Curriculum Vitae – Nicholas John Lawson
Associate Professor in Aerospace Engineering

Personal Profile:

An Aerospace Engineering Associate Professor, Aerodynamicist and Pilot, with >2000 hours of commercial flying experience, in the School of Aerospace, Mechanical and Mechatronic Engineering, the University of Sydney.

I specialise in experimental and applied aerodynamics, including the development of optical flow measurement methods and sensors, applied to aerospace and multi-phase flows.

Publications:

In excess of 120 papers published, including 67 refereed journal papers:

Google Scholar: https://scholar.google.co.uk/citations?hl=en&user=JhZDLJ0AAAAJ
Scopus: https://www.scopus.com/authid/detail.uri?authorId=7102395784

Current Responsibilities / Experience:

Module Leader lecturing AERO2703 Aircraft Performance and Operations

PhD student supervision and examination

Student project supervision and 1st year advisor for U'Grad Aeronautical Engineering students

Previous Responsibilities / Experience:

Head of Department (2017-2021). Managing 7 FTE staff and 4 visiting staff

Principal Investigator leading two Aerospace Technology Institute (ATI) research projects (~£1M)

Co-Investigator on four further ATI research projects, one EU project and one EPSRC project (~£2M)

MSc Lecturer & Supervisor, Flying Instructor, Co-pilot, Deputy Accountable Manager for flying ops.

Academic Qualifications:

BEng (Hons) 1st Class Mechanical Engineering, PhD in Aerodynamics and Optical Engineering

Professional Memberships:

CEng, FRAeS[1], FHEA[2], MSFTE[3]

Other Qualifications:

Commercial Pilot Licence with single engine piston and night ratings: >2000 hours total experience

Education:

1991 – 1995	PhD in Aerodynamics and Optics	Loughborough University, UK
1987 – 1991	BEng(Hons) Mechanical Engineering	Loughborough University, UK

Employment:

Sep21 onwds	Assoc Prof in Aerospace Engineering	University of Sydney, Australia
2016 – Sep21	Professor, Head of Dept. & Pilot	Cranfield University, UK
2007 – 2016	Reader & Pilot	Cranfield University, UK
2002 – 2007	Senior Lecturer	Cranfield University, UK
1999 – 2002	Lecturer	Cranfield University, UK
1995 – 1999	Research Assistant	Melbourne University, Australia
1987 – 1995	Sponsored PhD and U'Grad Student	Rolls-Royce plc, Derby, UK

[1] Fellow of the Royal Aeronautical Society
[2] Fellow of the Higher Education Academy
[3] Member of the Society of Flight Test Engineers

Research:

2016 – 2021 Principal Investigator leading workpackages on ATI research grants: Wing Design Methodology (WINDY) and End-2-End Equipment Health Management (E2EEHM). Also Co-I on EPSRC[4] Platform Grant EP/N002520/1 – Optical Instrumentation.

Co-I on RAEng[5] COVID19 viral flow visualisation in ambulances and transport systems

2006 – 2014 Workpackage leader with 3 post-doctoral researchers and one PhD student working on development of optical and fibre optic flight test instrumentation as part of an EU FP6 / FP7 AIM1 / AIM2 research projects (#030827 / #266107)

1999 – 2015 Principal Investigator and Co-Investigator on 6 EPSRC[4] grants

1997 – 2016 Supervision of 6 PhD students who completed research and theses into high speed cavity aerodynamics, unsteady cavity jets, fluidic vectoring, Ahmed automotive wakes, high speed protuberances and solids dispersion

1995 – 1999 Post-doctoral fluid mechanics research, including the development of a laser measurement lab for single and multi-phase flows. Two PhD's co-supervised

1991 – 1995 PhD completed with Rolls-Royce plc on the application of the laser measurement technique particle image velocimetry (PIV) to high speed flows

