### DAY 1 TUESDAY 2 OCTOBER 12.00 – 12.50, ROOM A

**SMART DOLLY**

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<td>Lateral control of an A-double combination considering different measurement signals and dolly steering configurations</td>
<td>Maliheh Sadeghi Kati¹, Jonas Fredriksson³, Bengt Jacobson³, Leo Laine²</td>
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<tr>
<td>Feasibility study of a steered and powered dolly for an A-double high capacity vehicle</td>
<td>A.G.P. Parfant¹, R.M.S.C. Wouters², I.J.M. Besselink²&lt;br&gt;¹Chalmers University of Technology, ²Volvo Group Trucks Technology</td>
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### DAY 1 TUESDAY 2 OCTOBER 12.00 – 12.50, ROOM B

**DRIVER INVOLVED SAFETY STRATEGIES - 1**

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<td>Integrating safety technology and management practice for improved fleet safety</td>
<td>John Woodroffe&lt;br&gt;Woodroffe Dynamics Ltd.</td>
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<tr>
<td>The face of the project - Regulating for soft and hard skills in driver training to support the implementation of high performance vehicles.</td>
<td>A. Efron¹, G. Corvalan²&lt;br&gt;¹BrAle Consulting/EMaBi, ²EMabi, Government San Luis</td>
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### DAY 1 TUESDAY 2 OCTOBER 12.00 – 12.50, ROOM C

**PAVEMENT & BRIDGE LOADING**

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<td>Characterizing in-service truck loads for improved pavement and bridge performance: experiences from Manitoba, Canada</td>
<td>J.D. Regehr, B. Algohi, A. Mufti, A. Shalaby&lt;br&gt;University of Manitoba</td>
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<td>Pavement and bridge impact assessment of vehicles within project FALCON</td>
<td>M.G. Arroyo Contreras², Franziska Schmidt², Carl van Geem³, E. van Kerkhof³&lt;br&gt;²Autonomous University of Queretaro, ³IFSTTAR, ³Belgian Road Research Center</td>
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### DAY 1 TUESDAY 2 OCTOBER 14.00 – 15.40, ROOM A

**ROADS FOSTERING MULTIMODAL TRANSPORT**

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<td>Understanding modal choice: a review</td>
<td>I.Vierth¹, S. Lindgren¹, A. Lobig², P. Niérat¹, E. Rogers⁴, I. Davidenko⁵, A. Burgess⁶, S. van de Ree⁶&lt;br&gt;¹VTI, ²DLR, ³IFSTTAR, ⁴HAN University of Applied Sciences, ⁵TNO, ⁶Panteia</td>
</tr>
<tr>
<td>FALCON II: Input for a European PBS definition: review of vehicle legislations and infrastructure design criteria.</td>
<td>Franziska Schmidt¹, Sogol Kharrazi², Sigurdur Erlingsson², Carl van Geem³, Xavier Coci³, Bernard Jacob¹&lt;br&gt;¹IFSTTAR, ²VTI, ³Belgian Road Research Center</td>
</tr>
<tr>
<td>FALCON III: Defining a performance-based standards framework for high capacity vehicles in Europe.</td>
<td>C. de Saxe¹, K. Kural², S. Kharrazi³, F. Schmidt³, C. van Geem⁵, R. Berman³, John Woodrooffe⁶, D. Cebon⁷&lt;br&gt;¹CSIR, ²HAN University of Applied Sciences, ³VTI, ⁴IFSTTAR, ⁵Belgian Road Research Institute, ⁶Woodrooffe Dynamics Ltd, ⁷University of Cambridge</td>
</tr>
<tr>
<td>FALCON IV: Validation of smart infrastructure access policy.</td>
<td>K. Kural¹, F. Schmidt², E. van Kerkhof³, C. van Geem⁴, I. Vierth³, D. Cebon⁵, A. Lobig⁶, G. Liedtke⁶&lt;br&gt;¹HAN University of Applied Sciences, ²IFSTTAR, ³VTI, ⁴Belgian Road Research Center, ⁵University of Cambridge, ⁶DLR</td>
</tr>
</tbody>
</table>
Aerodynamic and flexible trucks for next generation of long distance road transport (AEROFLEX).
Ben Kraaijenhagen\(^1\), Cor van der Zweep\(^2\)
\(^1\)MAN Truck &Bus AG, \(^2\)Uniresearch

