

# William Devenport

## List of Publications by Year in descending order

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105  
papers

3,025  
citations

172386

29  
h-index

182361

51  
g-index

105  
all docs

105  
docs citations

105  
times ranked

994  
citing authors

#	ARTICLE	IF	CITATIONS
1	The structure and development of a wing-tip vortex. <i>Journal of Fluid Mechanics</i> , 1996, 312, 67-106.	1.4	453
2	Time-depeident and time-averaged turbulence structure near the nose of a wing-body junction. <i>Journal of Fluid Mechanics</i> , 1990, 210, 23-55.	1.4	332
3	The Kevlar-walled anechoic wind tunnel. <i>Journal of Sound and Vibration</i> , 2013, 332, 3971-3991.	2.1	152
4	Sound radiation from real airfoils in turbulence. <i>Journal of Sound and Vibration</i> , 2010, 329, 3470-3483.	2.1	121
5	An experimental study of a turbulent wing-body junction and wake flow. <i>Experiments in Fluids</i> , 1993, 14, 366-378.	1.1	88
6	Wake of a Compressor Cascade with Tip Gap, Part 1: Mean Flow and Turbulence Structure. <i>AIAA Journal</i> , 2004, 42, 2320-2331.	1.5	80
7	On the generation of large-scale homogeneous turbulence. <i>Experiments in Fluids</i> , 2011, 50, 1207-1223.	1.1	77
8	Bioinspired Trailing-Edge Noise Control. <i>AIAA Journal</i> , 2017, 55, 740-754.	1.5	77
9	Effects of a fillet on the flow past a wing-body junction. <i>AIAA Journal</i> , 1990, 28, 2017-2024.	1.5	65
10	Wake of a Compressor Cascade with Tip Gap, Part 2: Effects of Endwall Motion. <i>AIAA Journal</i> , 2004, 42, 2332-2340.	1.5	64
11	A four-sensor hot-wire probe system for three-component velocity measurement. <i>Experiments in Fluids</i> , 1998, 24, 416-423.	1.1	63
12	An experimental investigation of unsteady surface pressure on an airfoil in turbulence—Part 1: Effects of mean loading. <i>Journal of Sound and Vibration</i> , 2006, 296, 417-446.	2.1	58
13	The structure and development of a counter-rotating wing-tip vortex pair. <i>Journal of Fluid Mechanics</i> , 1997, 332, 71-104.	1.4	57
14	An experimental study of two flows through an axisymmetric sudden expansion. <i>Experiments in Fluids</i> , 1993, 14, 423-432.	1.1	54
15	Effects of a leading-edge fillet on the flow past an appendage-body junction. <i>AIAA Journal</i> , 1992, 30, 2177-2183.	1.5	52
16	Measurements of roughness noise. <i>Journal of Sound and Vibration</i> , 2011, 330, 4250-4273.	2.1	48
17	Near-wall behavior of separated and reattaching flows. <i>AIAA Journal</i> , 1991, 29, 25-31.	1.5	47
18	Flow structure produced by the interaction and merger of a pair of co-rotating wing-tip vortices. <i>Journal of Fluid Mechanics</i> , 1999, 394, 357-377.	1.4	46

#	ARTICLE	IF	CITATIONS
19	Bio-inspired canopies for the reduction of roughness noise. Journal of Sound and Vibration, 2016, 385, 33-54.	2.1	46
20	The far-field sound from rough-wall boundary layers. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 1717-1734.	1.0	43
21	Broadband rotor noise predictions using a time domain approach. Journal of Sound and Vibration, 2015, 335, 115-124.	2.1	39
22	Panel methods for airfoils in turbulent flow. Journal of Sound and Vibration, 2010, 329, 3709-3720.	2.1	38
23	Infrared thermography for detection of laminar-turbulent transition in low-speed wind tunnel testing. Experiments in Fluids, 2016, 57, 1.	1.1	37
24	Aeroacoustics of a rotor ingesting a planar boundary layer at high thrust. Journal of Fluid Mechanics, 2018, 850, 212-245.	1.4	36
25	An experimental investigation of unsteady surface pressure on an airfoil in turbulence Part 2: Sources and prediction of mean loading effects. Journal of Sound and Vibration, 2006, 296, 447-460.	2.1	35
26	The wall-pressure spectrum of high-Reynolds-number turbulent boundary-layer flows over rough surfaces. Journal of Fluid Mechanics, 2015, 768, 261-293.	1.4	35
27	Calibration and Demonstration of the New Virginia Tech Anechoic Wind Tunnel. , 2008, , .		33
28	Flow past a wing-body junction - Experimental evaluation of turbulence models. AIAA Journal, 1992, 30, 873-881.	1.5	32
29	Pressure fluctuations produced by forward steps immersed in a turbulent boundary layer. Journal of Fluid Mechanics, 2014, 756, 384-421.	1.4	32
30	Wall-Mounted Finite Airfoil-Noise Production and Prediction. AIAA Journal, 2016, 54, 1637-1651.	1.5	32
31	Wake of a Compressor Cascade with Tip Gap, Part 3: Two Point Statistics. AIAA Journal, 2004, 42, 2341-2346.	1.5	29
32	Unsteady loading on an airfoil of arbitrary thickness. Journal of Sound and Vibration, 2009, 319, 1252-1270.	2.1	29
33	Perpendicular blade vortex interaction. AIAA Journal, 1995, 33, 1667-1674.	1.5	27
34	PROPER ORTHOGONAL DECOMPOSITION OF TURBULENT FLOWS FOR AEROACOUSTIC AND HYDROACOUSTIC APPLICATIONS. Journal of Sound and Vibration, 2001, 239, 767-784.	2.1	26
35	Noise from a Rotor Ingesting a Planar Turbulent Boundary Layer. , 2013, , .		24
36	Aerodynamic and Acoustic Corrections for A Kevlar-Walled Anechoic Wind Tunnel. , 2010, , .		23

