

Xiaoqing GUO

Room 2325, AC1, City University of Hong Kong, Kowloon, Hong Kong.

Email: xiaoqingguo1128@gmail.com ♦ Web: <https://Guo-Xiaoqing.github.io/>

EDUCATION

City University of Hong Kong (CityU), Hong Kong Sep. 2018 - Present
Ph.D. in Electrical Engineering (EE), GPA: 3.925/4
Supervisor: Prof. Yixuan Yuan

Beihang University (BUAA), Beijing, China Sep. 2014 - Jun. 2018
B.E. in Biomedical Engineering (BME), GPA: 3.64/4
Supervisor: Prof. Yu Wang (**Honor: Outstanding Undergraduate Thesis Award**)

PREVIOUS WORK EXPERIENCE

Tsinghua University, Beijing, China Sep. 2017 - Jul. 2018
Research Assistant in Department of Electrical Engineering (EE)
Supervisor: Prof. Yongfeng Huang

RESEARCH INTERESTS

Medical Image Analysis, Deep Learning.

My research interests include abnormality recognition and segmentation. Recently, I am dedicated to making adequate use of unannotated data and augmenting the limited training data.

PUBLICATIONS ([GOOGLE SCHOLAR](#))

1. **Xiaoqing Guo**, Yixuan Yuan. "Semi-supervised WCE Image Classification with Adaptive Aggregated Attention." *Medical Image Analysis (MedIA)*, 101733, 2020. (**Impact Factor: 11.148**)
2. Zhen Chen, **Xiaoqing Guo**, Chen Yang, Bulat Ibragimov, Yixuan Yuan. "Joint Spatial-Wavelet Dual-Stream Network for Super-Resolution." *The 23rd International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2020)*, Lima, Peru.
3. **Xiaoqing Guo**, Zhen Chen, Yixuan Yuan. "Complementary Network with Adaptive Receptive Fields for Melanoma Segmentation." *The 17th IEEE International Symposium on Biomedical Imaging (ISBI 2020)*, Iowa City, Iowa, USA.
4. **Xiaoqing Guo**, Chen Yang, Pak Lun Lam, Peter Y.M. Woo, Yixuan Yuan. "Domain Knowledge Based Brain Tumor Segmentation and Overall Survival Prediction." *Brain Lesion (BrainLes) workshop of MICCAI 2019*, Shenzhen, China.
5. **Xiaoqing Guo**, Yixuan Yuan. "Triple ANet: Adaptive Abnormal-aware Attention Network for WCE Image Classification." *The 22nd International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2019)*, Shenzhen, China. (Early Accept)
6. Yixuan Yuan, Wenjian Qin, **Xiaoqing Guo**, Mark Buyyounouski, Steve Hancock, Bin Han, Lei Xing. "Prostate Segmentation with Encoder-Decoder Densely Connected Convolutional Network (ED-DenseNet)." *The 16th IEEE International Symposium on Biomedical Imaging (ISBI 2019)*, Venice, Italy.

7. Zhongliang Yang, **Xiaoqing Guo**, Ziming Chen, Yongfeng Huang, Yujin Zhang. “RNN-stega: Linguistic steganography based on recurrent neural networks.” *IEEE Transactions on Information Forensics and Security (TIFS)*, 14(5): 1280-1295, 2019. (**Impact Factor: 6.211**)
8. Siyuan Shan, Wen Yan, **Xiaoqing Guo**, Eric I Chang, Yubo Fan, Yan Xu. “Unsupervised End-to-end Learning for Deformable Medical Image Registration.” *arXiv*, <https://arxiv.org/abs/1711.08608>

PUBLICATIONS UNDER REVIEW

1. **Xiaoqing Guo**, Yixuan Yuan. “Learn to Threshold: ThresholdNet with Confidence-Guided Manifold Mixup for Polyp Segmentation.” *IEEE Transactions on Medical Imaging (TMI)*.
2. **Xiaoqing Guo**, Zhen Chen, Chen Yang, Bulat Ibragimov, Yixuan Yuan. Anonymity. *The 23rd International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2020)*, Lima, Peru.

RESEARCH EXPERIENCES

- | | |
|--|-----------------------|
| Automatic Segmentation of Polyp in Endoscopy Images | Dec. 2019 - Present |
| <ul style="list-style-type: none"> • Data augmentation to enrich limited training dataset • Solve class imbalance problem • Self-paced learning • Threshold learning for polyp segmentation | |
| Automatic Diagnosis for Wireless Capsule Endoscopy Images | Sep. 2018 - Dec. 2019 |
| <ul style="list-style-type: none"> • Classification and localization for WCE images • Abnormality detection based on attention mechanism • Semi-supervised learning for WCE image analysis | |
| Diagnosis of Brain Tumor in MRI | Sep. 2018 - Present |
| <ul style="list-style-type: none"> • Automatic brain tumor segmentation • Survival and grading prediction with incorporating clinical information | |
| Melanoma Segmentation for Dermoscopy Images | Jan. 2019 - Sep. 2019 |
| <ul style="list-style-type: none"> • Semi-supervised learning for automatic melanoma segmentation | |
| Coverless Text Steganography | Nov. 2017 - Jul. 2018 |
| <ul style="list-style-type: none"> • Coverless information hiding based on recurrent neural networks • Constructed a language model network to automatically generate a high-quality text according to a secret bit stream | |
| Medical Image Registration | Jan. 2017 - Jun. 2018 |
| <ul style="list-style-type: none"> • 2D/3D (X-ray/CT) medical image registration using Convolutional Neural Network • 2D (CT or MRI) medical image registration with unsupervised learning strategy | |

SELECTED AWARDS

- **Outstanding Academic Performance Award (OAPA)**, City University of Hong Kong, 2019
- **Research Tuition Scholarship (RTS)**, City University of Hong Kong, 2019 - 2020
- **Honorable Mention**, Mathematical Contest in Modeling (MCM), 2016
- **Grand Prize**, the 25th “Feng Ru Cup” Competition of Innovation, BUAA, 2015

PROFESSIONAL ACTIVITIES

Technical Reviewers

- MICCAI 2019

Conference Presentations

- | | |
|--------------------------------|-----------|
| • MICCAI 2019, Shenzhen, China | Oct. 2019 |
| • ISBI 2019, Venice, Italy | Apr. 2019 |