

D S Henningson

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119
papers

8,189
citations

42
h-index

89
g-index

131
ext. papers

9,805
ext. citations

3.4
avg, IF

6.11
L-index

#	Paper	IF	Citations
119	Stability and Transition in Shear Flows. <i>Applied Mathematical Sciences (Switzerland)</i> , 2001 ,	0.9	1236
118	Spectral analysis of nonlinear flows. <i>Journal of Fluid Mechanics</i> , 2009 , 641, 115-127	3.7	1064
117	Energy growth in viscous channel flows. <i>Journal of Fluid Mechanics</i> , 1993 , 252, 209-238	3.7	510
116	Optimal disturbances and bypass transition in boundary layers. <i>Physics of Fluids</i> , 1999 , 11, 134-150	4.4	430
115	On the breakdown of boundary layer streaks. <i>Journal of Fluid Mechanics</i> , 2001 , 428, 29-60	3.7	311
114	Transition in boundary layers subject to free-stream turbulence. <i>Journal of Fluid Mechanics</i> , 2004 , 517, 167-198	3.7	263
113	Steady solutions of the Navier-Stokes equations by selective frequency damping. <i>Physics of Fluids</i> , 2006 , 18, 068102	4.4	186
112	On stability of streamwise streaks and transition thresholds in plane channel flows. <i>Journal of Fluid Mechanics</i> , 1998 , 365, 269-303	3.7	182
111	Optimal energy density growth in Hagen-Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 1994 , 277, 197-225	3.7	173
110	A mechanism for bypass transition from localized disturbances in wall-bounded shear flows. <i>Journal of Fluid Mechanics</i> , 1993 , 250, 169-207	3.7	167
109	Transient growth in compressible boundary layer flow. <i>Physics of Fluids</i> , 1996 , 8, 826-837	4.4	166
108	Turbulent boundary layers up to $Re_{\tau} \approx 2500$ studied through simulation and experiment. <i>Physics of Fluids</i> , 2009 , 21, 051702	4.4	161
107	Global stability of a jet in crossflow. <i>Journal of Fluid Mechanics</i> , 2009 , 624, 33-44	3.7	148
106	Linear feedback control and estimation of transition in plane channel flow. <i>Journal of Fluid Mechanics</i> , 2003 , 481, 149-175	3.7	114
105	On streak breakdown in bypass transition. <i>Physics of Fluids</i> , 2008 , 20, 101505	4.4	112
104	Direct numerical simulation of a separated turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2002 , 471, 107-136	3.7	110
103	Input-output analysis, model reduction and control of the flat-plate boundary layer. <i>Journal of Fluid Mechanics</i> , 2009 , 620, 263-298	3.7	109

102	Input-Output Analysis and Control Design Applied to a Linear Model of Spatially Developing Flows. <i>Applied Mechanics Reviews</i> , 2009 , 62,	8.6	102
101	Transition of streamwise streaks in zero-pressure-gradient boundary layers. <i>Journal of Fluid Mechanics</i> , 2002 , 472, 229-261	3.7	100
100	A new mechanism for rapid transition involving a pair of oblique waves. <i>Physics of Fluids A, Fluid Dynamics</i> , 1992 , 4, 1986-1989		99
99	Global two-dimensional stability measures of the flat plate boundary-layer flow. <i>European Journal of Mechanics, B/Fluids</i> , 2008 , 27, 501-513	2.4	89
98	Mutual inductance instability of the tip vortices behind a wind turbine. <i>Journal of Fluid Mechanics</i> , 2014 , 755, 705-731	3.7	88
97	Global three-dimensional optimal disturbances in the Blasius boundary-layer flow using time-steppers. <i>Journal of Fluid Mechanics</i> , 2010 , 650, 181-214	3.7	83
96	The effect of small-amplitude convective disturbances on the size and bursting of a laminar separation bubble. <i>Journal of Fluid Mechanics</i> , 2011 , 671, 1-33	3.7	80
95	Nonequilibrium thermodynamics and the optimal path to turbulence in shear flows. <i>Physical Review Letters</i> , 2011 , 106, 134502	7.4	72
94	Matrix-Free Methods for the Stability and Control of Boundary Layers. <i>AIAA Journal</i> , 2009 , 47, 1057-1068.1		67
93	Transient growth on boundary layer streaks. <i>Journal of Fluid Mechanics</i> , 2005 , 537, 91	3.7	60
92	Bounds for threshold amplitudes in subcritical shear flows. <i>Journal of Fluid Mechanics</i> , 1994 , 270, 175-198.7	3.7	60
91	On the convectively unstable nature of optimal streaks in boundary layers. <i>Journal of Fluid Mechanics</i> , 2003 , 485, 221-242	3.7	57
90	State estimation in wall-bounded flow systems. Part 1. Perturbed laminar flows. <i>Journal of Fluid Mechanics</i> , 2005 , 534, 263-294	3.7	56
89	Receptivity to free-stream vorticity of flow past a flat plate with elliptic leading edge. <i>Journal of Fluid Mechanics</i> , 2010 , 653, 245-271	3.7	54
88	Minimal transition thresholds in plane Couette flow. <i>Physics of Fluids</i> , 2013 , 25, 084103	4.4	51
87	State estimation in wall-bounded flow systems. Part 2. Turbulent flows. <i>Journal of Fluid Mechanics</i> , 2006 , 552, 167	3.7	50
86	Relaminarization of $Re_{\tau} \approx 100$ turbulence using gain scheduling and linear state-feedback control. <i>Physics of Fluids</i> , 2003 , 15, 3572-3575	4.4	50
85	Sensitivity Analysis Using Adjoint Parabolized Stability Equations for Compressible Flows. <i>Flow, Turbulence and Combustion</i> , 2000 , 65, 321-346	2.5	47

