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Stony Brook, NY 11794, USA
Intelligent Urban System Program
Department of Civil Engineering
Stony Brook University

Professional Employment

2025-on **Research Assistant**, Stony Brook University, USA

2024-2025 **Research Assistant**, University of Minnesota, USA

2022-2024 **Research Assistant**, Southeast University, China

Education

2025-on **PhD in Civil Engineering**, Stony Brook University, USA.

2021-2024 **M.S. in Communication and Transportation Engineering**, Southeast University, China.

2017-2021 **B.S. in Road, Bridge and Channel Engineering**, Chang'an University, China.

Research Project

2025-on **Rural Safe Efficient Advanced Transportation Center** | [Lab website](#)

Vid-LLM-Based Understanding and Analysis of Rural Traffic Crash Videos

Role: Graduate Research Assistant

2024-2025 **MnDOT** | [Project page](#)

Analyzing Truck Size and Weight Impacts on Vehicle Miles Traveled

Role: Graduate Research Assistant

Open Resources Code

2025 **CrashChat: A MLLM for Multitask Traffic Crash Video Analysis.**  <https://github.com/Liangkd/CrashChat>.

Honors and Awards

2025 **Hsiao Shaw-Lundquist Fellowship Award.** [Hsiao Shaw-Lundquist Fellowship](#).

2024 **ITS Minnesota Educational Scholarship Award.** [ITS Minnesota](#).

Refereed Conference Presentation

2025 **Research on Driver Acceptance of Automatic Truck Platoon Based on Extended TAM.**

Transportation Research Board (TRB) 2025 Annual Meeting, Washington, D.C., USA.

Yang, W.Y.; Qian, Z.D.*; Liang, K.D.; Yu J.L.; Qian, Z.N.

2024 **Investigation of Traffic Sign Occlusion in Autonomous Truck Platoon Using an Occlusion Time Model.**

The 24th COTA International Conference of Transportation Professionals, Shenzhen, China.

Liang, K.D.; Qian, Z.D.*.

2023 **Highway Life-cycle Cost Analysis under the Autonomous Vehicles Scenario.**

The 29th Intelligent Transportation Systems (ITS) World Congress, Suzhou, Jiangsu, China.

Liang, K.D.; Qian, Z.D.*.

Refereed Journal Articles

2025 **CrashChat: A Multimodal Large Language Model for Multitask Traffic Crash Video Analysis.**

Liang, K.D.; Li, K.; Hu, x.b.; Qin R.W.*. arXiv preprint arXiv:2512.18878. doi:[10.48550/arXiv.2512.18878](https://doi.org/10.48550/arXiv.2512.18878)

Open science:  <https://github.com/Liangkd/CrashChat> |  doi:<https://doi.org/10.48550/arXiv.2512.18878>

- 2024 **The Impact of the Lateral Distribution of Autonomous Vehicles on the Performance of Steel Bridge Deck Pavement.**
Liang, K.D.*; Zhu, J.K.; Qian, Z.N.; Yang, W.Y. Proceeding of the Institution of Civil Engineering – Bridge Engineering, Early Access. doi:[10.1680/jbren.23.00038](https://doi.org/10.1680/jbren.23.00038). Open science:  doi:[10.1680/jbren.23.00038](https://doi.org/10.1680/jbren.23.00038).
- 2023 **Development of a Finite Element Model to Analyze the Lateral Drift of Autonomous Vehicles and Its Impacts on Rutting Depth on Flexible Pavements under Mixed Traffic Scenarios.**
Liang, K.D.*; Qian, Z.D.; YX. Xie; Wang, H.B. Transportation Research Record, Early Access. doi:[10.1177/03611981231189495](https://doi.org/10.1177/03611981231189495). Open science:  doi:[10.1177/03611981231189495](https://doi.org/10.1177/03611981231189495).