

## Journal papers

1. C.J. Baker, 1979, "The laminar horseshoe vortex", *Journal of Fluid Mechanics*, 95, 2, 347-367, <http://dx.doi.org/10.1017/S0022112079001506>
2. C.J. Baker, 1980, "Theoretical approach to prediction of local scour around bridge piers", *Journal of Hydraulics Research*, 18, 1, 1-12, <http://dx.doi.org/10.1080/00221688009499564>
3. C.J. Baker, 1980, "The turbulent horseshoe vortex", *Journal of Wind Engineering and Industrial Aerodynamics*, 6, 1, 9-23, [http://dx.doi.org/10.1016/0167-6105\(80\)90018-5](http://dx.doi.org/10.1016/0167-6105(80)90018-5)
4. C.J. Baker, 1980, "The theory of flow between two buildings - experimental verification of the assumptions of Britter and Hunt's theory", *Journal of Wind Engineering and Industrial Aerodynamics*, 6, 1, 169-174, [http://dx.doi.org/10.1016/0167-6105\(80\)90028-8](http://dx.doi.org/10.1016/0167-6105(80)90028-8)
5. C.J. Baker, 1980, "Discussion of 'Drifting Snow Similitude' by J Iversen", *Journal of the Hydraulics Division A.S.C.E.*, 106, HY2, 349-350
6. C.J. Baker, 1981, "New design equations for scour around bridge piers", *Journal of the Hydraulics Division A.S.C.E.*, 107, HY4, 507-511, [http://ascelibrary.org/doi/pdf/10.1061/\(ASCE\)0733-9429\(1983\)109%3A5\(767\)](http://ascelibrary.org/doi/pdf/10.1061/(ASCE)0733-9429(1983)109%3A5(767))
7. C.J. Baker, L.C. Squire, 1982, "Turbulent boundary layer development on a two dimensional aerofoil with supercritical flow at low Reynolds number", *Aeronautical Quarterly*, 33, 2, 174-198
8. C.J. Baker, 1984, "Fact and Friction", *Modern Railways*, 41, 425, 86-88
9. C.J. Baker, 1984, "The determination of topographical exposure factors in complicated hilly terrain", *Journal of Wind Engineering and Industrial Aerodynamics*, 17, 2, 239-250, [http://dx.doi.org/10.1016/0167-6105\(84\)90058-8](http://dx.doi.org/10.1016/0167-6105(84)90058-8)
10. K.R. Elliott, C.J. Baker, 1985, "The effect of pier spacing on scour around bridge piers", *Journal of the Hydraulics Division A.S.C.E.*, 111 HY7, 1105-1110, [http://ascelibrary.org/doi/pdf/10.1061/\(ASCE\)0733-9429\(1985\)111%3A7\(1105\)](http://ascelibrary.org/doi/pdf/10.1061/(ASCE)0733-9429(1985)111%3A7(1105))
11. C.J. Baker, C.J. Wood, R.G. Gawthorpe, 1985, "Strong winds in complicated hilly terrain - field measurements and wind tunnel study", *Journal of Wind Engineering and Industrial Aerodynamics*, 18, 1, 1-26, [http://dx.doi.org/10.1016/0167-6105\(85\)90072-8](http://dx.doi.org/10.1016/0167-6105(85)90072-8)
12. C.J. Baker, 1985, "The position of points of maximum and minimum shear stress upstream of cylinders mounted normal to flat plates", *Journal of Wind Engineering and Industrial Aerodynamics*, 18, 3, 263-274, [http://dx.doi.org/10.1016/0167-6105\(85\)90085-6](http://dx.doi.org/10.1016/0167-6105(85)90085-6)
13. C.J. Baker, 1985, "The determination of topographical exposure factors for railway embankments", *Journal of Wind Engineering and Industrial Aerodynamics*, 21, 2, 89-99, [http://dx.doi.org/10.1016/0167-6105\(85\)90035-2](http://dx.doi.org/10.1016/0167-6105(85)90035-2)
14. C.J. Baker, 1986, "A simplified analysis of various types of wind induced road vehicle accidents", *Journal of Wind Engineering and Industrial Aerodynamics*, 22, 1, 69-85, [http://dx.doi.org/10.1016/0167-6105\(86\)90012-7](http://dx.doi.org/10.1016/0167-6105(86)90012-7)
15. C.J. Baker, 1986, "Train aerodynamic forces and moments from moving model experiments", *Journal of Wind Engineering and Industrial Aerodynamics*, 24, 3, 227-252, [http://dx.doi.org/10.1016/0167-6105\(86\)90024-3](http://dx.doi.org/10.1016/0167-6105(86)90024-3)
16. C.J. Baker, 1987, "Measures to control vehicle movement at exposed sites during windy periods", *Journal of Wind Engineering and Industrial Aerodynamics*, 25, 151-167, [http://dx.doi.org/10.1016/0167-6105\(87\)90013-4](http://dx.doi.org/10.1016/0167-6105(87)90013-4)

