Yunhao Ge

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Education

University of Southern California *Los Angeles, USA*

PhD, ilab, Computer Science Department *Aug. 2019 - Present*

- Annenberg Graduate Fellowship at University of Southern California
- Advisor: Prof. Laurent Itti

Shanghai Jiao Tong University *Shanghai, China*

MASTER OF SCIENCE, Robotics and Intelligence Group, Robotics Institute *Sep. 2016 - June 2019*

- Overall **Ranking 6th/210** | GPA: Mechanical 3.43/4 | Computer science courses 3.80/4
- Advisor: Prof. Weixin Yan & Prof. Hongtao Lu & Prof. Yanzheng zhao
- Honor: Outstanding Graduate Thesis Award

Shandong University *Jinan, China*

BACHELOR OF ENGINEERING, Control Engineering and Mechatronics *Sep. 2012 - June 2016*

- Overall **Ranking 1st/66** | GPA: Overall: 86.08/100 | Major: 93.38/100
- Honor: Outstanding Undergraduate Thesis Award

Research Interests

My research interests lie in Computer vision, Robotics and General AI. Currently, I am focusing on simulating baby learning (Reasoning, Attention, Imagination) by using various learning algorithms (Representation Learning, Adversarial Learning, Meta Learning, GNN, Reinforcement Learning, etc.).

Selected Publications

[1] Zero-shot Synthesis with Group-Supervised Learning

Yunhao Ge, Sami Abu-El-Haija, Gan Xin and Laurent Itti 📄 PDF ⌨**Fonts Dataset**

arXiv:2009.06586, 2020.

[2] Pose Augmentation: Class-agnostic Object Pose Transformation for Object Recognition

Yunhao Ge, Jiaping Zhao, Laurent Itti 📄 PDF ⌨**Code**

*European Conference on Computer Vision (**ECCV**), 2020.*

[3] Beneficial Perturbation Network for designing general adaptive artificial intelligence systems

Shixian Wen, Amanda Rios*, **Yunhao Ge*** and Laurent Itti (*=equal contribution) 📄 PDF

arXiv:2009.13954, 2020.

[4] Unpaired MR to CT Synthesis with Explicit Structural Constrained Adversarial Learning

Yunhao Ge*, Dongming Wei*, Zhong Xue, Qian Wang, Xiang Zhou, Yiqiang Zhan, Shu Liao (*=equal contribution) 📄 PDF ⌨**Code**

*IEEE International Symposium on Biomedical Imaging (**ISBI**), 2019.*

[5] Synthesis and inpainting-based MR-CT registration for image-guided thermal ablation of liver tumors

Dongming Wei, Sahar Ahmad, Jiayu Huo, Wen Peng, **Yunhao Ge**, Zhong Xue, Pew-Thian Yap, Wentao Li, Dinggang Shen, Qian Wang 📄 PDF

*International Conference on Medical Image Computing and Computer-Assisted Intervention (**MICCAI**), 2019.*

[6] Unpaired Whole-body MR to CT Synthesis with Correlation Coefficient Constrained Adversarial Learning

Yunhao Ge, Zhong Xue, Tuoyu Cao, Shu Liao 📄 PDF ⌨**Code**

SPIE-Medical Imaging, 2019 [oral]

[7] A Real-time Gesture Prediction System Using Neural Networks and Multimodal Fusion based on Data Glove

Yunhao Ge, Bin Li, Weixin Yan, Yanzheng Zhao 📄 PDF 📄 Paper Link

*IEEE International Conference on Advanced Computational Intelligence (**ICACI**), 2018. [oral]*

[8] HH-Net: Image driven microscope fast auto-focus with deep neural network

Yunhao Ge, Bin Li, Yanzheng Zhao, Weixin Yan 📄 PDF

*International Conference on Biomedical Engineering and Technology (**ICBET**), 2019. [oral]*

[9] Melanoma Segmentation and Classification in Clinical Images Using Deep Learning

Yunhao Ge, Bin Li, Weixin Yan 📄 PDF 📄 Paper Link

*ACM International Conference on Machine Learning and Computing (**ICMLC**), 2018. [oral]*

[10] Benign and Malignant Mammographic Image Classification Based on Convolutional Neural Networks

Bin Li, **Yunhao Ge**, Yanzheng Zhao, Enguang Guan, Weixin Yan 📄 PDF 📄 Paper Link

*ACM International Conference on Machine Learning and Computing (**ICMLC**), 2018. [oral]*

[11] Effect of Mechanical Error on Dual-Wedge Laser Scanning System and Error Correction

Yunhao Ge, Jihao Liu, Fenfen Xue, Enguang Guan, Weixin Yan, Yanzheng Zhao 📄 PDF 📄 Paper Link

*Applied Optics (**Appl. Opt. IF:1.79**) 57, pp. 6047-6054, 2018*

Honors & Awards

SCHOLARSHIPS

National Scholarship (Graduate), top graduate nationwide	*Nov. 2017*
National Scholarship (UnderGraduate), top undergraduate nationwide	*Nov. 2015*
KaiYuan Motivational Scholarship, top 0.5% in Shanghai Jiao Tong University	*Apr. 2018*
Presidential Scholarship, top 0.2% in Shandong University	*Nov. 2015*
BaoGang Excellent student Scholarship, 4 Places per year at Shandong University	*Nov. 2015*
First Prize Scholarship, three-year continuous	*2013-2015*

CONTESTS

The first prize, 2017 ROBOMASTER **The World's Leading Robotics Competition**
(Responsible for the design of electronic control in robotics) — *Aug. 2017*

Rank 1st (preliminary competition), Tianchi: Precision medical competition-Artificial Intelligence Aided genetic risk prediction of diabetes ⭕**Pred-diabetes** — *Dec. 2017*

The first prize, 9th International college students Ican innovation and entrepreneurship competition — *Oct. 2015*

Patent & software

Pulmonary Nodular Assisted Detection System Based on AI(V1.0)	*Software*
Bin Li, **Yunhao Ge** 2018SR037095	*Jan. 2018*

A two-layer barrier free parking robotics based on bionic manipulator	*Patent for invention*
Yunhao Ge, Shangze Yang, Zheng Zhang, Weixin Yan, Yanzheng Zhao CN201610712048	*Jan. 2017*