

# RUNSONG ZHU

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## Education

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### The Chinese University of Hong Kong

Aug 2022 - Jun 2026 (*expected*)

Ph.D. candidate in the Faculty of Computer Science & Engineering. Supervisor: Prof. Chi-Wing Fu, Prof. Pheng-Ann Heng.

*Research Direction:* 3D Reconstruction/Understanding.

### Wuhan University

Sept 2019 - Jun 2022

M. Eng. in Surveying and Mapping Engineering. Supervisor: Prof. Zhen Dong, Prof. Bisheng Yang.

*Research Direction:* Point Cloud Analysis.

### Central South University

Sept 2015 - Jun 2019

B. Sc. in Geographic Information Science (GIS).

*Grade:* 87/100 (rank 4 out of 47)

## First-Author Publications

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**Research topics:** I am interested in computer vision and computer graphics. My research began with point cloud analysis (e.g., normal estimation, surface reconstruction). I then explored projects on 3D semantic reconstruction from multi-view image inputs. More recently, I have been working on feedforward semantic reconstruction and a robotics-related project.

### 3D Semantic Reconstruction

1. (**NeurIPS2025**) 3D Gaussian-based open-vocabulary segmentation

Runsong Zhu, Ka-Hei Hui, Zhengzhe Liu, Qianyi Wu, Weiliang Tang, Shi Qiu, Pheng-Ann Heng, Chi-Wing Fu.

2. (**CVPR2025**) Rethinking End-to-End 2D to 3D Scene Segmentation in Gaussian Splatting

Runsong Zhu, Shi Qiu, Zhengzhe Liu, Ka-Hei Hui, Qianyi Wu, Pheng-Ann Heng, Chi-Wing Fu.

3. (**ECCV2024**) PCF-Lift: Panoptic Lifting by Probabilistic Contrastive Fusion

Runsong Zhu, Shi Qiu, Qianyi Wu, Ka-Hei Hui, Pheng-Ann Heng, Chi-Wing Fu.

### Point Cloud Analysis

1. (**WACV2024**) Semi-Signed Prioritized Neural Fitting for Point Cloud Surface Reconstruction.

Runsong Zhu, Kang Di, Ka-Hei Hui, Yue Qian, Shi Qiu, Zhen Dong, Linchao Bao, Pheng-Ann Heng, Chi-Wing Fu.

2. (**ICCV2021 oral**) AdaFit: Rethinking Learning-based Normal Estimation on Point Clouds

Runsong Zhu, Liu Yuan, Zhen Dong, Tengping Jiang, Yuan Wang, Wenping Wang, Bisheng Yang.

## On-going Projects

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### Feedforward 3D semantic reconstruction

- Role: Project leader.

- Exploring an effective and efficient solution for feedforward 3D semantic reconstruction from multi-view images input.

### **3D reconstruction for robotics**

- Role: Assisting with the HKCLR robotic team.
- Exploring a tailored depth prediction approach for real-world robotic manipulation.

## **Internships**

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### **Tencent AI-Lab**

*Jun 2021 - May 2022*

Research intern: Working on 3D model reconstruction from images; Supervised by Dr. *Di Kang* and Dr. *Linchao Bao*

### **DiDi**

*Jun 2020 - Sept 2020*

Engineer intern: Analyzing the traffic data for traffic congestion prediction.

### **Baidu Map**

*Jun 2018 - Oct 2018*

Engineer intern: Working on the development of android test platform for “BaiduMap” APP.

## **Awards**

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- 2022 CUHK Postgraduate Scholarship
- 2020 Lidar Congress - Point Cloud Segmentation Track (First Prize)
- 2019 Unique hackday (Best Technology Award)
- 2019 National GIS Development Competition (First Prize)
- 2018 Mathematical Contest In Modeling (Meritorious Winner)

## **Community Services**

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Reviewer:

- CVPR25, ICCV25, ICLR25&26, NeurIPS25, ACM MM24, etc.