17. C.J. Baker, 1988, "High sided articulated lorries in strong cross winds", *Journal of Wind Engineering and Industrial Aerodynamics*, 31, 67-85, [http://dx.doi.org/10.1016/0167-6105\(88\)90188-2](http://dx.doi.org/10.1016/0167-6105(88)90188-2)
18. S.A. Coleman, C.J. Baker, 1990, "High sided road vehicles in cross winds", *Journal of Wind Engineering and Industrial Aerodynamics* 36, 1383-1397, [http://dx.doi.org/10.1016/0167-6105\(90\)90134-X](http://dx.doi.org/10.1016/0167-6105(90)90134-X)
19. C.G. Robinson, C.J. Baker, 1990, "The effect of atmospheric turbulence on trains", *Journal of Wind Engineering and Industrial Aerodynamics* 34, 251-272, [http://dx.doi.org/10.1016/0167-6105\(90\)90155-6](http://dx.doi.org/10.1016/0167-6105(90)90155-6)
20. N.J.W. Brockie, C.J. Baker, 1990, "The aerodynamic drag of high speed trains", *Journal of Wind Engineering and Industrial Aerodynamics* 34, 273-290, [http://dx.doi.org/10.1016/0167-6105\(90\)90156-7](http://dx.doi.org/10.1016/0167-6105(90)90156-7)
21. H.J. Bell, A.R. Dawson, C.J. Baker, C.J. Wright, 1990, "The question of tree stability", *Forestry Commission Bulletin* 97
22. C.J. Baker, N.J. Brockie, 1991, "Wind tunnel tests to obtain train aerodynamic drag coefficients - Reynolds number and ground simulation effects", *Journal of Wind Engineering and Industrial Aerodynamics* 38, 23-28, [http://dx.doi.org/10.1016/0167-6105\(91\)90024-Q](http://dx.doi.org/10.1016/0167-6105(91)90024-Q)
23. C.J. Baker, 1991, "Ground vehicles in high cross winds - Part I Steady aerodynamic forces" *Journal of Fluids and Structures* 5, 69-90, [http://dx.doi.org/10.1016/0889-9746\(91\)80012-3](http://dx.doi.org/10.1016/0889-9746(91)80012-3)
24. C.J. Baker, 1991, "Ground vehicles in high cross winds - Part 2 Unsteady aerodynamic forces" *Journal of Fluids and Structures* 5, 91-111, [http://dx.doi.org/10.1016/0889-9746\(91\)80013-4](http://dx.doi.org/10.1016/0889-9746(91)80013-4)
25. C.J. Baker, 1991, "Ground vehicles in high cross winds - Part 3 The interaction of aerodynamic forces and the vehicle system", *Journal of Fluids and Structures* 5, 221-241, [http://dx.doi.org/10.1016/0889-9746\(91\)90478-8](http://dx.doi.org/10.1016/0889-9746(91)90478-8)
26. C.J. Baker, 1991, "The oscillation of horseshoe vortex systems", *A.S.M.E. Journal of Fluids Engineering* 113, 3, 489-495, <http://dx.doi.org/10.1115/1.2909523>
27. C.J. Baker, 1991, "The problems of road vehicles in cross winds" *Journal of the Institute of Highways and Transportation* 38, 5, 6-9
28. C.J. Baker, S. Reynolds, 1991, "Wind induced accidents of road vehicles" *Accident Analysis and Prevention* 24, 6, 559-575, [http://dx.doi.org/10.1016/0001-4575\(92\)90009-8](http://dx.doi.org/10.1016/0001-4575(92)90009-8)
29. C.J. Baker, H.J. Bell, 1992, "The aerodynamics of urban trees" *Journal of Wind Engineering and Industrial Aerodynamics* 41-44, 2655 - 2666, [http://dx.doi.org/10.1016/0167-6105\(94\)90046-9](http://dx.doi.org/10.1016/0167-6105(94)90046-9)
30. N.D. Humphreys, C.J. Baker, 1992, "Forces on vehicles in cross winds from moving model tests" *Journal of Wind Engineering and Industrial Aerodynamics* 41-44, 2673 - 2684, [http://dx.doi.org/10.1016/0167-6105\(92\)90059-J](http://dx.doi.org/10.1016/0167-6105(92)90059-J)
31. S.A. Coleman, C.J. Baker, 1992, "The reduction of accident risk for high sided vehicles in cross winds" *Journal of Wind Engineering and Industrial Aerodynamics* 41-44, 2685 - 2695, [http://dx.doi.org/10.1016/0167-6105\(92\)90060-](http://dx.doi.org/10.1016/0167-6105(92)90060-)
32. C.J. Baker, W.G. Dutch, 1992, "An investigation into the potential use of solid snow barriers on the Snake Pass, Derbyshire", *Proceedings of the I.C.E. Transport*, 95, 151-160, <http://dx.doi.org/10.1680/itrans.1992.20382>
33. C.J. Baker, 1993, "The behaviour of road vehicles in unsteady cross winds", *Journal of*

- Wind Engineering and Industrial Aerodynamics 49, 439-448,  
[http://dx.doi.org/10.1016/0167-6105\(93\)90038-P](http://dx.doi.org/10.1016/0167-6105(93)90038-P)
34. C.J. Baker, 1994, "The quantification of accident risk for road vehicles in cross wind", Journal of Wind Engineering and Industrial Aerodynamics 52, 93-107,  
[http://dx.doi.org/10.1016/0167-6105\(94\)90041-8](http://dx.doi.org/10.1016/0167-6105(94)90041-8)
  35. H.J. Roodbaraky, C.J. Baker, A.R. Dawson, C.J. Wright, 1994, "Experimental observations of the aerodynamic characteristics of urban trees" Journal of Wind Engineering and Industrial Aerodynamics 52, 171-184,  
[http://dx.doi.org/10.1016/0167-6105\(94\)90046-9](http://dx.doi.org/10.1016/0167-6105(94)90046-9)
  36. S.A. Coleman, C.J. Baker, 1994, "An experimental study of the aerodynamic behaviour of high sided lorries in cross winds" Journal of Wind Engineering and Industrial Aerodynamics 53, 3, 401-431, [http://dx.doi.org/10.1016/0167-6105\(94\)90093-0](http://dx.doi.org/10.1016/0167-6105(94)90093-0)
  37. C.J. Baker, 1995, "The development of a theoretical model for the windthrow of plants", Journal of Theoretical Biology 175, 355-372,  
<http://dx.doi.org/10.1006/jtbi.1995.0147>
  38. D.M. King, C.J. Baker, 1996, "Changes in wave parameters in the surf zone due to wind effects" Journal of Hydraulics Research 34, 1, 55-76,  
<http://dx.doi.org/10.1080/00221689609498764>
  39. C.J. Baker, N.D. Humphreys, 1996, "Assessment of the adequacy of various wind tunnel techniques to obtain aerodynamic data for ground vehicles in cross winds" Journal of Wind Engineering and Industrial Aerodynamics 60, 49-68,  
[http://dx.doi.org/10.1016/0167-6105\(96\)00023-2](http://dx.doi.org/10.1016/0167-6105(96)00023-2)
  40. R.P. Hoxey, P.J. Kettlewell, A.M. Meehan, C.J. Baker, X. Yang, 1996, "The aerodynamics and ventilation of poultry transport vehicles; Part 1 Full scale experiments" Journal of Agricultural Engineering Research 65, 77-83 (awarded IAE Douglas Bomford trust Award 1996), <http://dx.doi.org/10.1006/jaer.1996.0081>
  41. C.J. Baker, S. Dalley, X. Yang, P.J. Kettlewell, R.P. Hoxey, 1996, "The aerodynamics and ventilation of poultry transport vehicles; Part 2 Wind tunnel experiments" ,Journal of Agricultural Engineering Research 65, 97-113 (awarded IAE Douglas Bomford trust Award 1996), <http://dx.doi.org/10.1006/jaer.1996.0083>
  42. S. Dalley, C.J. Baker, X. Yang, P.J. Kettlewell, R.P. Hoxey, 1996, "The aerodynamics and ventilation of poultry transport vehicles; Part 3 Internal flow field calculations", Journal of Agricultural Engineering Research 65, 115-127 (awarded IAE Douglas Bomford trust Award 1996), <http://dx.doi.org/10.1006/jaer.1996.0081>
  43. C.J. Baker, 1996, "Outline of a novel method for the prediction of atmospheric pollution dispersal from road vehicles", Journal of Wind Engineering and Industrial Aerodynamics 65, 395-404, [http://dx.doi.org/10.1016/S0167-6105\(97\)00058-5](http://dx.doi.org/10.1016/S0167-6105(97)00058-5)
  44. C.J. Baker, 1997, "Measurements of the natural frequency of trees", Journal of Experimental Botany 48, 310, 1125-1132,  
<http://jxb.oxfordjournals.org/content/48/5/1125>
  45. A.D. Quinn, C.J. Baker, 1997, "An investigation of the ventilation of a day old chick transport vehicles", Journal of Wind Engineering and Industrial Aerodynamics 67-68, 305-311, [http://dx.doi.org/10.1016/S0167-6105\(97\)00081-0](http://dx.doi.org/10.1016/S0167-6105(97)00081-0)
  46. Z.E. Hider, S. Hibberd, C.J. Baker, 1997, "Modelling particulate dispersion in the wake of a vehicle", Journal of Wind Engineering and Industrial Aerodynamics 67-68, 733-744,  
[http://dx.doi.org/10.1016/S0167-6105\(97\)00114-1](http://dx.doi.org/10.1016/S0167-6105(97)00114-1)
  47. D.M. Hargreaves, C.J. Baker, 1997, "Gaussian puff model of an urban street canyon",

