Mengyang Guo

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Education

Rutgers University, NJ	Civil Engineering	M.S., 2016	GPA: 4.0
Rutgers University, NJ	Civil Engineering	Ph.D., 4th year	GPA:3.94

Relevant Courses

BIM	Software Engineering and Web Application	Advanced Data Mining
Introduction to GIS	Computer Vision	Programming Finance

Technical Skills

Software:	MicroStation, Revit, ArcGIS, Navisworks,AutoCAD
Programming Language:	Python, JavaScript, HTML, PHP, SQL, C++, MATLAB
Cloud Service:	AWS, Azure
LiDAR System:	Faro LiDAR, Velodyne Mobile LiDAR, Z+F PROFILER Scanner

Work Experience

FEMA: Post-Sandy Mobile Mapping Study

- Mobile LiDAR Collection, Processing
- Web-based Inundation Risk Information System (IRIS) System Development and Building Elevation Certificate Data Extraction
- Cloud-based (AWS) Big Disaster Data Platform Development and Data Processing

NJ One Call Online Exam System

- PHP-based Exam System Development
- Database Development Exam System

Digital Raritan River

- Cloud-based (AWS) Raritan Data Visualization Platform Development and Data Processing

Near Miss Project: Bring Computer Vision to Urban Planning

- Develop Computer Vision-based Vehicle and Pedestrian Detection System
- Fusion of LiDAR and Web Camera Data for 3D Vehicle/Pedestrian Position Extraction and Near Miss Estimation

NDT testing of Yerba Buena Tunnel, San Francisco

- LiDAR and Infrared Data Collection, Processing
- NDT 3D Thermal Model Generation and Infrared-based Tunnel Defects Detection

US DOT: Development of An Online Platform for Streaming Highway

- Static LiDAR Data Collection, Sharing, and Processing
- Web-based Data Sharing Platform Development

HUD: Cost-effective Detection of Multi-Family Housing-Related Health and Safety Hazards

- LiDAR and Infrared Data Collection, Processing
- 3D Building Thermal Model Generation
- Infrared-based Multi-family Building Performance Analysis and Energy Simulation

Publication

1. Zhou, Z., Gong, J., & Guo, M. (2015). Image-based 3D reconstruction for posthurricane residential building damage assessment. Journal of Computing in Civil Engineering, 30(2), 04015015.
2. Wang, Z., Hu, H., Guo, M., & Gong, J. (2019). Optimization of Temporary Debris Management Site Selection and Site Service Regions for Enhancing Postdisaster Debris Removal Operations. Computer-Aided Civil and Infrastructure Engineering, 34(3), 230-247.
3. Thomas, N., Calderön, L., Senick, J., Sorensen-Allacci, M., Plotnik, D., Guo, M., ... & Mainelis, G. (2019). Investigation of indoor air quality determinants in a field study using three different data streams. Building and Environment.
4. Guo, M. (2016). Spatially resolved infrared imaging for building performance evaluation.