



Symposium agenda
Scientific sessions
overview

DAY 1 TUESDAY 2 OCTOBER 12.00 pm – 12.50 pm

SMART DOLLY

[Lateral control of an A-double combination considering different measurement signals and dolly steering configurations](#)

Maliheh Sadeghi Kati¹, Jonas Fredriksson¹, Bengt Jacobson¹, Leo Laine²

¹Chalmers University of Technology, ²Volvo Group Trucks Technology

[Feasibility study of a steered and powered dolly for an A-double high capacity vehicle](#)

A.G.P. Parfant¹, R.M.S.C. Wouters², I.J.M. Besselink²

¹Altran Netherlands, ²Eindhoven University of Technology

DAY 1 TUESDAY 2 OCTOBER 12.00 pm – 12.50 pm

DRIVER INVOLVED SAFETY STRATEGIES - 1

[Integrating safety technology and management practice for improved fleet safety](#)

John Woodrooffe
Woodrooffe Dynamics Ltd.

[The face of the project - Regulating for soft and hard skills in driver training to support the implementation of high performance vehicles.](#)

A. Efron¹, G. Corvalan²

¹BrAle Consulting/EMaBi, ²EMabi, Government San Luis

DAY 1 TUESDAY 2 OCTOBER 12.00 pm – 12.50 pm

PAVEMENT AND BRIDGE LOADING

[Characterizing in-service truck loads for improved pavement and bridge performance: experiences from Manitoba, Canada](#)

J.D. Regehr, B. Algoji, A. Mufti, A. Shalaby
University of Manitoba

[Pavement and bridge impact assessment of vehicles within project FALCON](#)

M.G. Arroyo Contreras¹, Franziska Schmidt², Carl van Geem³, E. van Kerkhof³, Bernard Jacob²

¹Autonomous University of Queretaro, ²IFSTTAR, ³Belgian Road Research Center

DAY 1 TUESDAY 2 OCTOBER 2.00 pm– 3.40 pm

ROADS FOSTERING MULTIMODAL TRANSPORT

[Understanding modal choice: a review](#)

I.Vierth¹, S. Lindgren¹, A. Lobig², P. Niérat³, E. Bogers⁴, I. Davidenko⁵, A. Burgess⁶, S. van de Ree⁶
¹VTI, ²DLR, ³IFSTTAR, ⁴HAN University of Applied Sciences, ⁵TNO, ⁶Panteia

[FALCON II: Input for a European PBS definition: review of vehicle legislations and infrastructure design criteria.](#)

Franziska Schmidt¹, Sogol Kharrazi², Sigurdur Erlingsson², Carl van Geem³, Xavier Cocu³, Bernard Jacob¹
¹IFSTTAR, ²VTI, ³Belgian Road Research Center

[FALCON III : Defining a performance-based standards framework for high capacity vehicles in Europe.](#)

C. de Saxe¹, K. Kural², S. Kharrazi³, F. Schmidt⁴, C. van Geem⁵, R. Berman¹, John Woodrooffe⁶, D. Cebon⁷
¹CSIR, ²HAN University of Applied Sciences, ³VTI, ⁴IFSTTAR, ⁵Belgian Road Research Institute, ⁶Woodrooffe Dynamics Ltd, ⁷University of Cambridge

[FALCON IV: Validation of smart infrastructure access policy.](#)

K. Kural¹, F.Schmidt², S. Erlingsson³, C. van Geem⁴, I. Vierth³, D. Cebon⁵, A. Lobig⁶, G. Liedtke⁶
¹HAN University of Applied Sciences, ²IFSTTAR, ³VTI, ⁴Belgian Road Research Center, ⁵University of Cambridge, ⁶DLR



DAY 1 TUESDAY 2 OCTOBER 2.00 pm – 3.40 pm

ROADMAPS FOR GREENER TRANSPORT

[Aerodynamic and flexible trucks for next generation of long distance road transport \(AEROFLEX\).](#)

B. Kraaijenhagen¹, C. v.d. Zweep², A. Lischke³, J. Engasser¹, P. Eloffsson⁴, M. Ölback⁵, A. Frexas⁶, M. Tobar⁶, G. Koornnef⁷
¹MAN Truck & Bus AG, ²Uniresearch, ³DLR, ⁴Scania, ⁵Volvo Group, ⁶IDIADA, ⁷TNO

[The commercial vehicles of the future: an integrated approach for sustainable truck operations.](#)

Tim Breemers¹, Lars Akkermans¹, Marc Billiet²
¹Transport & Mobility Leuven, ²International Road Transport Union

[Swedish roadmap for electric road systems.](#)

M. Lindgren, J. Pettersson, A. Berndtsson
Swedish Transport Administration

[Professionalized road freight operators for truck fleet energy management.](#)

