

Refereed Journal Publications¹

1. Johnson, D.A., Abdelrahman, A., and D. Gertz (2012), "Experimental indirect determination of wind turbine performance and Blade Element Theory parameters in controlled conditions", Wind Engineering (accepted) S1437
2. Gertz, D.*, Johnson, D.A. and Nigel Swytink-Binnema*, (2012), "An Evaluation Testbed for Wind Turbine Blade Tip Designs - Winglet Results", Wind Engineering, 36, 4, 389-410.
3. Johnson, D.A. and B. Gaunt*, (2012), "Wind Turbine Performance in Controlled Conditions: Experimental Results", Int. Journal of Green Energy DOI:10.1080/15435075.2012.675799
4. Gharali, K.* and D.A. Johnson, (2012), "Numerical modeling of an S809 airfoil under dynamic stall, erosion and high reduced frequencies", Applied Energy, 93, 45-52. DOI:10.1016/j.apenergy.2011.04.037
5. Gertz, D.* and D. Johnson, (2011), "An evaluation testbed for wind turbine blade tip designs—baseline case", Int. J. Energy Research, 35, 15, 1360-1370 DOI: 10.1002/er.1897
6. Orlando, S.*, Bale, A.*, and D. Johnson, (2011) "Experimental Study of the Effect of Tower Shadow on Anemometer Readings", J. Wind Engineering and Industrial Aerodynamics, 99, 1, 1-6.
7. Devaud, C.B., Weisinger, J.*, Johnson, D.A and E.J. Weckman, (2009) "Experimental and Numerical Characterization of the Flowfield in the Large-scale UW Live Fire Research Facility", International Journal for Num. Methods in Fluids, 60, 5, 539-564.
8. McWilliam, M.* and D.A. Johnson, (2008), "Velocity Measurement of Flow around Model Vertical Axis Wind Turbines", International Journal of Green Energy, 5, 1-2, 55-68.

Fully Refereed Conference Proceedings

9. Gharali, K.*, Gu, M.* and D.A. Johnson, "A PIV Study of a Low Reynolds Number Pitch Oscillating SD7037 Airfoil in Dynamic Stall with CFD comparison", 16th Int. Symp. Appl Laser Tech Fluid Mechanics, July 9-12, 2012, Lisbon, Portugal 10 pp.
10. Gertz, D.*, Johnson, D.A. and Nigel Swytink-Binnema*, "Experimental Evaluation of a Wind Turbine Blade Winglet", EUROMECH Colloquium 528, Oldenburg, Germany, **February 22-24, 2012 to be published in the Springer Proceedings Series**
11. Gharali, K.*, Lam, V.* and D.A. Johnson, "**Unsteady Flow Investigation around a Pitching Wind Turbine Blade Element**", EUROMECH Colloquium 528, Oldenburg,

