

Peter J Schmid

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.

137 papers	8,288 citations	33 h-index	90 g-index
148 ext. papers	10,390 ext. citations	3.5 avg, IF	6.93 L-index

#	Paper	IF	Citations
137	Dynamic Mode Decomposition and Its Variants. <i>Annual Review of Fluid Mechanics</i> , 2022 , 54,	2.2	18
136	Experimental Attenuation of a Trailing Vortex Inspired by Stability Analysis. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2022 , 313-323	0.3	
135	Sensitivity of Reacting Hypersonic Boundary Layers to n-periodic Surface Roughness. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2022 , 599-612	0.3	
134	A parallel-in-time approach for accelerating direct-adjoint studies. <i>Journal of Computational Physics</i> , 2021 , 429, 110033	4.1	0
133	Using adjoint-based optimization to enhance ignition in non-premixed jets. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021 , 477, 20200472	2.4	1
132	Frequency response analysis of a (non-)reactive jet in crossflow. <i>Journal of Fluid Mechanics</i> , 2021 , 922,	3.7	1
131	Data-driven and operator-based tools for the analysis of turbulent flows 2021 , 243-305		1
130	Shape optimization of stirring rods for mixing binary fluids. <i>IMA Journal of Applied Mathematics</i> , 2020 , 85, 762-789	1	3
129	Nonlinear model reduction: A comparison between POD-Galerkin and POD-DEIM methods. <i>Computers and Fluids</i> , 2020 , 208, 104628	2.8	6
128	Control of instability by injection rate oscillations in a radial Hele-Shaw cell. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	3
127	Mixing enhancement in binary fluids using optimised stirring strategies. <i>Journal of Fluid Mechanics</i> , 2020 , 899,	3.7	7
126	Mean and Unsteady Flow Reconstruction Using Data-Assimilation and Resolvent Analysis. <i>AIAA Journal</i> , 2020 , 58, 575-588	2.1	3
125	Thermoacoustic interplay between intrinsic thermoacoustic and acoustic modes: non-normality and high sensitivities. <i>Journal of Fluid Mechanics</i> , 2019 , 878, 190-220	3.7	10
124	A conditional space-time POD formalism for intermittent and rare events: example of acoustic bursts in turbulent jets. <i>Journal of Fluid Mechanics</i> , 2019 , 867,	3.7	22
123	Analysis of degenerate mechanisms triggering finite-amplitude thermo-acoustic oscillations in annular combustors. <i>Journal of Fluid Mechanics</i> , 2019 , 881, 384-419	3.7	2
122	Optimising the acoustic damping of multiple Helmholtz resonators attached to a thin annular duct. <i>Journal of Sound and Vibration</i> , 2019 , 444, 69-84	3.9	13
121	Adjoint-based parametric sensitivity analysis for swirling M-flames. <i>Journal of Fluid Mechanics</i> , 2019 , 859, 516-542	3.7	6