Grants Won

Details	Position	Funding Body	Period	Value	Cranfield Value	Cranfield % Value
ATI Collaborative R&D #102381	Co-I	TSB-ATI	01/11/15 31/10/18	£540k	£540k	100%
EP/N002520/1 Platform Grant	Co-I	EPSRC	01/10/15 30/09/20	£1,363k	£1,363k	100%
EP/H02252X/1 Platform Grant	Co-I	EPSRC	01/10/10 30/09/15	£1,149k	£1,149k	100%
Advanced In-Flight Measurement 2	P-I	EU FP7 # 266107	01/10/10 30/09/14	€3,754k	€672k	18%
EP/F005121/1 Standard Call	Co-I	EPSRC	01/01/08 31/03/09	£180k	£180k	100%
Advanced In-Flight Measurement 1	P-I	EU FP6 # 30827	01/11/06 30/04/06	€2,000k	€281k	14%
EP/C511190/1 Standard Call	P-I	EPSRC	27/01/05 26/07/08	£435k	£435k	100%
GR/S23025/01 Standard Call	Co-I	EPSRC	03/11/03 02/11/06	£117k	£117k	100%
GR/R42894/01 Fast Stream	Co-I	EPSRC	01/10/01 30/09/04	£60k	£60k	100%
GR/N02504/01 Standard Call	P-I	EPSRC	11/11/99 10/11/02	£50k	£50k	100%
ATI Airbus UK WINDY I-UK Project # 113074	P-I	I-UK / Airbus	01/05/16 31/10/19	£8,841k	£568k	6.5%
ATI Rolls-Royce (RR) E2EEHM Pr. # 113095	P-I	ATI / RR	30/09/16 31/08/19	£3000k	£250k	8.5%
Knowledge Transfer Partnership (KTP) # KTP010451	P-I	I-UK / TotalSim	01/06/16 31/05/19	£200k	£200k	100%

ATI – Aerospace Technology Institute

[4] Engineering and Physical Research Council
[5] Royal Academy of Engineering

Research Presentations:

Aug 2020 AFMS[6] - https://www.youtube.com/watch?v=4Ie1liiPv_c&feature=youtu.be

Nov 2020 Handley Page Named Lecture 2020
https://1drv.ms/v/s!AqvNv7Mai6RqhbBlH1j1VdYhfMK4_A?e=gyCJcB

MSc and BEng Teaching[7]:

2021 – current	Aircraft Performance and Operations (U'Grad)	University of Sydney, Australia
2003 – 2021	Experimental and Applied Aerodynamics	Cranfield University, UK
2003 – 2021	Introduction to Aerodynamics	Cranfield University, UK
2003 – 2021	Transonic Flow Aerodynamics	Cranfield University, UK
1999 – 2003	Thermofluids and Propulsion (U'Grad)	Cranfield University, UK

Other Responsibilities:

2011 – 2017	NFLC Safety and Compliance Manager for Flight Operations
2014 – 2016	Member EuFAR[8] Steering Group
2008 – 2014	School of Engineering (SoE) Laser Safety Officer / Manager
2006 – 2008	Associate Dean – Research / Chair Research Degree Committee

Prizes:

Feb 2020 Queens Anniversary Prize – NFLC for services to the higher education sector

Personal Details:

Nationality:	Dual British & Australian
Work address:	School of Aerospace, Mechanical & Mechatronic Engineering, University of Sydney
Phone:	+61 290360000
Mobile:	+61 450490214
Email:	nicholas.lawson@sydney.edu.au

[6] Australasian Fluid Mechanics Society
[7] Note: Cranfield primarily teaches post-graduate students only
[8] European Facility for Airborne Research

Most Recent Journal Papers Published (ORCID ID: 0000-0002-1915-8209)