¹ * denotes supervised graduate student

Germany, February 22-24, 2012 to be published in the Springer Proceedings Series

12. Almutairi, Z.*, Ren, C., and D.A. Johnson, "Effects of Hydrophobic Recovery of Plasma Treated PDMS on Surface Tension Driven Flow", ASME 2010 3rd Joint US-European Fluids Eng., FEDSM2010-ICNMM2010, Aug 1-5, 2010, Montreal, QC, Canada
13. Gertz, D.* and D.A. Johnson, "An Evaluation Testbed For Alternative Wind Turbine Blade Tip Designs", International Green Energy Conference IGEC V, Waterloo, Canada, June 1-3, 2010
14. Bale, A.*, Orlando, S.* and D.A. Johnson, "Design and Preliminary Testing of a MEMS Microphone Phased Array for Aeroacoustic Testing of a Small-Scale Wind Turbine Airfoil", International Green Energy Conference IGEC V, Waterloo, Canada, June 1-3, 2010
15. Lam, V.* and D.A. Johnson, "Wind resource assessment and loss factors for small wind turbines", International Green Energy Conference IGEC V, Waterloo, Canada, June 1-3, 2010
16. Gharali, K.* and D.A. Johnson, "Numerical Modeling Of Pitch Oscillating S809 Airfoil Dynamic Stall In 2D With Application To A Horizontal Axis Wind Turbine", International Green Energy Conference IGEC V, Waterloo, Canada, June 1-3, 2010
17. Orlando, S.*, Bale, A.* and D.A. Johnson, "Design And Preliminary Testing Of A MEMS Microphone Phased Array", Proceedings of Berlin Beamforming Conference BeBeC, Berlin, Germany, February 24-25, 2010
18. Gharali, K.* and D.A. Johnson, "Pressure and Acceleration Determination Methods Using the PIV Velocity Data Set", ASME Fluids Engineering Division, Jacksonville, FL, August 10-14, 2008, 657-664, FEDSM2008-55157.
19. McWilliam, M.* and D.A. Johnson, "Development of a Wind Tunnel Test Apparatus for Horizontal Axis Wind Turbine Rotor Testing", ASME 2nd International Conference on Energy Sustainability, Jacksonville, FL, August 10-14, 2008, 679-687, ES2008-54194
20. Johnson, D.A., "Renewables-based Micro Grid Development for Remote Communities", 14th Technology Summit: Clean Technologies, Hotel The Grand, Delhi, India, Dec. 4-6, 2008, Sponsor Cdn. Dept. Foreign Affairs (Invited)
21. Gaunt, B.* and D.A. Johnson, "The Effect of Wind Turbine Airfoil Pitching on Stall", ASME 2nd International Conference on Energy Sustainability, Jacksonville, FL USA, August 10-14, 2008, ES2008-54231
22. Parker, P. and D.A. Johnson, "Renewable Energy in Remote Communities: First Nations and a wind-based strategy", 2008 Canadian Association of Geographers Annual Meeting, Université Laval, Quebec, May 20-24, 2008.

Conferences (accepted based on abstract)

23. Bale, A.* and D. Johnson, "The Application of MEMS Microphone Arrays to Aeroacoustic Measurements", (Invited), CanWEA 27th Ann Conf. Vancouver, BC Oct 3-6, 2011
24. Swytink-Binnema, N.* and D. A. Johnson, "Wind tunnel testing of nacelle/rotor arrangement", NSERC WESNet Annual Meeting, Vancouver, CA Oct. 6, 2011
25. Gharali, K.* and D. Johnson, "Unsteady Flow Investigation Around a Pitching Wind Turbine Blade", CanWEA 27th Ann Conf., Vancouver, BC Oct 3-6, 2011
26. Gertz, D.P.* and D. A. Johnson, "The Design, Fabrication, and Testing of a Wind Turbine Blade with Interchangeable Tips", Proceedings of CSME FORUM 2010, Victoria, BC, June 7-9, 2010
27. Gertz, D.* and D. Johnson, "Experimental prediction of wind turbine performance through velocity measurements", 22nd Canadian Congress of Applied Mechanics", Halifax, NS, May 31-June 4th, 2009
28. Gaunt, B.* and D.A. Johnson, "Wind Turbine Performance: Power Production and Flow Visualization Experiments in a Controlled Environment", Canadian Wind Energy Association (CanWEA) 25th Annual Conference, Toronto, ON, Sept. 20-23, 2009
29. Orlando, S.*, Bale, A.*, Gertz, D.* and D.A. Johnson, "Effect of Tower Shadow on Anemometer Readings", Canadian Wind Energy Association (CanWEA) 25th Annual Conference, Toronto, ON, Sept. 20-23, 2009
30. McWilliam, M.*, Johnson, D.A., Gharali, K.*, McPhee*, A., Gaunt, B.*, Skensved, E.*, Orlando, S.*, Bale, A.*, Gertz, D.* and V. Lam*, "Wind Energy Research", Canadian Wind Energy Association (CanWEA) 24th Ann Conf, Vancouver, BC, Oct. 19- 22, 2008
31. Gertz, D.* and D. Johnson, "Wind Tunnel Testing of a Wind Turbine Blade with Interchangeable Tips", 1000 Island Energy Research Forum, TIERF, Alexandria Bay, NY, Nov. 12-14, 2010
32. Lam, V.* and D. Johnson, "Method of analysing the long-term turbulence level from meteorological data", 1000 Island Energy Research Forum, TIERF, Alexandria Bay, NY, Nov 12-14, 2010
33. Gharali, K.* and D. Johnson, "Unsteady modeling of dynamic stall phenomena with application to a Horizontal Axis Wind Turbine", CanWEA 26th Ann Conf., Montreal, QC, Nov. 1-3, 2010
34. Gertz, D.* and D. Johnson, "Analysis of Wind Turbine Blade Tips", Canadian Wind Energy Association (CanWEA) 26th Ann Conf., Montreal, QC, Nov. 1-3, 2010
35. Bale, A.* and D. Johnson, "Locating Noise Sources With A Microphone Array", Canadian

