

## Monday 12th August 2019

07:30	Registration - Lindholmen Conference Centre Foyer				
08:30	Opening ceremony - Main hall				
Plenary session i - Main hall Chair: Matthijs Klomp					
09:30	Modelling, simulation and evaluation of ground vibration caused by rail vehicles <i>David Thompson, Georges Kouroussis, Evangelos Ntsios, State of the Art paper 10.1080/00423114.2019.1602274</i>				
10:30	Effect of floating bridge motion on vehicle ride comfort and road grip <i>Dragon Sekulic, 356</i>				
11:00	Coffee break				
Room	Alfa	Beta	Tesla	Main hall	Pascal
11:30	Road 11 - Adas I Chair: Mathias Lidberg	Road 12 - Handling dynamics I Chair: Johannes Edelmann	Rail 11 - Adhesion and friction Chair: Oldrich Polach	Rail 12- Vehicle modelling Chair: Peter Klausner	Rail 13- Condition monitoring I Chair: Björn Pålsson
	Designing and evaluating active safety systems for rollover prevention of all-terrain vehicles <i>Erjan Nikyar, Vishal Venkatachalam, Lars Drugge 057</i>	The role of human sensory dynamics in car driving <i>Christopher Nash, David Cole 205</i>	Estimation of friction coefficient between outside wheel flange and rail considering influence of wheel/rail wear <i>Yosuke Ichiyonagi, Yohei Michitsuji, Akira Matsumoto, Yasuhiro Sato, Hirayuki Ohno, Daisuke Yamaguchi, Masuhisa Tanimoto, Takuya Matsuda, Takanori Matsumi 185</i>	Estimation of dynamic properties for the validation of driven railway vehicle models <i>Josef Fuchs, Bernd Lubner, Gabor Müller, Wolfgang Rulka 099</i>	Track condition monitoring based on car-body acceleration using time-frequency analysis <i>Hitoshi Tsunashima 081</i>
12:00	A feedforward controller design for lane keep assist employing differential braking force <i>Hironori Ito, Akira Nagae, Masayuki Ikeda, Ryo Inomata 082</i>	Directional stability of a front wheel drive passenger car with preemptive use of the direction sensitive locking differential (DSL) <i>Mathias Lidberg, Jonas Alfredson 152</i>	Nonlinear observer design for guidance and traction of railway vehicles <i>Andreas Heckmann, Christoph Schwarz, Alexander Keck, Tilman Bunte 070</i>	Study on non-linear parametric model of hydraulic damper for railway vehicles before relieving <i>Hongxing Gao, Maoru Chi, Xuesong Jin, Shulin Liang, Changxin Chi, Xiaozhi Zhou 089</i>	On-board wheel profile classification based on vehicle dynamics - from physical effects to machine learning <i>Bernd Lubner, Felix Sorribes-Palmer, Gabor Müller, Lorenz Pietsch, Klaus Six 094</i>
12:30	Corner test cases for adas: a computational study on the influence of road irregularities on vehicle vision systems <i>Yannik Weber, Stratis Kanarachos 127</i>	A free trajectory quasi-steady state optimal control method for minimum lap time of cars and motorcycles <i>Matteo Veneri, Matteo Massaro 142</i>	Wheel/rail contact creep curve measurement and low speed wheel climb derailment investigation <i>Xinggao Shu, Yuqing Zeng, Nicholas Wilson, Randy Thompson, Ali Tajaddini 193</i>	Using saint venant's elements in multibody Archeological studies <i>Hugues Chollet 385</i>	Condition monitoring of a rail vehicle: a machine learning approach <i>Henrik Karlsson, Alireza Qazizadeh, Sebastian Stichel, Mats Berg 239</i>
13:00	Lunch break				
14:00	Road 13- Driving automation 1 Chair: Abe Masato	Road 14-Integrated chassis control 1 Chair: David Cole	Rail 14- Wheel and rail profiles Chair: Anna Orlova	Rail 15- Active suspension 1 Chair: Sebastian Stichel	Rail 16- Switches & crossings Chair: Valeri Markine
