

NCMUG Vision: 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.

2018 Fall NCMUG Meeting

1 – 5 PM, Thursday, November 1, 2018

Room 2600, ITRE/NCSU

909 Capability Drive, Research Building IV, Centennial Campus, NCSU, Raleigh, North Carolina 27606

Agenda

Moderator: Joe Schirripa, CDM Smith

- **INTRODUCTION**

- **MODEL DEVELOPMENT WITH BIG DATA**

1:00-1:35 PM (35 minutes)

Using Big Data in Model Development & Calibration in Greenville & Other Regions

David Schellinger, P.E., Principal – Model Development and T&R Analysis, Stantec

Learning Objectives

- Understanding Big Data and its Application in Model Development
- Understanding the Limitations of the Data
- Lessons learned with several case studies

1:35-2:10 PM (35 minutes)

Recent Model Developments Using Big Data in Fayetteville and Virginia

Feng Liu, Ph.D., Principal; John Lewis, Principal, Cambridge Systematics, Inc.

Learning Objectives

- Get familiar with recent progress with Big Data (passive data)
- Learn roles of Big Data (passive data) in model development
- Caveats and lesson learned in using Big Data (passive data) in support of model development and application

2:10–2:45 PM (35 minutes)

Probe Speeds Conflation Process from TMC Network to Florida District 5 TDM Network

Li Jin, Ph.D, AICP, EIT, Kittelson & Associates, Inc.

Learning Objectives

- Integrating volume and speeds for model development
- Supporting model calibration and validation
- Possible “big data” analysis using model platform

- **MODEL AND PLANNING**

2:45-3:20 PM (35 minutes)

Exploratory Modeling Analysis of Land Use Changes on Traffic and Traffic Patterns

Brian Wert, NCDOT; John Burris, HNTB

Learning Objectives

- Update the audience on the value that exploratory modeling analysis can have when reviewing Measure of Effectiveness (MOE) benefits for major transportation projects.
- Learn about relevant North Carolina projects where multiple socioeconomic (SE) data scenarios were analyzed
- Discuss experiences, challenges, and potential opportunities for the application of exploratory modeling analysis

3:20-4:00 PM (40 minutes)

The Metrolina Regional Model's (MRM) Role in the Charlotte Regional Transportation Planning Organization's (CRTPO) Metropolitan Transportation Planning (MTP) Development Process

Anna Gallup, P.E.; Martin Kinnamon, Senior Travel Demand Modeler, P.E., Charlotte DOT

Learning Objectives

- How the MRM informs CRTPO's project ranking process
- The MRM and Scenario Planning
- Lessons Learned / Looking ahead to CRTPO's 2050 MTP process

- **OPEN DISCUSSION**

4:00 – 4:30 PM (30 minutes)

Discussion 1: Understand Model Uncertainty

Facilitator: Feng Liu, Cambridge Systematics Inc.; and Brian Wert, NCDOT

Discussion Focus Points

- Uncertainty in transit ridership forecasting;
- Uncertainty in traffic volume post processing and forecast development; and
- Uncertainty with inputs and scenario planning

4:30 – 5:00 PM (30 minutes)

Discussion 2: Performance Measurement and Performance-Based Planning

Facilitator: Pam Cook, NCDOT

Discussion Focus Points

- Overview: What is the data needed to determine if NCDOT/MPO performance measures are being met in the three separate rulemaking areas of a) Safety; b) Pavement/bridge, and c) CMAQ, Reliability, and Freight; and additional MPO performance measures (different for each MPO)
- What data for federal required performance measures for MPOs can be obtained from current travel demand models?
- Are there any changes/additions that could be made to current models more helpful in capturing needed performance measure data?
- Who needs to be included in the discussion of possible changes to a current travel demand model to make TDMs more useful for informing performance measures. Or do performance measures need to be modified to better match what data is available from travel demand models.

Note: Three (3) PDHs can be earned at the meeting (roster sheet & forms will be provided).