

The 8th International Symposium on Dynamic Traffic Assignment: DTA2021
Seattle, WA, USA
June 28 to June 30, 2021

Symposium Program (version 6.08.2021)

Date Duration	Jun 28, Mon 7:30 - 11:45 (PDT)	Jun 29, Tue 17:00 -20:45 (PDT)		Jun 30, Wed 17:00 - 20:45 (PDT)
1 hour (1.5 hours on Jun 28) <i>Regular</i>	A0 Opening Remarks A1 Day to Day Models	B1 DTA with MFD		C1 Recent Advances of DTA Methods
15 min	Break			
1 hour <i>Lightning & Panel Discussion</i>	A2 Simulation modeling for Emerging Technologies	B21 Freeway Traffic control with emerging technologies	B22 Analysis and Modeling of Transportation Networks	C2 Modeling New mobility Systems
15 min	Break			
1 hour 15 min (1 hour for C3) <i>Lightning & Panel Discussion</i>	A3 Algorithms & Large-scale applications	B3 Routing & Traffic control		C3 Data/AI Methods for DTA

Note: Times below are in PDT (Pacific Daylight saving Time), i.e., UTC-08:00

Day 1: Jun 28 (Mon)	Time
A0: Opening Remarks	7:30 – 7:45 PDT
A1: Day to Day Models <i>Chair: David Watling</i>	7:45 – 9:00 PDT
A Strategic Model for the Long-Term Evolution of Mode Share in On-Demand Shared Ride Service Systems	Haruko Nakao, Richard Connors and David Watling
Follow Your Friends or Not? Day-To-Day Route Choice Model and Behavioral Experiment Via Reference Point Effect	Tian-Liang Liu, Liang Zhang, Chong Zhang, Hai-Jun Huang and Jian Chen
Zero-Queue Traffic Control, Using Green-Times and Prices Together	Michael Smith, Takamasa Iryo, Richard Mounce, Koki Satsukawa and David Watling
Multi-Vehicle Day-To-Day Dynamic Assignment	Giulio E. Cantarella, Chiara Fiori and Pietro Velonà
Day-To-Day Learning Framework for Online Origin-Destination Demand Estimation and Network State Prediction	Eunhye Kim and Hani Mahmassani
Break	9:00 – 9:15 PDT
A2: Simulation modeling for Emerging Technologies <i>Chair: Ali Zockaie</i>	9:15 – 10:15 PDT
Considering Drivers' Heterogeneity in a Mixed Fleet of Connected, Autonomous, and Human-Driven Vehicles	Fatemeh Fakhroosavi, Ramin Saedi, Ali Zockaie and Alireza Talebpour
Integrating Dynamic Traffic Assignment and Activity-Based Models: Practical Challenges and Success Stories	Daniel Morgan, Qi Yang and Janet Choi
Impact of Connected and Autonomous Vehicles Under Supply Uncertainties: An Experimental Design Approach	Daniel Morgan, Qi Yang and Janet Choi
A Highly Efficient and Scalable Mesoscopic Traffic Simulator for Regional Dynamics Analysis	Ramachandran Balakrishna, Qi Yang and Beth Xie
A Multiscale Traffic Flow Model Based on Hybrid Deterministic and Stochastic Disaggregation	Roberta Di Pace, Facundo Storani and Stefano de Luca
Including Right-Of-Way in a Joint Large-Scale Agent-Based Dynamic Traffic Assignment Model for Cars and Bicycles	Mads Paulsen, Thomas Rasmussen and Otto Anker Nielsen
Break	10:15 – 10:30 PDT
A3: Algorithms & Large-scale applications <i>Chair: Ramachandran Balakrishna</i>	10:30 – 11:45 PDT
Recent Experiences with Practical Deployments of Wide-Area Dynamic Traffic Assignment	Daniel Morgan and Howard Slavin
Dynamic Origin-Destination Demand Estimation: A Review of Major Approaches, Limitations and the Future	Ramachandran Balakrishna
Traffic Flow Model Calibration for An Agent Based Traffic Simulation Model Applied in New York City	Ding Wang, Kaan Ozbay, Yueshuai He, Yubin Shen and Joseph Chow
Practical Algorithms of Stochastic Route Choice for DTA: ESDTA	Jeroen Verstraete and Chris Tampere
How Route Guidance with Small Detours for Only a Fraction of All Travelers Can Significantly Improve Network Performance	Oskar A.L. Eikenbroek, Georg Still and Eric van Berkum