	Vehicle localization with vehicle dynamics during gnss outages <i>Letian Gao, Lu Xiong, Xin Xia, Yishi Lu, Zhuoping Yu 059</i>	On the hardware in the loop simulation of electric power assisted steering system <i>Weitao Chen, Shenhai Ran, Benq Jacobson, Utsav Khan, Andrea Bianchi, Matthijs Klomp 137</i>	Integration of a wear model into wheel profile optimisation on metro vehicles to mitigate flange wear <i>Dexiang Ren, Gongquan Tao, Zefeng Wen, Shulin Liang, Xuesong Jin 051</i>	Control of railway wheelsets – a semi-active approach <i>TX Mei, Atousa Zaeim, Hong Li 013</i>	Modelling track stiffness in turnouts using MBS approach <i>Pedro Jorge, Yann Bezin, Ilaria Grossoni, Sergio Neves 124</i>
14:30	Dynamic multiobjective control performance assessment for an autonomous vehicle <i>André Kempf, Elias Weber, Steffen Müller 093</i>	Real-time minimum-time lane change using the modified hamiltonian algorithm <i>Victor Fors, Yangyan Gao, Björn Olofsson, Tim Gordon, Lars Nielsen 145</i>	Numerical simulation and experiment validation on curve passing performance of railway vehicle with independently rotating wheels using negative tread conicity <i>Yu Wang, Shih-Pin Lin, Hiroshi Tajima, Yoshihiro Suda 283</i>	A direct control approach for automatic steering and stability of motorized independently rotating wheels <i>Xiaoyuan Liu, Roger Goodall, Simon Iwnicki 126</i>	Prediction of long-term damage in railway crossings accounting for variability in dynamic traffic loads <i>Rostyslav Skrypnik, Jens Nielsen, Björn Pålsson, Magnus Ekh 326</i>
15:00	Path control in limits of vehicle handling: A sensitivity analysis <i>Erik Wachter, Antoine Schmeitz, Fredrik Bruzelius, Mohsen Alirezaei 153</i>	Real-time capable nonlinear predictive wheel slip control for combined driving and cornering <i>Mathias Metzler, Alessandro Scamacio, Patrick Gruber, Aldo Sorniotti 190</i>	Research on the vibration and matching characteristics of the typical wheel-rail profiles of high-speed railway in China <i>Maorui Hou, Xiaoyi Hu, Di Cheng, Lan Li, Xing Fang 025</i>	Design and assessment of a controller on a rail vehicle with wheel motors <i>Nabilah Farhat, Christopher Ward, Omar Shaebi, David Crosbee, Julian Stow, Ruichen Wang, Roger Goodall, Martin Whitley 332</i>	Relative movement of switch/stock rails and the wheel/rail interaction interface <i>Yann Bezin, Dimitrios Kostovasilis, Bello Sambo 175</i>
15:30	Coffee break				
16:00	Road 15- Powertrain/Driveline control Chair: Fredrik Bruzelius	Road 16- State estimation 1 Chair: Mats Jonasson	Rail 17- Wheel out-of-roundness Chair: Lars-Ove Jönsson	Rail 18- Vibration and control 1 Chair: Colin Cole	Rail 19- Track modelling Chair: Wanming Zhai
	Evaluation of combined energy-efficient and stability strategies utilizing direct yaw moment control <i>Peikun Sun, Annika Stensson Trigell, Lars Drugge, Jenny Jerrelind 040</i>	An investigation of longitudinal tyre force observation for slip control system development <i>Shenjin Zhu, Leon Henderson, Edo Drenth, Fredrik Bruzelius, Bengt Jacobson 023</i>	Torsional vibration as a method of diagnostic tool for wheel flatness <i>Zhiwei Wang, Paul Allen, Guanhua Huang, Sisi Xu, Weihua Zhang 244</i>	Investigation on the secondary quasi-zero-stiffness suspension system of high-speed railway vehicle <i>Zhen Liao, Bing Yang, Shoune Xiao, Guangwu Yang, Tao Zhu 241</i>	Simulation of vertical dynamic vehicle-track interaction – Comparison of two- and three-dimensional models <i>Emil Aggestam, Jens C O Nielsen, Niklas Sved 179</i>
