D S Henningson

List of Publications by Year
in descending order

129	10,876	46984 47	30058 103
papers	citations	h-index	g-index

131	131	131	3569
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spectral analysis of nonlinear flows. Journal of Fluid Mechanics, 2009, 641, 115-127.	1.4	1,592
2	Stability and Transition in Shear Flows. Applied Mathematical Sciences (Switzerland), 2001, , .	0.4	1,516
3	Energy growth in viscous channel flows. Journal of Fluid Mechanics, 1993, 252, 209-238.	1.4	614
4	Optimal disturbances and bypass transition in boundary layers. Physics of Fluids, 1999, 11, 134-150.	1.6	532
5	On the breakdown of boundary layer streaks. Journal of Fluid Mechanics, 2001, 428, 29-60.	1.4	379
6	Transition in boundary layers subject to free-stream turbulence. Journal of Fluid Mechanics, 2004, 517, 167-198.	1.4	329
7	Steady solutions of the Navier-Stokes equations by selective frequency damping. Physics of Fluids, 2006, 18, 068102.	1.6	255
8	Transient growth in compressible boundary layer flow. Physics of Fluids, 1996, 8, 826-837.	1.6	247
9	On stability of streamwise streaks and transition thresholds in plane channel flows. Journal of Fluid Mechanics, 1998, 365, 269-303.	1.4	227
10	Turbulent boundary layers up to Reî¸=2500 studied through simulation and experiment. Physics of Fluids, 2009, 21, .	1.6	217
11	Optimal energy density growth in Hagenâ€“Poiseuille flow. Journal of Fluid Mechanics, 1994, 277, 197-225.	1.4	207
12	Global stability of a jet in crossflow. Journal of Fluid Mechanics, 2009, 624, 33-44.	1.4	194
13	A mechanism for bypass transition from localized disturbances in wall-bounded shear flows. Journal of Fluid Mechanics, 1993, 250, 169-207.	1.4	188
14	On streak breakdown in bypass transition. Physics of Fluids, 2008, 20, .	1.6	143
15	Linear feedback control and estimation of transition in plane channel flow. Journal of Fluid Mechanics, 2003, 481, 149-175.	1.4	139
16	Mutual inductance instability of the tip vortices behind a wind turbine. Journal of Fluid Mechanics, 2014, 755, 705-731.	1.4	132
17	Input-Output Analysis and Control Design Applied to a Linear Model of Spatially Developing Flows. Applied Mechanics Reviews, 2009, 62, .	4.5	131
18	Inputâ€“output analysis, model reduction and control of the flat-plate boundary layer. Journal of Fluid Mechanics, 2009, 620, 263-298.	1.4	131

