Monday, August 23 (Central European Summer Time, UTC +2)		Chair
10:00	Welcome + Opening address, Navid Nayeri	Navid Nayeri
10:15	**Invited talk: Machine learning drag reduction of cars & trucks with multiple actuators and sensors** *Prof. Bernd Noack, Harbin Institute ot Technology, Shenzhen, China*	
Session 1: Active Flow Control I		Avi Seifert, Tel-Aviv University
11:00	Nonlinear Feedback Control of the Bi-modal Wake Past an Ahmed Body *Dania Ahmed, Aimee Morgans*	
11:20	Forcing the square-back Ahmed body wake with a large-scale sweeping jet actuator *Vladimir Parezanovic, Dhamotharan Veerasamy, Abdul Raouf Tajik, Luc Remy Pastur*	
11:40	Explorative gradient method for active drag reduction of a slanted Ahmed body in a 10-dimensional search space *Yiqing Li, Zhigang Yang, Bernd Noack, Marek Morzyński*	
12:00	Coffee Break	
Session 2: Active Flow Control II		
12:15	Active flow control with synthetic jets in a station wagon – A CFD study *David Blanco, Omar Lopez, Luis Muñoz*	
12:35	Open-loop periodic control applied to two-dimensional square-backed bodies in proximity to the ground *Gershom Easanesan, Mark Thompson, David Burton*	
12:55	Drag reduction in simplified geometries of blunt vehicles by means of perimetric blowing of varying density *Manuel Lorite-Díez, Jose Ignacio Jimenez-Gonzalez, Luc Pastur, Olivier Cadot, Carlos Martinez-Bazan*	
13:15	Lunch Break	
Session 3: Passive Flow Control & Driving Conditions		Duan Lian, Ohio State University
14:00	Application of an underbody rear diffuser to the 35 degree slant-back Ahmed body *Lennard Alexander*	
14:20	Geometrical effect of boat-tailed squareback Ahmed body with yaw, pitch and ground clearance variations *Olivier Cadot, Guillaume Bonnavion*	
14:40	Simulation of blunt base vehicle aerodynamics with drag reducing devices: steady versus transient approach *Jaap van Muijden*	
15:00	Coffee Break	
15:15	Aerodynamics sensitivity to realistic driving conditionsfor a simplified car model *Yajun Fan, Olivier Cadot*	
15:35	Numerical Wading Simulation: Comparison between Mesh-based Computational Fluid Dynamics and Moving Particle Semi-implicit Method for the DrivAer Vehicle *Rainer Andres, Bastian Schoeneberg, Gianluca Parma*	
15:55	The Impact of Rear-End Side Tapers on the Tyre Spray Produced by a Simplifed Automotive Body *Conor Crickmore, Andrew Garmory, Daniel Butcher*	
16:15	Coffee Break	
Session 4: Wheels Chair: Loper Omar		Lopez Omar, Universidad de los Andes
16:30	Numerical investigation of the influence of tire deformation on different vehicle configurations *Francesco Fabio Semeraro, Paolo Schito*	
16:50	Sensitivity study of modelled wheel-vehicle interactions *Di Bao, Jacques Borée, christophe sicot, Côme Roebroeck, Yann Haffner*	
17:10	An automated method for the aerodynamic modelling of grooved tiresAn automated method for the aerodynamic modelling of grooved tires *Thomas Schumacher, Pavlos Alexias, Eugene de Villiers, Teddy Hobeika*	
17:30	On the Aerodynamics of an Isolated, Rotating Wheel : An Experimental and Numerical Investigation *Dipesh Patel, Andrew Garmory, Martin Passmore*	
17:50	Improvement of Arbitrary Mesh Interface (AMI) Algorithm for External Aerodynamic Simulation with Rotating Wheels *Sebastien Vilfayeau, Chiara Pesci, Sergio Ferraris, Andrew Heather, Fabian Roesler*	
18:10	**End of first day**	

program status: 22 August

Tuesday, August 24 (Central European Summer Time, UTC +2)		Chair
