POSITION DESCRIPTION
Postdoctoral Researcher (2 years)

Georgia Institute of Technology

School of Civil and Environmental Engineering

Dr. Giovanni Circella, Supervisor

Dr. Giovanni Circella is recruiting a postdoctoral researcher to work on a two-year period, effective as soon as possible[1]. The primary role of the researcher will be to contribute to a research project that focuses on updating the Georgia Statewide Travel Demand Model (GSTDM). This project is funded by the Georgia Department of Transportation (GDOT), and aims to improve the GSTDM in several areas, including:

- Introducing better ways to account for vehicle availability in various geographic regions in the state, and by socioeconomic and demographic groups;
- Introducing time of day in all steps of the modeling process;
- Developing a mode choice component in the GSTDM framework based on information available from the recent 2017 NHTS data and other datasets;
- Exploring innovative solutions to include public transportation and shared mobility options in the modeling system, including using recent data available from the General Transit Feed Specification (GTFS) and other data sources to generate the required information on the availability and attribute levels of public transit options.

We are looking for an individual with excellent scientific expertise and strong leadership skills. The successful candidate would be working with and will help supervise the efforts of two Ph.D. students involved in the project. Other duties commensurate with the researcher's qualifications will also be assigned. Although fulfilling the contractual obligation to GDOT is the highest priority for the position, there is also expected to be considerable scope for the researcher to prepare papers for publication in scholarly journals, as well as to be involved in other research activities directed by Dr. Circella.

Candidates should have completed a doctoral degree in Transportation, Urban Planning, Human Geography, or a related field at the time of hire (or have a full draft of the dissertation under review by her/his committee, and attestation by the major professor of imminent completion of the degree). *Important* qualifications for this position include expertise in travel demand modeling (including both the theoretical foundations and planning applications in the United States) and discrete choice modeling (theory and estimation); competency and thoughtfulness in statistical analyses; experience working/coding in Citilabs Cube and/or alternative travel demand forecasting packages (e.g. TransCAD or PTV Visum), data management, spatial analysis and geographic information system (GIS) software (e.g. ArcGIS); attention to detail; good organization; time management and recordkeeping; as well as English-language proficiency and capability to work well with minimal direction and with a team. Other *desirable* qualifications

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[1] Applicants must be in possession of valid work authorization which enables them to work for GT in this capacity, for up to two years.

include familiarity/expertise in programming in R and/or Python environments in addition to familiarity/experience with advanced modeling techniques, big data analysis and/or machine learning/deep learning approaches.

Screening of applications will begin on September 4, 2019 and the recruitment will continue until the position is filled. The expected salary range for the position is $48,000 - $52,000 a year, depending on qualifications. For a review of benefits, see http://ohr.gatech.edu/health-welfare-benefits.

Applicants should submit a cover letter, curriculum vitae, copy of their most relevant scientific publication (for the purposes of this search) and names/contact information of three references in a single PDF file to: giovanni.circella@ce.gatech.edu. Please format the file name as {lastname_initials}_postdoc_app.pdf and include "GSTDM Postdoc Search" in the subject line of the e-mail.

The Georgia Institute of Technology is an Equal Opportunity/Affirmative Action employer, and applications from women and under-represented minorities are encouraged.

The School of Civil and Environmental Engineering at Georgia Tech has approximately 680 undergraduate students, 470 graduate students, and 52 tenure-track faculty. The 2018 US News and World Report rankings puts both the CE and EnvE undergraduate programs at #2 in the country. The corresponding graduate programs are ranked #2 and #7, respectively (https://ce.gatech.edu/prospective/profile-and-rankings). For more about the charming and vibrant city of Atlanta, please see https://en.wikipedia.org/wiki/Atlanta and https://www.tripsavvy.com/great-things-about-atlanta-253628.