DTA 2016


Local Organising Committee

University of Sydney
Michiel Bliemer
Michael Bell
Mark Raadsen

University of New South Wales
Travis Waller
Vinayak Dixit
David Rey

University of Queensland
Mark Hickman

MONDAY 27 JUNE (TUTORIALS)	
08.00 – 09.00	**Registration**
09.00 – 10.30	**Tutorial 1**
Kinematic wave model *Ke Han & Terry Friesz*	
10.30 – 11.00	**Morning tea**
11.00 – 12.30	**Tutorial 2**
Dynamic user equilibrium *Terry Friesz & Ke Han*	
12.30 – 13.30	**Lunch**
13.30 – 15.00	**Tutorial 3**
Node models *Chris Tampère*	
15.00 – 15.30	**Afternoon tea**
15.30 – 17.00	**Tutorial 4**
Dynamic transit assignment *Mark Hickman*	
17.00 – 19.00	**Reception (drinks & canapes)**

TUESDAY 28 JUNE (SYMPOSIUM DAY 1)

08.00 – 09.00 Registration

09.00 – 10.30 Opening

Opening & welcome
Elizabeth Cowley, Deputy Dean University of Sydney Business School
Michiel Bliemer, Chair of the Local Organising Committee

Keynote: Does DTA work in practice? Firming the foundations, pushing the boundaries
Hani Mahmassani

10.30 – 11.00 Morning tea

11.00 – 12.30 Session 1 — Chair: Giulio Cantarella

Computing dynamic user equilibria in continuous time
Terry Friesz & Ke Han

Fair and efficient system states in dynamic traffic networks
Feng Zhu & Satish Ukkusuri

Tractable optimization with iterated DTA simulators
Gunnar Flötteröd

12.30 – 13.30 Lunch

13.30 – 15.00 Session 2 — Chair: Hong Lo

Supporting within iteration route choice in event-based generalised first order dynamic network loading models
Mark Raadsen & Michiel Bliemer & Michael Bell

A dynamic user equilibrium algorithm that exploits warm starting capabilities of the iterative link transmission model
Willem Himpe & Chris Tampère

Extending the link transmission model with general concave fundamental diagrams and capacity drops
Jeroen van der Gun & Adam Pel & Bart van Arem

15.00 – 16.30 Poster Session A

15.00 – 15.30 Afternoon tea

Bus arrival time prediction based on support vector regression with Bayesian correction
Yunping Huang & Renxin Zhong & Lingli Deng

Investigating the performances of the method of successive averages for determining dynamic user equilibrium and system optimum in Manhattan networks
Ludovic Leclercq & Alexis Verchier & Jean Krug & Monica Menendez

Dynamic self-equalizing headway control for bus operations
Shuyang Zhang & Hong Lo

Clustering and calibration of traffic flow fundamental diagrams for large-scale network simulation applications
Ziyuan Gu & Meead Saberi & Majid Sarvi & Zhiyuan Liu

Improving convergence of quasi dynamic assignment models
Luuk Brederode & Adam Pel & Luc Wismans & Erik de Romph

A prospect-based network equilibrium approach for modelling household activity-travel choice behaviour over time
Xiao Fu & William Lam

Urban link travel time prediction considering turning choice with a non-explicit state-transition model
Ruotian Tang & Ryo Kanamori & Toshiyuki Yamamoto

Dynamic traffic assignment in stochastic networks under travel inertia
Chi Xie & Ying-En Ge & Travis Waller

Discrete and continuous time formulations of the link transmission model class
Michiel Bliemer & Mark Raadsen & Michael Bell

16.30 – 18.00 Session 3 — Chair: Satish Ukkusuri

A dynamic strategy-based path choice model for real-time run-oriented transit simulation
Agostino Nuzzolo & Antonio Comi

Dynamic modal choice for heterogeneous travellers with responsive transit operation
Xinwei Li & Hai Yang

Modelling public transit passengers' boarding strategy choices
Neema Nassir & Mark Hickman

18.00 – 19.00 Meeting of the Scientific Advisory Committee (closed to non-members)

WEDNESDAY 29 JUNE (SYMPOSIUM DAY 2)

09.00 – 10.30 **Session 4** **Chair: Iryo Takamasa**

Bringing DTA innovation into practice: research needs and the role of data and cyberinfrastructure
Natalia Ruiz Juri & Mason Gemar & Kenneth Perrine & Jennifer Duthie & Joe Stubbs

Multi-class dynamic traffic assignment: approach-proportion-based formulation and car-truck interaction paradox
Y. Jiang & Wai Yuen Szeto & Jiancheng Long & Ke Han

A multi-agent simulation based dynamic traffic user equilibrium
Genaro Peque Jr & Toshihiko Miyagi & Fumitaka Kurauchi