120	Linearised dynamics and non-modal instability analysis of an impinging under-expanded supersonic jet. <i>Journal of Physics: Conference Series</i> , 2018 , 1001, 012019	0.3	4
119	A parallel stability analysis of a trailing vortex wake. <i>Journal of Fluid Mechanics</i> , 2018 , 837, 858-895	3.7	17
118	A gradient-based framework for maximizing mixing in binary fluids. <i>Journal of Computational Physics</i> , 2018 , 368, 131-153	4.1	5
117	Active attenuation of a trailing vortex inspired by a parabolized stability analysis. <i>Journal of Fluid Mechanics</i> , 2018 , 855,	3.7	5
116	On the receptivity of aerofoil tonal noise: an adjoint analysis. <i>Journal of Fluid Mechanics</i> , 2017 , 812, 771-791	3.7	6
115	Optimal frequency-response sensitivity of compressible flow over roughness elements*View all notes. <i>Journal of Turbulence</i> , 2017 , 18, 338-351	2.1	3
114	Low-dimensional representation of near-wall dynamics in shear flows, with implications to wall-models. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017 , 375,	3	1
113	Linear and nonlinear dynamics of pulsatile channel flow. <i>Journal of Fluid Mechanics</i> , 2017 , 815, 435-480	3.7	10
112	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
111	Prograde, retrograde, and oscillatory modes in rotating Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2017 , 831, 182-211	3.7	26
110	Frequency selection mechanisms in the flow of a laminar boundary layer over a shallow cavity. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	4
109	Effect of nonlinearities on the frequency response of a round jet. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	1
108	Stability analysis for n-periodic arrays of fluid systems. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	11
107	River bedform inception by flow unsteadiness: A modal and nonmodal analysis. <i>Physical Review E</i> , 2016 , 93, 053110	2.4	6
106	Analysis of Flow Timescales on a Periodically Pitching/Surging Airfoil. <i>AIAA Journal</i> , 2016 , 54, 3421-3433	2.1	13
105	A Comprehensive Study of Adjoint-Based Optimization of Non-Linear Systems with Application to Burgers' Equation 2016 ,		1
104	Non-normality and nonlinearity in thermoacoustic instabilities. <i>International Journal of Spray and Combustion Dynamics</i> , 2016 , 8, 119-146	1.3	32
103	Parallel data-driven decomposition algorithm for large-scale datasets: with application to transitional boundary layers. <i>Theoretical and Computational Fluid Dynamics</i> , 2016 , 30, 415-428	2.3	34

102	Linear control of oscillator and amplifier flows*. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	12
101	Linear Closed-Loop Control of Fluid Instabilities and Noise-Induced Perturbations: A Review of Approaches and Tools1. <i>Applied Mechanics Reviews</i> , 2016 , 68,	8.6	30
100	Pressure wave generation from perturbed premixed flames. <i>Journal of Fluid Mechanics</i> , 2016 , 797, 231-246	3.7	4
99	On the mechanism of trailing vortex wandering. <i>Journal of Fluid Mechanics</i> , 2016 , 801,	3.7	44
98	Recursive dynamic mode decomposition of transient and post-transient wake flows. <i>Journal of Fluid Mechanics</i> , 2016 , 809, 843-872	3.7	93
97	Recovery of the inherent dynamics of noise-driven amplifier flows. <i>Journal of Fluid Mechanics</i> , 2016 , 797, 130-145	3.7	2
96	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
95	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
94	Analysis of pressure perturbation sources on a generic space launcher after-body in supersonic flow using zonal turbulence modeling and dynamic mode decomposition. <i>Physics of Fluids</i> , 2015 , 27, 016103	4.1	20
93	Parametrized data-driven decomposition for bifurcation analysis, with application to thermo-acoustically unstable systems. <i>Physics of Fluids</i> , 2015 , 27, 037102	4.4	33
92	Stability of a moving radial liquid sheet: experiments. <i>Journal of Fluid Mechanics</i> , 2015 , 770, 398-423	3.7	8
91	Modal and non-modal stability analysis of electrohydrodynamic flow with and without cross-flow. <i>Journal of Fluid Mechanics</i> , 2015 , 770, 319-349	3.7	33
90	Receptivity and sensitivity of the leading-edge boundary layer of a swept wing. <i>Journal of Fluid Mechanics</i> , 2015 , 775,	3.7	4
89	Nonlinear Model-order Reduction for Oscillator Flows Using POD-DEIM. <i>Procedia IUTAM</i> , 2015 , 14, 329-336		
88	Parametric resonance in unsteady watertable flow. <i>Journal of Fluid Mechanics</i> , 2015 , 768, 524-548	3.7	3
87	Experimental Investigation of Non-Normality of Thermoacoustic Interaction in an Electrically Heated Rijke Tube. <i>International Journal of Spray and Combustion Dynamics</i> , 2015 , 7, 315-352	1.3	11
86	Projection-free approximate balanced truncation of large unstable systems. <i>Physical Review E</i> , 2015 , 92, 023012	2.4	9
85	Sparsity-promoting dynamic mode decomposition. <i>Physics of Fluids</i> , 2014 , 26, 024103	4.4	384

