

HONGYUAN YANG

PH.D. CANDIDATE | CIVIL & ENVIRONMENTAL ENGINEERING *transportation*



1. **Where are you from?** Beijing, China.

2. **Where did you get your undergrad degree from and what was your major? Do you have a MS?** I got my bachelor's degree of Civil Engineering from Tsinghua University. And I got my master's degree of Project Management at Northwestern University.

3. **What attracted you to engineering?** Since I was a child, I have always liked to design and build things. My childhood dream is designing a famous bridge. So, I chose Civil Engineering as my major when I was an undergraduate student. Then I realized that bridges are components of a transportation system. Instead of building bridges, understanding the system, and optimizing the system makes me prouder of what I've done.

4. **What attracted you to pursue a Ph.D. in your specialty area?** My advisor is Yu (Marco) Nie. His attitude towards research attracted me. I can tell his passion for research from his eyes every time we discuss questions. His attitude makes me believe doing research can be my whole life pursuit.

5. **How do you explain your thesis research to a non-scientist?** My most recent work is on understanding the impact of omnichannel retailing (like Walmart and Amazon) on traffic network. Especially after the COVID-19 pandemic, many people choose to work from home and shop online. Someone thinks this will reduce the traffic congestion since fewer people need to commute or drive to shop in-store. In contrast, someone else thinks e-commerce generates additional traffic demands, especially personal vehicle use in express delivery. My work is to build a model to characterize the omnichannel retailing process and try to find the impact of retailer's decision on traffic network.

6. **What attracted you to NU?** At first, I came here to pursue my master's degree. The primary reason is Northwestern University is one of the top research universities in the United States. And its transportation center is a leading interdisciplinary education and research institution with a long history. After I studied here, I met a lot of people. They are brilliant, imaginative, and creative. And I know this is the type of university that I'm proud to be a part of.

7. **What has been the highlight of your time at NU and CEE?** I was selected as a distinctive graduate of my master's program. And I participated in a U.S. Department of Transportation-funded project named "Telemobility". My thesis about omnichannel retailing is a part of this project.

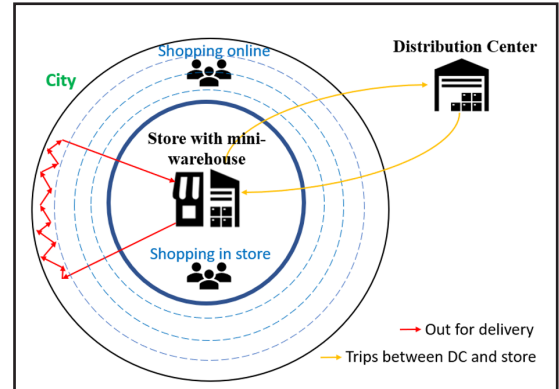
8. **What has been the most challenging aspect of your graduate school experience?** Transportation is an interdisciplinary research area. I need to learn a lot of different kinds of knowledge. For example, when I researched public transit strategies in response to the global pandemic, I read many papers about COVID-19. This challenge also makes me excited since I'm not just doing transportation research but solving real-world questions.

9. **Can you tell us about your experience being mentored or mentoring others?** I worked as a teaching assistant for EA2 and EA3 for several years, helping undergraduate students understand basic engineering analysis methods. It's quite different between learning and teaching. Different students may have different ideas about the same question. To help them, I need to understand their idea first. Sometimes, their ideas also inspired me a lot.

10. **What are your interests or hobbies outside of your research?** I like playing soccer and painting. Because of the COVID-19, I have no chance to play soccer with my friends. But I painted a rock at northwestern lakefill.



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Research: Omni-channel retail



Rock Painting at Northwestern lakefill