The commercial vehicles of the future: an integrated approach for sustainable truck operations.
Tim Bremersch\(^1\), Lars Akkermans\(^1\), Marc Billiet\(^2\)
\(^1\)Transport & Mobility Leuven, \(^2\)International Road Transport Union

Ultra-capacitor based kinetic energy recovery system for heavy goods vehicles.
D. Ainalis\(^1\), P. Achurra-Gonzalez\(^3\), A. Gaudin\(^2\), J. Garcia de la Cruz\(^3\), P. Angeloudis\(^1\), W. Ochieng\(^1\), M. Stettler\(^1\)
\(^1\)Imperial College London, \(^2\)ENSTA Paris Tech & National University of Singapore, \(^3\)Universidad Politècnica Madrid

Title to be determined. with focus on smart truck fleet management influencing the entire supply chain through fleet-owners.
Sophie Punte
Smart Freight Center

Duo Trailer an innovative transport solution co-optimizing multi vehicle combinations.
Lennart Cider\(^1\), Lena Larsson\(^1\), Heléne Jarlsson\(^2\)
\(^1\)Volvo GTT, \(^2\)ÅF Industry AB

Generic framework for assessment and extraction of envelopes for long combination vehicles.
Krshna Kashampur, Bengt Jacobson, Manjurul Islam
University of Chalmers

Hyperformance: advanced PBS performance prediction.
R. Berman\(^1\), P. Nordengen\(^2\), B. Rosman\(^1\), B. van Niekerk\(^2\)
\(^1\)CSIR, \(^2\)University of the Witwatersand

Investigation of a 9-axle configuration for log-hauling in British Columbia.
Séamus Parker
FPInnovations

On tyre blowouts and overheating brakes towards safer trucks.
J. Subel, F.W. Kienhöfer, J.H. Lange
University of the Witwatersrand

Empirical estimation of heavy goods vehicle tyre wear.
J. Lepine, S. Burgess, D. Cebon
University of Cambridge

A framework for heavy vehicle tyre cornering performance assessment and classification within the PBS scheme.
Thomas Batchelor, Marcus Coleman
Tiger Spider Pty Ltd

A new class of ventilated disc brakes.
Frank Kienhöfer, Michael Atkins, Tongbeum Kim
University of the Witwatersand

Innovative road train couplings, drawbar design trends and regulatory issues driven by PBS.
Brendan Coleman, Marcus Coleman, Jason Tjia, Derrick Wong, Neil Baldwin
Tiger Spider Pty Ltd.
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**COMPLIANCE AND ENFORCEMENT**

- **Implementation of Weigh-In-Motion systems for direct enforcement of overloading.**
  - H. van Loo¹, C. Oosterman²
  - ¹Corner Stone International, ²NMI Certin

- **Perceptions of the road transport management system (RTMS): promoting voluntary certification.**
  - A. Kamdar³, F. Kienhöfer¹, B. Emwanu¹, G. Heyns², P. Nordengen³
  - ³University of the Witwatersrand, ²University of Johannesburg, ¹CSIR

- **Re-engineering road networks through on-board mass (OBM) systems**
  - Chris Konditsiotis, Gavin Hill
  - Transport Certification Australia

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### DAY 2 WEDNESDAY 3 OCTOBER 8.30 – 9.45, ROOM A

**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**
  - Mirjam Nelisse
  - TNO

- **ITS applications for higher productivity of road freight transport.**
  - R. Aronietis, T. Voege
  - International Transport Forum at the OECD

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**DRIVER INVOLVED SAFETY STRATEGIES II**

- **FAST DASH: a program to evaluate promising safety technologies for truck and bus operations.**
  - Richard J. Hanowski, Andrew Krum
  - 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 Woodroofe
  - Woodroofe Dynamics Ltd.