84	Optimal mixing in two-dimensional plane Poiseuille flow at finite Péclet number. <i>Journal of Fluid Mechanics</i> , 2014 , 748, 241-277	3.7	47
83	Experimental control of natural perturbations in channel flow. <i>Journal of Fluid Mechanics</i> , 2014 , 752, 296-309	3.7	13
82	A global analysis of tonal noise in flows around aerofoils. <i>Journal of Fluid Mechanics</i> , 2014 , 754, 5-38	3.7	42
81	Thermoacoustic instability as a dynamical system and time domain analysis. <i>Journal of Fluid Mechanics</i> , 2014 , 753, 448-471	3.7	15
80	Analysis of Fluid Systems: Stability, Receptivity, Sensitivity. <i>Applied Mechanics Reviews</i> , 2014 , 66,	8.6	52
79	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
78	Reduced-order representation of near-wall structures in the late transitional boundary layer. <i>Journal of Fluid Mechanics</i> , 2014 , 748, 278-301	3.7	49
77	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
76	Hybrid Reduced-Order Integration with Proper Orthogonal Decomposition and Dynamic Mode Decomposition. <i>Multiscale Modeling and Simulation</i> , 2013 , 11, 522-544	1.8	15
75	Localization of flow structures using ℓ_1 -norm optimization. <i>Journal of Fluid Mechanics</i> , 2013 , 729, 672-701	3.7	17
74	Control of amplifier flows using subspace identification techniques. <i>Journal of Fluid Mechanics</i> , 2013 , 725, 522-565	3.7	21
73	The preferred mode of incompressible jets: linear frequency response analysis. <i>Journal of Fluid Mechanics</i> , 2013 , 716, 189-202	3.7	93
72	Adjoint algorithms for the Navier-Stokes equations in the low Mach number limit. <i>Journal of Computational Physics</i> , 2012 , 231, 1900-1916	4.1	36
71	A relaxation method for large eigenvalue problems, with an application to flow stability analysis. <i>Journal of Computational Physics</i> , 2012 , 231, 3912-3927	4.1	15
70	Analysis of unsteady behaviour in shockwave turbulent boundary layer interaction. <i>Journal of Fluid Mechanics</i> , 2012 , 700, 16-28	3.7	123
69	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
68	A physics-based approach to flow control using system identification. <i>Journal of Fluid Mechanics</i> , 2012 , 702, 26-58	3.7	57
67	Decomposition of time-resolved tomographic PIV. <i>Experiments in Fluids</i> , 2012 , 52, 1567-1579	2.5	94