16:30	Towards the limits of vibration attenuation in drivetrain system by torsional dynamics absorber <i>Viktor Berbyuk 163</i>	Estimation of states and parameters with dual extended kalman filters for active roll control <i>Seongjin Yim, Jaewon Nah, Manbok Park 061</i>	Dynamic responses of gear transmission system of high-speed train due to wheel polygonal wear <i>Zhonghui Yin, Jiye Zhang 242</i>	Analysis of ride comfort of a high-speed train based on a coupled track-train-seat-human model with lateral, vertical and roll vibrations <i>Jun Wu, Yi Qiu 319</i>	Validation of a finite element multibody system model for vehicle-slab track application <i>Zhiyong Shi, Martina Meacci, Enrico Meli, Kaiyun Wang, Andrea Rindi 315</i>
17:00	Vehicle sideslip angle estimation using disturbance observer <i>Baek-soon Kwon, Kyongsu Yi 380</i>	Vehicle sideslip estimation for four-wheel-steering vehicles using a particle filter <i>Basilio Lenzo, Ricardo de Castro 122</i>	Detection method for out-of-round wear wheel based on dynamic response <i>Xiaodi Xu, Jinzhao Liu, Shanchao Sun, Hangyuan Qin, Yuening Li 207</i>	Lateral guidance control using information of preceding wheel pairs <i>Gustav Grether, Andreas Heckmann, Gertjan Looye 129</i>	Analysis of vibration characteristics and vibration isolation measures of railway underpassing airport terminal <i>Feng Dai, Jizhong Yang, Su Wang, Xuwei Jin 310</i>
17:30	Welcome reception				

**Tuesday 13th August 2019**

08:00	Registration opens				
Plenary session II - Main hall					
08:30	Connected and automated vehicles state of the art and future challenges <i>Tulga Ersal, Matthew Johnson-Roberson, Ilya Kolmanovsky, Neda Masoud, Gabor Orosz, Necmiye Ozay, Jeffrey Scruggs, Ram Vasudevan, 387</i>				
09:30	The 'FORESEE' prototype, fully active, steered two axle railway vehicle <i>Simon Iwnicki, Per-Anders Jönsson, Jörgen Gustafsson, Johan Englund, Sebastian Stichel, Martin Pemberton, 279</i>				
10:00	Lateral vehicle dynamics on rutted roads <i>Igo Besselink, 210</i>				
10:30	Coffee break				
Room	Alfa	Beta		Main hall	Pascal
11:00	Road 21- Adas II Chair: Igo Besselink	Road 22- Standards assessment & validation Chair: Jenny Jerrelind		Rail 21- Condition monitoring 2 Chair: Mats Berg	Rail 22- Braking Chair: Hugues Chollet
	An adapted evasive manoeuvre assist function for over-reactive and under-reactive drivers <i>Preetham Harinath, Santusht Vasuki Kittane, Derong Yang, Lars Drugge, Mats Jonasson 192</i>	Dolly steering controller for enhancing low and high speed performance of long and heavy vehicles <i>Abhishek Singh Tomar, Abhishek Kalose, Karel Kural, Joop Pauwelussen 287</i>		A novel method for railway crossing monitoring based on space-frequency analysis of train-track interaction <i>Chen Shen, Zili Li, Rolf Dollovoet 328</i>	Locomotive adhesion control + rail friction field measurements = ? <i>Maksym Spiriyagin, Harold Harrison, Qing Wu, Dwayne Nielsen, Colin Cole, Peter Wolfs, Chris Bosomworth, Mark Hayman 006</i>
