Lequan YU

Contact Information

Department of Computer Science and Engineering
The Chinese University of Hong Kong
Shatin, New Territories, Hong Kong

Phone: (852) 6484-4600
Email: lqyu@cse.cuhk.edu.hk
www.cse.cuhk.edu.hk/∼lqyu

Research Interests

Deep learning for 3D understanding, medical image computing, deep learning for point cloud analysis

Education

The Chinese University of Hong Kong, Hong Kong

Ph.D., Computer Science and Engineering — Aug 2015 to Present

- Advisor: Pheng-Ann Heng & Chi-Wing Fu — Expected graduation: 07/2019

Zhejiang University, Hangzhou, China

B.S., Computer Science — Aug 2011 to Jul 2015

- Advisor: Deng Cai
- GPA: 91.1/100 (3.92/4.0), **Rank: 1/185**

Experience

Research Intern — July 2018 to Present
Nvidia, Bethesda, USA
Advisor: Dr. Daguang Xu
Project: 3D reconstruction from the single view ultrasound image

Research Intern — Mar 2017 to Jul 2017
Siemens Healthcare, Princeton, USA
Advisor: Dr. Kai Ma and Dr. Terrence Chen
Project: Body landmark detection from depth images via deep reinforcement learning

Research Assistant — Sep 2013 to Jun 2015
State Key Laboratory of CAD & CG, Zhejiang University, China
Supervisor: Prof. Deng Cai

Conference Publications

1. **Lequan Yu***, Xianzhi Li*, Chi-Wing Fu, Daniel Cohen-Or, Pheng-Ann Heng. "EC-Net: an Edge-aware Point set Consolidation Network." *ECCV*, 2018.
2. **Lequan Yu***, Xianzhi Li*, Chi-Wing Fu, Daniel Cohen-Or, Pheng-Ann Heng. "PU-Net: Point Cloud Upsampling Network." *CVPR*, 2018.
3. Xiaomeng Li, **Lequan Yu**, Hao Chen, Qi Dou, Chi-Wing Fu, Pheng-Ann Heng. "Semi-supervised Skin Lesion Segmentation via Transformation Consistent Self-ensembling Model." *BMVC*, 2018
4. **Lequan Yu**, Jie-Zhi Cheng, Qi Dou, Xin Yang, Hao Chen, Jing Qin, Pheng-Ann Heng. "Automatic 3D Cardiovascular MR Segmentation with Densely-Connected Volumetric ConvNets." *MICCAI*, 2017.
5. **Lequan Yu**, Xin Yang, Hao Chen, Jing Qin, Pheng-Ann Heng. "Volumetric ConvNets with Mixed Residual Connections for Automated Prostate Segmentation from 3D MR Images." *AAAI*, 2017. (**Oral**)
6. Xin Yang, **Lequan Yu**, Shengli Li, Xu Wang, Na Wang, Jing Qin, Dong Ni, Pheng-Ann Heng. "Towards Automatic Semantic Segmentation in Volumetric Ultrasound." *MICCAI*, 2017.(**Oral**)

7. Xin Yang, **Lequan Yu**, Lingyun Wu, Yi Wang, Dong Ni, Jing Qin, Pheng-Ann Heng. "Fine-grained Recurrent Neural Networks for Automatic Prostate Segmentation in Ultrasound Images." *AAAI*, 2017. (**Oral**)

8. Hao Chen, Xiaojuan Qi, **Lequan Yu**, Pheng-Ann Heng. "DCAN: Deep Contour-Aware Networks for Accurate Gland Segmentation." *CVPR*, 2016.

9. Qi Dou, Hao Chen, Yueming Jin, **Lequan Yu**, Jing Qin, Pheng-Ann Heng. "3D Deeply Supervised Network for Automatic Liver Segmentation from CT Volumes." *Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 2016.

10. Hao Chen*, **Lequan Yu***, Qi Dou, et al."Automatic Detection of Cerebral Microbleeds via Deep Learning Based 3D Feature Representation." *ISBI*, 2015. **(Oral)**

Journal Publications

1. Xin Yang, **Lequan Yu**, Shengli Li, Huaxuan Wen, Dandan Luo, Cheng Bian, Jing Qin, Dong Ni, Pheng-Ann Heng. "Towards Automated Semantic Segmentation in Prenatal Volumetric Ultrasound." *IEEE Transactions on Medical Imaging (TMI)*, 2018.

2. **Lequan Yu**, Hao Chen, Qi Dou, Jing Qin, Pheng-Ann Heng. "Automated Melanoma Recognition in Dermoscopy Images via Very Deep Residual Networks." *IEEE Transactions on Medical Imaging (TMI)*, 2017

3. **Lequan Yu***, Hao Chen*, Qi Dou, Jing Qin, Pheng-Ann Heng. "Integrating Online and Offline 3D Deep Learning for Automated Polyp Detection in Colonoscopy Videos." *IEEE Journal of Biomedical and Health Informatics (J-BHI)*, 2017.

4. Qi Dou, **Lequan Yu**, Hao Chen, Yueming Jin, Xin Yang, Jing Qin, Pheng Ann Heng. "3D Deeply Supervised Network for Automated Segmentation of Volumetric Medical Images." *Medical Image Analysis (MedIA)*, 2017

5. Hao Chen, Qi Dou, **Lequan Yu**, Jing Qin, Pheng Ann Heng. "VoxResNet: Deep Voxelwise Residual Networks for Volumetric Brain Segmentation." *NeuroImage*, 2017

6. Hao Chen, Xiaojuan Qi, **Lequan Yu**, Qi Dou, Jing Qin, Pheng-Ann Heng. "DCAN: Deep contour-aware networks for object instance segmentation from histology images." *Medical Image Analysis (MedIA)*, 2017.

7. Yueming Jin, Qi Dou, Hao Chen, **Lequan Yu**, Jing Qin, Pheng Ann Heng. "SV-RCNet: Workflow Recognition from Surgical Videos using Recurrent Convolutional Network." *IEEE Transactions on Medical Imaging (TMI)*, 2017

8. Qi Dou, Hao Chen, **Lequan Yu**, Jing Qin, Pheng-Ann Heng. "Multi-level Contextual 3D CNNs for False Positive Reduction in Pulmonary Nodule Detection." *IEEE Transactions on Biomedical Engineering (TBME)*, 2016.

9. Qi Dou, Hao Chen, **Lequan Yu**, et al. "Automatic Detection of Cerebral Microbleeds from MR Images via 3D Convolutional Neural Networks." *TMI*, 2016.

Select honors and Awards

Scholarships & Awards

- AAAI 2017 Scholarship, San Fransisco, USA
- China National Scholarship (1.8 %), 2012, 2013, 2014
- The He Zhijun Scholarship, 2014
  Only one student selected from about 300 undergraduates in Computer College.
- Kwanjeong Educational Foundation Scholarship, 2012, 2013,2014
- Meritorious Winner, Interdisciplinary Contest in Modeling(ICM), Consortium for Mathematics and Its Application, 2014

- The Outstanding Undergraduate Award, awarded by China Computer Federation,2014
  Only selected 100 undergraduates every year in China
- Outstanding Graduates of Zhejiang University and Zhejiang Province

Teaching Experience

- CSCI1130 Introduction to Computing Using Java — Fall 2015
- CSCI3180 Principles of Programming Languages — Spring 2016
- ENGG5108 Big Data Analytics — Fall 2016
- CSCI3150 Introduction to Operating Systems — Spring 2017, Fall 2017, Spring 2018

Skills

- **Programming:** Python, C/C++, MATLAB
- **Tools:** TensorFlow, Caffe, Linux Shell, VTK