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19	Direct numerical simulation of a separated turbulent boundary layer. Journal of Fluid Mechanics, 2002, 471, 107-136.	1.4	126
20	Transition of streamwise streaks in zero-pressure-gradient boundary layers. Journal of Fluid Mechanics, 2002, 472, 229-261.	1.4	124
21	A new mechanism for rapid transition involving a pair of oblique waves. Physics of Fluids A, Fluid Dynamics, 1992, 4, 1986-1989.	1.6	122
22	Global three-dimensional optimal disturbances in the Blasius boundary-layer flow using time-steppers. Journal of Fluid Mechanics, 2010, 650, 181-214.	1.4	117
23	The effect of small-amplitude convective disturbances on the size and bursting of a laminar separation bubble. Journal of Fluid Mechanics, 2011, 671, 1-33.	1.4	106
24	Global two-dimensional stability measures of the flat plate boundary-layer flow. European Journal of Mechanics, B/Fluids, 2008, 27, 501-513.	1.2	105
25	Matrix-Free Methods for the Stability and Control of Boundary Layers. AIAA Journal, 2009, 47, 1057-1068.	1.5	84
26	Nonequilibrium Thermodynamics and the Optimal Path to Turbulence in Shear Flows. Physical Review Letters, 2011, 106, 134502.	2.9	82
27	State estimation in wall-bounded flow systems. Part 1. Perturbed laminar flows. Journal of Fluid Mechanics, 2005, 534, 263-294.	1.4	78
28	State estimation in wall-bounded flow systems. Part 2. Turbulent flows. Journal of Fluid Mechanics, 2006, 552, 167.	1.4	78
29	Bounds for threshold amplitudes in subcritical shear flows. Journal of Fluid Mechanics, 1994, 270, 175-198.	1.4	71
30	Minimal transition thresholds in plane Couette flow. Physics of Fluids, 2013, 25, .	1.6	71
31	Receptivity to free-stream vorticity of flow past a flat plate with elliptic leading edge. Journal of Fluid Mechanics, 2010, 653, 245-271.	1.4	68
32	Swept wing boundary-layer receptivity to localized surface roughness. Journal of Fluid Mechanics, 2012, 711, 516-544.	1.4	68
33	Transient growth on boundary layer streaks. Journal of Fluid Mechanics, 2005, 537, 91.	1.4	67
34	On the convectively unstable nature of optimal streaks in boundary layers. Journal of Fluid Mechanics, 2003, 485, 221-242.	1.4	65
35	On the near-wall vortical structures at moderate Reynolds numbers. European Journal of Mechanics, B/Fluids, 2014, 48, 75-93.	1.2	62
36	Adaptive and Model-Based Control Theory Applied to Convectively Unstable Flows. Applied Mechanics Reviews, 2014, 66, .	4.5	61

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37	On the relevance of Reynolds stresses in resolvent analyses of turbulent wall-bounded flows. Journal of Fluid Mechanics, 2019, 867, 969-984.	1.4	60
38	Feedback control of instabilities in the two-dimensional Blasius boundary layer: The role of sensors and actuators. Physics of Fluids, 2013, 25, .	1.6	59
39	Relaminarization of Reï„=100 turbulence using gain scheduling and linear state-feedback control. Physics of Fluids, 2003, 15, 3572-3575.	1.6	58
40	Feedback control of three-dimensional optimal disturbances using reduced-order models. Journal of Fluid Mechanics, 2011, 677, 63-102.	1.4	56
41	Sensitivity Analysis Using Adjoint Parabolized Stability Equations for Compressible Flows. Flow, Turbulence and Combustion, 2000, 65, 321-346.	1.4	53
42	The wave structure of turbulent spots in plane Poiseuille flow. Journal of Fluid Mechanics, 1987, 178, 405-421.	1.4	52
43	Linear optimal control applied to instabilities in spatially developing boundary layers. Journal of Fluid Mechanics, 2002, 470, 151-179.	1.4	52
44	Self-Sustained Localized Structures in a Boundary-Layer Flow. Physical Review Letters, 2012, 108, 044501.	2.9	50
45	Adjoint-based optimization of steady suction for disturbance control in incompressible flows. Journal of Fluid Mechanics, 2002, 467, 129-161.	1.4	49
46	Bifurcation and stability analysis of a jet in cross-flow: onset of global instability at a low velocity ratio. Journal of Fluid Mechanics, 2012, 696, 94-121.	1.4	48
47	Localized edge states in the asymptotic suction boundary layer. Journal of Fluid Mechanics, 2013, 717, .	1.4	48
48	Spectral proper orthogonal decomposition and resolvent analysis of near-wall coherent structures in turbulent pipe flows. Journal of Fluid Mechanics, 2020, 900, .	1.4	48
49	On the stability of a falling liquid curtain. Journal of Fluid Mechanics, 2002, 463, 163-171.	1.4	47
50	A numerical and experimental study of a transitional separation bubble. Aerospace Science and Technology, 2001, 5, 317-328.	2.5	46
51	Exponential vs Algebraic Growth and Transition Prediction in Boundary Layer Flow. Flow, Turbulence and Combustion, 2003, 70, 183-210.	1.4	41
52	Stabilization of a swept-wing boundary layer by distributed roughness elements. Journal of Fluid Mechanics, 2013, 718, .	1.4	41
53	The colour of forcing statistics in resolvent analyses of turbulent channel flows. Journal of Fluid Mechanics, 2021, 907, .	1.4	41
54	Varicose instabilities in turbulent boundary layers. Physics of Fluids, 2002, 14, 2309.	1.6	40

