Welcome

Plenary 1: Nigel Wilson

10:30
Automatic bottleneck detection using AVL data: a case study in Amsterdam
Solving periodic timetabling problems with SAT and machine learning
Digital Transformation in Public Transport
Optimizing mixed Fleet bus scheduling under range constraint
Yu L Huang, Luqin Ding, and Jing Zhao
Mauro Pelillo, Luca Mancini, Francesco Corman, and Silvia Broggio
Na Liu, Lijuan Liu, and Xuwen Tang
Hao Li, Lin Yang, and Hong Pu

11:00
Non-parametric approach for real-time prediction
A Mixed Integer Linear Programming Model for Rolling Stock Rebalancing
An Analysis of the Affordability of Public Transport in South African Cities
Towards Optimised Deployment of Electric Bus Systems with On-Route Charging
using Cooperative ITS
Maguelonne Chandesris and Xavier Chapuis
Francesca Faini, Dennis Huismann, Roberto Roberts and Shadi Sharif Azadeh
Gary Hayes and Chris Verber
Sang Hyun Kim, Eunhee Son, and Yunsoo Ha

11:30
Assessment of models based on GPS data to identify buses skipping formal stops
Non-parametric approach for real-time prediction
A Mixed Integer Linear Programming Model for Rolling Stock Rebalancing
Including Equilibrium Model of Ridesharing Transport with High-Occupancy Vehicles
using Cooperative ITS
Nilesh Gandhi and Jan Carlos Herrera
Chayue Li, Pedro Jesus Copado-Mendez and Raymond Kwan
Pia-Helene Theilke-Holst, Tatsuya Tsai, Takahide Inakado and Yuasa Akahara
Charles Flavert

Lunch

13:00
Big Data Sources from GPS-enabled Smartphone Applications: An Exploratory Analysis of Transit App Data
Resolution of Station Level Constraints in Train Unit Scheduling
A metaheuristic-supported evaluation of the suitability of an urban integrated special transport service
Determining the waiting time in timetabling
Cardena Braxwood, Anukriti Ghimirey, Calvin Henry and Jonathan Penny
Juliette Raymond, Zoe Van Der Planken and Pieter Janssens
Sang Hyun Kim, Eunhee Son, and Yunsoo Ha
Hernández Pérez and Claudio de la Cueva

13:30
Frequent tracking of passengers to analyse public transport use in-case of Disruptions
Relationships between capacity, speed heterogeneity, and robustness in railway networks
Design of Integrated Flexible Transit Service with Given Flood-Route Services
Optimizing the Preventive-Maintenance Plan of a Public Transport Bus Fleet
Benito S. Morillo, Herrick Becker, Ben W. Ahwase, and Francesca Corman
Veronique Lebon and Eric GVF
Federico Farina, Dennis Huisman, Roberto Roberti and Shadi Sharif Azadeh
Gert-Jaap Polinder, Marie Schmidt and Dennis Huismann

14:00
Event-based Passive Tracking of Public Transportation Passengers
Train dispatcher desk districting problem in high-speed railway networks
Relationships between capacity, speed heterogeneity, and robustness in railway networks
Frequency and Vehicle Capacity Determination using a Dynamic Transit Assignment Model
Nicolás García and Juan Carlos Herrera
V. K. Ravi Shankar, Crimea L. Brahmin, Xiaoyan Li and T. S. Ramachandran
Sang Hyun Kim, Eunhee Son, and Yunsoo Ha
Khaled Saeed and Fumitaka Kurauchi

Afternoon Tea

15:00
Plenary 2: Lauren Sager Weinstein

16:00
Driver schedule efficiency vs. public transport robustness: A framework to quantify the trade-off based on passive data
Size Limited Dispatch Method: A Hybridized Heuristic for Train Unit Scheduling Optimization
A prediction method for public transport operations control
Walking Patterns and Frequency Determinations for a Multi-Modal Network
Menno Yap and Niel van Oort
Patricia Lorenzo-Cervantes, Zhao Li, Raymond Liu, and Raymond Kwan
Hannes M. Howell and Thomas Forlski
Oded Cats and Menno van Beurden

