RONGYAO FANG

rongyaofang.github.io lucas_fang@sjtu.edu.cn
800 Dongchuan RD. Minhang District, Shanghai, China, 200240 (+86)158-8850-6776

EDUCATION

Shanghai Jiao Tong University *Sept.2016 - Present*

Undergraduate, Dept. of EE, School of Electronic Information and Electrical Engineering.
Zhiyuan Honors Program of Engineering (An elite program for Top 5% students in Shanghai Jiao Tong University).
Major: Electronic Engineering (Artificial Intelligence track).
Overall GPA: 92.16/100 or 4.00/4.3, Ranking: **1^{st}/158**
Research: Independent researcher in Prof. Bingbing Ni's group.

Massachusetts Institute of Technology *July 2019 - Present*

Research: Visiting scholar under the supervision of Prof. Dina Katabi in CSAIL.

University of Washington, Seattle *July 2017 - Aug.2017*

Exchange program in Department of Electrical & Computer Engineering, University of Washington.
Overall GPA: 3.86/4.0

RESEARCH INTERESTS

My research interests lie in computer vision and deep learning, particularly 3D computer vision and medical imaging, as well as the application in wireless sensing and adversarial example. I am open to exploring other interesting topics.

PUBLICATION

Anonymous Submission Advisor: **Dina Katabi**

Rongyao Fang*, Tianhong Li*, Lijie Fan*, Rumen Hristov, Dina Katabi.
Area: Application of 3D computer vision in wireless data.
To be submitted to **CVPR 2020**.

Probabilistic Radiomics: Ambiguous Diagnosis with Controllable Shape Analysis

Jiancheng Yang*, **Rongyao Fang***(equal contribution), Bingbing Ni, etc. Advisor: **Bingbing Ni**
The 22nd International Conference on Medical Image Computing and Computer Assisted Intervention **(MICCAI)**, 2019. (Early Acceptance)

Adversarial Attack and Defense on Point Sets Advisor: **Bingbing Ni**

Jiancheng Yang*, Qiang Zhang*, **Rongyao Fang***(equal contribution), Bingbing Ni, Jinxian Liu, Qi Tian.
In submission to **IEEE TIFS**. **(Arxiv)**

RESEARCH PROJECTS

Learnable and Explainable *Probabilistic Radiomics* *July 2018 - March 2019*

◦ Developed a novel CNN-based 3D classification and segmentation model on lung nodule.
◦ Proposed *probabilistic radiomics*: *DenseSharp*$^{+}$, which has comparable performance with the most successful models and is controllable and explainable.
◦ Leveraged available training data with ambiguity labels to train explainable deep networks for computer-aided lung nodule diagnosis.
◦ First authored paper early accepted by **MICCAI 2019**.

Adversarial Attack and Defense on 3D Point Cloud Data *July 2018 - Jan. 2019*

◦ Proposed three novel 3D point cloud attack operations which reduced the accuracy of PointNet to 0%.
◦ Developed a flexible *perturbation-measurement* scheme for point cloud data to detect specific potential

adversarial samples with a ratio of 95.21%.

◦ Achieved the transferability of adversarial samples between different point cloud networks and between CNNs and point cloud nets.

◦ First authored paper submitted to **IEEE TIFS**.

Human Motion Transfer by Aligning Component *July 2018 - Nov. 2018*

◦ Proposed a method of human articulated motion transfer based on Dense Pose.

◦ Applied the conditional variational autoencoder to transfer texture details.

HONORS AND AWARDS

National Scholarship *2017 & 2018*

Top 1%, Ministry of Education of P.R.China.

Zhiyuan College Honors Scholarship *2017 & 2018*

Top 5%, Zhiyuan College, Shanghai Jiao Tong University.

First Prize of Undergraduate Physics Contest, Shanghai Division *Oct. 2017*

Shanghai Physical Society.

Tang-Lixing Scholarship *Oct. 2018*

Top 1 student in School of Electronic Information and Electrical Engineering.

First Prize of Academic Excellence Scholarship *Nov. 2018*

Top 1%, Shanghai Jiao Tong University.