

Neil D Sandham

List of Publications by Year in descending order

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82
papers

4,650
citations

94269

37
h-index

95083

68
g-index

84
all docs

84
docs citations

84
times ranked

1940
citing authors

#	ARTICLE	IF	CITATIONS
1	Large-eddy simulation of low-frequency unsteadiness in a turbulent shock-induced separation bubble. <i>Theoretical and Computational Fluid Dynamics</i> , 2009, 23, 79-107.	0.9	414
2	Direct numerical simulation of δ^+ laminar separation bubbles with turbulent reattachment. <i>Journal of Fluid Mechanics</i> , 2000, 410, 1-28.	1.4	322
3	Direct numerical simulations of forced and unforced separation bubbles on an airfoil at incidence. <i>Journal of Fluid Mechanics</i> , 2008, 602, 175-207.	1.4	316
4	Compressible mixing layer growth rate and turbulence characteristics. <i>Journal of Fluid Mechanics</i> , 1996, 320, 235.	1.4	285
5	Wall Pressure and Shear Stress Spectra from Direct Simulations of Channel Flow. <i>AIAA Journal</i> , 2006, 44, 1541-1549.	1.5	187
6	Low-order stochastic modelling of low-frequency motions in reflected shock-wave/boundary-layer interactions. <i>Journal of Fluid Mechanics</i> , 2011, 671, 417-465.	1.4	161
7	Stability and receptivity characteristics of a laminar separation bubble on an aerofoil. <i>Journal of Fluid Mechanics</i> , 2010, 648, 257-296.	1.4	146
8	Nonreflecting Zonal Characteristic Boundary Condition for Direct Numerical Simulation of Aerodynamic Sound. <i>AIAA Journal</i> , 2006, 44, 402-405.	1.5	142
9	Laminar-turbulent transition induced by a discrete roughness element in a supersonic boundary layer. <i>Journal of Fluid Mechanics</i> , 2013, 735, 613-646.	1.4	139
10	Direct numerical simulation of δ^+ laminar separation bubbles with turbulent reattachment. <i>Journal of Fluid Mechanics</i> , 2000, 403, 223-250.	1.4	136
11	Transitional shock-wave/boundary-layer interactions in hypersonic flow. <i>Journal of Fluid Mechanics</i> , 2014, 752, 349-382.	1.4	108
12	The late stages of transition to turbulence in channel flow. <i>Journal of Fluid Mechanics</i> , 1992, 245, 319.	1.4	105
13	Direct numerical simulation of turbulent flow past a trailing edge and the associated noise generation. <i>Journal of Fluid Mechanics</i> , 2008, 596, 353-385.	1.4	97
14	Numerical study of oblique shock-wave/boundary-layer interaction considering sidewall effects. <i>Journal of Fluid Mechanics</i> , 2015, 767, 526-561.	1.4	94
15	Change in drag, apparent slip and optimum air layer thickness for laminar flow over an idealised superhydrophobic surface. <i>Journal of Fluid Mechanics</i> , 2013, 727, 488-508.	1.4	85
16	Influence of an anisotropic slip-length boundary condition on turbulent channel flow. <i>Physics of Fluids</i> , 2012, 24, .	1.6	84
17	Direct numerical simulation of turbulent flow over a rough surface based on a surface scan. <i>Computers and Fluids</i> , 2015, 116, 129-147.	1.3	83
18	Direct Numerical Simulations of a High-Pressure Turbine Vane. <i>Journal of Turbomachinery</i> , 2016, 138, .	0.9	81

