



Ph.D. Student with Financial Aid

Overview

I am inviting those who are interested in a Ph.D. position (with full scholarship up to three years and possible funding for the fourth year) at the Department of Urban Affairs and Planning at Virginia Polytechnic Institute & State University. The student is going to work with Assistant Professor [Wenwen Zhang](#) examining topics, related to (1) the social impact and planning policy implications of disruptive transportation technologies, such as ride hailing services and (shared) automated vehicles and (2) leverage data science and innovative data sources to fill up existing urban data gaps and urban models. Dr. Zhang will also support the student to obtain an Urban Computing certificate at Virginia Tech (a joint program provided by Computer Science and Urban Affairs Planning departments, supported by National Science Foundation [NSF], where Dr. Zhang is an affiliated faculty member).

Minimum requirements:

1. A master's degree in urban planning or a related field, such as Civil Engineering, Geography, etc.¹;
2. Familiar with basic quantitative models, such as linear regression, count model, and discrete choice models;
3. Proficient with Geographic Information Systems (GIS);
4. In-depth knowledge regarding urban modeling, especially transportation and land use models;
5. Basic data visualization skills;
6. Excellent English writing and communication skills;
7. Self-motivated and enthusiastic about conducting research in related to transportation technologies and urban analytics.

¹ We may recruit exceptional bachelor students into the joint Master-Ph.D. program.

Preferred skill set:

1. Working experiences with R, Python, and Javascript;
2. Basic knowledge regarding machine learning, agent-based simulation, and optimization;
3. Capability to work with large dataset on platforms, such as Hadoop or Spark
4. Fundamental knowledge regarding transportation survey design.
5. History of journal and/or conference proceeding publication (especially Transportation Research Board [TRB] meeting)

About PGG-UDEP degree at VT Urban Affairs and Planning

The Urban Environmental Design and Planning (UEDP) track in the PhD in Planning, Governance, and Globalization (PGG) hosted by UAP draws insights from the social sciences and humanities into the multidimensional study of governance processes in all levels of society and international affairs. The faculty and students work jointly to cultivate their experience, knowledge, and skill with regard to the governance practices, political institutions, social dynamics, cultural values, workplace conditions, spatial formations, historical trends, and ethical conflicts that intersect in the workings of government, business, and not-for-profit organizations. Program graduates work in a range of nonprofit/NGO, public and private organizations at national and international levels. The urban affairs and planning (UAP) program is among the *Top 25 urban planning programs* in the U.S. according to *planning educators* based on the latest guide developed by [Planetizen](#). It is also among the few schools in the U.S. that offers Urban Computing certificate, which focuses on applying cutting-edge computer science algorithms to address social problems.

If you are interested in the position or have any question, please contact Dr. Zhang at wenwenz3@vt.edu.