66	Closed-loop control of unsteadiness over a rounded backward-facing step. <i>Journal of Fluid Mechanics</i> , 2012 , 703, 326-362	3.7	28
65	Matrix extraction technique for global stability of compressible flows and applications 2011 ,		1
64	Global linear stability of a model subsonic jet 2011 ,		1
63	Non-normality of thermoacoustic interactions: an experimental investigation 2011 ,		16
62	Linear stability of plane Poiseuille flow over a generalized Stokes layer. <i>Journal of Physics: Conference Series</i> , 2011 , 318, 022033	0.3	
61	Global stability of swept flow around a parabolic body: the neutral curve. <i>Journal of Fluid Mechanics</i> , 2011 , 678, 589-599	3.7	10
60	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
59	Algebraically diverging modes upstream of a swept bluff body. <i>Journal of Fluid Mechanics</i> , 2011 , 683, 346-356	3.7	3
58	Global stability of swept flow around a parabolic body: features of the global spectrum. <i>Journal of Fluid Mechanics</i> , 2011 , 669, 375-396	3.7	11
57	Application of the dynamic mode decomposition to experimental data. <i>Experiments in Fluids</i> , 2011 , 50, 1123-1130	2.5	174
56	Applications of the dynamic mode decomposition. <i>Theoretical and Computational Fluid Dynamics</i> , 2011 , 25, 249-259	2.3	278
55	Iterative optimization based on an objective functional in frequency-space with application to jet-noise cancellation. <i>Journal of Computational Physics</i> , 2011 , 230, 6075-6098	4.1	11
54	Dynamic mode decomposition of numerical and experimental data. <i>Journal of Fluid Mechanics</i> , 2010 , 656, 5-28	3.7	2123
53	Role of Transient Growth in Subcritical Transition to Thermoacoustic Instability in a Horizontal Rijke Tube 2010 ,		2
52	Algebraically decaying modes and wave packet pseudo-modes in swept Hiemenz flow. <i>Journal of Fluid Mechanics</i> , 2010 , 643, 309-332	3.7	11
51	A preconditioned Krylov technique for global hydrodynamic stability analysis of large-scale compressible flows. <i>Journal of Computational Physics</i> , 2010 , 229, 541-560	4.1	42
50	Direct numerical study of hypersonic flow about a swept parabolic body. <i>Computers and Fluids</i> , 2010 , 39, 1932-1943	2.8	9
49	Wave packet pseudomodes upstream of a swept cylinder. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 295-300	0.3	1

48	The description of fluid behavior by coherent structures. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 51-58	0.3	2
47	Closed-Loop Control of an Unstable Open Cavity. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2010 , 275-289	0.3	
46	Global Stability Analysis of Compressible Flow around Swept Wings. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2010 , 249-256	0.3	
45	Global stability of a jet in crossflow. <i>Journal of Fluid Mechanics</i> , 2009 , 624, 33-44	3.7	148
44	Twisted absolute instability in lifted flames. <i>Physics of Fluids</i> , 2009 , 21, 015110	4.4	5
43	The bifurcation structure of viscous steady axisymmetric vortex breakdown with open lateral boundaries. <i>Physics of Fluids</i> , 2009 , 21, 074107	4.4	9
42	Exponential time integration using Krylov subspaces. <i>International Journal for Numerical Methods in Fluids</i> , 2009 , 60, 591-609	1.9	24
41	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
40	Global linear stability of the non-parallel Batchelor vortex. <i>Journal of Fluid Mechanics</i> , 2009 , 629, 139-160	3.7	22
39	Numerical Simulation of Supersonic Jet Noise. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2009 , 29-46	0.3	5
38	Bifurcation Structure of Viscous Vortex Breakdown 2008 ,		2
37	Secondary Global Modes of Variable-Density Jets 2008 ,		1
36	The effect of a lifted flame on the stability of round fuel jets. <i>Journal of Fluid Mechanics</i> , 2008 , 609, 275-284	3.7	17
35	Spatial optimal disturbances in swept attachment-line boundary layers. <i>Journal of Fluid Mechanics</i> , 2008 , 603, 179-188	3.7	10
34	Global stability of swept flow around a parabolic body: connecting attachment-line and crossflow modes. <i>Journal of Fluid Mechanics</i> , 2008 , 611, 205-214	3.7	28
33	Self-sustained oscillations in variable-density round jets. <i>Journal of Fluid Mechanics</i> , 2007 , 582, 341-376	3.7	48
32	Optimal disturbances in swept Hiemenz flow. <i>Journal of Fluid Mechanics</i> , 2007 , 578, 223-232	3.7	10
31	Nonmodal Stability Theory. <i>Annual Review of Fluid Mechanics</i> , 2007 , 39, 129-162	2.2	569

