

Denis Sipp

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

96
papers

2,631
citations

30
h-index

49
g-index

104
ext. papers

3,306
ext. citations

3.5
avg. IF

5.48
L-index

#	Paper	IF	Citations
96	Wave-packets in a reacting, imperfectly-expanded supersonic jet. <i>Aerospace Science and Technology</i> , 2022 , 123, 107471	4.9	
95	Optimal eddy viscosity for resolvent-based models of coherent structures in turbulent jets. <i>Journal of Fluid Mechanics</i> , 2021 , 917,	3.7	6
94	Machine learning-augmented turbulence modeling for RANS simulations of massively separated flows. <i>Physical Review Fluids</i> , 2021 , 6,	2.8	4
93	On the linear receptivity of trailing vortices. <i>Journal of Fluid Mechanics</i> , 2021 , 908,	3.7	1
92	Link between subsonic stall and transonic buffet on swept and unswept wings: from global stability analysis to nonlinear dynamics. <i>Journal of Fluid Mechanics</i> , 2021 , 908,	3.7	3
91	Interpolatory-Based Data-Driven Pulsed Fluidic Actuator Control Design and Experimental Validation. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 1-8	4.8	
90	Nonlinear input/output analysis: application to boundary layer transition. <i>Journal of Fluid Mechanics</i> , 2021 , 911,	3.7	10
89	Nonlinear model reduction: A comparison between POD-Galerkin and POD-DEIM methods. <i>Computers and Fluids</i> , 2020 , 208, 104628	2.8	6
88	Mean-flow data assimilation based on minimal correction of turbulence models: Application to turbulent high Reynolds number backward-facing step. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	4
87	Reduced-order model of a reacting, turbulent supersonic jet based on proper orthogonal decomposition. <i>Theoretical and Computational Fluid Dynamics</i> , 2020 , 34, 49-77	2.3	1
86	Optimal triggering of jet bifurcation: an example of optimal forcing applied to a time-periodic base flow. <i>Journal of Fluid Mechanics</i> , 2020 , 885,	3.7	5
85	Mean and Unsteady Flow Reconstruction Using Data-Assimilation and Resolvent Analysis. <i>AIAA Journal</i> , 2020 , 58, 575-588	2.1	3
84	Linear iterative method for closed-loop control of quasiperiodic flows. <i>Journal of Fluid Mechanics</i> , 2019 , 868, 26-65	3.7	11
83	A tale of two airfoils: resolvent-based modelling of an oscillator versus an amplifier from an experimental mean. <i>Journal of Fluid Mechanics</i> , 2019 , 881, 51-83	3.7	8
82	Various approaches to determine active regions in an unstable global mode: application to transonic buffet. <i>Journal of Fluid Mechanics</i> , 2019 , 881, 617-647	3.7	4
81	Transonic buffet instability: From two-dimensional airfoils to three-dimensional swept wings. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	14
80	Eddy viscosity for resolvent-based jet noise models 2019 ,		6

