1.) Title of your research area (10 words or less)

Transportation & Logistics, Disaster Operations Management, ML & Optimization

2.) Description of the research area or project that a new postdoctoral scholar could investigate under your projected opportunity for training (300 words)

**From the application perspective** - One of my current research focuses is on evacuation planning, which designs effective evacuation strategies to help Gulf Coast communities successfully prepare for, respond, and adapt to disasters. Specifically, my main work involves analyzing human evacuation activities, predicting traffic flows, allocating available vehicles, and developing routes to safely and efficiently move affected populations (especially vulnerable groups) away from disasters. The second research focus is on humanitarian logistics, which aims to alleviate the suffering of people and improve community resiliency through planning, implementing, and controlling storage of goods and materials in an efficient and cost-effective manner for emergencies. In addition, with the emerging development of social media, I also focus on the management and analysis of social media data, which can provide a vast amount of relevant and timely information related to disaster response. Much of my work is to identify evacuation demands and analyze behaviors of community residents using social media data by applying machine learning techniques to reduce evacuation risks which decrease health related negative impacts.

**From the methodology perspective** - I have used both optimization and machine learning a lot for my research. One of my current project is to create a machine learning-based computational framework to solve large-scale stochastic programming problems effectively and efficiently by integrating machine learning techniques into optimization algorithms. This project is NSF funded, and I wish to bring some postdoc on board to get involved so that he/she could help submit a few relevant proposals for more funding.

3.) Special research AND career skills that you would be willing to provide training for a new postdoctoral scholar (50 words)

- **Career Counseling** will be directed with the skills, knowledge, and experience needed to excel in possible career paths
- **Experience with Preparation of Grant Proposals** will be gained by direct involvement in proposal writing
- **Publications and Presentations Skills**
- **Teaching and Mentoring Skills**
- **Instruction in Professional Practices**

4.) Please include website or social media links to your research profile or description at TXST.

Group website: [https://dong.wp.txstate.edu/](https://dong.wp.txstate.edu/)
LinkedIn: [https://www.linkedin.com/in/zhijie-sasha-dong-ph-d-12758638/](https://www.linkedin.com/in/zhijie-sasha-dong-ph-d-12758638/)
Twitter: [https://twitter.com/DrSashaDong](https://twitter.com/DrSashaDong)