30	Transition and Transition Control in a Square Cavity 2007 , 562-569		1
29	Secondary instability in variable-density round jets 2007 , 32-34		1
28	Optimal energy growth and optimal control in swept Hiemenz flow. <i>Journal of Fluid Mechanics</i> , 2006 , 566, 11	3.7	29
27	Experimental evidence of transient growth of energy before airfoil flutter. <i>Journal of Fluids and Structures</i> , 2006 , 22, 391-400	3.1	22
26	A FRAMEWORK FOR CONTROL OF FLUID FLOW. <i>Lecture Notes Series, Institute for Mathematical Sciences</i> , 2005 , 141-165	0.1	
25	Three-dimensional stability of a Burgers vortex. <i>Journal of Fluid Mechanics</i> , 2004 , 500, 103-112	3.7	19
24	A general framework for stability, receptivity, and optimal control 2004 , 13-24		
23	On the linear stability of swept attachment-line boundary layer flow. Part 1. Spectrum and asymptotic behaviour. <i>Journal of Fluid Mechanics</i> , 2003 , 493, 1-29	3.7	21
22	On the linear stability of swept attachment-line boundary layer flow. Part 2. Non-modal effects and receptivity. <i>Journal of Fluid Mechanics</i> , 2003 , 493, 31-58	3.7	26
21	Transient Growth in Exactly Counter-Rotating Couette-Taylor Flow. <i>Theoretical and Computational Fluid Dynamics</i> , 2002 , 16, 43-48	2.3	4
20	Transient Growth Before Coupled-Mode Flutter 2002 , 1055		
19	Transient growth in Taylor-Couette flow. <i>Physics of Fluids</i> , 2002 , 14, 3475-3484	4.4	23
18	On the stability of a falling liquid curtain. <i>Journal of Fluid Mechanics</i> , 2002 , 463, 163-171	3.7	39
17	Stability and Transition in Shear Flows. <i>Applied Mathematical Sciences (Switzerland)</i> , 2001 ,	0.9	1236
16	Linear stability theory and bypass transition in shear flows. <i>Physics of Plasmas</i> , 2000 , 7, 1788-1794	2.1	33
15	Longitudinal threshold changes in older men with audiometric notches. <i>Hearing Research</i> , 2000 , 141, 220-8	3.9	150
14	Spectra and pseudospectra for pipe Poiseuille flow. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1999 , 175, 413-420	5.7	20
13	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

12	Transient growth in compressible boundary layer flow. <i>Physics of Fluids</i> , 1996 , 8, 826-837	4.4	166
11	The Importance of Eigenvectors for Local Preconditioners of the Euler Equations. <i>Journal of Computational Physics</i> , 1996 , 127, 346-362	4.1	42
10	A note on measures of disturbance size for spatially evolving flows. <i>Physics of Fluids</i> , 1994 , 6, 2862-2864	4.4	6
9	Optimal energy density growth in Hagen-Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 1994 , 277, 197-225	3.7	173
8	Transient and asymptotic stability of granular shear flow. <i>Journal of Fluid Mechanics</i> , 1994 , 264, 255-275	3.7	57
7	The pseudospectrum of the resistive magnetohydrodynamics operator: Resolving the resistive Alfvén paradox. <i>Physics of Plasmas</i> , 1994 , 1, 3151-3160	2.1	24
6	Pseudospectra of the Orr-Sommerfeld Operator. <i>SIAM Journal on Applied Mathematics</i> , 1993 , 53, 15-47	1.8	288
5	A study of eigenvalue sensitivity for hydrodynamic stability operators. <i>Theoretical and Computational Fluid Dynamics</i> , 1993 , 4, 227-240	2.3	25
4	Vector Eigenfunction Expansions for Plane Channel Flows. <i>Studies in Applied Mathematics</i> , 1992 , 87, 15-43	2.1	22
3	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
2	On the collision of rigid spheres in a weakly compressible fluid. <i>Physics of Fluids A, Fluid Dynamics</i> , 1992 , 4, 2683-2689		8
1	Unravelling the large-scale circulation modes in turbulent Rayleigh-Bénard convection. <i>Europhysics Letters</i> ,	1.6	1