

# Peter J Schmid

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/3476499/peter-j-schmid-publications-by-citations.pdf>  
**Version:** 2024-04-10

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.  
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 of numerical and experimental data. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 656, 5-28	3.7	2123
136	Stability and Transition in Shear Flows. <i>Applied Mathematical Sciences (Switzerland)</i> , <b>2001</b> ,	0.9	1236
135	Nonmodal Stability Theory. <i>Annual Review of Fluid Mechanics</i> , <b>2007</b> , 39, 129-162	2.2	569
134	Sparsity-promoting dynamic mode decomposition. <i>Physics of Fluids</i> , <b>2014</b> , 26, 024103	4.4	384
133	Pseudospectra of the Orr-Sommerfeld Operator. <i>SIAM Journal on Applied Mathematics</i> , <b>1993</b> , 53, 15-47	1.8	288
132	Applications of the dynamic mode decomposition. <i>Theoretical and Computational Fluid Dynamics</i> , <b>2011</b> , 25, 249-259	2.3	278
131	On stability of streamwise streaks and transition thresholds in plane channel flows. <i>Journal of Fluid Mechanics</i> , <b>1998</b> , 365, 269-303	3.7	182
130	Application of the dynamic mode decomposition to experimental data. <i>Experiments in Fluids</i> , <b>2011</b> , 50, 1123-1130	2.5	174
129	Optimal energy density growth in Hagen-Poiseuille flow. <i>Journal of Fluid Mechanics</i> , <b>1994</b> , 277, 197-225	3.7	173
128	Transient growth in compressible boundary layer flow. <i>Physics of Fluids</i> , <b>1996</b> , 8, 826-837	4.4	166
127	Longitudinal threshold changes in older men with audiometric notches. <i>Hearing Research</i> , <b>2000</b> , 141, 220-8	3.9	150
126	Global stability of a jet in crossflow. <i>Journal of Fluid Mechanics</i> , <b>2009</b> , 624, 33-44	3.7	148
125	Closed-loop control of an open cavity flow using reduced-order models. <i>Journal of Fluid Mechanics</i> , <b>2009</b> , 641, 1-50	3.7	143
124	Analysis of unsteady behaviour in shockwave turbulent boundary layer interaction. <i>Journal of Fluid Mechanics</i> , <b>2012</b> , 700, 16-28	3.7	123
123	A new mechanism for rapid transition involving a pair of oblique waves. <i>Physics of Fluids A, Fluid Dynamics</i> , <b>1992</b> , 4, 1986-1989		99
122	Decomposition of time-resolved tomographic PIV. <i>Experiments in Fluids</i> , <b>2012</b> , 52, 1567-1579	2.5	94
121	The preferred mode of incompressible jets: linear frequency response analysis. <i>Journal of Fluid Mechanics</i> , <b>2013</b> , 716, 189-202	3.7	93