16:30
Combined use of Georectified and WiFi Detections to estimate real-time operational information of a public transport system
Integrated Use of WiFi and GPS Data for Public Transport Management
A holding control strategy for diverging bus lines
Modelling Turn in Transit Network Design
Yue Wang, Xian Qiu, and Xian Wang
Yi Xiao, Zhao Li, and Raymond Kwan
Sang Hyun Kim, Eunhee Son, and Yunsoo Ha
Oded Cats and Fumitaka Kurauchi

17:00
Unsupervised approach to bunching swings phenomenon analysis
Hybrid stochastic approaches for train trajectory reconstruction
Bus Bunching Modelling and Control: A Passenger-oriented Approach
Integrating line planning, timetabling and vehicle scheduling: Integer programming formulation and analysis
Mirko Bagnato, Giuseppe Bacchetta, Siyin Hong, Arvind Walia, and Xiufeng Liang
Hui Li, Zhe Zhang, and Haonan Peng
Francesco Corman, Marco Rinaldi and Francesco Viti
Phaksin Schewan, Anki Schönfeld, Christian Paciento and Marco Lübbecke

Social Activity
Tuesday 24 July

8:00 Registration Desk Opens

8:30 Understanding Fare Evasion Rates in Public Transport

Rodrigo Benitez, Christian Bögels, Sebastian Arzeno and Pablo Urgelles

9:00 Investigating Paper Ticket Usage on London Underground's Network

Li-Mei Lin, Filip Vecerka and Bruno Agostinho

9:30 Space-time classification of public travel smart card users' activity locations from smart card data

Lino, Martijn Triggeman and Bruno Agostinho

9:45 A methodology for correcting smartcard trip matrices by fare evasion

A. S. L. M. Coelho, Luís Carlos Mariz and Gabriel L. L. Ferreira

10:00 Having fun on the metro: understanding passenger behaviour in public transport

Michael Brandt, Lauge Christiansen and Tine Nielsen

10:30 Morning Tea

11:00 A methodology for generating structurally complex multi-day disruption scenarios

Rodrigo Benitez, Christian Bögels, Sebastian Arzeno and Pablo Urgelles

11:30 Afternoon Tea

12:00 Transit decision-making in transit planners: Past, present, and future perspectives on the use of ITS data in North America for transit planning and management and related challenges

Brenda D. Atten, Claudia Bartolini Casteri and Ami Steinkamp

12:30 Lunch (With Separate Meeting of ISC)

13:00 Understanding disruption management in railway delay management

Sergio Gnecco, Yuval Hadas and Marcello Sanguineti

13:30 Understanding disruption management in railway delay management

Sergio Gnecco, Yuval Hadas and Marcello Sanguineti

14:00 Strategic interactions between minimization of train delays and passenger assignment in microscopic railway delay management

Sergio Gnecco, Yuval Hadas and Marcello Sanguineti

14:30 Afternoon Tea

15:00 Investigating sampling biases in transit onboard surveys and associated impacts on resulting passenger socioeconomic and travel characteristics

Sylvain M. R. Fournier, Eduardo Otte Hülse and Éder Vasco Pinheiro

15:30 Afternoon Tea

16:00 Route choice decisions in public transport passengers: Measuring habitual bus ridership behavior using smart card data

Hee-Kyu Kim, Jonathan Corcoran and Manny Papamantelis

16:30 Investigating interpersonal and intrapersonal variability of travel use with smart card data

Sven Daskalov, Catherine McConnell and Martijn Triggeman

17:00 Afternoon Tea

17:30 Understanding learning: Predicting passenger load in public transport

Saeid Heydarnejad, Matthias Döpel, Ding Luo, Mathis van Oort and Heino van Liver
Wednesday 25 July

8:00 Registration Desk Opens

8:30 Translating Research to Practice: Implementing Real-time Control on High-Frequency Transit Routes
- Kyoto Kondo, Sasa Grubon and Kai Wieteska
  - Agent-based simulation approach for disruption management in rail scheduling
  - What factors determine the variability of the level of service experienced by users?
  - Impacts of Autonomous Driving on Public Transport Services
- Masanori Ito, Mileda Marcialis and Francisco Carreño