1. Doll U., Migliorini M., Baikie J., Zachos P.K., Röhle I., Melnikov S., Steinbock J., Dues M., Ralf Kapulla R., MacManus D.G., Lawson N.J. (2022) 'Non-intrusive flow diagnostics for unsteady inlet flow distortion measurements in novel aircraft architectures', Progress in Aerospace Sciences, 130, 100810.
2. Lawson N.J., Blackburn K., Sherwood G., Brighton J., Atkinson H.V., "Flow Visualisation and Particle Dispersion Measurements Inside an Ambulance Rear Saloon whilst Stationary and in Motion", accepted for publication in SAE Int. J. of Commercial Vehicles, Feb 2022.
3. Neves A.F., Lawson N.J., Bennett C.J., Khanal B., Hoff R.I. "Unsteady Aerodynamics Analysis and Modelling of a Slingsby Firefly Aircraft: Detached-Eddy Simulation Model and Flight Test Validation", accepted in Aerospace Science and Technology, September 2020, https://doi.org/10.1016/j.ast.2020.106179
4. Bennett C.J., Nott G.J., Wellpott A., Lawson N., Delise M., Woodcock B. & Gratton G.B. (2019) Characterizing instrumentation canister aerodynamics on the FAAM BAe-146-301 atmospheric research aircraft, ASCE Journal of Aerospace Engineering, 32 (4).
5. Landman A., Davies S., Groen E.L., van Paassen M.M., Lawson N.J., Bronkhorst A.W. & Mulder M. (2019) In-flight spatial disorientation induces roll reversal errors when using the attitude indicator, Applied Ergonomics, 81 Article No. 102905.
6. Bennett C., Lawson N., Klinge F., Lefieux J. & Moloney C. (2019) CFD and the wind tunnel analysis of the drag on a human-powered vehicle designed for a speed record attempt, SAE International Journal of Vehicle Dynamics, Stability and NVH, 3 (2).
7. Casadei L., Könözsy L. & Lawson N.J. (2019) Unsteady detached-eddy simulation (DES) of the Jetstream 31 aircraft in one engine inoperative (OEI) condition with propeller modelling, Aerospace Science and Technology, 91 (August) 287-300.
8. Ehirim O., Knowles K., Saddington A., Finnis M. & Lawson N. (2019) On the near-wake of a ground-effect diffuser with passive flow control, International Journal of Automotive Technology, 20 (1) 11-23.
9. Bennett C.J. & Lawson N.J. (2018) On the development of flight-test equipment in relation to the aircraft spin, Progress in Aerospace Sciences, 102 (October) 47-59.
10. Lawson N.J., Jacques H., Gautrey J.E., Cooke A.K., Holt J.C. & Garry K.P. (2017) Jetstream 31 National Flying Laboratory: Lift and drag measurement and modelling, Aerospace Science and Technology, 60 84-95.
11. Lawson N.J., Correia R., James S.W., Gautrey J.E., Invers Rubio G., Staines S.E., Partridge M. & Tatam R.P. (2017) Development of the Cranfield University Bulldog flight test facility, The Aeronautical Journal, 121 (1238) 533-552.
12. Bennett C.J., Lawson N.J., Gautrey J.E. & Cooke A. (2017) CFD Simulation of flow around angle of attack and sideslip angle vanes on a BAe Jetstream 3102 - Part 1, Aerospace Science and Technology, 68 (September) 561-576.
13. Bennett C.J., Lawson N.J., Gautrey J.E. & Cooke A. (2017) CFD Simulation of flow around angle of attack and sideslip angle vanes on a BAe Jetstream 3102 - Part 2, Aerospace Science and Technology, 68 (September) 577-587.
14. Roberts L.S., Finnis M., Knowles K. & Lawson N.J. (2017) Forcing boundary-layer transition on an inverted airfoil in ground effect, Journal of Aircraft, 54 (6) 2165-2172.

15. Yusuf S., Lone M., Cooke A. & Lawson N. (2017) Regressor time-shifting to identify longitudinal stability and control derivatives of the Jetstream 3102, Aerospace Science and Technology, 69 218-225.

16. Lawson N.J., Correia R., James S.W., Partridge M., Staines S.E., Gautrey J.E., Garry K.P., Holt J.C. & Tatam R.P. (2016) Development and application of optical fibre strain and pressure sensors for in-flight measurements, Measurement Science and Technology, 27 (10) Article No. 104001.

17. Lawson N.J., Gautrey J.E., Salmon N., Garry K.P., Pintiau A., "Modelling of a Scottish Aviation Bulldog using Reverse Engineering, Wind Tunnel and Numerical Methods", Journal of Aerospace Engineering pp7, DOI: 10.1177/0954410014524740 (2014)

18. Lawson N.J., Eyles J.M., Knowles K., "Transient and Time-Averaged Characteristics of a Compressible Ground Vortex Flow" Journal of Aerospace Engineering 228(3) p375 – 383 (2014)

19. Tipnis T.J., Lawson N.J., Tatam R.P., "A low-cost, high-magnification imaging system for particle sizing applications" Meas. Sci Tech. 25, pp5, doi:10.1088/0957-0233/25/2/027002 (2014)

20. Lawson N.J., Salmon N., Gautrey J.E., Bailey R. "Comparison of Flight Test Data with a Computational Fluid Dynamics Model of a Scottish Aviation Bulldog Aircraft" The Aeronautical Journal 117(1198) 1273-1291 (2013)

21. Strachan R., Knowles K., Lawson N.J., Finnis M.V 'Force and moment measurements for a generic car model in proximity to a side wall' Journal of Automobile Engineering 226(10), Part D, pp. 1352 – 1364 (2012)