A Method for Particle-Based Traffic Assignment	Gunnar Flötteröd
Assessing the Equity Implications of Localized Emissions and Congestion Impacts from Transportation Using Quasi-Dynamic Traffic Assignment: A Case Study of the San Francisco Bay Area	Jessica Lazarus, Ahmad Bin Theneya, Ioanna Kavvada, Cy Chan and Jane Macfarlane

Day 2: Jun 29 (Tue)	
B1: DTA with MFD <i>Chair: Jorge Laval</i>	17:00 – 18:00 PDT
Modeling and Managing Ridesharing in a Multi-Modal Network with An Aggregate Traffic Representation: A Doubly Dynamical Approach	Bangyang Wei, Meead Saberi, Fangni Zhang, Wei Liu and S. Travis Waller
Macroscopic Fundamental Diagram Based Perimeter Control Considering Dynamic User Equilibrium	Qiangqiang Guo and Xuegang Ban
Activity-Based Dynamic Traffic Assignment on Regional Network and Aggregated Traffic Models: An Application to Environmental Pricing	Sergio Batista, Guido Cantelmo, Mahendra Paipuri, Ludovic Leclercq, Monica Menendez and Constantinos Antoniou
Dynamic System Optimum Traffic Assignment in Continuum Space Using Macroscopic Fundamental Diagram: Analytical Solution and Simulation Experiments	Rafegh Aghamohammadi, Jorge Laval and Ludovic Leclercq
Break	18:00 – 18:15 PDT
B21: Freeway Traffic control with emerging technologies <i>Chair: Alireza Khani</i>	18:15 – 19:15 PDT
Deploying Public Charging Stations for Battery Electric Vehicles on Expressway Network Based on Dynamic Traffic Assignment	Yang Yang, Zhang Tian-Yu, Yao En-Jian and Wang Zhao-Hui
Variable speed limits in the Link Transmission Model: an information propagation method	Mark Raadsen and Michiel Bliemer
Trajectory-Based Roadside Adaptive Control in a Mixed Connected Vehicle Environment	Yao Yu, Jincheng Tu, Xuegang Ban and Qiangqiang Guo
Analytical Analysis of the Effect of Maximum Platoon Size of Connected and Automated Vehicles	Jiazu Zhou and Feng Zhu
A Dynamic Toll Design Problem for Express Toll Lane with Multiple Entries and Exits Using Cell Transmission Model	Yufeng Zhang and Alireza Khani
Collaborative Deploying Optimization of Cav Lanes and Bus Lanes Under Demand Uncertainty Considering Energy Consumption	Yu Lin, Hongfei Jia, Hongzhi Miao, Ruiyi Wu and Jun Ma
B22: Analysis & Modeling of Transportation Networks <i>Chair: Sarah Yang</i>	18:15 – 19:15 PDT
A Reflection on Intelligent Public Transport in Manaus	Carol Dias Gomes
Multi-Class DTA Framework for Non-Lane Based Traffic Scenario	Ranju Mohan and Debayan Ghosh
Intercity High-Speed Rail Planning and Timetable Optimization Under Time-Dependent Demand	Lina Hao, Sarah Yang and Jin Qin
Braess's Paradox in Scale-Free Networks	Jiawei Xue, Hemant Gehlot and Satish Ukkusuri
Price of Anarchy of Dynamic User Equilibrium Based on Graphical Solution Method	Chuan-Lin Zhao
Break	19:15 – 19:30 PDT
B3: Routing & Traffic control <i>Chair: Takamasa Iryo</i>	19:30 – 20:45 PDT
Adaptive Transit Signal Control with Reinforcement Learning	Zicheng Su and Andy Chow
Optimal Deployment of Capacitated Parking Facilities in the Era of Autonomous Vehicles	Mahmood T. Tabesh, Mohammad Miralinaghi and Samuel Labi