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19	Linear and nonlinear mechanisms of sound radiation by instability waves in subsonic jets. Journal of Fluid Mechanics, 2010, 658, 509-538.	1.4	71
20	Reynolds-number dependence of the near-wall flow over irregular rough surfaces. Journal of Fluid Mechanics, 2017, 810, 196-224.	1.4	71
21	Surface correlations of hydrodynamic drag for transitionally rough engineering surfaces. Journal of Turbulence, 2017, 18, 138-169.	0.5	64
22	Effect of Mach number on the structure of turbulent spots. Journal of Fluid Mechanics, 2006, 566, 225.	1.4	60
23	Parametric forcing approach to rough-wall turbulent channel flow. Journal of Fluid Mechanics, 2012, 712, 169-202.	1.4	60
24	Compressibility Effects on Boundary-Layer Transition Induced by an Isolated Roughness Element. AIAA Journal, 2010, 48, 2818-2830.	1.5	59
25	Numerical Simulation of Flow over a Rough Bed. Journal of Hydraulic Engineering, 2007, 133, 386-398.	0.7	58
26	Transitional separation bubbles and unsteady aspects of aerofoil stall. Aeronautical Journal, 2008, 112, 395-404.	1.1	58
27	Sound radiation in turbulent channel flows. Journal of Fluid Mechanics, 2003, 475, 269-302.	1.4	55
28	Direct numerical simulation of the early development of a turbulent mixing layer downstream of a splitter plate. Journal of Turbulence, 2009, 10, N1.	0.5	54
29	Direct numerical simulation of turbulent channel flow over a surrogate for Nikuradse-type roughness. Journal of Fluid Mechanics, 2018, 837, .	1.4	54
30	Simulations of laminar flow past a superhydrophobic sphere with drag reduction and separation delay. Physics of Fluids, 2013, 25, .	1.6	52
31	Nonlinear interaction model of subsonic jet noise. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 2745-2760.	1.6	51
32	Nonlinear mechanisms of sound generation in a perturbed parallel jet flow. Journal of Fluid Mechanics, 2006, 565, 1.	1.4	50
33	Turbulence structures and statistics of a supersonic turbulent boundary layer subjected to concave surface curvature. Journal of Fluid Mechanics, 2019, 865, 60-99.	1.4	45
34	Developments in turbulence research: a review based on the 1999 Programme of the Isaac Newton Institute, Cambridge. Journal of Fluid Mechanics, 2001, 436, 353-391.	1.4	44
35	Forced response of a laminar shock-induced separation bubble. Physics of Fluids, 2014, 26, .	1.6	44
36	OpenSBL: A framework for the automated derivation and parallel execution of finite difference solvers on a range of computer architectures. Journal of Computational Science, 2017, 18, 12-23.	1.5	41

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37	The effect of Mach number on unstable disturbances in shock/boundary-layer interactions. <i>Physics of Fluids</i> , 2007, 19, 054104.	1.6	40
38	Instability and low-frequency unsteadiness in a shock-induced laminar separation bubble. <i>Journal of Fluid Mechanics</i> , 2016, 798, 5-26.	1.4	34
39	Direct numerical simulation of breakdown to turbulence in a Mach 6 boundary layer over a porous surface. <i>Physics of Fluids</i> , 2010, 22, .	1.6	32
40	Influence of boundary-layer disturbances on the instability of a roughness wake in a high-speed boundary layer. <i>Journal of Fluid Mechanics</i> , 2015, 763, 136-165.	1.4	29
41	Instability of vortical and acoustic modes in supersonic round jets. <i>Physics of Fluids</i> , 1997, 9, 1003-1013.	1.6	28
42	Recovery of a supersonic turbulent boundary layer after an expansion corner. <i>Physics of Fluids</i> , 2017, 29, .	1.6	27
43	Direct Numerical Simulations of Transonic Flow Around an Airfoil at Moderate Reynolds Numbers. <i>AIAA Journal</i> , 2019, 57, 597-607.	1.5	25
44	Effects of Compressibility and Shock-Wave Interactions on Turbulent Shear Flows. <i>Flow, Turbulence and Combustion</i> , 2016, 97, 1-25.	1.4	24
45	Assessment of Low-Dissipative Shock-Capturing Schemes for the Compressible Taylorâ€œGreen Vortex. <i>AIAA Journal</i> , 2021, 59, 533-545.	1.5	23
46	Fluidâ€œstructure coupling mechanism and its aerodynamic effect on membrane aerofoils. <i>Journal of Fluid Mechanics</i> , 2018, 848, 1127-1156.	1.4	22
47	Modal Analysis of a Laminar-Flow Airfoil under Buffet Conditions at $Re = 500,000$. <i>Flow, Turbulence and Combustion</i> , 2020, 104, 509-532.	1.4	22
48	Acoustic Leading-Edge Receptivity for Supersonic/Hypersonic Flows over a Blunt Wedge. <i>AIAA Journal</i> , 2017, 55, 4234-4244.	1.5	19
49	Combined free-stream disturbance measurements and receptivity studies in hypersonic wind tunnels by means of a slender wedge probe and direct numerical simulation. <i>Journal of Fluid Mechanics</i> , 2018, 842, 495-531.	1.4	19
50	The effect of compressibility on vortex pairing. <i>Physics of Fluids</i> , 1994, 6, 1063-1072.	1.6	18
51	Shock-wave/boundary-layer interactions in the automatic source-code generation framework OpenSBLI. <i>Computers and Fluids</i> , 2018, 173, 17-21.	1.3	18
52	On the performance of WENO/TENO schemes to resolve turbulence in DNS/LES of highâ€œspeed compressible flows. <i>International Journal for Numerical Methods in Fluids</i> , 2021, 93, 176-196.	0.9	18
53	Sound radiation from a turbulent boundary layer. <i>Physics of Fluids</i> , 2006, 18, 098101.	1.6	17
54	Numerical Simulations of Transition due to Isolated Roughness Elements at Mach 6. <i>AIAA Journal</i> , 2016, 54, 53-65.	1.5	16

