

TABLE OF CONTENTS

Foreword 1 – P. COURTIER	1
Avant-Propos 1 – P. COURTIER	3
Foreword 2 – J. ROUDIER	5
Avant-Propos 2 – J. ROUDIER	7
Preface (in English) – B. JACOB	9
Préface (en français) – B. JACOB	12
International Forum for Road Transport Technology	15
International Society for Weigh-in-Motion	17
Panel Discussion	19
Plenary Session	21
The EU's rules on weights and dimensions and the realities of sustainable mobility – J. BERRY	23
A history of freight transport prior to the modern truck – M. LAY	35
Intelligent freight – J.-F. JANIN	49
Measures promoting intermodal transport as an alternative to pure road transport H. SILBORN	57

Session 1. Performance Based Standards	71
An initiative to introduce a performance-based standards (pbs) approach for heavy vehicle design and operations in South Africa – P. NORDENGEN, H. PREM, and L. MAI	73
A discussion of the high-speed offtracking performance standard J. BILLING and J. PATTEN	85
Development of an innovative steerable double extendable trailer under performance based standard (pbs) – M. JOHNSTON and L. BRUZSA	97
Session 2. European Modular Concept	109
Working group on longer and heavier goods vehicles: A multidisciplinary approach to the issue – W. DEBAUCHE	111
Experiences with longer and heavier vehicles in the Netherlands L. AARTS and G. FEDDES	123
Driving dynamics and stability issues of the European road train concepts G. BÓZSVÁRI, T. FÜLEP and L. PALKOVICS	137
Session 3. Vehicle Road Interaction	145
Pavement building costs allocation to HGV comparison between the French case and the eurovignette directive recommendations – G. DURAND, P. COUSIN and H. GUIRAUD	147
A brief review of tyre-pavement interaction and an insight on new regulation on tyre rolling resistance in Europe – C. PENANT	159
Effect of axle configurations on fatigue and faulting of concrete pavements K. CHATTI, A. MANIK, and N. BRAKE	171
The danger of ramps for heavy goods vehicles – V. CEREZO, M. GOTHIÉ and G. DUPRÉ	185
A new vehicle-pavement interaction test facility at BASt – K.-P. GLAESER	195
Steady state flow algorithm for modeling the impact of trucks on road S. MAÏOLINO, H. MAÏTOURNAM and V. CEREZO	203
How can the binder properties influence the road surface durability? An advanced method based on the bearing ratio curve – M. ECH, S. YOTTE, D. BREYSSE and B. POUTEAU	211

Session 4. Safety	223
Rollover crash analysis of a road tanker with self-steer axles – H. PREM, L. MAI, G. GORHAM, D. HUTCHINSON and J. LONG	225
Oversize/overweight commercial vehicle safety – D. TURNER, L.A. NICHOLSON and K. AGENT	243
Heavy vehicle driver involvement in road safety and multiple vehicle accidents in Bangladesh – T. ANJUMAN, C. KAWSAR AREFIN SIDDIQUI, S. HASANAT-E-RABBI and MD. MAZHARUL HOQUE	257
Crash compatibility between heavy goods vehicles and passenger cars: structural interaction analysis and in-depth accident analysis – A. KRUSPER and R. THOMSON	269
Improvement of safety barriers on German bridges - results of impact test with heavy lorries – J. KUEBLER	281
Rollover risk prevention of heavy vehicles by reliability-based analysis Y. SELLAMI, H. IMINE, B. JACOB, F. BERNARDIN and J. C. CADIOU	293
Analysis of heavy truck accidents with regard to yaw and roll instability - using LTCSS database – S. KHARRAZI and R. THOMSON	305
Relationship between road infrastructure characterisites and HGV accidents M. GOTHIÉ, V. CEREZO and F. CONCHE	319
Session 5. Routing	333
Heavyroute – intelligent route guidance for heavy vehicles A. IHS, D. OMASITS and G. LINDBERG	335
Australia's intelligent access program – J. BARING and C. KONIDITSIOTIS	349
Methodology and effects of heavy goods vehicle transport management in urban areas – E. TANIGUCHI and Y. IMANISHI	359
A generic software architecture for a driver information system to organize and operate truck platoons – A. FRIEDRICH, P. MEISEN and K. HENNING	375
A data-mining technique for the planning and organization of truck platoons P. MEISEN, T. SEIDL and K. HENNING	389
HGV guidance, road data and applications – L. SJÖGREN and M. ÖGREN	403

Session 6. Vehicle Performance	411
A new steerable wheel system for road transport applications H. PREM, L. MAI and G. DAVEY	413
Design concept for an alternative heavy vehicle slip control brake actuator J. MILLER, F. KIENHOFER and D. CEBON	429
Compatibility of long and heavy cargo vehicles with the geometric design standards of Brazilian rural roads and highways – W. PEREIRA NETO and J. WIDMER	443
The effect of wind on heavy vehicles – J. BILLING	455
Tyre scuffing forces from multi-axle groups – J. DE PONT and N. TARAMOEROA	467
Implementation of active rear steering of a tractor – semi-trailer B. JUJNOVICH, R. ROEBUCK, A. ODHAMS and D. CEBON	479
Improved brakes on heavy commercial vehicles – M. JOHANSSON	493
Session 7. Road Transport Policies and Operation	503
Vehicle infrastructure integration (VII) for heavy trucks: a new perspective of truck research – P. SWEATMAN	505
Heavy goods vehicle overtaking bans some information to assist decision-making – M. BERENI	517
Correctly loaded heavy commercial vehicles – M. JOHANSSON	531
Transportation of raw forest products in northern Ontario by trucks J. HAJEK, D. HEIN and D. SWAN.	541
Optimising log truck configurations – J. DE PONT	553
A proposal of an international vehicle designation structure for cargo combination vehicles – J. WIDMER	567
Index of authors	581