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37	Noise from a rotor ingesting a thick boundary layer and relation to measurements of ingested turbulence. Journal of Sound and Vibration, 2017, 409, 227-240.	2.1	23
38	Measuring surface pressure with far field acoustics. Journal of Sound and Vibration, 2010, 329, 3958-3971.	2.1	22
39	Turbulence structure of the flow downstream of a compressor cascade with tip leakage. , 1998, , .		19
40	The Sound of Flow Over Rigid Walls. Annual Review of Fluid Mechanics, 2018, 50, 435-458.	10.8	19
41	Tip Gap Effects on the Unsteady Behavior of a Tip Leakage Vortex. AIAA Journal, 2007, 45, 1713-1724.	1.5	18
42	The Wall Pressure Spectrum of High Reynolds Number Rough-Wall Turbulent Boundary Layers. , 2011, , .		18
43	The Disturbance of a High Reynolds Number Turbulent Boundary Layer by Small Forward Steps. , 2011, , .		18
44	Rotor Inflow Noise Caused by a Boundary Layer: Inflow Measurements and Noise Predictions. , 2012, , .		18
45	Predictions of Sound from Rough Wall Boundary Layers. AIAA Journal, 2013, 51, 465-475.	1.5	18
46	Sound from boundary layer flow over steps and gaps. Journal of Sound and Vibration, 2014, 333, 4170-4186.	2.1	16
47	A traversing pulsed-wire probe for velocity measurements near a wall. Experiments in Fluids, 1990, 8, 336-342.	1.1	15
48	Development and Testing of a Novel Acoustic Wind Tunnel Concept. , 2005, , .		15
49	Rough-Wall Boundary Layer Noise: An Experimental Investigation. , 2007, , .		15
50	Exploitation of hybrid anechoic wind tunnels for aeroacoustic and aerodynamic measurements. CEAS Aeronautical Journal, 2019, 10, 251-266.	0.9	14
51	The Relationship Between Roughness Noise and the Near-Field Pressure Spectrum. , 2008, , .		13
52	Rough Wall Boundary Layer Noise: Theoretical Predictions. , 2007, , .		12
53	Sound from Boundary Layer Flow over Steps and Gaps. , 2010, , .		11
54	Inverse measurement of wall pressure field in flexible-wall wind tunnels using global wall deformation data. Experiments in Fluids, 2018, 59, 1.	1.1	11

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55	Sound Radiation from Rounded Steps and Gaps. , 2013, , .		10
56	Two-point measurements in trailing vortices. , 1996, , .		9
57	Broadband Helicopter Noise Generated by Blade Wake Interactions. Journal of the American Helicopter Society, 1999, 44, 293.	0.5	9
58	Predictive Limits of Acoustic Diffraction Theory for Rough Wall Flows. AIAA Journal, 2014, 52, 634-642.	1.5	9
59	Aeroacoustics of Rounded Forward-Facing Steps: Near-Field Behavior. AIAA Journal, 2019, 57, 1237-1249.	1.5	9
60	Two-point measurements in the wake of a compressor cascade. , 1998, , .		8
61	Unsteady Periodic Behavior of a Disturbed Tip-Leakage Flow. AIAA Journal, 2006, 44, 1073-1086.	1.5	8
62	Behavior of Turbulence Flowing Through a Compressor Cascade. AIAA Journal, 2004, 42, 1302-1313.	1.5	7
63	Development and Testing of a Deterministic Disturbance Generator. , 2004, , .		7
64	Aeroacoustics of Rounded Forward-Facing Steps: Far-Field Behavior. AIAA Journal, 2019, 57, 1899-1913.	1.5	7
65	The structure of a highly decelerated axisymmetric turbulent boundary layer. Journal of Fluid Mechanics, 2021, 929, .	1.4	7
66	The Generation and Structure of High Reynolds Number Homogeneous Turbulence. , 2002, , .		6
67	Boundary Layer Noise from Discrete Roughness Elements. , 2009, , .		6
68	Aerodynamic Noise from Sparse Surface Roughness. , 2011, , .		6
69	Sound Radiation from Forward Facing Steps. , 2012, , .		6
70	Towards Interference Corrections for Three-Dimensional Models in Kevlar-Walled Anechoic Test Sections. , 2014, , .		6
71	Open rotor noise. , 2017, , 399-436.		6
72	Unsteady Aperiodic Behavior of a Periodically Disturbed Tip-Leakage Vortex. AIAA Journal, 2008, 46, 1025-1038.	1.5	5