Modeling Stochastic Degradations During Transportation Network Emergency Evacuations	Xia Yang and David Coit
Adaptive Coordinated Traffic Signal Control: A Rolling Horizon Optimization Scheme	Lubing Li, Hong Lo and Wei Huang
Routing Heterogeneous Drivers Through Persuasion: Formulation and Analysis	Yixian Zhu and Ketan Savla
Route Choices That Cause Gridlock	Takamasa Iryo and Yuki Sawamura
Expandable Area Control Strategy of Road Network Based on the Macroscopic Fundamental Diagram	Zundong Zhang, Dongbo Song and Xuegang Ban

Day 3: Jun 30 (Wed)	
C1: Recent Advances of DTA Methods <i>Chair: He Han</i>	17:00 – 18:00 PDT
A First Order Continuum Signalized Node Model for Dynamic Traffic Assignment	Raheleh Yahyamoazarani, Chris Tampere and Willem Himpe
Computing Dynamic User Equilibrium on Large-Scale Networks Without Knowing Global Parameters	Mathias Staudigl, Duong Viet Thong, Aviv Gibali and Phan Tu Vuong
MDTA: Markovian Dynamic Traffic Assignment, a New Approach for Stochastic Dynamic Traffic Assignment	Ricardo de La Paz Guala, Cristián E. Cortés, Pablo A Rey and Benjamin Heydecker
Convergence of Fixed-Point Algorithms for Elastic Demand Dynamic User Equilibrium	Terry Friesz, Ke Han and Amirreza Bagherzadeh
Break	18:00 – 18:15 PDT
C2: Modeling New mobility Systems <i>Chair: Stephen Boyles</i>	18:15 – 19:15 PDT
The First-Best System Optimum of the Morning Commute Problem with Ridesharing Travelers	Rui Ma and H. Michael Zhang
Multi-Objective Linear Optimization for Strategic Planning of Shared Autonomous Vehicle Operation and Infrastructure Design	Toru Seo and Yasuo Asakura
Ridesharing User Equilibrium with Nodal Matching Cost and Its Implications for Network Design Problems	Xu Chen and Xuan Di
Managing the Morning Commute Problem Using Ridesharing Program and Tradable Credit Scheme	Mohammad Miralinaghi, Amir Davatgari, Sania E. Seilabi, Yanfeng Ouyang, Mohammadhosein Pourgholamali and Samuel Labi
Multi-Period Bike Relocation Problem Using Co-Existing Transportation System	Chin Sum Shui
Peak-Load Pricing and Demand Management for Ridesourcing Platforms	Cesar Yahia and Stephen Boyles
Break	19:15 – 19:30 PDT
C3: Data/AI Methods for DTA <i>Chair: Hong Lo</i>	19:30 – 20:30 PDT
Quantifying Service-Reliability-Based Day-To-Day Evolution of Travel Choices in Public Transit Systems with Smart Transit Card Data	Mingyou Ma, Wei Liu, Xinwei Li, Fangni Zhang, Can Li and Vinayak Dixit
An Estimation Method for Spatiotemporal Traffic States Based on Incomplete Traffic Observation	Ryuichi Tani and Kenetsu Uchida
A Link-to-Link Segment Based Kriging Metamodel for Dynamic Network Loading	Ashraf Uz Zaman Patwary, Wei Huang and Hong K. Lo
Data-Driven Traffic Assignment: A Novel Approach of Learning Traffic Flow Patterns Using Graph Convolution Neural Network	Rezaur Rahman and Samiul Hasan
Estimating Dynamic Origin-Destination Flow by Self-Supervision and Adaptive Correction: Fusing Connected Vehicle Trajectories and Automatic Vehicle Identification Data	Yumin Cao and Keshuang Tang
A Hybrid Method for Real-Time Traffic Data Restoration and Its Impact on Performance of An Online DTA System	Eunhye Kim and Hani Mahmassani