79	Analysis of the two-dimensional dynamics of a Mach 1.6 shock wave/transitional boundary layer interaction using a RANS based resolvent approach. <i>Journal of Fluid Mechanics</i> , 2019 , 862, 1166-1202	3.7	5
78	Vortex pairing in jets as a global Floquet instability: modal and transient dynamics. <i>Journal of Fluid Mechanics</i> , 2019 , 862, 951-989	3.7	3
77	Analysis and Comparison of Transonic Buffet Phenomenon over Several Three-Dimensional Wings. <i>AIAA Journal</i> , 2019 , 57, 379-396	2.1	16
76	On the receptivity of aerofoil tonal noise: an adjoint analysis. <i>Journal of Fluid Mechanics</i> , 2017 , 812, 771-791	3.7	6
75	Data assimilation of mean velocity from 2D PIV measurements of flow over an idealized airfoil. <i>Experiments in Fluids</i> , 2017 , 58, 1	2.5	25
74	Unsteady flow dynamics reconstruction from mean flow and point sensors: an experimental study. <i>Journal of Fluid Mechanics</i> , 2017 , 824, 174-201	3.7	20
73	Time-delayed feedback technique for suppressing instabilities in time-periodic flow. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	7
72	Conditions for validity of mean flow stability analysis. <i>Journal of Fluid Mechanics</i> , 2016 , 798, 485-504	3.7	80
71	Linear control of oscillator and amplifier flows*. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	12
70	Linear Closed-Loop Control of Fluid Instabilities and Noise-Induced Perturbations: A Review of Approaches and Tools ¹ . <i>Applied Mechanics Reviews</i> , 2016 , 68,	8.6	30
69	Pressure wave generation from perturbed premixed flames. <i>Journal of Fluid Mechanics</i> , 2016 , 797, 231-246	3.7	4
68	Recovery of the inherent dynamics of noise-driven amplifier flows. <i>Journal of Fluid Mechanics</i> , 2016 , 797, 130-145	3.7	2
67	Uncertainty propagation in model extraction by system identification and its implication for control design. <i>Journal of Fluid Mechanics</i> , 2016 , 791, 214-236	3.7	3
66	Nonlinear model-order reduction for compressible flow solvers using the Discrete Empirical Interpolation Method. <i>Journal of Computational Physics</i> , 2016 , 324, 194-209	4.1	8
65	Response analysis of a laminar premixed M-flame to flow perturbations using a linearized compressible Navier-Stokes solver. <i>Physics of Fluids</i> , 2015 , 27, 043602	4.4	25
64	Stability, Receptivity, and Sensitivity Analyses of Buffeting Transonic Flow over a Profile. <i>AIAA Journal</i> , 2015 , 53, 1980-1993	2.1	80
63	Global stability analysis of underexpanded screeching jets. <i>European Journal of Mechanics, B/Fluids</i> , 2015 , 49, 392-399	2.4	15
62	Unsteadiness in transonic shock-wave/boundary-layer interactions: experimental investigation and global stability analysis. <i>Journal of Fluid Mechanics</i> , 2015 , 781, 550-577	3.7	42

61	Parametric reduced order dynamical model construction of a fluid flow control problem. <i>IFAC-PapersOnLine</i> , 2015 , 48, 133-138	0.7	6
60	Nonlinear Model-order Reduction for Oscillator Flows Using POD-DEIM. <i>Procedia IUTAM</i> , 2015 , 14, 329-336		
59	A Dynamic Observer to Capture and Control Perturbation Energy in Noise Amplifier Flows. <i>Procedia IUTAM</i> , 2015 , 14, 337-343		
58	Quasi-laminar stability and sensitivity analyses for turbulent flows: Prediction of low-frequency unsteadiness and passive control. <i>Physics of Fluids</i> , 2014 , 26, 045112	4.4	46
57	Linear dynamics of the Lamb-Chaplygin dipole in the two-dimensional limit. <i>Physics of Fluids</i> , 2014 , 26, 064103	4.4	6
56	A global analysis of tonal noise in flows around aerofoils. <i>Journal of Fluid Mechanics</i> , 2014 , 754, 5-38	3.7	42
55	A data-assimilation method for Reynolds-averaged Navier-Stokes-driven mean flow reconstruction. <i>Journal of Fluid Mechanics</i> , 2014 , 759, 404-431	3.7	42
54	A dynamic observer to capture and control perturbation energy in noise amplifiers. <i>Journal of Fluid Mechanics</i> , 2014 , 758, 728-753	3.7	16
53	Eigenvalue sensitivity, singular values and discrete frequency selection mechanism in noise amplifiers: the case of flow induced by radial wall injection. <i>Journal of Fluid Mechanics</i> , 2014 , 757, 770-799	3.7	6
52	Computation of eigenvalue sensitivity to base flow modifications in a discrete framework: Application to open-loop control. <i>Journal of Computational Physics</i> , 2014 , 269, 234-258	4.1	24
51	Characterization of noise amplifiers with global singular modes: the case of the leading-edge flat-plate boundary layer. <i>Theoretical and Computational Fluid Dynamics</i> , 2013 , 27, 617-635	2.3	45
50	Interaction between feedback aeroacoustic and acoustic resonance mechanisms in a cavity flow: a global stability analysis. <i>Journal of Fluid Mechanics</i> , 2013 , 717, 134-165	3.7	44
49	Stochastic dynamics and model reduction of amplifier flows: the backward facing step flow. <i>Journal of Fluid Mechanics</i> , 2013 , 719, 406-430	3.7	30
48	Dynamics of a shock-induced separation in a transonic flow: a linearized approach 2013 ,		1
47	Open-loop control of cavity oscillations with harmonic forcings. <i>Journal of Fluid Mechanics</i> , 2012 , 708, 439-468	3.7	21
46	Efficient evaluation of the direct and adjoint linearized dynamics from compressible flow solvers. <i>Journal of Computational Physics</i> , 2012 , 231, 7739-7755	4.1	30
45	A physics-based approach to flow control using system identification. <i>Journal of Fluid Mechanics</i> , 2012 , 702, 26-58	3.7	57
44	Closed-loop control of unsteadiness over a rounded backward-facing step. <i>Journal of Fluid Mechanics</i> , 2012 , 703, 326-362	3.7	28

