



CENTER RESEARCH SEMINAR

Development and Application of Link-Level Vehicle Emission Inventory for the Metropolitan Area

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3:00 p.m. – 4:30 p.m.

Room **154** at Science Building

Biography

Mr. Venugopal has over eight years of experience in regional air quality planning. He has extensive experience preparing on-road mobile and aircraft emission inventories for the Texas Commission on Environmental Quality's (TCEQ) State Implementation Plan (SIP). In addition, he has extensive experience with the use of the U.S. EPA models (MOVES/MOBILE6/NMIM) in the development of emission inventories for various state and federal requirements. He has worked with federal, state, and local transportation agencies in the development of long and short range transportation plan and associated air quality conformity analysis. He was instrumental in the development of modules used for conducting mobile source air toxics (MSATs) analyses for National Environmental Policy Act (NEPA) purposes. This has enabled to complete air quality analyses quickly, at a lesser cost, and reduced resource burdens placed on MPOs for providing necessary data to conduct air quality NEPA analyses. He serves as a vice chair for the Transportation Research Board's ADC20 regional air quality subcommittee. He also served as a project advisor for Texas Department of Transportation research projects.

Abstract

On-road emission models are used as planning tools in various settings. For example, metropolitan planning organizations (MPO), achieving conformity for the air quality plan, state air agencies working on state implementation plan, state department of transportation working on National Environmental Policy Act (NEPA) analysis, etc. The two pieces of puzzle for estimating emissions are vehicle miles of travel (VMT) and emission factors. The presentation will focus on how VMT and emission factors are developed using travel demand models and emissions model respectively. The presentation will also identify the importance of using local data such as age distribution, meteorology, fuel, inspection and maintenance, ramp fraction, road type distribution, source type population, vehicle miles of travel mix, etc. to develop emissions. Finally, presentation will show examples of how link-level emission estimates can be employed in real world applications.