22. Moraris V.M., Lawson N.J. 'Aerodynamic and performance characteristics of a passive leading edge Kruger flap at low Reynolds numbers' The Aeronautical Journal 116 (1181), p759 – 769 (2012)

23. Estruch, D., MacManus, D. G., Stollery, J. L., Lawson, N. J., Garry, K. P., "Hypersonic Interference Heating in the Vicinity of Surface Protuberances: a Semi-Empirical Predictive Approach", Experiments in Fluids, 49 (3), pp683-699 (2010)

24. Estruch, D., MacManus, D. G., Richardson, D. P., Lawson, N. J., Garry, K. P., and Stollery, J. L., "Experimental study of unsteadiness in supersonic shock-wave/turbulent boundary-layer interactions with separation", The Aeronautical Journal 115 No 1155, p299-308, (2010)

25. Estruch, D., Lawson, N. J., MacManus, D. G., Garry, K. P., and Stollery, J. L., "Schlieren visualization of high-speed flows using a continuous LED light source", Journal of Visualization, Vol. 12, No. 4, pp. 289-290 (2009)

26. Estruch, D., Lawson, N. J., and Garry, K. P., "Application of optical measurement techniques to supersonic and hypersonic aerospace flows", ASCE Journal of Aerospace Engineering, Vol. 22, No. 4, pp. 383-395 (2009)

27. Atvars K,. Knowles K., Ritchie S.A. and Lawson N.J. 'Experimental and Computational Investigation of an 'Open' Transonic Cavity Flow, Journal of Aerospace Engineering 223(G4), 357-368 (2009)

28. Chung H.-C.,. Lal Kummari K., Croucher S.J., Lawson N.J., Guo S., Whatmore R.W., Huang Z., "Development of piezoelectric fans for flapping wing application." Sensors and Actuators A: Physical. 149, 136-142 (2009)

29. Estruch, D., Lawson N.J., MacManus D.G., Garry K.P. and Stollery J.L." Measurement of shock wave unsteadiness using a high-speed schlieren system and digital image processing". Review of Scientific Instruments, 79 (12), 126108 (3pp) (2008)

30. Lal Kummari K., Croucher S.J., Lawson N.J., Liani E.E., Allegri G., Guo S., Chung H.-C. and Huang Z., “The application of piezoelectric actuator and compliant structures to achieve flapping wing motion for a MAV”, Journal of Materials Science & Technology, 26(4), 642-646 (2008)
31. Chung H.-C., Lal Kummari K., Croucher S.J., Lawson N.J. , Guo S., Whatmore R.W., Huang Z., “Coupled Piezoelectric Fans with Two Degree of Freedom Motion for the Application of Flapping Wing Micro Aerial Vehicles”, Sensors and Actuators A: Physical. 147, 607-612 (2008)
32. Strachan R.K., Knowles K, Lawson N.J. “The vortex structure behind an Ahmed reference model in the presence of a moving ground plane” Experiments in Fluids 42, p659 - 669 (2007)
33. Tatum J.A., Finnis M.V., Lawson N.J, Harrison G.M. “3-D Particle Image Velocimetry of the Flow Field Around a Sphere Sedimenting Near a Wall. Part 1. Effects of Weissenberg Number” Journal of non-Newtonian Fluid Mechanics 141, p99-115 (2007)
34. Lawson N.J., Faucompret N., Garry K.P. “An Investigation of the Flow Characteristics in the Bootdeck Region of a Scale Model Notchback Saloon Vehicle” Journal of Automobile Engineering 221, Part D, Special Issue p739-754 (2007)
35. Arruda M.P., Lawson N.J., Davidson M.R. “Control of an Oscillatory Rectangular Cavity Jet Flow by Secondary Injection” JSME International Journal B 49(4) 1105-1110 (2006)
36. Wallace I., Lawson N.J., Harvey A.R., Jones J.D.C and Moore A.J. "High-speed photogrammetry system for measuring the kinematics of insect wings" Applied Optics 45(17), pp4165-4173 (2006)
37. Bomphrey R., Lawson N.J, Taylor G.K, Thomas A.L.R. “Application of digital particle image velocimetry to insect aerodynamics: measurement of the leading-edge vortex and near wake of a Hawkmoth,” Experiments in Fluids, 40(4), 546-554 (2006)
38. Bomphrey R., Lawson N.J, Taylor G.K, Thomas A.L.R. “Digital particle image velocimetry measurements of the downwash distribution of a desert locust Schistocerca gregaria” Journal of Royal Society Interface, 311-317, 3(7) (2006)
39. Tatum J.A., Finnis M.V., Lawson N.J, Harrison G.M. “3-D Particle Image Velocimetry of the Flow Field Around a Sphere Sedimenting Near a Wall. Part 2. Effects of Distance from the Wall” Journal of non-Newtonian Fluid Mechanics 127, 95-106 (2005)
40. Moore A.J., Smith J., Lawson N.J. “Volume-3D flow measurements using wavelength multiplexing” Optics Letters 30(19), 2569-2571 (2005)
41. Lawson N.J, Finnis M.V., Tatum J.A., Harrison G.M “Combined stereoscopic particle image velocimetry and line convolution methods: Application to a Sphere Sedimenting Near a Wall in a Non-Newtonian Fluid”, Journal of Visualization, 8(3), p261-268, (2005)
42. Lawson N.J., Arruda M.P., Davidson M.R. “Control of a Submerged Jet In a Thin Rectangular Cavity”, Journal of Fluids and Structures, 20(8), 1025 - 1042 (2005)
43. Bomphrey R., Lawson N.J, Harding N.J., Taylor G.K, Thomas A.L.R. “The aerodynamics of Manduca sexta: Digital Particle Image Velocimetry analysis of the leading-edge vortex.” Journal of Experimental Biology, 208, 1079-1094 (2005)
44. Reeves M., Lawson N.J. “On Perspective Errors in Endoscopic PIV”, Comptes Rendus Mecanique 332, 687-692, (2004)
45. Reeves M., Lawson N.J. “Evaluation and Correction of Perspective Errors in Endoscopic PIV”, Experiments in Fluids 36, p701-705 (2004)
46. Saddington A.J., Lawson N.J. and Knowles K. “An experimental and numerical investigation of under-expanded turbulent Jets” The Aeronautical Journal 108(1081) p145-152 (2004)