10.30 – 11.00 **Morning tea**

11.00 – 12.30 **Session 5** **Chair: Terry Friesz**

Network signal setting design with stage sequence optimisation
Silvio Memoli & Giulio Cantarella & Stefano de Luca & Roberta Di Pace

Pressure-based policies for reservation-based intersection control
Michael Levin & Stephen Boyles & Tarun Rambha & Sanjay Shakkotai

A dynamic route swapping and control algorithm that maximises network capacity accounting for node constraints and blocking back
Francesco Viti & Wei Huang & Mike Smith

12.30 – 13.30 **Lunch**

13.30 – 15.00 **Session 6** **Chair: Chris Tampère**

Scenario based stochasticity for strategic dynamic traffic assignment
Melissa Duell & Hanna Grzybowska & David Rey & Travis Waller

Instability of departure time choice problem: a case with replicator dynamics
Iryo Takamasa

Statistical metamodeling of dynamic network loading
Wenjing Song & Ke Han & Yiou Wang & Terry Friesz & Enrique del Castillo

15.00 – 16.30 **Poster Session B**

15.00 – 15.30 **Afternoon tea**

Empirical analysis of the day-to-day models: a virtual route choice experiment
Hongbo Ye & Feng Xiao & Hai Yang

An agent-based analysis of transport network vulnerability and resilience with provision of travel information
Andy Chow & Ke Han & Kamal Achuthan

Bus dwell time prediction using proxy variables from a dynamic traffic assignment model
Neeraj Saxena & Sai Chand & Melissa Duell & Travis Waller

Effects of incorporating activity duration and scheduling utility on the equilibrium-based dynamic traffic assignment
Guido Cantelmo & Francesco Viti

Formal analysis of a cellular automaton model to optimise traffic control
Simon Stebbins & Mark Hickman & Jiwon Kim & Hai Vu

Optimal bimodal evacuation planning model using space-time extended network and its extension to the network design problem
Hiroe Ando & Fumitaka Kurauchi & Satoshi Sugiura

Link travel time approximation in double queue traffic model
Xia Yang & Rui Ma & Xuegang (Jeff) Ban & Ying-En Ge

Effects of partial implementation of tradable bottleneck permits scheme on departure time choice equilibrium
Katsuya Sakai & Takahiko Kusakabe & Yasuo Asakura

A hybrid model based on survival analysis and capacitated assignment for dynamic traffic assignment
Saeed Asadi Bagloee & Mohsen Asadi

16.30 – 18.00 **Session 7** **Chair: David Rey**

A macroscopic approach for inferring dynamic origin-destination demand
Qian Ge & Jiangshan Ma & Daisuke Fukuda

Infrastructure maintenance with day-to-day traffic dynamics and transient congestion
Ke Han & Terry Friesz & Yiou Wang & Hongcheng Liu

Time-dependent origin-destination demand estimation in a congested network using multi-source data
Sajjad Shafiei & Meead Saberi & Majid Sarvi

19.00 – 22.00 **Conference dinner**

THURSDAY 30 JUNE (SYMPOSIUM DAY 3)

09.00 – 10.30	**Session 8**	**Chair: Vinayak Dixit**

A theoretical analysis of macroscopic fundamental diagram based on dynamic user equilibrium
Kentaro Wada & Kouki Satsukawa

Robust control for two urban regions with macroscopic fundamental diagrams: a control-Lyapunov function approach
Can Chen & Renxin Zhong & Dabo Xu

A semi-dynamic network equilibrium model with unique and continuous flow
Shoichiro Nakayama & Richard Connors

10.30 – 11.00	**Morning tea**

11.00 – 12.30	**Session 9**	**Chair: Mark Hickman**

Reliable routing in schedule-based transit networks
Alireza Khani

The influence of passenger random arrivals and boarding rates on bus bunching dynamics
Achille Fonzone & Jan Dirk Schmoecker

Dynamic taxi dispatch modelling in urban networks
Mohsen Ramezani & Mehdi Nourinejad

12.30 – 13.30	**Lunch**

13.30 – 15.00	**Session 10**	**Chair: Michael Bell**

Managing morning commute with tradable credit scheme considering commuter heterogeneity and loss aversion
Mohammad Miralinaghi & Srinovas Peeta & Xiaozheng He & Satish Ukkusuri

The impact of cost variability in a bottleneck model with heterogeneous random delay
Gege Jiang & Hong Lo & Shanjiang Zhu

Microscopic dynamic traffic assignment modelling for container terminals
Ying-En Ge & Manda Meng & Ding Liu & Chi Xie & Hang Yu

15.00 – 15.30	**Afternoon tea**

15.30 – 17.00	**Closing**

Open discussion: Future research directions in dynamic traffic assignment
Travis Waller

DTA2018 in Hong Kong
Wai Yuen Szeto

Closing remarks
Michael Bell