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55	Spatial optimal growth in three-dimensional compressible boundary layers. Journal of Fluid Mechanics, 2012, 704, 251-279.	1.4	40
56	Local and global pairing instabilities of two interlaced helical vortices. Journal of Fluid Mechanics, 2019, 863, 927-955.	1.4	40
57	Linear feedback control and estimation applied to instabilities in spatially developing boundary layers. Journal of Fluid Mechanics, 2007, 588, 163-187.	1.4	39
58	Transition delay in a boundary layer flow using active control. Journal of Fluid Mechanics, 2013, 731, 288-311.	1.4	39
59	DNS and LES of estimation and control of transition in boundary layers subject to free-stream turbulence. International Journal of Heat and Fluid Flow, 2008, 29, 841-855.	1.1	38
60	A study of the Blasius wall jet. Journal of Fluid Mechanics, 2005, 539, 313.	1.4	35
61	Transition delay using control theory. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 1365-1381.	1.6	35
62	Self-similar transport of inertial particles in a turbulent boundary layer. Journal of Fluid Mechanics, 2012, 706, 584-596.	1.4	35
63	A study of eigenvalue sensitivity for hydrodynamic stability operators. Theoretical and Computational Fluid Dynamics, 1993, 4, 227-240.	0.9	34
64	On the role of adaptivity for robust laminar flow control. Journal of Fluid Mechanics, 2015, 767, .	1.4	34
65	Forcing statistics in resolvent analysis: application in minimal turbulent Couette flow. Journal of Fluid Mechanics, 2021, 908, .	1.4	34
66	A nonlinear mechanism for receptivity of free-stream disturbances. Physics of Fluids, 1999, 11, 3749-3760.	1.6	33
67	Stabilization of the Spectral Element Method in Convection Dominated Flows by Recovery of Skew-Symmetry. Journal of Scientific Computing, 2013, 57, 254-277.	1.1	32
68	Unsteady aerodynamic effects in small-amplitude pitch oscillations of an airfoil. International Journal of Heat and Fluid Flow, 2018, 71, 378-391.	1.1	30
69	Linear and nonlinear development of localized disturbances in zero and adverse pressure gradient boundary-layers. Physics of Fluids, 1998, 10, 1405-1418.	1.6	29
70	Bypass transition and spot nucleation in boundary layers. Physical Review Fluids, 2016, 1, .	1.0	29
71	Riccati-less approach for optimal control and estimation: an application to two-dimensional boundary layers. Journal of Fluid Mechanics, 2013, 731, 394-417.	1.4	28
72	High Order Accurate Solution of Flow Past a Circular Cylinder. Journal of Scientific Computing, 2006, 27, 431-441.	1.1	26