47. Bomphrey R., Taylor G.K, Thomas A.L.R. Lawson N.J. “Flow visualisations around insect wings using digital particle image velocimetry” Comparative Biochemistry and Physiology Part A: Molecular and Integrative Physiology, Vol. 134, Issue 3, Supplement 1, S39, A6.9 (2003)

48. Lawson N.J., Eyles J.M. and Knowles K. “Particle image velocimetry and laser Doppler anemometry experimental studies of a compressible short take-off and vertical landing ground vortex flow”, Journal of Aerospace Engineering 216, Part G4, p171-187 (2002)

49. Lawson N.J., Davidson M.R “Oscillatory Flow in a Physical Model of a Thin Slab Casting Mould with a Bifurcated Submerged Entry Nozzle”, Journal of Fluids Engineering 124(2), p535-543 (2002)

50. Harrison G.M., Lawson N.J., Boger D.V. "The measurement of the flow around a sphere settling in a rectangular box using 3-dimensional particle image velocimetry: 1. Shear thinning fluids", Chem. Eng. Communications 188, p143-178 (2001)

51. Lawson N.J., Davidson M.R. “Self-sustained oscillation of a submerged jet in a thin rectangular cavity”, Journal of Fluids and Structures 15(1), pp59-81 (2001)

52. Stokes J.R., Graham L.J.W., Lawson N.J., Boger D.V. “Swirling Flow Of Viscoelastic Fluids Part II: Elastic Effects”, Journal of Fluid Mechanics 429, pp.117-153 (2001)

53. Stokes J.R., Graham L.J.W., Lawson N.J., Boger D.V. “Swirling Flow of Viscoelastic Fluids Part I: Interaction Between Inertia and Elasticity”, Journal of Fluid Mechanics 429, pp67-115 (2001)

54. Smith K.M., Davidson M.R., Lawson N.J. “Dispersion of Neutrally Buoyant Solids Falling Vertically into Stationary Liquid and Horizontal Channel Flow”, Journal of Computers and Fluids 29(4), p369-384 (2000)

55. Lawson N.J., Wu J. “Three-Dimensional Particle Image Velocimetry: A low-cost 35mm angular stereoscopic system for liquid flows” Optics and Lasers in Engineering 32(1), p1-19 (1999)

56. Lawson N.J., Davidson M.R. “Crossflow Characteristics of an Oscillating Jet in a Thin Slab Caster”, Journal of Fluids Engineering 121, p589-595 (1999)