Sophie Punte, Boyong Wang, Su Li, Bonne Goedhart, Chris Douglas
Smart Freight Center

DAY 1 TUESDAY 2 OCTOBER 2.00 pm – 3.40 pm

PERFORMANCE ASSESSMENT OF HIGH PRODUCTIVITY VEHICLES

[Duo Trailer an innovative transport solution co-optimizing multi vehicle combinations.](#)

Lennart Cider¹, Lena Larsson¹, Heléne Jarlsson²
¹Volvo GTT, ²ÅF Industry AB

[Investigation of a 9-axle configuration for log-hauling in British Columbia.](#)

Séamus Parker
FPIInnovations

[Generic framework for assessment and extraction of envelopes for long combination vehicles.](#)

Krshna Kashampur, Bengt Jacobson, Manjurul Islam
University of Chalmers

DAY 1 TUESDAY 2 OCTOBER 4.10 pm – 5.25 pm

UNEVEN ROAD VEHICLE PERFORMANCE

[Rolling road.](#)

H. Bramer, D. Aalderink, D. Verbeek
VDL-Weweler

[A mechanistic approach toward estimating the roughness-induced rolling resistance and fuel consumption for articulated trucks.](#)

Imen Zaabar, Karim Chatti, Nizar Lajnef
Michigan State University

DAY 1 TUESDAY 2 OCTOBER 4.10 pm – 5.25 pm

SAFETY OF HIGH PRODUCTIVITY VEHICLES

[Heavy vehicle safety performance.](#)

J. Deiss¹, R. Berman², P. Nordengen², C. de Saxe², A. Steenkamp², F. Kienhöfer¹
¹University of the Witwatersrand, ²CSIR

[A new class of ventilated disc brakes.](#)

Frank Kienhöfer, Michael Atkins, Tongbeum Kim
University of the Witwatersrand

[Hyperperformance: advanced PBS performance prediction.](#)

R. Berman¹, P. Nordengen¹, B. Rosman¹, B. van Niekerk²
¹CSIR, ²University of the Witwatersrand



DAY 1 TUESDAY 2 OCTOBER 4.10 pm – 5.25 pm

COMPLIANCE AND ENFORCEMENT

[Implementation of Weigh-In-Motion systems for direct enforcement of overloading.](#)

H. van Loo¹, C. Oosterman²

¹Corner Stone International, ²NMI Certin

[Re-engineering road networks through on-board mass \(OBM\) systems](#)

Chris Konditsiotis, Gavin Hill

Transport Certification Australia

[Perceptions of the road transport management system \(RTMS\): promoting voluntary certification.](#)

A. Kamdar⁴, F. Kienhöfer¹, B. Emwanu¹, G. Heyns², P. Nordengen³

¹University of the Witwatersrand, ²University of Johannesburg, ³CSIR, ⁴KDG Logistics

DAY 2 WEDNESDAY 3 OCTOBER 8.30 am – 9.45 am

TRUCK PLATOONING AND HPV'S: OVERCOMING THE BOUNDARIES OF THE INFRASTRUCTURE

[PBS for connected and automated vehicles.](#)

John De Pont

TERNZ Ltd.

[Effect of platooning on the structural reliability of bridges](#)

R.M.L. Nelisse¹, A.H.J.M. Vervuurt¹, D.G. Schaafsma²

¹TNO, ²Dept. of Waterways and Public Works, Ministry of Infrastructure and Water Management

[ITS applications for higher productivity of road freight transport.](#)

R. Aronietis, T. Voegelé

International Transport Forum at the OECD

DAY 2 WEDNESDAY 3 OCTOBER 8.30 am – 9.45 am

DRIVER INVOLVED SAFETY STRATEGIES - 2

[FAST DASH: a program to evaluate promising safety technologies for truck and bus operations.](#)

Richard J. Hanowski, Andrew Krumpal

Center for Truck and Bus Studies, Virginia Tech Transportation Institute

[Closed loop performance of heavy goods vehicles.](#)

Joop Pauwelussen

HAN University of Applied Sciences

[Trucks that refuse to crash: new objectives for self-driving vehicles, the role of artificial intelligence.](#)

John Woodrooffe

Woodrooffe Dynamics Ltd.

