

DTALite and AgBM-DTALite Workshop Training Agenda

Objective:	Introduce participants to the DTALite/NeXTA open source software package through hands-on exercises. Teach participants to import data, code a network to analyze toll facilities and work zones, and evaluate simulation results using the visualization and reporting features in NeXTA. Also, introduce participants to the AgBM-DTALite integrated model, and present capabilities of the integrated model through examples of planned applications.
Participants:	Participants should possess a basic understanding of Dynamic Traffic Assignment and Agent-based models and have first-hand experience applying traffic analysis and modeling software tools. Participants are expected to work individually or in pairs in front of a workstation for the workshop. Each workshop is intended to have approximately 10-15 participants given the hands-on software training aspect of the workshop.
Instructors:	The workshop will be taught by Dr. Xuesong Zhou from Arizona State University, Drs. Lei Zhang, Carlos Carrion and Chenfeng Xiong from the University of Maryland.
Location	Room JMP2121, J.M. Patterson Building, University of Maryland, College Park
Driving directions	<u>From Baltimore and Points North</u> Take I-95 South to Exit 27, and follow signs to U.S. Route 1 South. Go two miles south on U.S. Route 1, turn right onto Campus Drive, and then make an almost immediate right onto Paint Branch Drive. Go less than 1 block and turn RIGHT into the GG1 Parking Lot (The first road on your right) before reaching the intersection at Stadium Drive. If you reach the Jeong H. Kim Bldg., then you went too far. The GG1 Visitor Parking spots are on your immediate right. The J.M. Patterson Building is the fourth building on the right at the intersection of Regents Drive and Stadium Drive, two blocks away.
Parking information	GG1 Visitor Lot is across the street of Glenn L. Martin Hall Bldg. and next to the Glenn L. Martin Wind Tunnel and the Computer Science Instructional Center. Parking codes for non-UMD visitors are provided in a separate document.

Agenda: In-Person Computer-based Workshop (4 hrs)

Start Time	Topic	Instructors	Objective	Software Skills Introduced	Data Sets
	Arrive				
9:30AM	Welcome and Setup Introductions and Overview		Description of course objectives, Applicability/limitations of DTALite and potential applications	-N/A-	-N/A-
10:00AM	Module 1: Introduction to NEXTA/DTALite	Xuesong	Data files, Integrate with demand and GIS	- Review basic data import and path MOE functions in NeXTA	West Jordan (Salt Lake) Network
10:30AM	Module 2.1 Working through Visualization Features in NEXTA		Basic GUI features Integration with assignment model	- Visualization and reporting features in NeXTA Export data to Google Earth	Maryland statewide network
11:30AM	Module 2.2: Importing network and demand data from a regional planning model	Xuesong/Carlos	Evaluate network results to understand how dynamic traffic equilibrium and route choice behavior influence model results	- Import data from a travel demand model - Prepare network for scenario analysis - Load the previous model runs	Maryland statewide network
12:00PM	Lunch Break	-	-		-
1:00PM	Module 3: DTA Modeling Approach	Xuesong	Introduction to DTA modelling principles	- Agent-based simulation - Capacity-constrained model - Traffic simulation models - BPR, volume-delay functions; Point Queue; - Spatial Queue (with jam density); Newell's Kinematic Wave Model	
1:30PM	Module 4: Hands-on Exercises for Understanding DTA Modeling Principles	Xuesong	Evaluate network results to understand how dynamic traffic equilibrium and route choice behavior influence model results	- Apply VOT distributions for driver classes - Perform scenario evaluations - Perform sensitivity analysis by adjusting network properties	Hypothetical 3-Corridor Test Network
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2:30PM	Module 5: AgBM+DTA	Lei/Carlos	Introduction to agent-based model, SILK(15 min) Integration efforts (30min)	-N/A-	Small subarea network (I270 network)

			2 sample applications (peak spreading, departure time integration; workzone with incident, enroute diversion, mode shift..) Input data, summary (30 min)		
3:30PM	Wrap up		Gather feedback from the group and future activities	-N/A-	-N/A-
	Adjourn				