

Journal Papers

- Gaylard, A., Oettle, N., Gargoloff, J., and Duncan, B. (2014). Evaluation of Non-Uniform Upstream Flow Effects on Vehicle Aerodynamics. *SAE Int. J. Passeng. Cars - Mech. Syst.*, **7**(2):692-702.
- Koitrand, S., Lofdahl, L., Rehnberg, S., and Gaylard, A. (2014). A Computational Investigation of Ground Simulation for a Saloon Car. *SAE Int. J. Commer. Veh.*, **7**(1):111-123.
- Robertson, I., Becot, A., Gaylard, A., and Thornber, B. (2014). Automotive Drag Reduction through Distributed Base Roughness Elements. *Applied Mechanics and Materials*, **553**(3), 267-272.
- Gaylard, A., Pitman, J., Jilesen, J., Gagliardi, A. *et al.* (2014). Insights into Rear Surface Contamination Using Simulation of Road Spray and Aerodynamics. *SAE Int. J. Passeng. Cars - Mech. Syst.*, **7**(2):673-681.
- Jilesen, J., Gaylard, A., Duncan, B., Konstantinov, A., *et al.* (2013). Simulation of Rear and Body Side Vehicle Soiling by Road Sprays Using Transient Particle Tracking. *SAE Int. J. Passeng. Cars - Mech. Syst.*, **6**(1), pp. 424-435.
- Gaylard A. P., Fagg M, Bannister M, Duncan B, *et al.* (2012). Modelling A-Pillar Water Overflow: Developing CFD and Experimental Methods. *The SAE International Journal of Passenger Cars - Mechanical Systems*, **5**(2), 789-800.
- Gaylard, A. and Duncan, B., (2011). Simulation of Rear Glass and Body Side Vehicle Soiling by Road Sprays. *SAE Int. J. Passeng. Cars – Mech. Syst.* **4**(1), 184-196.
- Gaylard, A., Beckett, M., Gargoloff, J., and Duncan, B., (2010). CFD-based Modelling of Flow Conditions Capable of Inducing Hood Flutter. *SAE Int. J. Passeng. Cars - Mech. Syst.*, **3**(1):675-694.
- Ahmad, N., Abo-Serie, E., & Gaylard, A. (2010). Mesh Optimization for Ground Vehicle Aerodynamics. [Online]. (URL <http://www.issres.net/journal/index.php/cfdl/article/view/63/43>) *CFD Letters*, **2**(1). (Accessed 9 August 2010).
- Gaylard A. P., Howell, J. P. & Garry, K. (2007). Observation of Flow Asymmetry Over the Rear of Notchback Vehicles. *SAE 2007 Transactions Journal of Passenger Cars: Mechanical Systems*, 2007-01-0900.
- Gaylard A. P. (2006). CFD Simulation of Side Glass Surface Noise Spectra for a Bluff SUV. *SAE 2006 Transactions Journal of Passenger Cars: Mechanical Systems*, 2006-01-0137, SP-1991.
- Prevezer, T., Holding, J., Gaylard, A. & Palin, R. (2002). Bluff body asymmetric flow phenomenon - real effect or solver artefact? *Wind and Structures*, **5**(2-4), 359-368.
- Gaylard A. P. (1993). The application of Computational Fluid Dynamics to railway aerodynamics. *Journal of Rail and Rapid Transit, Part F, Proceedings of the Institution of Mechanical Engineers*, **207**, 133-141.

Book Chapter

- Gaylard A. P. (2001). A Comparison of a Conventional RANS and a Lattice Gas Dynamics Simulation - A Case Study in High Speed Rail Aerodynamics. *In: Rhodes N. ed. Computational Fluid Dynamics in Practice*. London: Professional Engineering Publishing Ltd, Ch. 3.

Peer-Reviewed Conference Papers

Abo-Serie, E., Sherif, M., Pompei, D., and Gaylard, A., (2014) CFD Simulation of External Distribution of Tail-Pipe Emissions Around a Stationary Vehicle Under Light Tail-Wind Conditions. SAE Technical Paper 2014-01-0586. Paper presented at *SAE 2014 World Congress & Exhibition*, April 2014. Warrendale: SAE International.

Oettle N., Mankowski O., Sims-Williams D., Dominy R., Freeman C., Gaylard A. P. (2012). Assessment of a Vehicle's Transient Aerodynamic Response. SAE Technical Paper 2012-01-0449. Paper presented at *SAE 2012 World Congress & Exhibition*, April 2012. Warrendale: SAE International.

Freeman C. M., & Gaylard A. P. (2010). Correlation of CFD Simulation for Front Side Glass Wall Pressure Fluctuations at Yaw. Paper presented at *8th MIRA International Conference on Vehicle Aerodynamics*, October 2010, Nuneaton: MIRA Ltd.

Samples M., Gaylard A. P., & Windsor S. (2010). The Aerodynamics Development of the Range Rover Evoque. Paper presented at *8th MIRA International Conference on Vehicle Aerodynamics*, October 2010, Nuneaton: MIRA Ltd.

