The NCMUG's vision is to provide a forum for sharing knowledge and experiences of using state-of-practice transportation modeling tools, techniques and innovations appropriate to answer transportation planning and policy questions for the State of North Carolina, and promote its implementation across the State.

# 2016 Fall NCMUG Meeting

**Wednesday, November 16, 2016**

**1:00 p.m. – 5:00 p.m.**

**Room 2600, ITRE/NCSU**

909 Capability Drive, Research Building IV, Raleigh, North Carolina 27606

## Agenda

Moderator: Joe Schirripa, Transportation Planning Branch, NCDOT

- **INTRODUCTION**

- **SUB-AREA ANALYSIS/CORRIDOR ANALYSIS**
  **Sub-Area and Corridor Analysis – Guidelines and Tool for TRM v6 (40 minutes)**
  Amar Sarvepalli, Parsons Brinckerhoff

  *Learning Objectives:*
  ➢ Subarea: Need for one and what does it include (highway / transit?)
  ➢ Brief overview of popular subarea modeling approaches in the US
  ➢ Typical subarea modeling design and steps
  ➢ Subarea guidelines and things to consider
  ➢ Overview of TRM-v6 subarea Tool

- **SIMULATION MODEL**
  **Construction Traffic Analysis: To be or Not to be: A Case Study for NC-107 Widening, Sylva, NC (40 minutes)**
  Taruna Tayal, VHB and Donald Bryson, PE, VHB

  *Learning Objectives:*
  ➢ Improving Construction Management planning.
  ➢ Realizing opportunities to revise interim or final designs based on construction analysis.
  ➢ Recognizing and effectively exploiting linkages between regional travel demand models and micro-simulation models.
  ➢ Applying benefit cost analyses to construction phasing and traffic maintenance.
  ➢ Identifying the advantages and disadvantages of performing construction traffic analysis.

  **VISSIM Microsimulation Modeling for South Carolina Freeway Projects (40 minutes)**
  Kellie Reep, PE, Stantec

  *Learning Objectives:*
  ➢ Introduction to VISSIM and its features/limitations
  ➢ Summary of start-to-finish modeling process
  ➢ Explanation of vehicle assignment in VISSIM
  ➢ Overview of corridor studies performed in South Carolina

**Utilizing Macro- and Micro-Simulation Tools for the Completion of I-485 HOV/HOT Analysis in the Charlotte area (40 minutes)**
Vivek Hariharan, RS&H; Craig Gresham, Clearbox Forecast Group; Brian Wert, NCDOT

*Learning Objectives:*
➤ Working between Macrosimulation and Microsimulation Models
➤ Utilizing ODME Matrix Manipulation for Transmodeler analysis
➤ Limitations of regional models for microsimulation analysis

**Piedmont Triad Freight and Commercial Vehicle Model (40 minutes)**
Colin Smith, RSG; Craig Gresham, Clearbox Forecast Group

*Learning Objectives:*
➤ Introduction to truck touring models for simulating freight delivery and commercial vehicle movements
➤ Freight truck touring model: structure and sensitivity
➤ Commercial vehicle touring model: structure and sensitivity
➤ Piedmont Triad case study
➤ rFreight, an R (open source statistical programming platform) package that supports implementation of freight simulation models.

- **SURVEY – STATE OF PRACTICE**
  **Web-Based with GPS Samples: 2016 Triangle Household Travel Survey (40 minutes)**
  Joe Huegy, Project Manager, Triangle Regional Model Service Bureau/ITRE/NCSU

  *Learning Objectives:*
  ➤ Web-Based/Self-administered survey, purpose, cost, sample strategy, instrument design and QAQC, data process, and lessons learnt
  ➤ GPS data collection, purpose, cost, sample strategy, instrument design and lessons learnt

**Other Notes:**
**Four (4) PDHs can be earned at the meeting (roster sheet & forms will be provided).**