- Journal of Wind Engineering and Industrial Aerodynamics, 69-71, 927-942, [http://dx.doi.org/10.1016/S0167-6105\(97\)00218-3](http://dx.doi.org/10.1016/S0167-6105(97)00218-3)
48. W. Pearce, C.J. Baker, 1997, "Wind tunnel tests on the influence of vehicular motion on pollutant dispersion in an urban street canyon", Journal of Wind Engineering and Industrial Aerodynamics 69-71, 915-926, [http://dx.doi.org/10.1016/S0167-6105\(97\)00217-1](http://dx.doi.org/10.1016/S0167-6105(97)00217-1)
49. C.W. Williams, C.J. Baker, 1997, "Appraisal of a semi empirical model for the pressure field beneath roof corner vortices", Journal of Fluids and Structures 11, 767-792, <http://dx.doi.org/10.1006/jfls.1997.0102>
50. A. Namdeo, C.J. Baker, J.J. Colls, 1998, "Particulate pollution from motor vehicles in an urban street canyon in Nottingham, UK" International Journal of Vehicle Design 20, 1-4, 10-20, <http://dx.doi.org/10.1504/IJVD.1998.001833>
51. C.J. Baker, P.M. Berry, J.H. Spink, R.Sylvester-Bradley, J.M. Griffin, R.K. Scott, R.W. Clare, 1998, "A method for the assessment of the risk of wheat lodging", Journal of Theoretical Biology 194, 587-603, <http://dx.doi.org/10.1006/jtbi.1998.0778>
52. W. Pearce, C.J. Baker, 1999, "Wind tunnel tests on the dispersion of vehicular pollutants in an urban area", Journal of Wind Engineering and Industrial Aerodynamics 80, 3, 327-349, [http://dx.doi.org/10.1016/S0167-6105\(98\)00114-7](http://dx.doi.org/10.1016/S0167-6105(98)00114-7)
53. S. Saunderson, A. England. C. J. Baker, 1999, "A dynamic model of the behaviour of Sitka Spruce in high winds", Journal of Theoretical Biology 200, 249-259, <http://dx.doi.org/10.1006/jtbi.1999.0983>
54. A. K. Namdeo, J. J. Colls, C. J. Baker, 1999, "Dispersion and resuspension of fine and coarse particulates in an urban street canyon", Science of the Total Environment 235, 3-13
55. G C Chaplin, J R Randall, C J Baker, 2000, "The turbulent ventilation of a single opening enclosure", Journal of Wind Engineering and Industrial Aerodynamics 85, 2, 145-161, [http://dx.doi.org/10.1016/S0167-6105\(99\)00136-1](http://dx.doi.org/10.1016/S0167-6105(99)00136-1)
56. C J Baker, 2000, "Aspects of the use of the technique of orthogonal decomposition of surface pressure fields", Wind and Structures 3, 2, 97-115, <http://dx.doi.org/10.12989/was.2000.3.2.097>
57. Berry, P.M., Griffin, J.M., Sylvester-Bradley, R., Scott, R.K., Spink, J.H., Baker, C.J. and Clare, R.W., 2000 "Controlling plant form to minimise lodging in wheat" Fields Crop Research 67, 59-81, [http://dx.doi.org/10.1016/S0378-4290\(00\)00084-8](http://dx.doi.org/10.1016/S0378-4290(00)00084-8)
58. S Saunderson, A England, C Baker, 2000, "A dynamic analysis of the wind throw of trees" Forestry 73, 3, 225-237, <http://dx.doi.org/10.1093/forestry/73.3.22>
59. M P Straw, C J Baker, A P Robertson 2000 "Experimental measurements and computations of the wind induced ventilation of a cubic structure" Journal of Wind Engineering and Industrial Aerodynamics 88, 213-230, [http://dx.doi.org/10.1016/S0167-6105\(00\)00050-7](http://dx.doi.org/10.1016/S0167-6105(00)00050-7)
60. C J Baker, 2001, "Unsteady wind loading on a wall", Wind and Structures 4, 5, 413-440. Closure to discussion by N Cook Wind and Structures 6, 2, 165-177, <http://dx.doi.org/10.12989/was.2001.4.5.413>
61. C J Baker, 2001, "Flow and dispersion in vehicle wakes", Journal of Fluids and Structures 15, 7, 1031-1060, <http://dx.doi.org/10.1006/jfls.2001.0385>
62. C J Baker, S J Dalley, T Johnson, A Quinn, N G Wright, 2001, "The slipstream and wake of a high speed train", Proceedings of the Institution of Mechanical Engineers F Journal of Rail and Rapid Transit, 215, 83-99 (awarded James F Alcock Memorial Prize by