DAY 2 WEDNESDAY 3 OCTOBER 8.30 am – 9.45 am

THE COST OF ROAD USE BY HEAVY VEHICLES

[Methodology for estimating the road wear costs of heavy vehicles on a road network.](#)

L. Kemp, A.J. Steenkamp, P. Nordengen

CSIR

[Relationship between freight traffic and management/maintenance costs.](#)

Henri Palm¹, Marc van den Elzen², Martin Kraan³

¹DAT.Mobility, ²Goudappel Coffeng, ³Dept. Water management & Public Works/TRAIMCO

[Reduced pavement service life - causes and costs.](#)

J. Granlund

WSP Sverige AB



DAY 2 WEDNESDAY 3 OCTOBER 2.00 pm – 3.40 pm

PUBLIC POLICIES IN FREIGHT TRANSPORT

[Characteristics of road freight transport policy in The Netherlands.](#)

Joris Cornelissen
Dept. of Waterways and Public Works, Ministry of Infrastructure and Water Management

[Impact of disruptive innovations on road transport strategy.](#)

T.M. Chen
TNO

[A policy framework for implementation of appropriate regulatory tools aimed at promoting utilization of smart technology in the regulation of heavy vehicles: the case of eastern and southern Africa region.](#)

S.G. Khumalo, Etiyel Chibira
Cross-Border Road Transport Agency

DAY 2 WEDNESDAY 3 OCTOBER 2.00 pm – 3.40 pm

URBAN AND REGIONAL VITALITY

[Infrastructure solutions for increased efficiency and productivity of construction material transports in cities.](#)

A. Treiber, P. Bark
TFK - Transport Research Institute Sweden

[Zero emission city logistics: the possibilities of battery electric freight vehicles - now and in the future.](#)

H.J. Quak, N. Nesterova
TNO

[FLUXNET: Multimodal infrastructure integrated with land use, freight and logistics.](#)

Robert Broesi¹, Tertius Hanekamp², Jos Arts³
¹Must, ²TEMAH, ³University of Groningen

[Will automatic driving light electric freight vehicles be the future solution for urban Transport As A Service.](#)

Frank Rieck¹, Susanne Balm², Constant Staal¹, Roeland Hogt³
¹Rotterdam University of Applied Sciences, ²Amsterdam University of Applied Sciences, ³Regional Education Center Noorderpoort

DAY 2 WEDNESDAY 3 OCTOBER 2.00 pm – 3.40 pm

INTELLIGENT ACCESS

[Estonian Velub system for more efficient and greener transport. Velub system is a small part of the much bigger, theoretical MVMC system.](#)

Taavi Tõnts, Meelis Toome, Mait Klein
Estonian Road Administration (ERA)

[Regulation on the road in the digital age - challenges and opportunities](#)

C. Walker, A. Moulis
University of New South Wales

[In search of a Dutch logistic core road network](#)

Jan Top
Dept. of Waterways and Public Works, Ministry of Infrastructure and Water Management

[Intelligent road access & weight control system - first application for high capacity transport vehicles](#)

Sten Wandel¹, Thomas Asp²
¹University of Lund, ²Swedish Transport Administration

DAY 2 WEDNESDAY 3 OCTOBER 4.10 pm – 5.00 pm

AERODYNAMICS

[Assessing the fuel savings of aerodynamic trailer devices in realistic conditions.](#)

R. Veldhuizen, J.P. van der Krieke, G.M.R. van Raemdonck
WABCO

[Assessment of innovation concepts for Truck-semitrailer combinations within the TRANSFORMERS project.](#)

S. Wilkins¹, G. Hommen¹, S. van Zyl¹, E. van Eijk¹, A. Balau¹, G.J. Koornneef¹, R. Baert¹, B. Hillbrand², S. Wagner³, F. Jonkers⁴, C. Mailliet⁵, P. Adams⁵
¹TNO, ²Virtual Vehicle, ³Fraunhofer-IVI, ⁴DAF Trucks, ⁵Volvo Group Trucks Technology



DAY 2 WEDNESDAY 3 OCTOBER 4.10 pm – 5.00 pm

URBAN FREIGHT VEHICLES

[Design of urban freight vehicles to maximise capacity.](#)

Chris Eddy, David Cebon
University of Cambridge

[The evolution of the performance based standards urban rigid truck.](#)

Ken Cowell¹, Kim Hassall²
¹Heavy Vehicle Industry Australia, ²University of Melbourne

DAY 2 WEDNESDAY 3 OCTOBER 4.10 pm – 5.00 pm

MANAGING THE PERFORMANCE BASED STANDARDS (PBS) PROCESS

[Type vehicle combinations – HCT Sweden 25.25 to 34 meters.](#)

Lena Larsson, Emil Pettersson, Nikolas Fröjd
Volvo GTT

[Leveraging cloud computing for heavy vehicle optimization and in-service performance assessment.](#)

C. Lopez, M. Coleman
Tiger Spider Pty Ltd.

DAY 3 THURSDAY 4 OCTOBER 8.30 am – 9.45 am

TRUCK AUTOMATION AND PLATOONING DEPLOYMENT

[Truck platooning: an update after the European Truck Platooning Challenge.](#)