57. Lawson N.J., Page G., Halliwell N.A., Coupland J.M. "Application of Particle Image Velocity to a Small Scale de Laval Nozzle", AIAA Journal 37(7), p798-804 (1999)

58. Lawson N. J., Rudman M., Guerra A., Liow J.-L. “Experimental and Numerical Comparisons of the Break-up of a Large Bubble”, Experiments in Fluids 26(6), p524-534 (1999)

59. Lawson N.J., Liow J.-L., “Low-Cost Design of 35mm Drum Camera for High-Resolution, High-Speed Image Analysis”, Review of Scientific Instruments 69(12), p4195-4197, (1998)

60. Lawson N.J., Wu J. “Three-Dimensional Particle Image Velocimetry: Experimental Error Analysis of a Digital Angular Stereoscopic System” Measurement Science and Technology 8, p1455-1464, (1997)

61. Lawson N.J., Wu J. “Three-Dimensional Particle Image Velocimetry: Error Analysis of Stereoscopic Techniques” Measurement Science and Technology 8, p894-900, (1997)

62. Lawson N.J., Coupland J.M., Halliwell N.A., “A Generalised Optimisation Method for Double Pulsed Particle Image Velocimetry", Optics and Lasers in Engineering 27(6), p637-656, (1997)

63. Lawson N.J., Reeves M., Halliwell N.A., Coupland J.M. "Particle Image Velocimetry: Theory and Application of Image Labelling using a Polarisation-Sensitive Pupil Mask" Measurement Science and Technology 6, p1317-1324, (1995)

64. Reeves M., Lawson N.J., Halliwell N.A., Coupland J.M. "Particle Image Velocimetry: Image Labelling Using Encoding of the Point Spread Function by Application of a Polarisation-Sensitive Pupil Mask" Applied Optics 34, p194-200, (1995)

65. Lawson N.J., Halliwell N.A., Coupland J.M. "Particle Image Velocimetry: Image Labelling using Adaptive Optics to Modify the Point Spread Function" Applied Optics 33, p4241-4247, (1994)

66. Lawson N.J., Halliwell N.A., Coupland J.M. "Particle Image Velocimetry: Image Labelling Using Dynamic Encoding of the Point Spread Function" Optics and Lasers in Engineering 19, p241-248, (1993).

Journals Invited for Publication

1. Lawson N.J. “The application of laser measurement techniques to aerospace flows” Journal of Aerospace Engineering 218, Part G4, p33-57 (2004).

Journals Submitted for Publication

1. Neves A.F., Lawson N.J., Bennett C.J., Khanal B., Hoff R.I., Davies S.G. “Unsteady Aerodynamics Analysis and Modelling of a Slingsby Firefly Aircraft: Flow Physics and Wake Tailplane Interaction” submitted to Aerospace Science and Technology Oct 2021.

Books Published

1. Boden F., Lawson N., Jentink H.W. Kompenhans J. “Advanced In-Flight Measurement Techniques” Springer-Verlag, Berlin (2013).

Chapters in Books

1. Politz C., Lawson N.J. ‘Chapter 9 - Particle Image Velocimetry (PIV)’ from AIM2 Advanced Flight Test Workshop – Handbook of Advanced In-Flight Measurement Techniques, Eds – Boden F., Books on Demand, Norderstedt, Germany ISBN 978-3-7322-3740-1 p101-110 (2013)

2. Lawson N.J. ‘External Transonic Flows’, Encyclopedia of Aerospace Engineering ISBN 978-0-470-075440-5, R Blockley and W Shyy (eds). John Wiley & Sons Ltd, Chichester, UK, pp299-308 (2010)

Conference Papers Published

1. S. Weber, D. Southgate, K. Mullaney, S. James, R. Rutherford, A. Sharma, M. Lone, T. Kissinger, E. Chehura, S. Staines, H. Pekmezci, L. Zanotti Fragonara, I. Petrunin, D. Williams, I. Moulitsas, A. Cooke, N. Lawson, W. Rosales, R. Tatam, P. Morrish, M. Fairhurst, R. Atack, G. Bailey, and S. Morley (2018) ‘Bladesense – A Novel Approach For Measuring Dynamic Helicopter Rotor Blade Deformation’, presented at the 44th European Rotorcraft Forum, Delft, The Netherlands 18-20 Sept 2018

2. N.J. Lawson (2018) ‘Airborne Measurement – Advanced Instrument Development Methods and Insight’, invited Keynote paper presented at the KDU International Research Conference, Colombo, Sri Lanka, 13th – 14th September 2018, General Sir John Kotelawala Defence University Ratmalana, 10390 Sri Lanka, Ed. U. Rajapaksha, ISBN number: 978-955-0301-42-3, p159 – 169.