- Railway Division of the IMechE, 2002), <http://dx.doi.org/10.1243/0954409011531422>
- 63 C J Baker, D M Hargreaves 2001 "Wind tunnel evaluation of a pollution dispersion model", Journal of Wind Engineering and Industrial Aerodynamics 89, 187-200, [http://dx.doi.org/10.1016/S0167-6105\(00\)00061-1](http://dx.doi.org/10.1016/S0167-6105(00)00061-1)
- 64 A D Quinn, C J Baker, N G Wright, 2001, "Wind and vehicle induced forces on flat plates Part 1: Wind induced force", Journal of Wind Engineering and Industrial Aerodynamics 89, 817-829, [http://dx.doi.org/10.1016/S0167-6105\(01\)00070-8](http://dx.doi.org/10.1016/S0167-6105(01)00070-8)
- 65 A D Quinn, C J Baker, N G Wright, 2001, "Wind and vehicle induced forces on flat plates Part 2: Vehicle induced force" Journal of Wind Engineering and Industrial Aerodynamics 89, 831-847, [http://dx.doi.org/10.1016/S0167-6105\(01\)00071-X](http://dx.doi.org/10.1016/S0167-6105(01)00071-X)
- 66 S Kho, C Baker, A Robertson, 2002, "Unsteady wind induced forces in structural members", Journal of Wind Engineering and Industrial Aerodynamics 90, 1115-1126, [http://dx.doi.org/10.1016/S0167-6105\(02\)00225-8](http://dx.doi.org/10.1016/S0167-6105(02)00225-8)
- 67 S Kho, C Baker, R Hoxey, 2002, "POD/ARMA reconstruction of the surface pressure field around a low rise structure" Journal of Wind Engineering and Industrial Aerodynamics 90 1831-1842, [http://dx.doi.org/10.1016/S0167-6105\(02\)00291-X](http://dx.doi.org/10.1016/S0167-6105(02)00291-X)
- 68 A. Sanz-Andrés, J. Santiago-Prowald, C Baker, A Quinn, 2003, "Vehicle-induced loads on traffic sign panels", Journal of Wind Engineering and Industrial Aerodynamics 91 7 925-942, [http://dx.doi.org/10.1016/S0167-6105\(01\)00071-X](http://dx.doi.org/10.1016/S0167-6105(01)00071-X)
- 69 C J Baker, 2003, "Some complex applications of the wind loading chain", Journal of Wind Engineering and Industrial Aerodynamics 91, 1791-1811, <http://dx.doi.org/10.1016/j.jweia.2003.09.028>
- 70 M Sterling, C J Baker, P M Berry, A Wade, 2003, "An experimental investigation of the lodging of wheat", Agricultural and Forest Meteorology, 119,149-165, [http://dx.doi.org/10.1016/S0168-1923\(03\)00140-0](http://dx.doi.org/10.1016/S0168-1923(03)00140-0)
- 71 P M Berry, M Sterling, C J Baker, J Spink, D Sparks, 2003, "A calibrated model of wheat lodging compared with field measurements", Agricultural and Forest Meteorology, 119,167-180, [http://dx.doi.org/10.1016/S0168-1923\(03\)00139-4](http://dx.doi.org/10.1016/S0168-1923(03)00139-4)
- 72 M Sterling, C J Baker, 2003, "Short term unsteady wind loading on a low rise building", Wind and Structures 6, 5, 403-418, <http://dx.doi.org/10.12989/was.2003.6.5.403>
- 73 A Sanz-Andres, A Laveron, A Cuerva, C Baker, 2004, "Vehicle induced forces on pedestrians", Journal of Wind Engineering and Industrial Aerodynamics 92, 185-198, <http://dx.doi.org/10.1016/j.jweia.2003.11.002>
- 74 N G Wright, C J Baker, 2004, "Environmental applications of computational fluid mechanics", in "Environmental Modelling – finding simplicity in complexity", editors J Wainwright and M Mulligan, Wiley 335-348, [http://faculty.ksu.edu.sa/Almutaz/Documents/Enviro\\_courses/ENVS-531/Environmental%20Modelling\\_Finding%20Simplicity%20in%20Complexity.pdf](http://faculty.ksu.edu.sa/Almutaz/Documents/Enviro_courses/ENVS-531/Environmental%20Modelling_Finding%20Simplicity%20in%20Complexity.pdf)
- 76 Z Cui, X Cai, C J. Baker, 2004, "Large-eddy simulation of turbulent flow in a street canyon", Quarterly Journal of the Royal Meteorological Society 130, 1373-1394, <http://dx.doi.org/10.1256/qj.02.150>
- 77 J Holmes, C Baker, E English, E Choi, 2005, "IAWE Codification Group - Report by Working Group WGC –Wind Structure and codification", Wind and Structures 8, 235-250, <http://dx.doi.org/10.12989/was.2005.8.4.235>
- 78 A Sanz-Andres A Laveron, A Cuerva, C Baker, 2004, "Vehicle-induced loads on pedestrian barriers", Journal of Wind Engineering and Industrial Aerodynamics 92, 403-426, <http://dx.doi.org/10.1016/j.jweia.2003.12.004>