Gaylard A. P., Lynch D., Amodeo J., & Amunugama R. (2010). The Simulation of Brake Dust Deposition. *Paper presented at 8th MIRA International Conference on Vehicle Aerodynamics*, October 2010, Nuneaton: MIRA Ltd.

Irving Brown, Y. A., Windsor, S., and Gaylard, A. P. (2010). The Effect of Base Bleed and Rear Cavities on the Drag of an SUV. SAE Technical Paper 2010-01-0512. *Paper presented at SAE 2010 World Congress & Exhibition*, April 2010. Warrendale: SAE International.

Gaylard A. P. (2009) The Appropriate Use of CFD in the Automotive Design Process. SAE Technical Paper 2009-01-1162. Paper presented at *SAE 2009 International Congress and Exposition*, April 2009. Warrendale: SAE International.

Gaylard A. P. (2008). The Aerodynamic Development of the New Jaguar XF. Paper presented at *7th MIRA International Conference on Vehicle Aerodynamics*, October 2008, Nuneaton: MIRA Ltd.

Freeman C. M. & Gaylard A. P. (2008). Integrating CFD and Experiment: The Jaguar Land Rover Aeroacoustics Process. Paper presented at *7th MIRA International Conference on Vehicle Aerodynamics*, October 2008, Nuneaton: MIRA Ltd.

Gaylard A. P., Wilson A. C., & Bambrook G. S. J. (2006) A Quasi-Unsteady Description of Windscreen Wiper Induced Flow Structures. Paper presented at *6th MIRA International Vehicle Aerodynamics Conference*, October 2006, Nuneaton: MIRA Ltd.

Gaylard A. P. (2004). Simulation of A-Pillar/Side Glass Flows for Bluff SUV Geometries. Paper presented at *Fifth MIRA International Conference on Vehicle Aerodynamics*, October 2004, Nuneaton: MIRA Ltd.

Baker C. J., Dalley S., Johnson T., Brown M. A., Gaylard A. P., Quinn A., & Wright N. (2000). Measurements of the Slipstream and Wake of a Model Lorry. Paper presented at *Third MIRA International Conference on Vehicle Aerodynamics*, October 2000, Nuneaton: MIRA Ltd.

Palin R. B., Gaylard A. P. & Cook R. G. A. (2000). CFD Investigation of Unsteady Flow Features in and Around the Passenger Compartment of an Open-top Coupe. Paper presented at *Third MIRA International Vehicle Aerodynamics Conference*, October 2000, Nuneaton: MIRA Ltd.

Matschke G., Schulte-Werning B., Fauchier C., Gregoire R. & Gaylard A. P. (1999) Numerical simulation of the flow around a six-coach high speed train. Paper presented at *World Congress on Rail Research, WCRR'99*, October 1999, Tokyo.

Gaylard A. P., Baxendale A. J. & Howell J. P. (1998). The use of CFD to predict the aerodynamic characteristics of simple automotive shapes. SAE Technical paper No. 980036. Paper presented at *SAE 1998 International Congress and Exposition*, February 1998. Warrendale: SAE International.

Gaylard A. P., Bickerton J. & Howell J. P. (1998) Current issues in the use of CFD to predict aerodynamic characteristics of car shapes. Paper presented at *Second MIRA International Conference on Vehicle Aerodynamics*, October 1998, Nuneaton: MIRA Ltd.

Khandhia Y, Gaylard A. P. & Johnson T. (1996). CFD Simulation of Three Dimensional Unsteady Train Aerodynamics. Paper presented at *First MIRA International Conference on Vehicle Aerodynamics*, October 1996, Nuneaton: MIRA Ltd.

Gaylard A. P., Howlett A. B. & Harrison D. J. (1994). Assessing drag reduction measures for high speed trains. Paper presented at *Vehicle Aerodynamics*, July 1994, London: The Royal Aeronautical Society.

Other Conference Papers

Alajbegovic, A., Gaylard, A., Duncan, B. & Gargoloff, J. (2014). Vehicle aerodynamic effects of realistic transient wind conditions. Paper presented at *11th World Congress on Computational Mechanics*, July 2014. Barcelona: International Centre for Numerical Methods in Engineering (CIMNE).

Gaylard A. P. & Johnson T. (1993). The practical application of CFD to railway aerodynamics. Paper C461/020. Paper presented at *Engineering Applications of Computational Fluid Dynamics*, September 1993. London: Mechanical Engineering Publications Ltd.

Published Reports

ETSU. (2001). *Truck Aerodynamic Styling*. 1st. Harwell: AEA Technology Environment. (GPG 308).

Gaylard, A. P. & Johnson, T. (1992). *CFD Investigation of train roof flows*. Utrecht: European Railway research Institute (ERRI). (C 179/DT 258)

Miscellaneous

Gaylard, A. P. (2008) Expect the Unexpected. *In: The Open Laboratory – The Best in Science Writing on Blogs*. Rohn, J. and Zivkovic, B. (eds.) Chapel Hill, North Carolina: Lulu.com. pp 24-28.

Gaylard, A. P. (2008) Going beyond the evidence. *Homeopathy*, **97**(1), 46.

Gaylard, A. P. (2008) Straw men and black swans: the philosophy of contemporary science. *Homeopathy*, **97**(1), 47-48.