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73	Transfer functions for flow predictions in wall-bounded turbulence. Journal of Fluid Mechanics, 2019, 864, 708-745.	1.4	26
74	Global stability and optimal perturbation for a jet in cross-flow. European Journal of Mechanics, B/Fluids, 2015, 49, 438-447.	1.2	24
75	Edge states as mediators of bypass transition in boundary-layer flows. Journal of Fluid Mechanics, 2016, 801, .	1.4	23
76	Resolvent modelling of near-wall coherent structures in turbulent channel flow. International Journal of Heat and Fluid Flow, 2020, 85, 108662.	1.1	23
77	Turbulent spots in the asymptotic suction boundary layer. Journal of Fluid Mechanics, 2007, 584, 397-413.	1.4	22
78	Stability and sensitivity of a cross-flow-dominated Falknerâ€“Skanâ€“Cooke boundary layer with discrete surface roughness. Journal of Fluid Mechanics, 2017, 826, 830-850.	1.4	22
79	Wave growth and spreading of a turbulent spot in plane Poiseuille flow. Physics of Fluids A, Fluid Dynamics, 1989, 1, 1876-1882.	1.6	21
80	On turbulent spots in plane Poiseuille flow. Journal of Fluid Mechanics Digital Archive, 1991, 228, 183.	0.6	21
81	Weakly nonlinear analysis of boundary layer receptivity to free-stream disturbances. Physics of Fluids, 2002, 14, 1426-1441.	1.6	21
82	Swept-wing boundary-layer receptivity. Journal of Fluid Mechanics, 2012, 700, 490-501.	1.4	20
83	On the wave-cancelling nature of boundary layer flow control. Theoretical and Computational Fluid Dynamics, 2018, 32, 593-616.	0.9	18
84	On time-dependent settling of a dilute suspension in a rotating conical channel. Journal of Fluid Mechanics, 1986, 166, 473.	1.4	17
85	Localized disturbances in parallel shear flows. Flow, Turbulence and Combustion, 1994, 53, 51-97.	0.2	17
86	Output Feedback Control of Blasius Flow with Leading Edge Using Plasma Actuator. AIAA Journal, 2013, 51, 2192-2207.	1.5	17
87	Complexity of localised coherent structures in a boundary-layer flow. European Physical Journal E, 2014, 37, 32.	0.7	17
88	Energy efficiency and performance limitations of linear adaptive control for transition delay. Journal of Fluid Mechanics, 2017, 810, 60-81.	1.4	17
89	Turbulence collapse in a suction boundary layer. Journal of Fluid Mechanics, 2016, 795, 356-379.	1.4	16
90	The stability of wakes of floating wind turbines. Physics of Fluids, 2022, 34, .	1.6	16

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91	On the role of actuation for the control of streaky structures in boundary layers. Journal of Fluid Mechanics, 2020, 883, .	1.4	15
92	The Influence of Periodic Excitation on a Turbulent Separation Bubble. Flow, Turbulence and Combustion, 2006, 76, 1-21.	1.4	14
93	Tipâ€vortex breakdown of wind turbines subject to shear. Wind Energy, 2019, 22, 1789-1799.	1.9	14
94	Numerical realization of helical vortices: application to vortex instability. Theoretical and Computational Fluid Dynamics, 2020, 34, 1-20.	0.9	14
95	Spanwise-coherent hydrodynamic waves around flat plates and airfoils. Journal of Fluid Mechanics, 2021, 927, .	1.4	14
96	Edge tracking in spatially developing boundary layer flows. Journal of Fluid Mechanics, 2019, 881, 164-181.	1.4	13
97	A realizable data-driven approach to delay bypass transition with control theory. Journal of Fluid Mechanics, 2020, 883, .	1.4	13
98	Optimal disturbances in suction boundary layers. European Journal of Mechanics, B/Fluids, 2007, 26, 330-343.	1.2	12
99	In-flight active wave cancelation with delayed-x-LMS control algorithm in a laminar boundary layer. Experiments in Fluids, 2016, 57, 1.	1.1	12
100	Parametric dependencies of the yawed windâ€turbine wake development. Wind Energy, 2020, 23, 1367-1380.	1.9	11
101	Edge manifold as a Lagrangian coherent structure in a high-dimensional state space. Physical Review Research, 2020, 2, .	1.3	11
102	Transition in an infinite swept-wing boundary layer subject to surface roughness and free-stream turbulence. Journal of Fluid Mechanics, 2022, 931, .	1.4	11
103	Topology optimization of heat sinks in a square differentially heated cavity. International Journal of Heat and Fluid Flow, 2018, 74, 36-52.	1.1	10
104	On the linear global stability analysis of rigid-body motion fluidâ€“structure-interaction problems. Journal of Fluid Mechanics, 2020, 903, .	1.4	10
105	Statistical characterization of free-stream turbulence induced transition under variable Reynolds number, free-stream turbulence, and pressure gradient. Physics of Fluids, 2021, 33, .	1.6	10
106	Computing Optimal Forcing Using Laplace Preconditioning. Communications in Computational Physics, 2017, 22, 1508-1532.	0.7	9
107	Global linear analysis of a jet in cross-flow at low velocity ratios. Journal of Fluid Mechanics, 2020, 889, .	1.4	8
108	Experimental control of Tollmienâ€“Schlichting waves using pressure sensors and plasma actuators. Experiments in Fluids, 2021, 62, 1.	1.1	8