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73	Rotor Inflow Noise Caused by a Boundary Layer: Theory and Examples. , 2012, , .		5
74	Propagation characteristics of laser-induced acoustic sources in hybrid anechoic wind tunnels. Journal of Sound and Vibration, 2021, 510, 116294.	2.1	5
75	Applied aerodynamics education - Developments and opportunities. , 1998, , .		5
76	Unsteady behavior of a tip leakage vortex produced by simulated stator/rotor interaction. , 2000, , .		4
77	Modeling the two-point space-time correlation of turbulence in a fan-wake type flow. , 2001, , .		4
78	The Tip Leakage Vortex Shed from an Unsteady Tip Clearance Flow. , 2004, , .		4
79	Directivity of Noise from Discrete Elements in a Turbulent Boundary Layer. , 2010, , .		4
80	High Reynolds Number Turbulent Boundary Layer Flow over Rough Walls: Wall Pressure Spectrum and Noise. , 2013, , .		4
81	Wind Tunnel Testing of Airfoils for Wind Turbine Applications. Wind Engineering, 2015, 39, 651-660.	1.1	4
82	Wavenumber frequency spectra of turbulence in a lifting wake for broadband noise prediction. , 1997, , .		3
83	Interaction of Large Scale Homogeneous Turbulence with a Cascade of Flat Plates. , 2003, , .		3
84	Analysis of Wakes Shed by Idealized Aircraft Engine Fan Blades for Noise Reduction. , 2004, , .		3
85	Rough Wall Boundary Layer Noise. , 2006, , .		3
86	Sound radiated by turbulent flow over unrounded and rounded forward-facing steps. Journal of Sound and Vibration, 2020, 488, 115635.	2.1	3
87	The design and operation of a moving end-wall system for a compressor cascade wind tunnel. , 1999, , .		2
88	Compact eddy structures and their application to aeroacoustics. , 2000, , .		2
89	The Application of Proper Orthogonal Decomposition to Trailing Edge Noise. , 2004, , .		2
90	Trailing Edge Blowing of Fan Blades. , 2005, , .		2

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91	Application of Proper Orthogonal Decomposition to Trailing-Edge Noise. AIAA Journal, 2009, 47, 1543-1548.	1.5	2
92	Turbulence Structure Resulting from a Vortex/Wing-Tip Encounter. Journal of the American Helicopter Society, 1999, 44, 141-149.	0.5	1
93	The interaction of free-stream turbulence with a compressor cascade. , 2000, , .		1
94	Measurement of the space-time correlation of surface pressure fluctuations on an airfoil immersed in turbulence. , 2000, , .		1
95	Turbulence Modeling for Rotor Stator Interaction Noise. , 2010, , .		1
96	Trailing edge and roughness noise. , 2017, , 365-395.		1
97	The diode-array velocimeter. Journal of Fluid Mechanics, 1994, 259, 167-189.	1.4	0
98	Characterizing unsteady periodic disturbances in the tip leakage vortex of an idealized axial compressor rotor blade. , 2001, , .		0
99	The Interaction of Large Scale Turbulence with a Cascade of Flat Plates. , 2003, , .		0
100	Predicting Modes of a Turbulent Boundary Layer for Trailing Edge Noise Calculations. , 2003, , .		0
101	Assessing Conceptual Knowledge in an Engineering Course: Four Case Studies. , 2003, , .		0
102	Measurements of a Discrete Upwash Gust Passing Through a Linear Flat Plate Cascade, and Comparisons with Linearized Theory. , 2005, , .		0
103	Measuring Surface Pressure with Far Field Acoustics. , 2009, , .		0
104	Sensitivity of wind turbine airfoil sections to geometry variations inherent in modular blades. Wind Engineering, 2018, 42, 529-546.	1.1	0
105	Acoustic transmission loss and noise from Kevlar wind tunnel walls. International Journal of Aeroacoustics, 0, , 1475472X2211074.	0.8	0