120	Recursive dynamic mode decomposition of transient and post-transient wake flows. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 809, 843-872	3.7	93
119	A physics-based approach to flow control using system identification. <i>Journal of Fluid Mechanics</i> , <b>2012</b> , 702, 26-58	3.7	57
118	Transient and asymptotic stability of granular shear flow. <i>Journal of Fluid Mechanics</i> , <b>1994</b> , 264, 255-275	3.7	57
117	Analysis of Fluid Systems: Stability, Receptivity, Sensitivity. <i>Applied Mechanics Reviews</i> , <b>2014</b> , 66,	8.6	52
116	Reduced-order representation of near-wall structures in the late transitional boundary layer. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 748, 278-301	3.7	49
115	Self-sustained oscillations in variable-density round jets. <i>Journal of Fluid Mechanics</i> , <b>2007</b> , 582, 341-376	3.7	48
114	Optimal mixing in two-dimensional plane Poiseuille flow at finite Péclet number. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 748, 241-277	3.7	47
113	On the mechanism of trailing vortex wandering. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 801,	3.7	44
112	A global analysis of tonal noise in flows around aerofoils. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 754, 5-38	3.7	42
111	A data-assimilation method for Reynolds-averaged Navier-Stokes-driven mean flow reconstruction. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 759, 404-431	3.7	42
110	A preconditioned Krylov technique for global hydrodynamic stability analysis of large-scale compressible flows. <i>Journal of Computational Physics</i> , <b>2010</b> , 229, 541-560	4.1	42
109	The Importance of Eigenvectors for Local Preconditioners of the Euler Equations. <i>Journal of Computational Physics</i> , <b>1996</b> , 127, 346-362	4.1	42
108	On the stability of a falling liquid curtain. <i>Journal of Fluid Mechanics</i> , <b>2002</b> , 463, 163-171	3.7	39
107	Adjoint algorithms for the Navier-Stokes equations in the low Mach number limit. <i>Journal of Computational Physics</i> , <b>2012</b> , 231, 1900-1916	4.1	36
106	Parallel data-driven decomposition algorithm for large-scale datasets: with application to transitional boundary layers. <i>Theoretical and Computational Fluid Dynamics</i> , <b>2016</b> , 30, 415-428	2.3	34
105	Parametrized data-driven decomposition for bifurcation analysis, with application to thermo-acoustically unstable systems. <i>Physics of Fluids</i> , <b>2015</b> , 27, 037102	4.4	33
104	Modal and non-modal stability analysis of electrohydrodynamic flow with and without cross-flow. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 770, 319-349	3.7	33
103	Linear stability theory and bypass transition in shear flows. <i>Physics of Plasmas</i> , <b>2000</b> , 7, 1788-1794	2.1	33

102	Non-normality and nonlinearity in thermoacoustic instabilities. <i>International Journal of Spray and Combustion Dynamics</i> , <b>2016</b> , 8, 119-146	1.3	32
101	Efficient evaluation of the direct and adjoint linearized dynamics from compressible flow solvers. <i>Journal of Computational Physics</i> , <b>2012</b> , 231, 7739-7755	4.1	30
100	Linear Closed-Loop Control of Fluid Instabilities and Noise-Induced Perturbations: A Review of Approaches and Tools1. <i>Applied Mechanics Reviews</i> , <b>2016</b> , 68,	8.6	30
99	Optimal energy growth and optimal control in swept Hiemenz flow. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 566, 11	3.7	29
98	Input-Output measures for model reduction and closed-loop control: application to global modes. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 685, 23-53	3.7	28
97	Closed-loop control of unsteadiness over a rounded backward-facing step. <i>Journal of Fluid Mechanics</i> , <b>2012</b> , 703, 326-362	3.7	28
96	Global stability of swept flow around a parabolic body: connecting attachment-line and crossflow modes. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 611, 205-214	3.7	28
95	Prograde, retrograde, and oscillatory modes in rotating Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , <b>2017</b> , 831, 182-211	3.7	26
94	On the linear stability of swept attachment-line boundary layer flow. Part 2. Non-modal effects and receptivity. <i>Journal of Fluid Mechanics</i> , <b>2003</b> , 493, 31-58	3.7	26
93	Data assimilation of mean velocity from 2D PIV measurements of flow over an idealized airfoil. <i>Experiments in Fluids</i> , <b>2017</b> , 58, 1	2.5	25
92	A study of eigenvalue sensitivity for hydrodynamic stability operators. <i>Theoretical and Computational Fluid Dynamics</i> , <b>1993</b> , 4, 227-240	2.3	25
91	Exponential time integration using Krylov subspaces. <i>International Journal for Numerical Methods in Fluids</i> , <b>2009</b> , 60, 591-609	1.9	24
90	The pseudospectrum of the resistive magnetohydrodynamics operator: Resolving the resistive Alfvén paradox. <i>Physics of Plasmas</i> , <b>1994</b> , 1, 3151-3160	2.1	24
89	Transient growth in Taylor-Couette flow. <i>Physics of Fluids</i> , <b>2002</b> , 14, 3475-3484	4.4	23
88	A conditional space-time POD formalism for intermittent and rare events: example of acoustic bursts in turbulent jets. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 867,	3.7	22
87	Global linear stability of the non-parallel Batchelor vortex. <i>Journal of Fluid Mechanics</i> , <b>2009</b> , 629, 139-160	3.7	22
86	Experimental evidence of transient growth of energy before airfoil flutter. <i>Journal of Fluids and Structures</i> , <b>2006</b> , 22, 391-400	3.1	22
85	Vector Eigenfunction Expansions for Plane Channel Flows. <i>Studies in Applied Mathematics</i> , <b>1992</b> , 87, 15-43	4.1	22