3. N.J. Lawson, T. Kissinger, M.V. Finnis, S.W. James, and R P Tatam (2018) ‘Application of fibre optic range-resolved interferometric vibrometry to a full-scale feathered propeller in a wind

tunnel', presented at European test and telemetry conference: ETTC2018 Nuremburg, Germany, May 2018

4. N.J. Lawson, E. Alcusa Sáez, S.A. Prince, E. Chehura, S.W. James, and R.P. Tatam (2018) 'Application of fibre Bragg grating sensors to a stalled high lift wing', presented at European test and telemetry conference: ETTC2018 Nuremburg, Germany, May 2018

5. Garry K., Di Pasquale D., Prince S. & Lawson N. (2018) 'The influence of SPIV data processing parameters on aircraft wing wake vortex assessment'. In: 31st Congress of the International Council of the Aeronautical Sciences, 2018, Belo Horizonte, 9-14 September 2018.

6. Bennett C. & Lawson N. (2017) 'The aircraft spin - a mathematical approach and comparison to flight test'. In: AIAA Flight Testing Conference: AIAA AVIATION Forum 2017, Denver, 5-9 June 2017.

7. Bennett C., Lawson N. & Gautrey J. (2017) 'Undercarriage drag prediction for a fixed undercarriage light aircraft'. In: AIAA Applied Aerodynamics Conference, AIAA AVIATION Forum 2017, Denver, 5-9 June 2017.

8. Lawson N.J., Correia R.N.G., Partridge M., Staines S.E., James S.W., Gautrey J.E. & Tatam R.P. (2016) 'Adaption of fibre optic sensors and data processing systems for flight test on a Bulldog light aircraft'. In: 36th European Telemetry and Test Conference – etc2016, Nuremberg, 10-12 May 2016.

9. Roberts L., Finnis M., Knowles K. & Lawson N. (2016) 'Forcing boundary-layer transition on an inverted airfoil in ground effect and at varying incidence'. In: 34th AIAA Applied Aerodynamics Conference, 2016, Washington, 13-17 June 2016.

10. Boden F, Lawson N.J. 'Advanced In-Flight Measurement Techniques – An Overview on Modern Optical Measurement Techniques for Flight Testing applied within AIM and AIM2' Aerodays 2015, Queen Elizabeth II Centre, London, 20 – 23 October 2015, Paper 3D (2015)

11. Lawson N.J,, Correia R., James S.W., Tatam R.P., Gautrey J.E. 'Development of fibre optic strain and pressure instruments for flight test on an aerobatic light aircraft' European Test and Telemetry Conference (ETTC2015), 09 June 2015 - 11 June 2015 Centre des Congrès Pierre Baudis, Toulouse (France) Paper 1-5, p1 – 6 (2015)

12. Correia R, Staines SE, James SW, Lawson N, Garry K, Tatam RP 'Wind tunnel unsteady pressure measurements using a differential optical fiber Fabry-Perot pressure sensor' 23rd International Conference on Optical Fibre Sensors, http://dx.doi.org/10.1117/12.2059631 (2014)

13. Lawson N.J., Correia R., James S.W., Tatam R.P., Gautrey J.E. 'Cranfield University National Flying Laboratory facilities and flight test research' RAeS Aircraft Research Operations Conference, Hamilton Place, London, 3 – 5 November 2014, p1-11 (2014)

14. Moraris V.M., Lawson N.J. 'Aerodynamic and performance characteristics of a passive leading edge Kruger flap at low Reynolds numbers', RAeS Applied Aerodynamics Conference, University of Bristol, Bristol, UK, 27th-28th July, 2010 ISBN 1-85768-293-9 (2010)

15. Chehura E, James SW, Tatam RP, Lawson N, Garry K.P. 'Pressure measurements on aircraft wing using phase-shifted fibre Bragg grating sensors' Proc. SPIE 7503, 20th International Conference on Optical Fibre Sensors, 750334 (5 October 2009); doi: 10.1117/12.835469 (2009)

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