43	Matrix extraction technique for global stability of compressible flows and applications 2011 ,		1
42	Input/Output measures for model reduction and closed-loop control: application to global modes. <i>Journal of Fluid Mechanics</i> , 2011 , 685, 23-53	3.7	28
41	Effect of base-flow variation in noise amplifiers: the flat-plate boundary layer. <i>Journal of Fluid Mechanics</i> , 2011 , 687, 503-528	3.7	62
40	Model reduction for fluids using frequential snapshots. <i>Physics of Fluids</i> , 2011 , 23, 064101	4.4	15
39	Accurate low dimensional models for deterministic fluid systems driven by uncertain forcing. <i>Physics of Fluids</i> , 2011 , 23, 094101	4.4	6
38	A sensitivity study of vortex breakdown onset to upstream boundary conditions. <i>Journal of Fluid Mechanics</i> , 2010 , 645, 81-119	3.7	16
37	Dynamics and Control of Global Instabilities in Open-Flows: A Linearized Approach. <i>Applied Mechanics Reviews</i> , 2010 , 63,	8.6	148
36	Open-loop control of compressible afterbody flows using adjoint methods. <i>Physics of Fluids</i> , 2010 , 22, 054109	4.4	36
35	Effect of compressibility on the global stability of axisymmetric wake flows. <i>Journal of Fluid Mechanics</i> , 2010 , 660, 499-526	3.7	33
34	Active steady control of vortex shedding: an adjoint-based sensitivity approach. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 259-264	0.3	3
33	Global sustained perturbations in a backward-facing step flow. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 525-528	0.3	4
32	Open-loop control of compressible afterbody flows using adjoint methods. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 283-288	0.3	1
31	Closed-loop control of cavity flow using a reduced-order model based on balanced truncation. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 457-460	0.3	
30	Model reduction using Balanced Proper Orthogonal Decomposition with frequential snapshots. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 477-480	0.3	
29	Closed-Loop Control of an Unstable Open Cavity. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2010 , 275-289	0.3	
28	Elephant modes and low frequency unsteadiness in a high Reynolds number, transonic afterbody wake. <i>Physics of Fluids</i> , 2009 , 21, 054105	4.4	13
27	Unsteadiness in the wake of disks and spheres: Instability, receptivity and control using direct and adjoint global stability analyses. <i>Journal of Fluids and Structures</i> , 2009 , 25, 601-616	3.1	35
26	Closed-loop control of an open cavity flow using reduced-order models. <i>Journal of Fluid Mechanics</i> , 2009 , 641, 1-50	3.7	143