Arjan van Vliet¹, Robbert Jansen², Joris Cornelissen³
¹The Netherlands National Vehicle Authority (RDW), ²TNO,
³Dept. of Waterways and Public Works, Ministry of Infrastructure and Water Management

[Truck Platooning: expected benefits and implementation conditions at highways.](#)

B. Jacob, O. Arbeit de Chalendar
IFSTTAR

[Safety assessment of platooning trucks - streetwise](#)

O. op den Camp, R. Wouters, J.-P. Paardekooper
TNO

DAY 3 THURSDAY 4 OCTOBER 8.30 am – 9.45 am

SOCIETAL CHALLENGES OF HIGH PRODUCTIVITY VEHICLES

[High Productivity Freight Vehicles: Challenges faced by local government road managers.](#)

R. Di Cristoforo
Advantia Transport Consulting Pty, Ltd.

[Comparison of noise emission of HCT and classic vehicle combinations for timber transportation in Sweden.](#)

Ulf Sandberg¹, Sogol Kharrazi¹, Piotr Mioduszewski²
¹VTI, ²Gdansk University of Technology

[OECD/ITF study on high capacity transport \(HCT\) – final report.](#)

Jerker Sjögren,
Jesjo Konsult

DAY 3 THURSDAY 4 OCTOBER 8.30 am – 9.45 am

TYRE PERFORMANCE AND DURABILITY

[On tyre blowouts and overheating brakes towards safer trucks](#)

J. Subel, F.W. Kienhöfer, J.H. Lange
University of the Witwatersrand

[A framework for heavy vehicle tyre cornering performance assessment and classification within the Performance Based Standards scheme](#)

Marcus Coleman
Tiger Spider Pty Ltd

[Empirical estimation of heavy goods vehicle tyre wear.](#)

J. Lepine, S. Burgess, D. Cebon
University of Cambridge



DAY 3 THURSDAY 4 OCTOBER 2.00 pm – 3.40 pm

ELECTRIFICATION AND HYBRIDIZATION

[Designing and demonstrating a system for efficient and sustainable road freight based on dynamic power supply.](#)

P. Akkerman, H. Gruenjes, M. Lehmann
Siemens Mobility

[Ultra-capacitor based kinetic energy recovery system for heavy goods vehicles](#)

D. Ainalis¹, P. Achurra-Gonzalez¹, A. Gaudin², J. Garcia de la Cruz³, P. Angeloudis¹, W. Ochieng¹, M. Stettler¹

¹Imperial College London, ²ENSTA Paris Tech & National University of Singapore, ³Universidad Politécnica Madrid

[Architectural proposal for low-cost low-emission high productivity freight vehicles with electric traction systems.](#)

J. Allwright¹, A. Kulkarni¹, M. Coleman²
¹Swinburne University of Technology, ²Tiger Spider Pty Ltd.

[ORCA project: optimization framework for next generation heavy duty hybrids.](#)

Steven Wilkins¹, Thinh Pham¹, Duong Tran², Omar Hegazy², Noshin Omar²

¹TNO, ²Vrije Universiteit Brussel

DAY 3 THURSDAY 4 OCTOBER 2.00 pm – 3.40 pm

DRIVER SUPPORT AND CHASSIS MANAGEMENT

[Minimum swept path control for autonomous reversing of long combination vehicles.](#)

Xuanzuo Liu, David Cebon
University of Cambridge

[Path following bi-directional controller for articulated vehicles.](#)

A. Tomar, K. Kural, R. Kusukumar, A. Naren
HAN University of Applied Sciences

[Heavy vehicle braking using friction estimation for controller optimization.](#)

B.E. Westerhof¹, D. Kalakos², L. Henderson³, B. J. H. Jacobson⁴, S. Zhu⁴

¹Delft University of Technology, ²KTH, ³Volvo GTT, ⁴Chalmers University of Technology

DAY 3 THURSDAY 4 OCTOBER 2.00 pm – 3.40 pm

GLOBAL EXPERIENCES WITH HIGH PRODUCTIVITY VEHICLES

[An overview of the performance-based standards pilot project in South Africa.](#)

P. Nordengen¹, R. Berman¹, C. de Saxe¹, J. Deiss²
¹CSIR, ²University of the Witwatersrand

[Performance based standards project in Sweden.](#)

Sogol Kharrazi
VTI

[Finding the edge of the envelope - the evolution of high productivity motor vehicles in New Zealand.](#)

John De Pont¹, Don Hutchinson², James Smith³
¹TERNZ Ltd., ²New Zealand Transport Agency, ³Halls Transport

[A study of the introduction of high productivity vehicles into Uruguay.](#)

Alejandra Efrón¹, Bob Pearson²
¹BrAle/EMaBi, ²Pearson Transport Research Center - PTRC