11:30	Review on tire-road-friction potential estimation technologies <i>Ari Tuononen, Markus Ovaska, Arto Niskanen 285</i>	Scaled experiment with dimensional analysis for vehicle lateral dynamics maneuver <i>Yeayoung Park, Byungjoo Kim, Changsun Ahn 312</i>		Parameter identification for railway suspension systems using cubature kalman filter <i>Selma Zoljic-Beglerovic, Bernd Luber, Georg Stettinger, Gabor Müller, Martin Horn 340</i>	Analysis of self-excited vibrations of an electromagnetic track brake <i>Daniel Tippelt, Johannes Edelmann, Manfred Plöchl, Michael Jirout 107</i>
12:00	Single wheel braking - a new method to measure friction potential on public roads <i>Thorsten Lajewski, Jochen Rauh, Steffen Müller 316</i>	Validation of driver model based handling quality evaluation by cerebral blood flow <i>Hiroshi Arisaka, Yuya Hirota, Yusuke Tanaka, Takatoshi Tsukano, Makoto Yamakado, Yoshio Kano, Masato Abe 166</i>		Integrated tool for assessment of performance of railway crossings <i>Valeri Markine, Xiangming Liu, Jeroen Wegdam 359</i>	Dynamics of wagon system containing out-of-round wheels subject to brake torque <i>Qingqun Lan, Manicka Dhanasekar, Yunendar Handoko 368</i>
12:30	Lunch break				
Poster paper presentations. See pages 14–15 (3 minutes per presentation)					
13:30	Road 23 - Poster session I Chair: Tim Gordon	Road 24 - Poster session II Chair: Fredrik Bruzelius		Rail 23 - Poster session I Chair: Viktor Berbyuk	Rail 24 - Poster session II Chair: Jens Nielsen
15:30	Coffee break				
16:00	Road 25 - Driving automation II Chair: Steffen Müller	Road 26 - Handling dynamics II Chair: Werner Schiehlen		Rail 25 - Active suspension 2 Chair: Bernhard Kurzeck	Rail 26 - Switches & crossings 2 Chair: Elias Kassa
	Combined lateral and longitudinal control with variable reference path for automated driving <i>Dongpil Lee, Kyongsu Yi, Matthijs Klomp 211</i>	Roll mode change due to vehicle speed and its effect on yaw natural frequency <i>Hideki Sakai 069</i>		Application of state estimators for sensing in active control of railway wheelsets <i>Lushan Weerasooriya, TX Mei, Hong Li, Yanyun Luo 014</i>	A model for evaluating long-term support degradation at railway switches <i>Ilaria Grossoni, Yann Bezin, Louis Le Pen, Geoff Watson, Dimitrios Kostovasilis 067</i>
16:30	Control of a scaled vehicle in and beyond stable limit handling <i>Mart Baars, Hans Hellendoorn, Mohsen Alirezaei 216</i>	The effects of racetrack three-dimensionality on the dynamics of motorcycles <i>Edoardo Marconi, Matteo Massaro 147</i>		The development of stiffness-adjustable anti-yaw damper <i>Wenbiao Huo, Bingshen Yue, Feng Zhao, Nan Jia, Tiecheng Wang, Zhihui Yin, Tao Cui 250</i>	Simulation of vehicle-track interaction in railway crossings to reduce differential settlement <i>Xin Li, Jens Nielsen, Peter Torstensson 184</i>
17:00	Flow field and neural network guided steering control for rigid autonomous vehicles <i>MengXuan Song, Tim Gordon, Yinqi Liu, Jun Wang 172</i>	Drift control for path tracking without prior knowledge of drift equilibria <i>Eunhyek Joo, Kyongsu Yi 173</i>		Gain scaling for active wheelset steering on innovative two-axle vehicle <i>Rocco Libero Giusti, Rickard Person, Sebastian Stichel 105</i>	Reducing impact loads at railway crossings using tuned resilient elements <i>Yann Bezin, Dimitrios Kostovasilis, Bello Sambo 071</i>
18:00	City Boat Tour "Paddan"				

**Wednesday 14th August 2019**

Wednesday 14th August 2019				
Plenary session III - Main Hall Chair: Stefano Bruni				