25	Direct and adjoint global modes of a recirculation bubble: lift-up and convective non-normalities. <i>Journal of Fluid Mechanics</i> , 2009 , 622, 1-21	3.7	64
24	Global mode interaction and pattern selection in the wake of a disk: a weakly nonlinear expansion. <i>Journal of Fluid Mechanics</i> , 2009 , 633, 159-189	3.7	78
23	Sensitivity analysis and passive control of cylinder flow. <i>Journal of Fluid Mechanics</i> , 2008 , 615, 221-252	3.7	214
22	Multiple Timescale and Sensitivity Analysis for the Passive Control of the Cylinder Flow 2008 ,		8
21	Amplifier and resonator dynamics of a low-Reynolds-number recirculation bubble in a global framework. <i>Journal of Fluid Mechanics</i> , 2008 , 605, 429-443	3.7	74
20	Absolute instability in axisymmetric wakes: compressible and density variation effects. <i>Journal of Fluid Mechanics</i> , 2008 , 600, 373-401	3.7	18
19	Strategies for Optimal Control of Global Modes. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2008 , 353-357	0.3	
18	Global stability of base and mean flows: a general approach and its applications to cylinder and open cavity flows. <i>Journal of Fluid Mechanics</i> , 2007 , 593, 333-358	3.7	214
17	Near-critical swirling flow in a contracting duct: The case of plug axial flow with solid body rotation. <i>Physics of Fluids</i> , 2007 , 19, 091701	4.4	7
16	Optimal amplification of the Crow instability. <i>Physics of Fluids</i> , 2007 , 19, 111703	4.4	22
15	Criticality of compressible rotating flows. <i>Physics of Fluids</i> , 2007 , 19, 018101	4.4	4
14	Global Optimal Perturbations in a Separated Flow over a Backward-Rounded Step 2006 ,		3
13	Kelvin waves and the singular modes of the Lamb-Denise vortex. <i>Journal of Fluid Mechanics</i> , 2006 , 551, 235	3.7	82
12	Stability of a vortex with a heavy core. <i>Journal of Fluid Mechanics</i> , 2005 , 526, 67-76	3.7	24
11	Effects of a Contraction on a Uniformly Rotating Flow 2005 ,		1
10	Effets d'une tuyère convergente sur un écoulement tournant. <i>Mécanique Et Industries</i> , 2005 , 6, 263-268		1
9	Unsteadiness, instability and turbulence in trailing vortices. <i>Comptes Rendus Physique</i> , 2005 , 6, 399-414	1.4	24
8	Mixing induced by Rayleigh-Taylor instability in a vortex. <i>Physics of Fluids</i> , 2005 , 17, 021703	4.4	8

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| 7 | Widnall instabilities in vortex pairs. <i>Physics of Fluids</i> , 2003 , 15, 1861-1874 | 4.4 | 38 |
| 6 | Instability and unsteadiness of aircraft wake vortices. <i>Aerospace Science and Technology</i> , 2003 , 7, 577-593 | 4.9 | 58 |
| 5 | Weakly nonlinear saturation of short-wave instabilities in a strained Lamb-Oseen vortex. <i>Physics of Fluids</i> , 2000 , 12, 1715-1729 | 4.4 | 34 |
| 4 | Self-adaptation and viscous selection in concentrated two-dimensional vortex dipoles. <i>Physics of Fluids</i> , 2000 , 12, 245-248 | 4.4 | 47 |
| 3 | Three-dimensional centrifugal-type instabilities of two-dimensional flows in rotating systems. <i>Physics of Fluids</i> , 2000 , 12, 1740-1748 | 4.4 | 60 |
| 2 | Vortices in rotating systems: Centrifugal, elliptic and hyperbolic type instabilities. <i>Physics of Fluids</i> , 1999 , 11, 3716-3728 | 4.4 | 43 |
| 1 | Elliptic instability in two-dimensional flattened Taylor-Green vortices. <i>Physics of Fluids</i> , 1998 , 10, 839-849 | 4.4 | 45 |