10:00	**Invited talk: Wind Noise Source Filtering and Transmission Study through a Side Glass of DrivAer Model** *Prof. Yinzhi He; Shanghai Automotive Wind Tunnel Center (SAWTC), Tongji University,P.R.China*	Jacques Borée, ENSMA
	Session 5: Flow fields of cars I	
10:45	Numerical investigation of the flow around DrivAer models *François Delassaux, Iraj Mortazavi, Herbert Vincent, Charles Ribes, Karel Chalupa, Burkhard Hupert*	
11:05	Numerical identification of interacting drag sources for road vehicles *Guillaume Bonnavion, Jacques Borée, Vincent Herbert*	
11:25	Turbulent wake characteristics of a simplified road vehicle: simulation vs experiment *Wassim Zeidan, Nicolas Mazellier, Emmanuel Guilmineau, Azeddine Kourta*	
11:45	Coffee Break	
	Session 6: Flow fields of cars II	
12:00	Bimodal wake dynamics of squareback bluff-bodies: a journey from academia to industry application *Faron Hesse, Aimee Morgan*	Emmanuel Guilmineau, EC Nantes
12:20	Large scale interaction mechanism between shear layers in turbulent wakes *Yann Haffner, Jacques Borée, Thomas Castelain, Andreas Spohn*	
12:40	Long-Period Wake Dynamics of the DrivAer Fastback Model and the Effects of Wheel Rotation *Matt Aultman, Rodrigo Auza Gutierrez, Lian Duan*	
13:00	Scale effect on flow characteristics of ground vehicles *Alfonso Colon de Carvajal, Philippe GILOTTE, Iraj Mortazavi*	
13:20	Lunch Break	
	Session 7: numerical methods / modelling / machine learning I	
14:05	**Special Talk:** Overview and summary of the 2nd Automotive CFD prediction Workshop *Neil Ashton*	Sinisa Krajnovic, Chalmers
14:25	URANS simulation of a realistic road vehicle with k- ω SST and SSG/LRR- ω model as turbulence closure *P. Madhan Kumar, Emmanuel Guilmineau*	
14:45	Modelling the dynamics of the wake behind a squareback Ahmed body *Berengere Podvin, Stéphanie Pellerin, yann fraigneau, Guillaume Bonnavion, Olivier Cadot*	
15:05	Novel Viscous Surface Vorticity Method for Fast Aerodynamic Analysis of Road Vehicles *Vivek Ahuja, Roy Hartfield*	
15:25	Coffee Break	
15:40	Assessment of IDDES and LES methods for the Bi-stable Wake behind a Squareback Ahmed Body *Jing Ren, Chao Xia, Yajun Fan, Zhigang Yang*	
16:00	The bi-stable state of the flow around notchback road vehicles *Sinisa Krajnovic, Kan He, Guglielmo Minelli*	
16:20	Leveraging the value of CFD with data science *Astrid Walle*	
16:40	Extension of Spectral/hp Element Methods towards Robust Large-Eddy Simulation of Industrial Automotive Geometries *Filipe Fabian Buscariolo, Walid Hambli, James Slaughter, Spencer Sherwin*	
17:00	Coffee Break	
	Session 8: numerical methods / modelling / machine learning II	
17:15	Practical Mesh Adaptation for Aerodynamics CFD Simulations *Paul Galpin*	Iraj Mortazavi, CNAM
17:35	Numerical optimization thanks to aerodynamic data measured on wind tunnel around a reduced scale model of a ground vehicle *Alfonso Colon de Carvajal, Ceyham Erdem, Philippe GILOTTE, Stefan Harries, Christian Nayeri*	
17:55	A fully-automated and coupled CFD-driving simulator procedure for vehicle aerodynamic design *Francesco Fabio Semeraro, Antonio Cioffi, Paolo Schito, Michele Vignati, Stefano Melzi*	
18:15	3D Deep Learning based surrogate model for the prediction of multiple connected components and long-range external aerodynamic correlations *Pierre Baqué, Thomas von Tschammer, Luca Zampieri*	
18:35	Flow around a simplified truck: assessment of delayed detached eddy simulation methods and mesh refinement strategies *Xutong Zhang, Maxime Savoie, Mark Quinn, Ben Parslew, Alistair Revell*	
18:55	**End of second day**	

