

17th International Symposium on Transportation and Traffic Theory, London 22-25 July 2007

Programme

Sunday 22 July

Jolly St Ermin's Hotel
Caxton Street
London SW1H 0QW

Telephone 020 7222 7888

17.30 – 19.30 **Registration**

17.30 – 19.30 **Welcome reception**

Monday 23 July

Institution of Mechanical Engineers
1 Birdcage Walk
London SW1H 9JJ

Telephone 020 7222 7899

8.30 – 9.00 **Registration**

9.00 – 9.30 **Welcome**

Richard Allsop, Michael Bell, Benjamin Heydecker
Symposium Organisers

Welcome to London

David Bayliss OBE FREng
Chief Transport Planner for Greater London (1968 - 1984)
Director of Planning for London Transport (1984 -1999)

9.30 – 11.00 **Session 1** **Chair: Jean-Baptiste Lesort**

- 1 A computable theory of dynamic congestion pricing
Terry L Friesz, Changhyun Kwon, Reetabrata Mookherjee
- 2 Bounding the inefficiency of toll competition among congested roads
Feng Xiao, Hai Yang, Xiaolei Guo
- 3 Time-differential pricing of road tolls and parking charges in a transport network with elastic demand
Zhi-Chun Li, Hai-Jun Huang, William H K Lam, S C Wong

11.00 – 11.30 **Coffee**

11.30 – 13.00 **Session 2** **Chair: Carlos Daganzo**

- 4 Dynamic ramp control strategies for risk averse system optimal assignment
Takashi Akamatsu, Takashi Nagae
- 5 A robust approach to continuous network designs with demand uncertainty
Yafeng Yin, Siriphong Lawphongpanich
- 6 Generalisation of the risk-averse traffic assignment
W Y Szeto, Liam O'Brien, Margaret O'Mahony

13.00 – 14.00 **Lunch**

14.00 – 15.30 **Session 3 Proposed Chair: Alan Nicholson**

- 7 Empirical studies on road traffic response to capacity reduction
Richard Clegg
- 8 Variation of value of travel time savings over travel time in urban commuting:
theoretical and empirical analysis
Hironori Kato
- 9 A game theoretical approach for modelling merging and yielding behaviour at
freeway on-ramp sections
Henry X Liu, Zain N Adam, Jeff X Ban

15.30 – 16.00 **Tea**

16.00 – 17.30 **Session 4 Chair: Chan Wirasinghe**

- 10 Random supply and strategic behaviour in static traffic assignment
Giuseppe Bellei, Guido Gentile
- 11 Assessing network vulnerability of degradable transportation systems: an
accessibility based approach
Anthony Chen, Sirisak Kongsomsaksakul, Zhong Zou, Ming Lee, Will Recker
- 12 Theoretical bounds of congestion-pricing efficiency for a continuum
transportation system
H W Ho, S C Wong, T D Hau

19.00 **Reception**

Terrace Pavilion
New Palace of Westminster
London
SW1A 0AA

Please come to the St Stephen's entrance

Tuesday 24 July

9.00 – 10.30 **Session 5 Chair: Piet Bovy**

- 13 Uniqueness of equilibrium in steady state and dynamic traffic networks
Richard Mounce, Mike Smith
- 14 Analysis of dynamic system optimum and externalities with departure time choice
Andy H F Chow
- 15 On path marginal cost analysis and its relation to dynamic system-optimal traffic assignment
Wei Shen, Yu Nie, H Michael Zhang

10.30 – 10.50 **Coffee**

10.50 – 12.20 **Session 6 Chair: Masao Kuwahara**

- 16 Commuting equilibria on a mass transit system with capacity constraints
Qiong Tian, Hai-Jun Huang, Hai Yang
- 17 Optimal single-route transit-vehicle scheduling
Avishai Ceder
- 18 A frequency based transit model for dynamic traffic assignment to multimodal networks
Lorenzo Meschini, Guido Gentile, Natale Papola

12.20 – 14.20 **Lunch**

14.20 – 15.50 **Session 7 Chair: Henk Van Zuylen**

- 19 A theory on modeling collaboration in logistics networks combining network design theory and transaction cost economics
Bas Grootedde, Piet Bovy
- 20 On-line ambulance dispatching heuristics with the consideration of triage
K I Wong, Fumitaka Kurauchi, Michael G H Bell
- 21 A Markov process model for capacity constrained transit assignment
Fitsum Teklu, David Watling, Richard Connors

15.50 – 16.10 **Tea**

16.10 – 16.30 **Report of the International Advisory Committee**

16.30 – 18.00 **Session 8 Chair: Shinya Kikuchi**

- 22 A novel fuzzy logic controller for transit signal preemption
Yu-Chiun Chiou, Ming-Te Wang, Lawrence W Lan
- 23 Reserve capacity of a signal-controlled network considering the effect of physical queuing
C K Wong, S C Wong, Hong K Lo
- 24 Time dependent delay at unsignalized intersections
Werner Brilon

19.30 **Conference dinner**

The Royal Society
6-9 Carlton House Terrace
London
SW1Y 5AG

Telephone 020 7451 2500

Wednesday 25 July

9.00 – 10.30 **Session 9 Chair: Marian Tracz**

- 25 Properties of a microscopic heterogeneous multi-anticipative traffic flow model
Serge P Hoogendoorn, Saskia Ossen, Marco Schreuder
- 26 Anticipative vehicle control algorithm mitigating temporal information delay
Yu Liu, Francois Dion
- 27 A new concept and general algorithm architecture to improve automated incident detection
Kun Zhang, Michael A P Taylor

10.30 – 11.00 **Coffee**

11.00 – 12.30 **Session 10 Chair: Nathan Gartner**

- 28 Stochastic modeling and simulation of multi-lane traffic
Niamph Dundon, Alexandros Sopasakis
- 29 Freeway traffic oscillations and vehicle lane-change maneuvers
Soyoung Ahn, Michael J Cassidy
- 30 State dependence in lane changing models
Charisma Choudhury, Moshe E Ben-Akiva, Tomer Toledo, Anita Rao, Gunwoo Lee

12.30 – 13.30 **Lunch**

13.30 – 15.00 **Session 11 Chair: Valentin Silyanov**

- 31 The Lagrangian coordinates and what it means for first order traffic flow models

Ludovic Leclercq, Jorge Laval, Estelle Chevallier

- 32 Generic second order traffic flow modelling

Jean-Patrick Lebacque, Salim Mammari, Habib Haj Salem

- 33 Understanding traffic breakdown: a stochastic approach

Reinhard Kühne, Reinhard Mahnke, Julia Hinkel

15.00 – 15.30 **Tea**

15.30 – 17.00 **Session 12 Chair: Hani Mahmassani**

- 34 Developing a positive approach to travel demand analysis: SILK theory and behavioral user equilibrium

Lei Zhang

- 35 A new modeling framework for travelers' day-to-day route choice adjustment processes

Fan Yang, Henry X Liu

- 36 The co-evolution of land use and road networks

David Levinson, Feng Xie, Shanjiang Zhu

17.00 **Closure**

The International Advisory Committee will meet at lunch in the Stephenson Room of the IMechE, 12.20 – 14.20 on Tuesday 24 July.

BG Heydecker

20 June 2007

Session Chairs.doc