Wind Energy Association (CanWEA) 26th Ann Conf., Montreal, QC, Nov. 1-3, 2010

36. Lam, V.* and D. Johnson, "Turbulence levels determined from meteorological data", Canadian Wind Energy Association (CanWEA) 26th Ann Conf., Montreal, QC, Nov. 1-3, 2010
37. Gertz, D.* and D.A. Johnson, (2010), "The Design, Fabrication, and Testing of a Wind Turbine Blade with Interchangeable Tips", CSME Forum, Victoria, BC, June 7 – 9, 2010
38. Gaunt, B.*, Gertz, D.*, Orlando, S.* and D. A. Johnson, "Wind tunnel testing of nacelle/rotor arrangement of a Full Scale Wind Turbine", WESNet Workshop at ÉTS, Montréal, QC, May 27, 2010
39. Gaunt, B.* and D.A. Johnson, "Wind Turbine Performance: Power Production and Flow Visualization Experiments in a Controlled Environment", Canadian Wind Energy Association (CanWEA) 25th Annual Conference, Toronto, ON, Sept. 20-23, 2009
40. Orlando, S.*, Bale, A.*, Gertz, D.* and D.A. Johnson, "Effect of Tower Shadow on Anemometer Readings", Canadian Wind Energy Association (CanWEA) 25th Annual Conference, Toronto, ON, September 20-23, 2009
41. Johnson, D.A., "Wind-Diesel-Storage Project at Kasabonika Lake First Nation", 2009 Wind-Diesel Workshop, Ottawa, ON, June 1-2, 2009
42. Gaunt, B.* and D.A. Johnson "Investigating Airflow over an Oscillating Wind Turbine Airfoil In the Stalled Region", Can. Wind Energy Conf., Quebec QC Sept 30–Oct 3, 2007
43. McWilliam, M.* and D.A. Johnson "Research in Dynamic Stall", Canadian Wind Energy Association Conference, Quebec, QC, Sept. 30 – Oct. 3, 2007
44. Johnson, D.A., "Aerodynamic Measurements on Wind Turbines", 19th annual Canadian Power Conference - Association of Power Producers of Ontario (APPrO), Toronto, ON, Nov. 13-14, 2007
45. McWilliam, M.* and D.A. Johnson, "CFD Study in the Applicability of Wind Tunnel Testing for Wind Turbines", CANCAM, Toronto ON, June 3–7, 2007
46. McWilliam, M.* and D.A. Johnson, "Wind Turbine Aerodynamic Research", Canadian Wind Energy Association Conference, Winnipeg, MB, Oct. 22–25, 2006
47. McWilliam, M.* and D.A. Johnson, "Effect of Blade Geometry Distribution on Overall Wind Turbine Performance in Varying Environments" CSME FORUM 2006, Kananaskis, AB May 21-24, 2006 * Best Paper Competition 3rd place
48. McWilliam, M.* and D.A. Johnson, "Velocity Measurement Of Savonius Wind Turbines" IGEC-2 2nd International Green Energy Conf., Oshawa, ON June 25-29, 2006 10pp

49. McWilliam, M.* and D.A. Johnson, "Wind Turbine Aerodynamic Research" 2006 CanWEA Annual Conference, Winnipeg, MB, October 22-27, 2006