The Department of Civil Engineering – TSSO Lab at the University of South Alabama (USA) invites applications for a graduate research assistantship (GRA) for a student interested in pursuing a Master of Science in Civil Engineering (MSCE) degree or Doctor Science in System Engineering (D.Sc.) degree with concentration in transportation engineering. The position is expected to begin in January 2016.

Primary roles of the graduate research assistant will be to assist Dr. Kang in developing a Roadway Congestion/Safety Improvement Tool that will allow engineers to enter roadway characteristics of existing corridors (or potential changes to corridors) and calculate crash propensity and traffic flow performance measures. The appointment will be a yearly basis (starting from 1/2016 to 12/2016), and renewal will be contingent upon the availability of funds and demonstrated performance. Preference is given to students who have prior knowledge, experiences, and/or skills for the following areas:

- Microscopic traffic simulation modeling/analysis (e.g., VISSIM)
- Statistical analysis (e.g., SPSS)
- Computer programing and spreadsheet applications (e.g., Visual Basic/Excel-Macro)

The selected graduate research assistant will model and analyze (using a microscopic traffic simulation tool) highway corridors that have significant traffic operational improvements within the past 10 years. FHWA’s simulation-based safety surrogate assessment model (SSAM) will be applied to selected corridors to calculate traffic conflict likelihood parameters before and after traffic improvements were made. These conflict likelihood parameters will be generated by adapting microscopic traffic simulation (e.g., VISSIM) models for the corridors. In the course of the project, the graduate research assistant should be able to conduct: traffic data collection; traffic simulation modeling/analysis; statistical analysis; interpretation of results; technical writing; presenting results at international conferences; managing undergraduate researchers.

Applicants should prepare following materials and email them to Dr. Kang (mwkang@southalabama.edu) no later than Oct. 3rd, 2015: (1) a brief statement of interest; (2) C.V.; (3) university transcripts; (4) a list of three references; (5) GRE and TOEFL/IELTS scores (for international students). Note that the selected candidate must have a B.S. or M.S. degree in civil engineering or a closely related field by the time of the appointment.

In addition to this GRA application, the selected candidate should officially apply to the USA-Graduate School no later than the deadline below to get an admission letter from the university:

- Application Deadline for USA – Graduate School
  - 2016 Spring Semester (January): Dec. 1, 2015 if students are in the US
    Nov. 1, 2015 if students are outside the US