08:30	Train-track-bridge dynamic interaction: a state-of-art review <i>Wanming Zhao, Zhaowei Chen, Zhaolin Han, Liang Ling, Shengyang Zhu, State of the Art paper 10.1080/00423114.2019.1605085</i>			
09:30	Model predictive control for evasive steering of autonomous vehicle <i>Wansik Choi, 261</i>			
10:00	A parameterized turnout model for simulation of dynamic vehicle-turnout interaction with an application to crossing geometry assessment <i>Björn Pålsson, 339</i>			
10:30	Coffee break			
	Alfa	Beta	Main hall	Pascal
11:00	Road 31 - State estimation II Chair: Patrick Grubber	Road 32 - Tyre modelling I Chair: Shenhai Ran	Rail 31 - Vibration and control 2 Chair: TX Mei	Rail 32 - Vehicle design 1 Chair: Carlos Casanueva
	A novel vehicle localization system using vision module for heading feedback <i>Yishi Lu, Lu Xiong, Yanqun Han, Letian Gao</i> 79	Full-field strain measurement of the contact patch via the inside tyre surface <i>Megan Pegram, Theunis Botha, Schalk Els</i> 33	Prediction of maximum torsional wheelset axle vibrations considering non-linear adhesion characteristics <i>Alexander Meierhofer, Christof Bernsteiner, Gabor Müller, Florian Semrad, Franz-Josef Weber, Martin Rosenberger, Klaus Six</i> 221	A new designed coupled-bogie for straddle-type monorail vehicle and its dynamic performance <i>Han Leng, Lihui Ren, Youpei Huang, Yuanjin Ji</i> 229
11:30	Model-based vehicle localization via an iterative parameter estimation <i>Mate Fazekas, Balazs Nemeth, Peter Gaspar</i> 237	Nonlinear modeling of truck-semitrailer lateral dynamics including experimental validation of lateral tire forces <i>Zygimantas Ziaukas, Jan-Philipp Kobler, Alexander Busch, Mark Wielitzka, Tobias Ortmaier</i> 120	The influence of the dynamic properties of the primary suspension on metro vehicle-track coupled vertical vibration <i>Wenjing Sun, David Thompson, Jinsong Zhou</i> 238	Curving performance evaluation of eef bogie with inclined wheel axles using scale model vehicle <i>Yohei Michitsuji, Kohei Mizuno, Yoshihiro Suda, Shihpin Lin, Shingo Makishima</i> 063
12:00	Payload estimation in excavators using a machine learning based parameter identification method <i>Ashwin Walawalkar, Steffen Heep, Martin Frank, Christian Schindler</i> 321	Experimental investigation and semi-physical modelling of the influence of rotational speed on the vertical tyre stiffness and tyre radii <i>Martin Schabauer, Andreas Hackl, Wolfgang Hirschberg, Cornelia Lex</i> 170	Car body vertical abnormal vibration of light rail transit caused by carbody natural mode <i>Qunsheng Wang, Jing Zeng, Yi Wu, Lai Wei, Hao Gao</i> 324	Study on the mechanism and influencing factors of hydraulic anti-kink system of low-floor tram <i>Youpei Huang, Yuanjin Ji, Dao Gong, Lihui Ren</i> 263
12:30	Light lunch			
13:00	Technical visits			
19:00	Optional Archipelago Boat Tour			

**Thursday 15th August 2019**

Plenary session IV - Main Hall  
Chair: Bengt Jacobson

08:30	Trends in vehicle motion control for automated driving on public roads <i>Matthijs Klomp, Mats Jonasson, Leo Laine, Leon Henderson, Enrico Regolin, Stefan Schumi, State of the Art paper 10.1080/00423114.2019.1610182</i>				
09:30	Novel automated urban maglev transport system: A validated multibody simulation <i>Bernhard Kurzeck, Simon Fink, 334</i>				
10:00	Wheel/rail creep force model for wayside application of top-of-rail products incorporating carry-on and consumption effects <i>Zing Lee, Gerald Trummer, Klaus Six, Roger Lewis, 160</i>				