84	The wave structure of turbulent spots in plane Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 1987 , 178, 405-421	3.7	46
83	On the near-wall vortical structures at moderate Reynolds numbers. <i>European Journal of Mechanics, B/Fluids</i> , 2014 , 48, 75-93	2.4	45
82	Feedback control of three-dimensional optimal disturbances using reduced-order models. <i>Journal of Fluid Mechanics</i> , 2011 , 677, 63-102	3.7	45
81	Linear optimal control applied to instabilities in spatially developing boundary layers. <i>Journal of Fluid Mechanics</i> , 2002 , 470, 151-179	3.7	44
80	Adaptive and Model-Based Control Theory Applied to Convectively Unstable Flows. <i>Applied Mechanics Reviews</i> , 2014 , 66,	8.6	43
79	Feedback control of instabilities in the two-dimensional Blasius boundary layer: The role of sensors and actuators. <i>Physics of Fluids</i> , 2013 , 25, 054106	4.4	43
78	Self-sustained localized structures in a boundary-layer flow. <i>Physical Review Letters</i> , 2012 , 108, 044501	7.4	43
77	A numerical and experimental study of a transitional separation bubble. <i>Aerospace Science and Technology</i> , 2001 , 5, 317-328	4.9	41
76	Localized edge states in the asymptotic suction boundary layer. <i>Journal of Fluid Mechanics</i> , 2013 , 717,	3.7	40
75	On the stability of a falling liquid curtain. <i>Journal of Fluid Mechanics</i> , 2002 , 463, 163-171	3.7	39
74	Bifurcation and stability analysis of a jet in cross-flow: onset of global instability at a low velocity ratio. <i>Journal of Fluid Mechanics</i> , 2012 , 696, 94-121	3.7	38
73	Swept wing boundary-layer receptivity to localized surface roughness. <i>Journal of Fluid Mechanics</i> , 2012 , 711, 516-544	3.7	37
72	Adjoint-based optimization of steady suction for disturbance control in incompressible flows. <i>Journal of Fluid Mechanics</i> , 2002 , 467, 129-161	3.7	37
71	A study of the Blasius wall jet. <i>Journal of Fluid Mechanics</i> , 2005 , 539, 313	3.7	34
70	Linear feedback control and estimation applied to instabilities in spatially developing boundary layers. <i>Journal of Fluid Mechanics</i> , 2007 , 588, 163-187	3.7	33
69	Exponential vs Algebraic Growth and Transition Prediction in Boundary Layer Flow. <i>Flow, Turbulence and Combustion</i> , 2003 , 70, 183-210	2.5	32
68	Varicose instabilities in turbulent boundary layers. <i>Physics of Fluids</i> , 2002 , 14, 2309	4.4	32
67	On the relevance of Reynolds stresses in resolvent analyses of turbulent wall-bounded flows. <i>Journal of Fluid Mechanics</i> , 2019 , 867, 969-984	3.7	30