	Wednesday, August 25 (Central European Time Zone, UTC +2)	
10:00	**Invited talk: "Diesel exhaust in trains' cabins; numerical and experimental investigations"** *Hassan Hemida, University of Birmingham,United Kingdom*	(Navid Nayeri)
	Session 9: Trains	
10:45	Numerical Study On Controlling Slipstream Velocities Around High-Speed Trains *Jordan Dunlop, Mark Thompson*	
11:05	On the Estimation of Boundary Layer Parameters and Skin Friction Coefficients at High Reynolds Numbers *Jonathan Tschepe, Navid Nayeri*	
11:25	The effect of Bogie Configurations on the Slipstream and unsteady wake of a high-speed train *Ting Guo, Chao Xia, Zhigang Yang*	
11:45	Procedure for evaluating crosswind safety of a train running in presence of windbreaks with gap, part 1: determination of the aerodynamic loads *Elia Brambilla, Carlos Araya, Paolo Schito, Gisella Tomasini*	
12:05	Coffee Break	
	Session 10: Trains	
12:20	Aerodynamics of high-speed trains with respect to ground simulation *Dennis Weidner, Daniel Stoll, Timo Kuthada, Andreas Wagner*	Hassan Hemida, University of Birmingham
12:40	Aerodynamic improvement of superstructure interacting with trucks carried in the Channel Tunnel *Sebastien Courtine,Jean-Paul Bouchet*	
13:00	Numerical Simulation of Snow Accretion Caused by Snow Saltation on a High-speed Train *Jinkyu Bae, Soonho Shon, Kwanjung Yee*	
13:20	~~Parametric study of flow control outlets in pantographs~~ *~~Felipe Romero-Caparrós, Jorge Munoz-Paniagua, Masahiro Suzuki, Javier García, Eduardo Latorre Iglesias~~*	
13:40	Lunch Break	
	Session 11: Cyclists	
14:25	The subtle interplay between leg position and riding posture on cycling aerodynamics *Shibo Wang, John Pitman, Christopher Brown, Daniel Smith, David Burton, Timothy Crouch, Mark Thompson*	Yann Haffner, CSBT
14:45	Roll moment acting on a cyclist induced by an overtaking station wagon *Christof Gromke*	
15:05	Full-scale laboratory simulation of lateral loads exerted on cyclists being overtaken by vehicles *Camilo Cardenas*	
	Session 12:Trucks, Buses : Experimental Methods	
15:25	The Canadian FSA technology extends aerodynamicists' reach into the free-stream flow field *Bernard Tanguay, Steve Cochard*	Simone Sebben, Chalmers
15:45	Numerical Analysis of Snow Particle Trajectories in the Wake of a Boat-Tail Equipped Heavy-Duty Vehicle *Krzysztof Szilder , Brian McAuliffe*	
16:05	Development of a plasma flow control method for heavy duty vehicle model testing in the wind tunnel *Roy Veldhuizen, Gijs Bouman, Karel Lammers, Theo Michelis, Kamran Noghabai*	
16:25	Coffee Break	
16:40	Experimental Study of the Drag Behavior of Cab Over Engine Trucks in Close Proximity *Johannes Tornell, Simone Sebben, Per Elofsson, Alexander Broniewicz*	
17:00	Efficient aerodynamics for heavy trucks – a European collaborative CFD development effort within AEROFLEX *Kamran Noghabai*	
	Session 13: Hyperloop and other	
17:20	The impact of the isentropic and Kantrowitz limits on the aerodynamics of the evacuated tube transportation system *Zhiwei Zhou, Chao Xia, Shan Xizhuang, Zhigang Yang*	Jonathan Tschepe, TU Berlin
17:40	Numerical simulation of blunt bodies traveling in a pipe at low pressure *Paul Bonnefis, Christophe Airiau, David Fabre, romain guibert, Gerald Debenest*	
18:00	Linear stability and DNS of the flow past a bullet-shaped blunt body moving in a tube *Paul Bonnefis, Christophe Airiau, David Fabre*	
18:20	Monorail Flow Patterns and Vehicle Drag *Georg Klepp, Guido Langer*	
18:40	**End of conference**	