10:30	Coffee break				
	Alfa	Beta	Tesla	Main hall	Pascal
11:00	Road 41 - Suspension and ride I Chair: Ingemar Johansson	Road 42 - Tyre modelling II Chair: Cornelia Lex	Rail 41 - Safety 1 Chair: Akira Matsumoto	Rail 42 - Wheel-rail contact Chair: Klaus Six	Rail 43 - Wheel and rail damage 1 Chair: Yann Bezin
	Identification of kinematic points based on kncc measurements from the suspension motion simulator <i>Chao Liu, Yi Zhang, Clemens Deubel, Felix Kocksch, Jan Kubenz, Günther Prokop 21</i>	Predicting tyre behaviour on different road surfaces <i>Alexander O'Neill, Patrick Gruber, John Watts, Jan Prins 247</i>	Dynamic behavior of a high-speed train subjected to earthquake and emergency braking <i>Liang Ling, Kaiyun Wang, Wanming Zhai 042</i>	Running dynamics and contact mechanics comparison of two freight bogies running in plain line and through switches and crossings <i>Gianluca Megna, Hugo Magalhães, Yann Bezin, Andrea Bracciali 330</i>	Measurements and formation mechanism of high order wheel polygonal wear in high-speed railway <i>Xingwen Wu, Wenlin Shen, Wubin Cai, Subhash Rakheja, Maoru Chi, Yunhua Huang 091</i>
11:30	Posture control of all terrain mobile robot with vibration isolation system <i>Fangwu Ma, Liwei Ni, Lulu Wei, Yang Wang, Jiahong Nie, Liang Wu, Weiwei Jia 103</i>	A grey box model approach for the prediction of tire energy loss <i>Stefan Steidel, Michael Burger 342</i>	Safety to crosswind of railway vehicles in presence of wind barriers: numerical-experimental approach <i>Gisella Tomasiini, Elia Brambilla, Stefano Cii 360</i>	On the two-point wheel-rail contact scenario using the knife-edge contact method <i>Javier Aceituno, José Escalona 108</i>	Effect of the influence factors on rail head checks initiation and wear growth under wheel-rail stick-slip contact <i>Yu Zhou, Congcong Zhang, Xuwei Huang, Dingren Sun 189</i>
12:00	Comparative performance analysis of active and semi-active suspensions with road preview control <i>Ivan Cvok, Joško Deur, Eric Tseng, Davor Hrovat 203</i>	Influence of the speed-dependent tire-road friction on the car drifting dynamics <i>Ye Zhuang, Zhanshuai Song, Zhao Jiaqi, Qiang Chen, Konghui Guo 233</i>	On-track measurement of aerodynamic loads for high speed trains <i>Lai Wei, Jing Zeng, Pingbo Wu, Hao Gao, Wenbiao Huo 083</i>	Comparison of wheel-rail contact modelling in multibody system online simulation <i>Binbin Liu, Stefano Bruni 331</i>	New methodology to estimate costs caused by rail wear and rcf depending on the type of running gear <i>Visakh V Krishna, Saeed Hossein-Nia, Sebastian Stichel 018</i>
12:30	Lunch break				
13:30	Road 43 - Specialized vehicles Chair: Els Schalk	Road 44 - Suspension and ride II Chair: Wolfgang Hirschberg	Rail 44 - Wheel polygonalisation Chair: Bernd Lubert	Rail 45 - Pantograph-catenary dynamics Chair: Hans True	Rail 46 - Vehicle design 2 Chair: Maksym Spiryagin
	Trajectory tracking of a four-wheel-steering vehicle on harsh road <i>Fangwu Ma, Jiahong Nie, Liang Wu, Ni Liwei, Guangjian Xu, Weiwei Jia 130</i>	Analysis of active suspension performance improvement based on introducing front/rear LQ control coupling <i>Ivan Cvok, Joško Deur, Eric Tseng, Davor Hrovat 204</i>	Locomotive wheel polygonisation due to discrete irregularities: Field measurement, simulation and mechanism <i>Gongquan Tao, Zefeng Wen, Guosheng Chen, Yun Luo, Xuesong Jin 026</i>	Study on the characterization of degraded catenary in Sweden to enhance safety and reliability <i>Zhendong Liu, Sebastian Stichel, Peter Larsson, Jan Hjort 005</i>	Coil springs in suspensions of railway vehicles <i>Anna Orlova, Aleksei Sokolov, Ekaterina Rudakova, Denis Shevchenko, Artem Gusev, Stanislav Popovich 032</i>
