaofo Chen, Mingkui Tan, Kui Jia, Jian Chen, Jingdong Wang
   Neural Networks, 2021.

9. **Multi-way Backpropagation for Training Compact Deep Neural Networks**
   Yong Guo, Jian Chen, Qing Du, Anton Van Den Hengel, Qinfeng Shi, Mingkui Tan
   Neural Networks, 2020.

10. **Hierarchical Neural Architecture Search for Single Image Super-Resolution**
    Yong Guo, Yongsheng Luo, Zhenhao He, Jin Huang, Jian Chen
    IEEE Signal Processing Letters (IEEE SPL), 2020.

11. **Contrastive Neural Architecture Search with Neural Architecture Comparators**
    Yaofo Chen*, **Yong Guo*** (co-first author), Qi Chen, Minli Li, Yaowei Wang, Wei Zeng, Mingkui Tan
    the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021.

12. **Adversarial Learning with Local Coordinate Coding** (*Oral Presentation*)
    Jiezhang Cao*, **Yong Guo*** (co-first author), Qingyao Wu, Chunhua Shen, Junzhou Huang, Mingkui Tan
    International Conference on Machine Learning (ICML), 2018.

13. **Improving Generative Adversarial Networks with Local Coordinate Coding**
    Jiezhang Cao*, **Yong Guo*** (co-first author), Qingyao Wu, Chunhua Shen, Junzhou Huang, Mingkui Tan
    IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2020.

14. **Dynamic Extension Nets for Few-shot Semantic Segmentation**
    Lizhao Liu*, Junyi Cao*, Minqian Liu*, **Yong Guo*** (co-first author), Qi Chen, Mingkui Tan
    ACM Multimedia (ACM MM), 2020.

15. **AdaXpert: Adapting Neural Architecture for Growing Data**
    Shuaicheng Niu, Jiaxiang Wu, Guanghui Xu, Yifan Zhang, **Yong Guo**, Peilin Zhao, Peng Wang, Mingkui Tan
    International Conference on Machine Learning (ICML), 2021.

16. **Discrimination-aware Network Pruning for Deep Model Compression**
    Jing Liu, Bohan Zhuang, Zhuangwei Zhuang, **Yong Guo**, Junzhou Huang, Jinhui Zhu, Mingkui Tan
    IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2021.

17. **Discrimination-aware Channel Pruning for Deep Neural Networks**
    Zhuangwei Zhuang, Mingkui Tan, Bohan Zhuang, Jing Liu, **Yong Guo**, Qingyao Wu, Junzhou Huang, Jinhui Zhu
    Advances in Neural Information Processing Systems (NeurIPS), 2018.

18. **Disturbance-immune Weight Sharing for Neural Architecture Search**
    Shuaicheng Niu, Jiaxiang Wu, Yifan Zhang, **Yong Guo**, Peilin Zhao, Junzhou Huang, Mingkui Tan
    Neural Networks, 2021.

19. **Deep View Synthesis via Self-Consistent Generative Network**
    Zhuoman Liu, Wei Jia, Ming Yang, Peiyao Luo, **Yong Guo**, Mingkui Tan
    IEEE Transactions on Multimedia (TMM), 2020.

PREPRINTS

1. **Improving Corruption Robustness with Adversarial Feature Alignment Transformers**
   Yong Guo, David Stutz, Bernt Schiele
   International Conference on Learning Representations (ICLR), 2023. [†]Under Review.

2. **Towards Lightweight Super-Resolution with Dual Regression Learning**
   Yong Guo, Jingdong Wang, Qi Chen, Jiezhang Cao, Zeshuai Deng, Yanwu Xu, Jian Chen, Mingkui Tan
   IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI). [†]Under Review.

3. **Pareto-aware Neural Architecture Generation for Diverse Computational Budgets**
   Yong Guo, Yaofo Chen, Yin Zheng, Qi Chen, Peilin Zhao, Jian Chen, Junzhou Huang, Mingkui Tan
   IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI). [†]Under Review.

AWARDS & HONORS

- MSRA Fellowship Nomination Award (**Top 20 Ph.D. candidates** in Asia)   2018.10
- National Scholarship (**Received Twice**)   2019.10 & 2020.10
- Oral Presentation at European Conference on Computer Vision (ECCV) in Tel Aviv   2022.10
- Oral Presentation at International Conference on Machine Learning (ICML) in Stockholm   2018.07
- Oral Presentation at AAAI Conference on Artificial Intelligence in New Orleans   2018.02

PROFESSIONAL SKILLS

- Excellent communication skills to present ideas/methods
- Wide collaborations with the researchers from both academia and industry
- Strong programming skills in Python, particularly for PyTorch

INTERNATIONAL CONFERENCE/JOURNAL REVIEWER

TPAMI, IJCV, TIP, TNNLS, CVPR, ECCV, NeurIPS, ICML, ICLR, AAAI, UAI