- 79 C J Baker, F Lopez-Calleja, J Jones, J Munday, 2004, "Measurements of the cross wind forces on trains", *Journal of Wind Engineering and Industrial Aerodynamics* 92, 547-563, <http://dx.doi.org/10.1016/j.jweia.2004.03.002>
- 80 P M Berry, M Sterling, J H Spink, C J Baker, R Sylvester-Bradley, A R Tams, A R Ennos, 2004, "Understanding and reducing lodging in cereals", *Advances in Agronomy* 84, 217-269, [http://dx.doi.org/10.1016/S0065-2113\(04\)84005-7](http://dx.doi.org/10.1016/S0065-2113(04)84005-7)
- 81 M Sterling, C Baker, A Quinn, R Hoxey, 2004, "Pressure and velocity fluctuations in the atmospheric boundary layer", *Wind and Structures* 8, 13-34, <http://dx.doi.org/10.12989/was.2005.8.1.013>
- 82 M An, C Baker, J Zeng, 2005, "A fuzzy logic based approach to qualitative risk modeling in the construction process", *World Journal of Engineering* 2, 1-12
- 83 J.D. Holmes, C.J. Baker, Y. Tamura, 2005, "Tachikawa number: A proposal", *Journal of Wind Engineering and Industrial Aerodynamics* 94, 41-47, <http://dx.doi.org/10.1016/j.jweia.2005.10.004>
- 84 M Sterling, C Baker, A Quinn, R Hoxey, P Richards, 2006, "An investigation of the wind statistics and extreme gust events at a rural site", *Wind and Structures* 9, 3, 193-216, <http://dx.doi.org/10.12989/was.2006.9.3.193>
- 85 C J Baker, 2007, "Wind Engineering – past, present and future", *Journal of Wind Engineering and Industrial Aerodynamics* 95, 843-870, <http://dx.doi.org/10.1016/j.jweia.2007.01.011>
- 86 V. Durañona, C.J Baker, M. Sterling, 2007, "An analysis of extreme non synoptic winds", *Journal of Wind Engineering and Industrial Aerodynamics* 95, 1007-1027, <http://dx.doi.org/10.1016/j.jweia.2007.01.014>
- 87 C J Baker, 2007, "The debris flight equations", *Journal of Wind Engineering and Industrial Aerodynamics* 95, 5, 329-353, <http://dx.doi.org/10.1016/j.jweia.2006.08.001>
- 88 M An, S Huang, C J Baker, 2007, "Railway risk assessment – the fuzzy reasoning approach and fuzzy analytic hierarchy process approaches: a case study of shunting at Waterloo depot", *Proceedings of the I.Mech.E, Part F, Journal of Rail and Rapid Transit* 221, 3, 365-383, <http://dx.doi.org/10.1243/09544097JRRT106>
- 89 A. Scarabino, M. Sterling, P. Richards, C. J. Baker, R. Hoxey, 2007, "An investigation of the structure of ensemble averaged extreme wind events", *Wind and Structures* 10, 2, 135-152, <http://dx.doi.org/10.12989/was.2007.10.2.135>
- 90 J. Snæbjornsson, C.J. Baker, R. Sigbjornsson, 2007, "Probabilistic assessment of road vehicle safety in windy environments" *Journal of Wind Engineering and Industrial Aerodynamics* 95, 1445-1462, <http://dx.doi.org/10.1016/j.jweia.2007.02.020>
- 91 S. C. Jordan, T. Johnson, M. Sterling, C.J Baker, 2008, "Evaluating and modelling the response of an individual to a sudden change in wind speed", *Building and Environment* 43, 1521-1534, <http://dx.doi.org/10.1016/j.buildenv.2007.08.004>
92. A. D. Quinn, M Sterling, A. P Robertson, and C. J Baker, 2008, "An Investigation of the wind induced rolling moment on a commercial vehicle in the atmospheric boundary layer", *Proceedings of the I.Mech.E Part D, Journal of Automobile Engineering* 221, 1367-1379, <http://dx.doi.org/10.1243/09544070JAUTO537>
93. Y. Ding, M Sterling, and C. J. Baker, 2008, "An alternative approach to modelling train stability in high cross winds" *Proceedings of the Institute of Mechanical Engineers Part F: Journal of Rail and Rapid Transport.* 222.1.85-97, <http://dx.doi.org/10.1243/09544097JRRT138>
- 94 N. Metje, M. Sterling, C. J. Baker, 2008, "Pedestrian comfort using clothing values and body temperatures" *Journal of Wind Engineering and Industrial Aerodynamics* 96, 412-

435, <http://dx.doi.org/10.1016/j.jweia.2008.01.003>

- 95 M. Sterling, C. J. Baker, S. C. Jordan, T. Johnson, 2008, A study of the slipstreams of high speed passenger trains and freight trains, Proceedings of the Institute of Mechanical Engineers Part F: Journal of Rail and Rapid Transport. 222, 177-19 (the most cited paper from JRRT in 2010), <http://dx.doi.org/10.1243/09544097JRRT133>
- 96 K. Dobney, C. J. Baker, A. D. Quinn, L. Chapman, 2008, "Quantifying the Effects of High Summer Temperatures due to Climate Change on Buckling and Rail Related Delays in south-east UK". Meteorological Applications 16, 2, 245-251, <http://dx.doi.org/10.1002/met.114>
- 97 A. McConville, M. Sterling, C. J. Baker, 2009, "The physical simulation of thunderstorm downbursts using an impinging jet", Wind and Structures, 12, 2, 133-149, <http://dx.doi.org/10.12989/was.2009.12.2.133>
- 98 S. Jordan, M. Sterling, C.J. Baker, 2009, "Modelling the response of a standing person to the slipstream generated by passenger train", Proceedings of the Institute of Mechanical Engineers Part F: Journal of Rail and Rapid Transit 223, 567- 578, <http://dx.doi.org/10.1243/09544097JRRT281>
- 99 M. Sterling, C.J. Baker, A. Bouferrouk, H. O'Neil, S. Wood, E. Crosbie, 2009, "An investigation of the aerodynamic admittances and aerodynamic weighting functions of trains" Journal of Wind Engineering and Industrial Aerodynamics 97, 512–522, <http://dx.doi.org/10.1016/j.jweia.2009.07.009>
- 100 C.J.Baker, F.Cheli, A.Orellano, N.Paradot, C.Proppe, D.Rocchi, 2009, "Cross wind effects on road and rail vehicles", Vehicle Systems Dynamics 47, 8, 983–1022 (invited paper), <http://dx.doi.org/10.1080/00423110903078794>
- 101 K. Dobney, C. J. Baker, L. Chapman, A. D. Quinn, 2009, "The future cost to the UK's railway network of heat related delays and buckles caused by the predicted increase in high summer temperatures due to climate change", Proceedings of the Institute of Mechanical Engineers Part F: Journal of Rail and Rapid Transit, 224, 25-34, <http://dx.doi.org/10.1243/09544097JRRT292>
- 102 C.J.Baker, M.Sterling, 2009, "Aerodynamic forces on multiple unit trains in cross winds" Journal of Fluids Engineering 131 101103-1, <http://dx.doi.org/10.1115/1.3222908>
- 103 C.J.Baker, 2010, "Discussion of 'The macro-meteorological spectrum - a preliminary study' by R I Harris" Journal of Wind Engineering and Industrial Aerodynamics. 98, 945–947
- 104 A.D. Quinn, C.J. Baker, 2010, "Spatial and temporal correlations of wind speeds", Proceedings of the institution of Civil Engineers. Structures and Buildings 163, 65-72, <http://dx.doi.org/10.1680/stbu.2010.163.2.65>
- 105 M. Sterling, A. Quinn, D. Hargreaves, F. Cheli, F. Sabbioni, G. Tomasini, D. Delaunay, C.J. Baker, and H. Morvan, 2010, "A comparison of different methods to evaluate the wind induced forces on a high sided lorry", Journal of Wind Engineering & Industrial Aerodynamics 98 10–20, <http://dx.doi.org/10.1016/j.jweia.2009.08.008>
- 106 C.J. Baker, 2010, "The simulation of unsteady aerodynamic cross wind forces on trains", Journal of Wind Engineering & Industrial Aerodynamics 98, 88-99, <http://dx.doi.org/10.1016/j.jweia.2009.09.006>
- 107 A.D. Quinn, M. Hayward, C.J. Baker, F. Schmid, J. Priest, W. Powrie, 2010, "A full-scale experimental and modelling study of ballast flight under high speed trains", Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit 224, 61- 74 (in the top three most downloaded papers from JRRT in