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### DAY 2 WEDNESDAY 3 OCTOBER 8.30 – 9.45, ROOM C

**THE COST OF ROAD USE BY HEAVY VEHICLES**

- **Methodology for estimating the road wear costs of heavy vehicles on a road network.**
  - L. Kemp¹, A.J. Steenkamp², P. Nordengen¹
  - ¹CSIR, ²University of the Witwatersrand

- **Relationship between (heavy) freight traffic and management/maintenance costs.**
  - Henri Palm¹, Marc van den Elzen², Martin Kraan³
  - ³DAT.Mobility, ²Goudappel Coffeng, ¹Dept. Water management & Public Works/TRAIMCO

- **Reduced pavement service life - causes and costs.**
  - J. Granlund
  - WSP Sverige AB
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PUBLIC POLICIES IN FREIGHT TRANSPORT

Imminent failure of public policies for urban freight transport in Barranquilla, Colombia.
Diego F. Suero Pérez1, Orlando Carrillo2, Sagith Amin2, Santander Martínez2, Silvia Quintero2, Edna Polo2
1Universidad Tecnológica de Pereira, 2Universidad Libre

Characteristics of road freight transport policy in The Netherlands.
Joris Cornelissen
Dept. of Waterways and Public Works, Ministry of Infrastructure and Watermanagement

Impact of disruptive innovations on road transport strategy.
T.M. Chen
TNO

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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
1Rotterdam University of Applied Sciences, 2Amsterdam University of Applied Sciences

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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 Watermanagement

Intelligent road access & weight control system - first application for high capacity transport vehicles
Sten Wandel1, Thomas Asp2
1University of Lund, 2Swedish Transport Administration

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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. Baert2, B. Hillbrand2, S. Wagner3, F. Jonkers4, C. Maillet5, P. Adams6
1TNO, 2Virtual Vehicle, 3Fraunhofer-IVI, 4DAF Trucks, 5Volvo Group Trucks Technology
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**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

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**MANAGING THE PERFORMANCE BASED STANDARDS (PBS) PROCESS**

- Type vehicle combinations – HCT Sweden 25.25 to 34 meters.
  Lena Larsson¹, Emil Pettersson², Nikolas Fröjd¹
  ¹Volvo GTT, ²ÅF Industry AB

- Leveraging cloud computing for heavy vehicle optimization and in-service performance assessment.
  C. Lopez, M. Coleman
  Tiger Spider

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**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 Road Authority (RDW), ²TNO, ³Dept. of Waterways and Public Works, Ministry of Infrastructure and Watermanagement

- Streetwise scenario mining for safety assessment of platooning trucks.
  O. op den Camp, R. Wouters, J.-P. Paardekooper
  TNO

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**SOCIETAL CHALLENGES OF HIGH PRODUCTIVITY VEHICLES**

- Challenges faced by local governments considering road access approval for high productivity freight vehicles.
  R. de Christoforo
  Advantia Transport Consulting Pty, Ltd.

- OECD/ITF study on high capacity transport (HCT) – final report.
  Jerker Sjögren
  Jesjo Konsult

- 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

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**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
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**ELECTRIFICATION AND HYBRIDIZATION**

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| Designing and demonstrating a system for efficient and sustainable road freight based on dynamic power supply. | P. Akkerman, H. Gruenjes, M. Lehmann
Siemens Mobility                                                       |
| Swedish roadmap for electric road systems.                           | M. Lindgren, J. Pettersson, A. Berndtsson
Swedish Transport Administration                                     |
| Architectural proposal for low-cost low-emission high productivity freight vehicles with electric traction systems. | J. Allwright, A. Kulkarni, M. Coleman
Swedish Transport Administration                                      |

### DAY 3 THURSDAY 4 OCTOBER 14.00 – 15.40, ROOM B

**DRIVER SUPPORT AND CHASSIS MANAGEMENT**

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| 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. Kusukamar, A. Naren
HAN University of Applied Sciences                                    |
Delft University of Technology                                          |
| Improvement of the ride comfort of the truck with the semi-trailer through controllable top-level truck cabin suspension. | R. Junevičius, V. Ivanov, J. Theunissen, M. Dhaens, S. Schel, J. Wilkin, K. Motte
Vilnius Gediminas Technical University, Technical University Ilmenau, Tenneco Automotive Europe |

### DAY 3 THURSDAY 4 OCTOBER 14.00 – 15.40, ROOM C

**GLOBAL EXPERIENCES WITH HIGH PRODUCTIVITY VEHICLES**

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| An overview of the performance-based standards pilot project in South Africa. | P. Nordengen, R. Berman, C. de Saxe, J. Deiss
CSIR, University 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 Pont, Don Hutchinson, James Smith
TERNZ Ltd., New Zealand Transport Agency, Halls Transport              |
| A study of the introduction of high productivity vehicles into Uruguay. | Alejandra Efrón, Bob Pearson
BrAle/EMaBi, Pearson Transport Research Center - PTRC                 |