9:00 A Smart Dispatching tool based on AVT data
- Fulvia Chiarani, Marco Giudici, Fabio Palloni, Marco Catena, Diego Gadolla and Paolo Capozza
  - Maximum Robust Train Path for an Additional Train inserted in an Existing Railway Network
  - Value of Reliability for the Waiting Stage, In-vehicle Stage and Transfer Stage of Demand Responsive Transport (DRT) Services
- Marisol J. Alvarez-González, Sascha Hoogendoorn-Lanser, Niels van Oort and Jorge Valverde

9:30 How are decision-making tools driven by different driving conditions? Impact the performance of inter-vehicle controls?
- Tanya Takacs, Sasa Grubon, Fabio Palloni, Diego Gadolla and Paolo Capozza
  - Evaluation of Bus Bridging Scenarios for Railway Service Disruption Management: A Users’ Delay Modelling Tool
  - Bus bunching prediction based on logistic regression considering rare events bias
- Yanhui He, Yuri Cernik, Schrader, Toshihiko Motobu and Akira Shiramatsu

10:00

Morning Tea

11:00 OneBusAway: A Ten Year Retrospective of an Open Source Real-time Information System
- Kari Wieteska
  - A simulation model for assessment and evaluation of bus terminal design
  - How the distribution of actual times at a railway station varies with headway: A study using smart card data
- Geoffrey Clifford, Corinne Muller, Loic He, Guo-Chi Lin Ho and Barbara Yan

12:00 Route Choice Strategies and Usage of Real Time information in Public Transport on empirical survey based on dedicated smartphone application
- M. Poggio, C. Arnone and A. Norek
  - Assessing platform safety with innovative data to a novel assessment framework
  - Modelling Railway-Induced Passenger Delays in Multi-Modal Public Transport Networks: An Agent-based Copenhagen Case Study Using Empirical Train Delay Data
- Alejandro Schmidt, Sebastián Tamblay, Francisco Garrido-Valenzuela and Marina Saeed Asadi Bagloee

Lunch

13:00 Short-Term Multiple-Step Ahead Forecasting of Railway Passenger Flows During Special Events With Machine Learning Methods
- Todor Toitov, Elvira Gómez, Mário Trancoso and Laura Cordeau
  - Intelligent Mobility and Mode - Designing Mobility Packages and Contracts
  - Improving railway passengers experience: two perspectives
- Markus Siebenrock, Thomas Kjer Rasmussen and Otto Anker Nielsen

14:00 Can Passenger Flow be Explained by Network Topology in Public Transport?
- Yip Wai and David Henderson
  - Measuring the impact of future Personalised Public Transport
  - Energy based transit assignment: Approach-Based formulation and paradox revisit
- Marco van Igelken and Niels van Oort

14:30 A Machine Learning Approach to Detecting Long-Term Changes in Weekly Trip Patterns of Public Transport Passengers
- Hong Lui, Oded Cats and Nicks van der Velde
  - Potential for mode shifts due to Mobility-as-a-Service: results from the Southbound Mobility Panel
  - The Influence of Frequency on route choice in mixed schedule- and frequency-based public transport systems – The case of the Greater Copenhagen Area
- Chao Hong, Yu, Zhihao Ming and Bao Lin

15:00

Afternoon Tea

15:30 Quantifying Travel Travel Experiences from the Users’ Perspective with High-Resolution Smartphone and Vehicle Location Data
- A. Pacheco, Peter G. Cox, Rob G. McDaid, Rafa Vazquez and Luis S. Weiler
  - How far are travellers willing to walk to access a more frequent service: an international comparison?
- Carine Mulley, Christel de Lucas, Jacob Hensher and John Rowe

16:00 Social Cost Benefit Analysis for Pre-payment Bus Stops: An Application to Transantiago
- S. Jaimungal, Sebastian Tanblay, Joan Carlos Herrera and Ignacio Guimpert
  - Insights into factors affecting the combined bicycle-transit mode
  - Identifying quick win opportunities for surface transit, delay reductions obtained through traffic signal timing distribution
- Alejandro Schmidt, Sebastián Tamblay, Francisco Garrido-Valenzuela, Marina Saeed Asadi Bagloee

16:30 The underlying effect of public transport reliability on users’ satisfaction
- Wuze Zhao, Jia, Jianjun Chen and Lei Guo
  - Incorporating reliability into Queensland’s LUTP/ accessibility model
- Simon Berrebi, Sean Crudden and Kari Watkins

17:00 Close

Conference Dinner