- 2010), <http://dx.doi.org/10.1243/09544097JRRT294>
- 108 C.J. Baker, 2010, "The flow around high speed trains" *Journal of Wind Engineering and Industrial Aerodynamics* **98**, 277-298, <http://dx.doi.org/10.1016/j.jweia.2009.11.002>
- 109 C.J. Baker, L. Chapman, A.D. Quinn, K. Dobney, 2010, "Climate Change and the Railway Industry". *Proc. IMechE, Part C: J. Mechanical Engineering Science*, **224**, 519-528., <http://dx.doi.org/10.1243/09544062JMES1558>
- 110 C.J. Baker, 2010, "The calculation of cricket ball trajectories". *Journal of Mechanical Engineering Science, Proceedings of the IMechE C*, **224**, 1947-1958, DOI: Awarded SAGE prize in 2011 for best paper in Journal in 2010, <http://dx.doi.org/10.1243/09544062JMES1973>
- 111 P. Martinez-Vazquez, C.J. Baker, M. Sterling, A.D. Quinn, P.J. Richards, 2010, "Aerodynamic forces on fixed and rotating plates", *Wind and Structures*, **13**, 2 127-144, <http://dx.doi.org/10.12989/was.2010.13.2.127>
- 112 B. Kakimpa, P. Martinez-Vazquez, D. Hargreaves, J. Owen , C.J. Baker, M. Sterling, A.D. Quinn, 2010, "CFD modelling of plate free-flight and auto-rotation", *Wind and Structures*, **13**, 2 169-189, <http://dx.doi.org/10.12989/was.2010.13.2.169>
- 113 H. Hemida, N.Gil, C.J. Baker, 2010, "LES of the slipstream of a rotating train", *ASME Journal of Fluids Engineering* **132**, 5, 051103-1, <http://dx.doi.org/10.1115/1.4001447>
- 114 N. Gil, C.J. Baker, C. Roberts, 2010, "Passenger Train Slipstream Characterization Using a Rotating Rail Rig," *ASME Journal of Fluids Engineering* **132**, 6, 061401, <http://dx.doi.org/10.1115/1.4001577>
- 115 H. Hemida, C.J. Baker, 2010, "Large-Eddy Simulation of the flow around a freight wagon subjected to a crosswind", *Computers and Fluids* **39** 1944–1956, <http://dx.doi.org/10.1016/j.compfluid.2010.06.026>
- 116 Tomlinson C, Chapman C, Thornes J, 2010, "Derivation of Birmingham's summer surface urban heat island from MODIS satellite images", *International Journal of Climatology*, <http://dx.doi.org/10.1002/joc.2261>
- 117 P. Martinez-Vazquez` M. Sterling, C. J. Baker, A. D. Quinn, P.J. Richards 2011, "Autorotation of Square Plates, with Application to Windborne Debris", "Wind and Structures, An International Journal" **14**, 2, <http://dx.doi.org/10.12989/was.2011.14.2.167>
- 118 C. Baker, H. Hemida, S. Iwnicki, G Xie, D. Ongaro, 2011, "The integration of cross wind forces into train dynamic modelling", *Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit* **225**, 2, 154-164, <http://dx.doi.org/10.1177/2041301710392476>
- 119 C J Tomlinson, L Chapman, J E Thornes and C J Baker, 2011, "Including the urban heat island in spatial heat health risk assessment strategies: a case study for Birmingham, UK", *International Journal of Health Geographics*. <http://www.ij-healthgeographics.com/content/10/1/42>
- 120 M An, Y Chen, C Baker, 2011, "A fuzzy reasoning and fuzzy-analytical hierarchy process based approach to the process of railway risk information: A railway risk management system", *Information Sciences* **181**, 3946–3966, <http://dx.doi.org/10.1016/j.ins.2011.04.051>
- 121 C J Tomlinson, L Chapman, J E Thornes, C J Baker, 2011, "Remote sensing land surface temperature for meteorology and climatology: a review", *Meteorological Applications* **18**, 296-306, <http://dx.doi.org/10.1002/met.287>
- 122 C D F Rogers, C J Bouch, S Williams, A R G Barber, C J Baker, J R Bryson, D N Chapman, L Chapman, J Coaffee, I Jefferson and A D Quinn, 2012, "Resistance and Resilience –