66	Transition delay using control theory. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011 , 369, 1365-81	3	30
65	Stabilization of a swept-wing boundary layer by distributed roughness elements. <i>Journal of Fluid Mechanics</i> , 2013 , 718,	3.7	29
64	DNS and LES of estimation and control of transition in boundary layers subject to free-stream turbulence. <i>International Journal of Heat and Fluid Flow</i> , 2008 , 29, 841-855	2.4	29
63	Transition delay in a boundary layer flow using active control. <i>Journal of Fluid Mechanics</i> , 2013 , 731, 288-311	3.7	28
62	Self-similar transport of inertial particles in a turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2012 , 706, 584-596	3.7	27
61	On the role of adaptivity for robust laminar flow control. <i>Journal of Fluid Mechanics</i> , 2015 , 767,	3.7	25
60	Spatial optimal growth in three-dimensional compressible boundary layers. <i>Journal of Fluid Mechanics</i> , 2012 , 704, 251-279	3.7	25
59	A study of eigenvalue sensitivity for hydrodynamic stability operators. <i>Theoretical and Computational Fluid Dynamics</i> , 1993 , 4, 227-240	2.3	25
58	A nonlinear mechanism for receptivity of free-stream disturbances. <i>Physics of Fluids</i> , 1999 , 11, 3749-3760	4.4	24
57	Linear and nonlinear development of localized disturbances in zero and adverse pressure gradient boundary-layers. <i>Physics of Fluids</i> , 1998 , 10, 1405-1418	4.4	23
56	Riccati-less approach for optimal control and estimation: an application to two-dimensional boundary layers. <i>Journal of Fluid Mechanics</i> , 2013 , 731, 394-417	3.7	22
55	Unsteady aerodynamic effects in small-amplitude pitch oscillations of an airfoil. <i>International Journal of Heat and Fluid Flow</i> , 2018 , 71, 378-391	2.4	21
54	Bypass transition and spot nucleation in boundary layers. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	21
53	Local and global pairing instabilities of two interlaced helical vortices. <i>Journal of Fluid Mechanics</i> , 2019 , 863, 927-955	3.7	20
52	Stabilization of the Spectral Element Method in Convection Dominated Flows by Recovery of Skew-Symmetry. <i>Journal of Scientific Computing</i> , 2013 , 57, 254-277	2.3	20
51	Turbulent spots in the asymptotic suction boundary layer. <i>Journal of Fluid Mechanics</i> , 2007 , 584, 397-413	3.7	20
50	High Order Accurate Solution of Flow Past a Circular Cylinder. <i>Journal of Scientific Computing</i> , 2006 , 27, 431-441	2.3	20
49	Wave growth and spreading of a turbulent spot in plane Poiseuille flow. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989 , 1, 1876-1882		18

48	Edge states as mediators of bypass transition in boundary-layer flows. <i>Journal of Fluid Mechanics</i> , 2016 , 801,	3.7	18
47	Weakly nonlinear analysis of boundary layer receptivity to free-stream disturbances. <i>Physics of Fluids</i> , 2002 , 14, 1426-1441	4.4	17
46	Global stability and optimal perturbation for a jet in cross-flow. <i>European Journal of Mechanics, B/Fluids</i> , 2015 , 49, 438-447	2.4	16
45	Swept-wing boundary-layer receptivity. <i>Journal of Fluid Mechanics</i> , 2012 , 700, 490-501	3.7	16
44	On time-dependent settling of a dilute suspension in a rotating conical channel. <i>Journal of Fluid Mechanics</i> , 1986 , 166, 473	3.7	16
43	Transfer functions for flow predictions in wall-bounded turbulence. <i>Journal of Fluid Mechanics</i> , 2019 , 864, 708-745	3.7	15
42	Localized disturbances in parallel shear flows. <i>Flow, Turbulence and Combustion</i> , 1994 , 53, 51-97		15
41	Spectral proper orthogonal decomposition and resolvent analysis of near-wall coherent structures in turbulent pipe flows. <i>Journal of Fluid Mechanics</i> , 2020 , 900,	3.7	15
40	Output Feedback Control of Blasius Flow with Leading Edge Using Plasma Actuator. <i>AIAA Journal</i> , 2013 , 51, 2192-2207	2.1	14
39	Complexity of localised coherent structures in a boundary-layer flow. <i>European Physical Journal E</i> , 2014 , 37, 32	1.5	13
38	The Influence of Periodic Excitation on a Turbulent Separation Bubble. <i>Flow, Turbulence and Combustion</i> , 2006 , 76, 1-21	2.5	13
37	Turbulence collapse in a suction boundary layer. <i>Journal of Fluid Mechanics</i> , 2016 , 795, 356-379	3.7	13
36	On turbulent spots in plane Poiseuille flow. <i>Journal of Fluid Mechanics Digital Archive</i> , 1991 , 228, 183		12
35	Energy efficiency and performance limitations of linear adaptive control for transition delay. <i>Journal of Fluid Mechanics</i> , 2017 , 810, 60-81	3.7	10
34	Stability and sensitivity of a cross-flow-dominated Falkner-Skan-Cooke boundary layer with discrete surface roughness. <i>Journal of Fluid Mechanics</i> , 2017 , 826, 830-850	3.7	9
33	In-flight active wave cancellation with delayed-x-LMS control algorithm in a laminar boundary layer. <i>Experiments in Fluids</i> , 2016 , 57, 1	2.5	9
32	The colour of forcing statistics in resolvent analyses of turbulent channel flows. <i>Journal of Fluid Mechanics</i> , 2021 , 907,	3.7	9
31	Tip-vortex breakdown of wind turbines subject to shear. <i>Wind Energy</i> , 2019 , 22, 1789-1799	3.4	8