14:00	Dynamics, control and stability of motion of electric scooters <i>Daniel Garcia-Vallejo, Werner Schiehlen, Alfonso Blanco 172</i>	Development of a cab suspension for a 4x2 semi-truck <i>Ugur Deryal, Ezgi Zeynep Sarikaya, Mehmet Murat Topaç 246</i>	The formation mechanism of high-order polygonal wear of metro train wheels <i>Xiaoxuan Yang, Wei Li, Gongquan Tao, Zefeng Wen 039</i>	A Galerkin approach for modelling the pantograph-catenary interaction <i>John Martin, Stephen Duncan 306</i>	Modelling complex series combinations of draft gear springs <i>Colin Cole, Maksym Spiryagin, Qing Wu 092</i>
14:30	Parameter sensitivity analysis of the anti-rolling performance of straddling type monorail vehicle <i>Chaoran Wang, Yuanjin Ji, Lihui Ren, Huang Youpei 266</i>	A new generic model for adaptive shock absorbers <i>Niklas Kunz 182</i>	Comparison of wear models for prediction of railway wheel polygonalization <i>Bo Peng, Simon Iwnicki, Philip Shackleton 076</i>	Semi-active dampers for multiple pantograph operation <i>Stefano Bruni, Marco Carnevale, Alan Facchinetti 284</i>	Inertance-integrated primary suspension optimisation on an industrial railway vehicle model <i>Tim Lewis, Yuan Li, Gareth Tucker, Jason Zheng Jiang, Simon Neild, Malcolm Smith, Roger Goodall, Simon Iwnicki, Neil Dinmore 146</i>
15:00	Stochastic sensitivity of external impact factors on the straight-line performance of a generic motorbike <i>Christoph Feichtinger, Peter Fischer 267</i>	A novel approach for parametrization of suspension kinematics <i>Georg Rill, Abel Arrieta Castro 349</i>	Suppression measures for high-order polygonal wear of railway wheels based on resonance theory <i>Huanyun Dai, Yayun Qi, Dadi Li 219</i>	A methodology to study high-speed catenary systems with realistic contact wire irregularities <i>Yang Song, Pedro Antunes, João Pombo 346</i>	A simplified yaw damper model for use in dynamics simulation <i>Caihong Huang, Jing Zeng 234</i>
15:30	Coffee break				
16:00	Road 45 - Driving automation III Chair: Lars Drugge	Road 46 - Integrated chassis control II Chair: Mehdi Ahmadian		Rail 48 - Wheel and rail damage 2 Chair: Jens Nielsen	Rail 49 - Active suspension 3 Chair: Andreas Heckmann
	Search-based motion planning for performance autonomous driving <i>Zlatan Ajanović, Enrico Regolin, Georg Stettinger, Martin Horn, Antonella Ferrara 228</i>	The influence of tyre lateral force for control allocation of yaw torque <i>Derang Yang, Mats Jonasson 217</i>		Study on the initiation of fatigue cracks due to wheel-rail impact at insulated rail joints <i>Zilong Wei, Xiubo Liu, Yu Zhou, Xinyu Jia, Guoqing Li 194</i>	A dedicated control design methodology for improved tilting train performance <i>Hugo Magalhães, Pedro Antunes, João Pombo, Jorge Ambrosio 325</i>