- Paradigms for Critical Local Infrastructure”, Proceedings of the ICE - Municipal Engineer 165, 2, 73-83 <http://dx.doi.org/10.1680/muen.11.00030>
- 123 M. Anyala, J.B. Odoki and C.J. Baker, 2012, “Hierarchical asphalt pavement deterioration model for climate impact studies”, International Journal of Pavement Engineering, 15, 3, 251-266, <http://dx.doi.org/10.1080/10298436.2012.687105>
- 124 S Blenkinsop, Y Zhao, J Quinn, F Berryman, J Thornes, C Baker, H J Fowler, 2012, “Downscaling future wind hazard for SE London using the UKCP09 regional climate model ensemble”, 53, 141–156, <http://dx.doi.org/10.3354/cr01091>
- 125 P. Martinez-Vazquez, B. Kakimpa, M. Sterling, C.J. Baker, A.D. Quinn, P.J. Richards, J.S. Owen, 2012, “Pressure field of a rotating square plate with application to windborne debris”, Wind and Structures, 15, 6, 527-547, <http://dx.doi.org/10.12989/was.2012.15.6.509>
- 126 C J Tomlinson, L Chapman, J E Thornes, C J Baker, T Prieto-Lopez, 2012, “Comparing night-time satellite land surface temperature from MODIS and ground measured air temperature across a conurbation”, Remote Sensing Letters 3 8, 2012. Awarded "The Taylor & Francis Remote Sensing Letters Award" 2013 for the best letter published in the Remote Sensing Letters publication during the previous calendar year, <http://dx.doi.org/10.1080/01431161.2012.659354>
- 127 F. Dorigatti, M. Sterling, D. Rocchi, M. Belloli, A.D. Quinn, C.J. Baker, E. Ozkan, 2012, “Wind tunnel measurements of crosswind loads on high sided vehicles over long span bridges”, Journal of Wind Engineering and Industrial Aerodynamics 107–108, 214–224 <http://dx.doi.org/10.1016/j.jweia.2012.04.017>
- 128 H Hemida, C J Baker, G Gao, 2012, “The calculation of train slipstreams using Large-Eddy Simulation”, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid 228, 1 25-36 <http://dx.doi.org/10.1177/0954409712460982>
- 129 C J Baker, 2013, “A framework for the consideration of the effects of crosswinds on trains”, Journal of Wind Engineering and Industrial Aerodynamics 123, 130–142, <http://dx.doi.org/10.1016/j.jweia.2013.09.015>,
- 130 C J Baker, 2013, “Pensnett – its name and origins” Staffordshire History Journal
- 131 C J Baker, 2013, “A unified framework for the prediction of cricket ball trajectories in spin and swing bowling”, IMechE Proceedings P – Journal of Sports Engineering, 227, 1 31 – 38, <http://dx.doi.org/10.1177/1754337112440793>
- 132 C J Tomlinson, T Prieto-Lopez, R Bassett, L Chapman, X-M Cai, J E Thornes, C J Baker 2013 “Showcasing urban heat island work in Birmingham – measuring, monitoring, modelling and more”, Weather 68, 2, <http://dx.doi.org/10.1002/wea.1998>
- 133 C J Baker, A Quinn, M Sima, L Hoefener, R Licciardello, 2013, Full-scale measurement and analysis of train slipstreams and wakes: Part 1 Ensemble averages. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 228, 5, 451-467, Awarded the William Alexander Agnew Meritorious Award / Clarence Noel Goodall Award of the IMechE Railway Division 2015, <http://dx.doi.org/10.1177/0954409713485944>
- 134 C J Baker, A Quinn, M Sima, L Hoefener, R Licciardello, 2013, Full-scale measurement and analysis of train slipstreams and wakes. Part 2 Gust analysis, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit 228, 5. 468-480. Awarded the William Alexander Agnew Meritorious Award / Clarence Noel Goodall Award of the IMechE Railway Division 2015, <http://dx.doi.org/10.1177/0954409713488098>
- 135 T Gilbert, C J Baker, A D Quinn, 2013, “Aerodynamic pressures around high-speed

- trains: the transition from unconfined to enclosed spaces”, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid 227, 6, 608-621, <http://dx.doi.org/10.1177/0954409713494947>
- 136 T Gilbert, C J Baker, A D Quinn, 2013, “Gusts caused by high speed trains in confined spaces and tunnels”, Journal of Wind Engineering and Industrial Aerodynamics, Journal of Wind Engineering and Industrial Aerodynamics 121, 39–48, <http://dx.doi.org/10.1016/j.jweia.2013.07.015>
- 137 C J Baker, S J Jordan, T Gilbert, M Sterling, A Quinn, T Johnson, J Lane, 2014, “Transient aerodynamic pressures and forces on trackside and overhead structures due to passing trains. Part 1 Model scale experiments”, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid 228 36 – 69, <http://dx.doi.org/10.1177/0954409712464859>
- 138 C J Baker, S J Jordan, T Gilbert, M Sterling, A Quinn, T Johnson, J Lane, 2014, “Transient aerodynamic pressures and forces on trackside and overhead structures due to passing trains. Part 2 Standards applications”, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid, 228 36 – 69, <http://dx.doi.org/10.1177/0954409712464859>
- 139 C J Baker, 2014, “Train aerodynamics – a review; Part 1 Fundamentals”, Aeronautical Journal 118, 1201 <http://aerosociety.com/News/Publications/Aero-Journal/Online/1937/A-review-of-train-aerodynamics-Part-1-Fundamentals>
- 140 C J Baker, 2014, “Train aerodynamics - a review; Part 2 Applications” Aeronautical Journal 118, 1202 <http://aerosociety.com/News/Publications/Aero-Journal/Online/2056/A-review-of-train-aerodynamics-Part-2-Applications>
- 141 C J Baker, M Sterling, P Berry, 2014, “A generalised model of crop lodging”, Journal of Theoretical Biology 363, 1–12 , <http://dx.doi.org/10.1016/j.jtbi.2014.07.032>
- 142 D Soper, C J Baker, M Sterling, 2014, “Experimental investigation of the slipstream development around a container freight train using a moving model facility”, Journal of Wind Engineering and Industrial Aerodynamics 135, 105–117, <http://dx.doi.org/10.1177/0954409712464859>
- 143 F Dorigatti, M Sterling, C J Baker, A D Quinn, 2015, “Crosswind effects on the stability of a model passenger train - a comparison of static and moving experiments”, Journal of Wind Engineering and Industrial Aerodynamics 138, 36-51, <http://dx.doi.org/10.1016/j.jweia.2014.11.009>
- 144 J A Morden, H Hemida, C J Baker, 2015, “Comparison of RANS and Detached Eddy Simulation Results to Wind-Tunnel Data for the Surface Pressures Upon a Class 43 High-Speed Train”, ASME Journal of Fluids Engineering, 137, 4, 041108, <http://dx.doi.org/10.1115/1.4029261>
- 145 M Jesson, M Sterling, C Letchford, C Baker, 2015, “Aerodynamic Forces on the Roofs of Low-, Mid- and High-Rise Buildings Subject to Transient Winds”, Journal of Wind Engineering and Industrial Aerodynamics”, 143, 42-49 <http://dx.doi.org/10.1016/j.jweia.2015.04.020>
- 146 C J Baker, 2015, “Risk analysis of pedestrian and vehicle safety in windy environments”, Journal of Wind Engineering and Industrial Aerodynamics, 147, 283–290, <http://dx.doi:10.1016/j.jweia.2015.10.001>
- 147 Jaroszweski, D., Hooper, E., Baker, C., Chapman, L. & Quinn, A. (2015) The impacts of the 28 June 2012 storms on UK road and rail transport, Meteorological Applications. 22, 3, 470-476, <http://dx.doi:10.1002/met.1477>
- 148 Zhu, C., Hemida, H., Flynn, D., Baker, C., Liang, X. & Zhou, D. (2016) Numerical

