# Integrating Exploratory and Simulation Modeling into Regional Transportation Planning

Are you interested in potential applications of Exploratory and Simulation Modeling in regional transportation planning? If yes, please join us on **October 13th, 2022, at 2:00 PM** Eastern Time (US & Canada) for our next webinar - Integrating Exploratory and Simulation Modeling into Regional Transportation Planning.

## Session Description

This webinar summarizes findings of a project marrying two emerging areas of transportation research: regional dynamic traffic assignment (DTA) and exploratory modeling and analysis (EMA). EMA enables transportation planners to make better decisions in the face of deep uncertainty about demographic and land use forecasts, uncertainty relating to shifting economic and market factors, and uncertainty surrounding emerging transportation technologies like connected and autonomous vehicles. DTA helps planners estimate the operational impacts of projects with greater fidelity and confidence than static assignments afford.

This project demonstrates the potential benefits of bringing EMA and DTA together to help manage deep uncertainty in the transportation planning context. Caliper Corporation has completed integration of TMIP's EMA Tool (EMAT) with three core models of the Las Vegas Metropolitan area. These models include travel demand and DTA models maintained by the Regional Transportation Commission for Southern Nevada (RTCSNV). Two DTA models were integrated with EMAT: one based on microsimulation and suitable for analysis of traffic operations and another based on mesoscopic simulation and designed for planning-level decision-making. EMA experiments were performed, and results and lessons learned will be presented.

## Presenters

**Beth Xie** is Manager of Transportation Planning with Regional Transportation Commission of Southern Nevada (RTCSNV). Beth has 25 years of diversified working experience in travel demand modeling, transit and transportation planning, economic and employment projections, and transportation data analysis. She has Ph.D. in Transportation Geography with a minor in Economics from Indiana University and M.A in Economics from University of Toledo, OH.

**Daniel Morgan** is the Vice President of Traffic Simulation at Caliper Corporation. He has 20 years' experience in traffic modeling and simulation, as a simulation software developer, researcher, and practitioner. Dan has been the product manager for TransModeler, Caliper's

traffic simulation software, since the software's initial release in 2005, has overseen the software's training and technical support services, and has been project manager for pioneering transportation studies involving the development, calibration, and application of wide-area microsimulation and dynamic traffic assignment (DTA) models for clients across the US.

**Ramachandran Balakrishna** is a Principal Transportation Scientist at Caliper Corporation, with over two decades of experience in Dynamic Traffic Assignment (DTA), traffic simulation, Activity-Based Modeling (ABM), route choice, discrete choice theory, advanced choice modeling, and dynamic origin-destination (OD) trip table estimation. He has developed and applied sophisticated optimization algorithms for the calibration and validation of large-scale traffic simulation models.

## Meeting Information

**Please register in advance for this webinar at:**
https://usdot.zoomgov.com/webinar/register/WN_wrVvgZniSW2octu7m1df8g

Capacity is limited to first 100 participants. Registration does not guarantee entry. We will record the webinar.

### Contact Us

If you would like to work with TMIP to share your agency's experience or if you have questions or comments about TMIP, please contact Sarah Sun, FHWA.

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