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55	The effect of flow confinement on laminar shock-wave/boundary-layer interactions. Journal of Fluid Mechanics, 2020, 897, .	1.4	16
56	The Influence of Different Wake Profiles on Losses in a Low Pressure Turbine Cascade. International Journal of Turbomachinery, Propulsion and Power, 2018, 3, 10.	0.5	14
57	Two-dimensional unsteadiness map of oblique shock wave/boundary layer interaction with sidewalls. Journal of Fluid Mechanics, 2019, 871, .	1.4	14
58	OpenSBL: Automated code-generation for heterogeneous computing architectures applied to compressible fluid dynamics on structured grids. Computer Physics Communications, 2021, 267, 108063.	3.0	14
59	Simulation and Modelling of a Skewed Turbulent Channel Flow. Flow, Turbulence and Combustion, 2000, 65, 83-109.	1.4	12
60	Surface-sampled simulations of turbulent flow at high Reynolds number. International Journal for Numerical Methods in Fluids, 2017, 85, 525-537.	0.9	12
61	Linear Stability Prediction of Vortex Structures on High Pressure Turbine Blades. International Journal of Turbomachinery, Propulsion and Power, 2017, 2, 8.	0.5	12
62	An error indicator for finite difference methods using spectral techniques with application to aerofoil simulation. Computers and Fluids, 2018, 168, 67-72.	1.3	12
63	Shock-Wave/Boundary-Layer Interactions in Transitional Rectangular Duct Flows. Flow, Turbulence and Combustion, 2020, 105, 649-670.	1.4	12
64	Large-eddy simulations and modal reconstruction of laminar transonic buffet. Journal of Fluid Mechanics, 2022, 944, .	1.4	11
65	Direct Numerical Simulation of Supersonic Jet Flow. Journal of Engineering Mathematics, 1997, 32, 121-142.	0.6	10
66	Large Eddy simulation of a heaving wing on the Cusp of transition to turbulence. Computers and Fluids, 2019, 184, 64-77.	1.3	10
67	Block-structured compressible Navier-Stokes solution using the OPS high-level abstraction. International Journal of Computational Fluid Dynamics, 2016, 30, 450-454.	0.5	9
68	Assessment of low-dissipative shock-capturing schemes for transitional and turbulent shock interactions. , 2019, , .		9
69	Transition mechanisms in cross-flow-dominated hypersonic flows with free-stream acoustic noise. Journal of Fluid Mechanics, 2020, 896, .	1.4	9
70	Wide domain simulations of flow over an unswept laminar wing section undergoing transonic buffet. Physical Review Fluids, 2020, 5, .	1.0	8
71	Shock Train Response to High-Frequency Backpressure Forcing. AIAA Journal, 2022, 60, 3736-3748.	1.5	8
72	ON THE RESPONSE OF SHOCK-INDUCED SEPARATION BUBBLE TO SMALL AMPLITUDE DISTURBANCES. Modern Physics Letters B, 2005, 19, 1495-1498.	1.0	7

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73	Stability and Unsteadiness in a 2D Laminar Shock-Induced Separation Bubble. , 2013, , .		6
74	DNS Study of Roughness-Induced Transition at Mach 6. , 2019, , .		6
75	Numerical study of Fourier-filtered rough surfaces. Physical Review Fluids, 2021, 6, .	1.0	6
76	A vorticity stretching diagnostic for turbulent and transitional flows. Theoretical and Computational Fluid Dynamics, 2012, 26, 485-499.	0.9	4
77	Receptivity to Freestream Acoustic Noise in Hypersonic Flow over a Generic Forebody. Journal of Spacecraft and Rockets, 2019, 56, 447-457.	1.3	4
78	Performance evaluation of explicit finite difference algorithms with varying amounts of computational and memory intensity. Journal of Computational Science, 2019, 36, 100565.	1.5	4
79	Direct numerical simulation of compressible turbulence in a counter-flow channel configuration. Physical Review Fluids, 2021, 6, .	1.0	4
80	Embedded direct numerical simulation for aeronautical CFD. Aeronautical Journal, 2001, 105, 193-198.	1.1	3
81	Unsteady behaviour in direct numerical solutions of transonic flow around an airfoil.. , 2018, , .		2
82	Enhanced instability of supersonic boundary layer using passive acoustic feedback. Physics of Fluids, 2016, 28, .	1.6	1