

# Haonan Dong

Portfolio: haonan-dong.github.io  
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## EDUCATION

- **School of Geodesy and Geomatics, Wuhan University** Wuhan, China  
*Bachelor of Photogrammetry and Remote Sense; GPA: 3.8/4*  
Sep, 2016 - Jun, 2020
- **University of California, Santa Barbara** Santa Barbara, USA  
*Student Exchange Program; GPA: 3.7/4*  
Sep, 2019 - Dec, 2019
- **School of Remote Sensing and Information Engineering, Wuhan University** Wuhan, China  
*Master of Pattern Recognition and Intelligent System; GPA: 3.9/4*  
Sep, 2020 - Jun, 2023

## PUBLICATIONS

- **Haonan Dong**, Xiaotong Ye, Congpu Hao. Emergency Evacuation Path Planning Algorithm for Indoor Fire in Commercial Buildings[J]. Journal of Geomatics, 2021,46(S1):40-43.DOI:10.14188/j.2095-6045.2019351.
- **Haonan Dong**, Jian Yao\*. PatchMVSNet: Patch-wise Unsupervised Multi-View Stereo for Weakly-Textured Surface Reconstruction. arXiv:2203.02156.
- **Haonan Dong**, Jian Yao\*, Fei Sun, Yuyue Liu, Yunmeng Li, Yuxi Xiao, Ye Gong, Li Li, Shaoshen Cao, Yuxuan Li. Optical Camera Calibration Revisited. Submitted to RA-L 2022.

## PROJECTS

- **Highly-Precise Point Clouds Reconstruction with RGB-D Camera:** (Work in progress) University-Enterprise Cooperation: Funded by *Huawei Inc.* (03/2022 - Now.)
- **Multi-Camera System Intrinsic and Extrinsic Calibration:** (Work in progress) Funded by *National Natural Science Foundation of China.* and *DiDi Inc.* (12/2021 - 06/2022).
  - Designed the “Meta-Board” for the comprehensive optical camera calibration task.
  - Presented an intact, fast and robust calibration pipeline with “Meta-Board” based on deep learning.
  - Proposed a novel strategy for processing the fish-eye image by the orthoimage transformation.
  - Built a low-priced calibration field with “Meta-Board” and optimized the camera poses with adaptive bundle adjustment.
- **Multi-party Secure Pathological Computing System based on Federated Learning:** Funded by *Xiamen Healthy and Medical Big Data Center* (06/2021 - 10/2021).
  - Built a secure computation framework based on the principle of federated learning.
  - Developed learning-based methods into the framework for image classification, segmentation and detection.
  - Used Kubernetes to make a distributed system for the multi-party computing.
- **Online 3D Reconstruction Server with High Performance Computing Cluster:** Funded by *CVRS, Wuhan University* (09/2020 - 05/2021).
  - Assembled a software about the intact 3D reconstruction pipeline to the textured mesh from RGB images, Videos.
  - Developed a back-end to manage a HPC cluster based on Slurm.
  - Established a server for the online reconstruction website.
- **Indoor Fire Evacuation System Based on Path Planning Algorithm and WSN:** *National Program of Innovation and Entrepreneurship for Undergraduates* (03/2018 - 06/2019).
  - Proposed an adaptive path planning algorithm based on AHP.
  - Designed the wireless sensor network(WSN) to collect data and to indicate the evacuation directions.

## HONORS AND AWARDS

- Outstanding Graduate Award. June, 2020
- Outstanding Award of National Program of Innovation and Entrepreneurship. June, 2020
- Four-time “Second-Prize” Scholarships. 2017, 2018, 2019, 2021
- “Southern-Survey Cup” Paper Competition: Special Prize (The Highest Award). June, 2019
- Geomatics Skill Contest of SGG, Wuhan University: Third Prize. March, 2019
- Honorable Prize of MCM/ICM. February, 2019
- Third Prize of China Undergraduate Mathematical Contest in Modeling. August, 2018

## SKILLS SUMMARY

- **Languages:** C++, Python, Linux Shell, Matlab
- **Frameworks:** Pytorch, Tensorflow
- **Platforms:** Linux (Ubuntu, CentOS), Windows
- **English:** TOEFL 97 (25 + 25 + 22 + 25) **Will Take Another Test.**  
GRE 321 (154 + 167) + 3