16:30	Lateral control design for autonomous vehicles using a big data-based approach <i>Daniel Fenyves, Balazs Nemeth, Peter Gaspar 227</i>	Torque vectoring control on ice for electric vehicles with individually actuated wheels <i>Timur Agliullin, Valentin Ivanov, Vincenzo Ricciardi, Manuel Acosta, Klaus Augsburg, Corina Sandu, Barys Shyrokau, Dzmityr Savitski 288</i>		An innovative tool for simultaneous wheel and rail damage evaluation <i>Elisa Butini, Lorenzo Marini, Martina Meacci, Enrico Meli, Andrea Rindi, Zhiyong Shi, Xiangji Zhao, Wenjian Wang 308</i>	Scaled roller rig to assess the influence of active wheelset steering on wheel-rail contact forces <i>Jan Kalivoda, Petr Bauer 327</i>
17:00	Driver interventions in critical situations during automated driving <i>Thang Nguyen, Steffen Müller 251</i>	Recent advancements in continuous wheel slip control <i>Dzmityr Savitski, Valentin Ivanov, Klaus Augsburg, Barys Shyrokau, Hiroshi Fujimoto 156</i>		Impact of track health on vehicle-track interaction loads <i>Caterina Ariudo, Naim Kuka, Riccardo Verardi 180</i>	Fault tolerant analysis for active steering actuation system applied on conventional bogie vehicle <i>Bin Fu, Stefano Bruni 335</i>
18:30	IAVSD Banquet at Kajsksjul 8				

## Friday 16th August 2019

Friday 16th August 2019				
Plenary session V - Main Hall Chair: Simon Iwnicki				
08:30	Uncertainty quantification in vehicle dynamics <i>Christine Funfschilling, Guillaume Perrin, State of the Art paper: 10.1080/00423114.2019.1601745</i>			
09:30	Influence of system dynamics in brake blending strategies for electric vehicles <i>Javier Pérez Fernández, 097</i>			
10:00	Which parameters determine the type of bogie hunting bifurcation? <i>Oldrich Polach, Jonas Vuitton, 049</i>			
10:30	Coffee break			
	Alfa		Main hall	Pascal
11:00	Road 51 - Handling dynamics III Chair: Jochen Rauh		Rail 51 - Wheel wear Chair: Roger Lundén	Rail 52 - Safety 2 Chair: Manicka Dhanasekar
	Evaluation of frequency response characteristics on “g-g” planes by using of quasi-steady state analysis <i>Takatoshi Tsukano, Yoshio Kano, Makoto Yamakado, Masato Abe</i> 256		Prediction of wheel flange wear by observing the change of curving performance with flange lubrications <i>Takuya Matsuda, Masuhisa Tanimoto, Akira Matsumoto, Yohei Michitsuji, Yosuke Ichiyanagi, Yasuhiro Sato, Hiroyuki Ohno, Daisuke Yamaguchi, Takamori Matsumi</i> 272	Risk analysis of vehicle/track interaction related derailment for dangerous goods transportation by rail <i>Wei Huang, Yan Liu, Luke Steinginga, Zach Schenk</i> 344
11:30	Design of an improved robust active trailer steering controller for a multi-trailer articulated heavy vehicle using SiL/HIL <i>Mutaz Keldani, Yuping He</i> 313		Simulation of track-locomotive interactions in the longitudinal direction <i>Qing Wu, Yan Sun, Maksym Spiriyagin, Colin Cole</i> 286	Hunting phenomenon evolution of HSRS and anti-hunting absorbing wide-band mechanism solution <i>Wei Du, Mingwei Piao, Guodong Li, Jing Yang</i> 028
12:00	The significance of roll on dynamics of ground vehicles subjected to crosswind gusts by two-way coupled simulation of aero- and vehicle dynamics <i>Tural Tunay, Ciarán J. O’Reilly, Lars Drugge</i> 075		Rail vehicle dynamics simulation-based decision support for novel block brake material implementation in Sweden <i>Carlos Casanueva, Babette Dirks, Tohmmmy Bustad</i> 352	Reliability analysis of rail fastening system when a heavy haul locomotive passing through a small radius curve <i>Xuancheng Yuan, Jianzheng Jiang, Shengyang Zhu, Wanming Zhai, Huibin Lou</i> 197
12:30	Awards and closing ceremony - Main hall			
13:30	Lunch			