Pedestrian Subcommittee on Modeling and Simulation
Subcommittee will be co-chaired by Tarek Sayed and Karim Ismail

New urban planning concepts place considerable emphasis on sustainable modes of transportation, particularly walking. Consequently, a solid understanding of pedestrian behavior is of considerable interest. This Sub-committee is concerned with research on pedestrian modeling and simulation that utilize either macroscopic or microscopic modeling approaches. Macroscopic models relate to the representation of streams of pedestrians and their macroscopic characteristics, e.g., flow and density. Microscopic models concern the representation of individual movements of pedestrians. Microscopic modeling approaches can provide valuable insight to a wide range of individual and emerging group-level pedestrian behavior. These approaches are witnessing considerable advances because of the improvement in computer computational capabilities. Both modeling approaches can be applied to design pedestrian facilities, control crowd movements in different situations, and predict the level of service.

The goals of this subcommittee will be to provide a forum for the researchers and stakeholders to discuss these issues and to produce documents on the state-of-the-art and practice in the area of pedestrian modeling and simulation (white papers, research needs statements, peer-reviewed publications etc.). Following the TRB 2012 joint call for paper on “Modeling pedestrians and motorized traffic” sponsored by the pedestrian committee (ANF10) and the traffic flow theory committee (AHB45), workshops and other call for papers will be organized by the sub-committee. Some of the specific issues that the committee deals with include:

1) Identification and development of research need statements by engaging friends and members of the subcommittee.
2) Liaison with other committees and subcommittees on common interests, particular the traffic flow theory committee (AHB45), through joint call for papers and co-sponsoring of join sub-committees.
3) Promotion and dissemination of advances in macroscopic and microscopic pedestrian modeling techniques, with special focus on applications.
   Promotion of better understanding of crowd movement, in particular under emergent and evacuation conditions, and methods to mitigate associated risks.