

# Xiangyue Liu



◦ Web: [xiangyueliu.github.io](https://xiangyueliu.github.io) ◦ Email: liuxiangyue@buaa.edu.cn ◦ Birth: 1996/10/1

## EDUCATION

**Beihang University (University of 985 Project)**

*Master of Software Engineering*

**Beijing, China**

*Score: 84.94/100, Jun 2021*

**Northeast Normal University (University of 211 Project)**

*Bachelor of Software Engineering*

**Changchun, China**

*Score: 82.57/100, Jun 2018*

## KEY SKILLS

- Research Interest: Neural Implicit Representation, 3D Reconstruction, SLAM
- Programming: C++, Python, Matlab
- Deep Learning: PyTorch, PyTorch Lightning, TensorFlow
- Tools: Latex, g2o, Ceres, Eigen, OpenCV

## PUBLICATIONS

**Sobolev Training for Implicit Neural Representations with Approximated Image Derivatives**

*ECCV 2022*

Wentao Yuan, Qingtian Zhu, **Xiangyue Liu**, Yikang Ding, Haotian Zhang, Chi Zhang

**KD-MVS: Knowledge Distillation Based Self-supervised Learning for Multi-view Stereo**

*ECCV 2022*

Yikang Ding, Qingtian Zhu, **Xiangyue Liu**, Wentao Yuan, Haotian Zhang, Chi Zhang

**TransMVSNet: Global Context-aware Multi-view Stereo Network with Transformers**

*CVPR 2022*

Yikang Ding\*, Wentao Yuan\*, Qingtian Zhu, Haotian Zhang, **Xiangyue Liu**, Yuanjiang Wang, Xiao Liu

**Structure Reconstruction Using Ray-Point-Ray Features: Representation and Camera Pose Estimation**

*ICRA 2021*

Yijia He\*, **Xiangyue Liu**\*, Xiao Liu, Ji Zhao (\* Equal Contribution)

**2nd Place Solution to Instance Segmentation of IJCAI 3D AI Challenge 2020**

*IJCAI 2020 Workshop*

Kai Jiang\*, **Xiangyue Liu**\*, Zheng Ju\*, Xiang Luo (\* Equal Contribution)

**An Optimization Algorithm of Baseline Density Distribution for An Ultra-long Wave Astronomical Observation Array**

*IAC 2020*

Jingwei Yang, Juntao Pu, Xinyi Fei, **Xiangyue Liu**, You Song, Li Deng

## EXPERIENCE

**National Space Science Center**

**Beijing, China**

◦ *Research Group Member*

*Sept 2018 - Sept 2019*

- Reconstruct the sky map from under sampled inversion astronomical matrix by

using deep learning methods (conditional GANs).

### **MEGVII Research**

**Beijing, China**

#### ○ *SLAM Intern*

*Aug 2019 - Apr 2020*

- Develop new visual Simultaneous Localization and Mapping (SLAM) algorithm.
- Build a ray-point-ray feature-based stereo visual odometry (VO) by C++.

#### ○ *3D Vision Intern*

*Jun 2021 - Aug 2021*

- Do research on Multi-view Stereo (MVS) with deep learning.

### **Tsinghua University**

**Beijing, China**

#### ○ *Visiting Student at IIIS*

*Jul 2021 - Present*

- Do the research about neural implicit representations.
- Neural implicit surface reconstruction.

## **AWARDS AND ACHIEVEMENTS**

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- Second class scholarship of Northeast Normal University, Oct 2015
- National College Students Innovation and Entrepreneurship Training Program, Dec 2016
- Third class scholarship of Northeast Normal University, Nov 2017
- Third class scholarship of Northeast Normal University, Jun 2018
- Second class scholarship of Beihang University, Oct 2018
- First class scholarship of Beihang University, Oct 2019
- First class scholarship of Beihang University, Jun 2020
- 2nd Place in IJCAI-PRICAI 2020 3D AI Challenge: Instance Segmentation, Oct 2020
- Excellent graduate in Beijing, Jun 2021

## **ACTIVITIES**

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- Oral presentation for the IJCAI-PRICAI 2020 3D AI workshop *Jan 2021*
- Outstanding student of visual SLAM class at Shenlan School *Aug 2019*
- Volunteer of the 2nd National SLAM Technology Forum *Jul 2019*
- League secretary in Software College at Beihang University *Sep 2018 - Jun 2021*
- Recreation and sports secretary in Software College at NENU *Sep 2015 - Jun 2018*