- simulation of the slipstream and aeroacoustic field around a High-Speed Train, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit. <http://dx.doi.org/10.1177/0954409716641150>
- 149 J Thornes, A Hickman, C Baker, X Cai, J M Delgado Saborit (2016) Air quality in enclosed railway stations, Proceeding Institution of Civil Engineers Transport (winner of ICE Safety in Construction Medal 2018) <http://dx.doi.org/10.1680/jtran.15.00094>
- 150 D Soper, M Gallagher, C Baker , Quinn A (2017), A model-scale study to assess the influence of ground geometries on aerodynamic flow development around a train, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit 231, 8, 916-933 <http://dx.doi.org/10.1177/0954409716648719>
- 151 D Flynn, H Hemida, C Baker (2016) On the effect of crosswinds on the slipstream of a freight train and associated effects, Journal of Wind Engineering and Industrial Aerodynamics 156, 14-28 <http://dx.doi.org/10.1016/j.jweia.2016.07.001>
- 152 D. Flynn, H. Hemida, D. Soper, C. Baker (2014) Detached-eddy simulation of the slipstream of an operational freight train, Journal of Wind Engineering and Industrial Aerodynamics 132, 1-12 <http://dx.doi.org/10.1016/j.jweia.2014.06.016>
- 153 C J Baker, M Sterling (2017) Modelling wind fields and debris flight in tornadoes, Journal of Wind Engineering and Industrial Aerodynamics 168, 312-321 <http://dx.doi.org/10.1016/j.jweia.2017.06.017>
- 154 D Soper, C Baker, A Jackson, D Milne, L Le Pen, G Watson, W Powrie (2017) Full scale measurements of train underbody flows and track forces, Journal of Wind Engineering and Industrial Aerodynamics 169, 251-264, <http://dx.doi.org/10.1016/j.jweia.2017.07.023>
- 155 D Soper, D Flynn, D, C Baker, A Jackson, H Hemida (2017) A comparison of methods to simulate the aerodynamic flow beneath a high speed train, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 44 p.?? <http://dx.doi.org/10.1177/0954409717734090>
- 156 C Baker, M Sterling (2018) A conceptual model for wind and debris impact loading of structures due to tornadoes, Journal of Wind Engineering and Industrial Aerodynamics. 175, 283-291, University of Birmingham EPS College Paper of the Month, April 2018 <https://doi.org/10.1016/j.jweia.2017.11.029>
- 157 S Gillmeier, M Sterling, H Hemida, C Baker (2018) A reflection on analytical tornado-like vortex flow field models, Journal of Wind Engineering and Industrial Aerodynamics, 174, 10-27 <https://doi.org/10.1016/j.jweia.2017.12.017>
- 158 A Hickman, C J Baker, X Cai, J Delgado-Saborit, J E Thornes (2018) Air Quality Evaluation at Birmingham New Street Railway Station, Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, <http://dx.doi.org/10.1177/0954409717752180>
- 159 M Gallagher, J Morden, C Baker, D Soper, A Quinn, H Hemida, M Sterling (2018) Trains in crosswinds – comparison of full-scale on-train measurements, physical model tests and CFD calculations, Journal of Wind Engineering and Industrial Aerodynamics 175, 428-444 <https://doi.org/10.1016/j.jweia.2018.03.002>
- 160 C Baker, M Sterling (2018) The calculation of train stability in tornado winds, Journal of Wind Engineering and Industrial Aerodynamics, 176, 158-165, <https://doi.org/10.1016/j.jweia.2018.03.022>
- 161 I R Bartle, c J Bouch, C J Baker, C D F Rogers (2018) End-user Innovation of Urban Infrastructure: Key Factors in the Direction of Development, accepted for publication in the Proceedings of the Institution of Civil Engineers; Municipal Engineering,

<https://www.icevirtuallibrary.com/doi/abs/10.1680/jmuen.18.00008>

- 162 P Iliadis, D Soper, C Baker, H Hemida (2018) Experimental investigation of the aerodynamics of a freight train passing through a tunnel using a moving model, accepted for publication in Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit
- 163 Y Noguchia, M Suzukia, C Baker, K Nakade (2018) Numerical and experimental study on the aerodynamic force coefficients of railway vehicles on an embankment in crosswind, Accepted for publication in the Journal of Wind Engineering and Industrial Aerodynamics 184, 90-105, <https://doi.org/10.1016/j.jweia.2018.11.019>
- 164 C Baker, D Soper (2019) The calculation of the overturning wind speed of large road vehicles at exposed sites, Accepted for Publication in the Institution of Civil Engineers Transport Journal.