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109	Feedback Control for Laminarization of flow over Wings. Flow, Turbulence and Combustion, 2015, 94, 43-62.	1.4	7
110	Adjoint optimization of natural convection problems: differentially heated cavity. Theoretical and Computational Fluid Dynamics, 2017, 31, 537-553.	0.9	7
111	Free-Stream Turbulence-Induced Boundary-Layer Transition in Low-Pressure Turbines. Journal of Turbomachinery, 2021, 143, .	0.9	7
112	Optimal perturbations and transition energy thresholds in boundary layer shear flows. Physical Review Fluids, 2020, 5, .	1.0	7
113	Resolvent analysis in unbounded flows: role of free-stream modes. Theoretical and Computational Fluid Dynamics, 2020, 34, 163-176.	0.9	6
114	Optimal wavepackets in streamwise corner flow. Journal of Fluid Mechanics, 2015, 766, 405-435.	1.4	5
115	Acoustic receptivity simulations of flow past a flat plate with elliptic leading edge. Journal of Fluid Mechanics, 2016, 800, .	1.4	5
116	Tip-vortex instabilities of two in-line wind turbines. Journal of Physics: Conference Series, 2019, 1256, 012015.	0.3	5
117	On the stability of a Blasius boundary layer subject to localised suction. Journal of Fluid Mechanics, 2019, 871, 717-741.	1.4	5
118	Transient linear stability of pulsating Poiseuille flow using optimally time-dependent modes. Journal of Fluid Mechanics, 2021, 927, .	1.4	5
119	Actuator and sensor placement for closed-loop control of convective instabilities. Theoretical and Computational Fluid Dynamics, 2020, 34, 619-641.	0.9	4
120	On the onset of aeroelastic pitch-oscillations of a NACA0012 wing at transitional Reynolds numbers. Journal of Fluids and Structures, 2021, 105, 103344.	1.5	4
121	Optimal feedback control applied to boundary layer flow. Journal of Turbulence, 2005, 6, N25.	0.5	3
122	Stability of Floating Wind Turbine Wakes. Journal of Physics: Conference Series, 2021, 1934, 012009.	0.3	3
123	Disturbance growth on a NACA0008 wing subjected to free stream turbulence. Journal of Fluid Mechanics, 2022, 944, .	1.4	3
124	Large-scale Simulations of Turbulence: HPC and Numerical Experiments. , 2011, , .		1
125	e-Science in Scandinavia. Informatik-Spektrum, 2018, 41, 398-404.	1.0	1
126	Modeling the collapse of the edge when two transition routes compete. Physical Review E, 2020, 102, 053108.	0.8	1

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127	On the receptivity of low-pressure turbine blades to external disturbances. Journal of Fluid Mechanics, 2022, 937, .	1.4	1
128	Stability of two-dimensional potential flows using bicomplex numbers. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	1.0	1
129	Subharmonic eigenvalue orbits in the spectrum of pulsating Poiseuille flow. Journal of Fluid Mechanics, 2022, 945, .	1.4	1