30	Optimal disturbances in suction boundary layers. <i>European Journal of Mechanics, B/Fluids</i> , 2007 , 26, 330-343	3.4	8
29	Resolvent modelling of near-wall coherent structures in turbulent channel flow. <i>International Journal of Heat and Fluid Flow</i> , 2020 , 85, 108662	2.4	8
28	Feedback Control for Laminarization of flow over Wings. <i>Flow, Turbulence and Combustion</i> , 2015 , 94, 43-62	2.5	7
27	Edge tracking in spatially developing boundary layer flows. <i>Journal of Fluid Mechanics</i> , 2019 , 881, 164-183	3.7	7
26	Forcing statistics in resolvent analysis: application in minimal turbulent Couette flow. <i>Journal of Fluid Mechanics</i> , 2021 , 908,	3.7	7
25	On the wave-cancelling nature of boundary layer flow control. <i>Theoretical and Computational Fluid Dynamics</i> , 2018 , 32, 593-616	2.3	7
24	On the role of actuation for the control of streaky structures in boundary layers. <i>Journal of Fluid Mechanics</i> , 2020 , 883,	3.7	6
23	Adjoint optimization of natural convection problems: differentially heated cavity. <i>Theoretical and Computational Fluid Dynamics</i> , 2017 , 31, 537-553	2.3	5
22	Numerical realization of helical vortices: application to vortex instability. <i>Theoretical and Computational Fluid Dynamics</i> , 2020 , 34, 1-20	2.3	5
21	Topology optimization of heat sinks in a square differentially heated cavity. <i>International Journal of Heat and Fluid Flow</i> , 2018 , 74, 36-52	2.4	5
20	Computing Optimal Forcing Using Laplace Preconditioning. <i>Communications in Computational Physics</i> , 2017 , 22, 1508-1532	2.4	4
19	Optimal wavepackets in streamwise corner flow. <i>Journal of Fluid Mechanics</i> , 2015 , 766, 405-435	3.7	4
18	On the linear global stability analysis of rigid-body motion fluid-structure-interaction problems. <i>Journal of Fluid Mechanics</i> , 2020 , 903,	3.7	4
17	Acoustic receptivity simulations of flow past a flat plate with elliptic leading edge. <i>Journal of Fluid Mechanics</i> , 2016 , 800,	3.7	4
16	Tip-vortex instabilities of two in-line wind turbines. <i>Journal of Physics: Conference Series</i> , 2019 , 1256, 012015	0.3	3
15	On the stability of a Blasius boundary layer subject to localised suction. <i>Journal of Fluid Mechanics</i> , 2019 , 871, 717-741	3.7	3
14	Parametric dependencies of the yawed wind-turbine wake development. <i>Wind Energy</i> , 2020 , 23, 1367-1380	3.4	3
13	A realizable data-driven approach to delay bypass transition with control theory. <i>Journal of Fluid Mechanics</i> , 2020 , 883,	3.7	3

12	Global linear analysis of a jet in cross-flow at low velocity ratios. <i>Journal of Fluid Mechanics</i> , 2020 , 889,	3.7	3
11	Optimal feedback control applied to boundary layer flow. <i>Journal of Turbulence</i> , 2005 , 6, N25	2.1	2
10	Optimal perturbations and transition energy thresholds in boundary layer shear flows. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	2
9	Edge manifold as a Lagrangian coherent structure in a high-dimensional state space. <i>Physical Review Research</i> , 2020 , 2,	3.9	2
8	Actuator and sensor placement for closed-loop control of convective instabilities. <i>Theoretical and Computational Fluid Dynamics</i> , 2020 , 34, 619-641	2.3	1
7	Experimental control of Tollmien-Schlichting waves using pressure sensors and plasma actuators. <i>Experiments in Fluids</i> , 2021 , 62, 1	2.5	1
6	Statistical characterization of free-stream turbulence induced transition under variable Reynolds number, free-stream turbulence, and pressure gradient. <i>Physics of Fluids</i> , 2021 , 33, 094115	4.4	1
5	Resolvent analysis in unbounded flows: role of free-stream modes. <i>Theoretical and Computational Fluid Dynamics</i> , 2020 , 34, 163-176	2.3	0
4	Stability of Floating Wind Turbine Wakes. <i>Journal of Physics: Conference Series</i> , 2021 , 1934, 012009	0.3	0
3	e-Science in Scandinavia. <i>Informatik-Spektrum</i> , 2018 , 41, 398-404	0.3	0
2	Modeling the collapse of the edge when two transition routes compete. <i>Physical Review E</i> , 2020 , 102, 053108	2.4	
1	On the onset of aeroelastic pitch-oscillations of a NACA0012 wing at transitional Reynolds numbers. <i>Journal of Fluids and Structures</i> , 2021 , 105, 103344	3.1	