Xin Yang

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Homepage

RESEARCH INTERESTS medical image computing, intelligent ultrasound, surgical simulation and computer graphics

EDUCATION

The Chinese University of Hong Kong, Hong Kong

Ph.D., Computer Science and Engineering

Aug 2015 to Present

• Advisor: Prof. Pheng-Ann Heng

Shenzhen University, Shenzhen, China

M.S., Biomedical Engineering

Aug 2012 to Jul 2015

• Advisor: Prof. Dong Ni

South-Central University for Nationalities, Wuhan, China

B.S., Biomedical Engineering

Sept 2008 to Jul 2012

• Graduated with top rank and National Scholarship.

EXPERIENCE

- Visiting student, IDEA Lab, University of North Carolina at Chapel Hill, NC, USA Advisor: Prof. Dinggang Shen
- Student Volunteer (150/500), Siggraph Asia, 2013, Hong Kong
- FreeScale SmartCar Contest. Teamed up with an infrared laser guided autonomous car, 2011, China

Conference Publications

- 1. **Xin Yang**, Lequan Yu, Qi Dou, Jing Qin, Pheng-Ann Heng. "Deep Convolutional Networks for Automated Volumetric Cardiovascular Image Segmentation: From a Design Perspective". *Book Chapter Invitation: Cardiovascular Imaging: An Engineering and Clinical Perspective*, In preparing, 2018.
- 2. **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(oral)*, 2017.
- 3. 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.
- 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.
- 5. **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.
- Xin Yang, Cheng Bian, Lequan Yu, Dong Ni, Pheng-Ann Heng. "Hybrid Loss Guided Convolutional Networks for Whole Heart Parsing." MICCAI Workshop on Multi-Modality Whole Heart Segmentation, 2017 (rank second in CT segmentation phase).

- Lingyun Wu, Xin Yang, Shengli Li, Tianfu Wang, Pheng-Ann Heng, Dong Ni. "Cascaded Fully Convolutional Networks for Automatic Prenatal Ultrasound Image Segmentation." *International Symposium on Biomedical Imaging*, 2017.
- 8. Guodong Zeng, **Xin Yang**, Jing Li, Lequan Yu, Pheng-Ann Heng, Guoyan Zheng. "3D U-net with Multi-level Deep Supervision: Fully automatic segmentation of Proximal Femur in 3D MR Images." *MICCAI Workshop on Machine Learning in Medical Imaging*, 2017.
- 9. Lequan Yu, Xin Yang, Jing Qin, Pheng-Ann Heng. "3D FractalNet: Dense Volumetric Segmentation for Cardiovascular MRI Volumes." MICCAI Workshop on Whole-Heart and Great Vessel Segmentation from 3D Cardiovascular MRI in Congenital Heart Disease, 2016 (rank first in the Challenge).

JOURNAL PUBLICATIONS

- 1. 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.
- Hao Chen, Dong Ni, Jing Qin, Shengli Li, Xin Yang, Tianfu Wang, Pheng-Ann Heng. "Standard Plane Localization in Fetal Ultrasound via Domain Transferred Deep Neural Networks." *IEEE Journal of Biomedical and Health Informatics (J-BHI)*, 2015.
- 3. Dong Ni, **Xin Yang**, Xin Chen, Chien-Ting Chin, Siping Chen, Pheng-Ann Heng, Shengli Li, Jing Qin, Tianfu Wang. "Standard Plane Localization in Ultrasound by Radial Component Model and Selective Search." *Ultrasound in Medicine & Biology (UMB)*, 2014.

SELECT HONORS AND AWARDS

Scholarships & Honors

- 2017, AAAI Scholarship, San Fransisco, USA
- 2014, Tencent Founder Innovative Scholarship, Tencent Co., Ltd, China
- 2010, National Scholarship (1.8 %), China

Awards & Prizes

- 2012, Outstanding Bachelor Thesis Award, Hubei Province, China
- 2011, Third Prize of SmartCar Competition (supported by Freescale Co.,Ltd), South-Central University for Nationalities, China

TEACHING EXPERIENCE

- 2017-2018 Fall, CSCI3260 Principles of Computer Graphics
- 2016-2017 Spring, ENGG1410 Linear Algebra and Vector Calculus for Engineers
- 2016-2017 Fall, CSCI3260 Principles of Computer Graphics
- 2015-2016 Spring, CSCI3170 Introduction to Database Systems
- 2015-2016 Fall, CSCI3160 Design and Analysis of Algorithms

SKILLS

- Programming: C/C++, MATLAB, Python, OpenGL
- Tools: Theano, TensorFlow, Caffe, VTK/ITK