84	Control of amplifier flows using subspace identification techniques. <i>Journal of Fluid Mechanics</i> , <b>2013</b> , 725, 522-565	3.7	21
83	On the linear stability of swept attachment-line boundary layer flow. Part 1. Spectrum and asymptotic behaviour. <i>Journal of Fluid Mechanics</i> , <b>2003</b> , 493, 1-29	3.7	21
82	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> , <b>2015</b> , 27, 016103	4.1	20
81	Spectra and pseudospectra for pipe Poiseuille flow. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>1999</b> , 175, 413-420	5.7	20
80	Three-dimensional stability of a Burgers vortex. <i>Journal of Fluid Mechanics</i> , <b>2004</b> , 500, 103-112	3.7	19
79	Dynamic Mode Decomposition and Its Variants. <i>Annual Review of Fluid Mechanics</i> , <b>2022</b> , 54,	2.2	18
78	A parallel stability analysis of a trailing vortex wake. <i>Journal of Fluid Mechanics</i> , <b>2018</b> , 837, 858-895	3.7	17
77	Localization of flow structures using $\ell_1$ -norm optimization. <i>Journal of Fluid Mechanics</i> , <b>2013</b> , 729, 672-701	3.7	17
76	The effect of a lifted flame on the stability of round fuel jets. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 609, 275-384	3.7	17
75	A dynamic observer to capture and control perturbation energy in noise amplifiers. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 758, 728-753	3.7	16
74	Non-normality of thermoacoustic interactions: an experimental investigation <b>2011</b> ,		16
73	Thermoacoustic instability as a dynamical system and time domain analysis. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 753, 448-471	3.7	15
72	A relaxation method for large eigenvalue problems, with an application to flow stability analysis. <i>Journal of Computational Physics</i> , <b>2012</b> , 231, 3912-3927	4.1	15
71	Hybrid Reduced-Order Integration with Proper Orthogonal Decomposition and Dynamic Mode Decomposition. <i>Multiscale Modeling and Simulation</i> , <b>2013</b> , 11, 522-544	1.8	15
70	Analysis of Flow Timescales on a Periodically Pitching/Surging Airfoil. <i>AIAA Journal</i> , <b>2016</b> , 54, 3421-3433	2.1	13
69	Experimental control of natural perturbations in channel flow. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 752, 296-309	3.7	13
68	Optimising the acoustic damping of multiple Helmholtz resonators attached to a thin annular duct. <i>Journal of Sound and Vibration</i> , <b>2019</b> , 444, 69-84	3.9	13
67	Linear control of oscillator and amplifier flows*. <i>Physical Review Fluids</i> , <b>2016</b> , 1,	2.8	12

66	Experimental Investigation of Non-Normality of Thermoacoustic Interaction in an Electrically Heated Rijke Tube. <i>International Journal of Spray and Combustion Dynamics</i> , <b>2015</b> , 7, 315-352	1.3	11
65	Global stability of swept flow around a parabolic body: features of the global spectrum. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 669, 375-396	3.7	11
64	Iterative optimization based on an objective functional in frequency-space with application to jet-noise cancellation. <i>Journal of Computational Physics</i> , <b>2011</b> , 230, 6075-6098	4.1	11
63	Algebraically decaying modes and wave packet pseudo-modes in swept Hiemenz flow. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 643, 309-332	3.7	11
62	Stability analysis for n-periodic arrays of fluid systems. <i>Physical Review Fluids</i> , <b>2017</b> , 2,	2.8	11
61	Linear and nonlinear dynamics of pulsatile channel flow. <i>Journal of Fluid Mechanics</i> , <b>2017</b> , 815, 435-480	3.7	10
60	Thermoacoustic interplay between intrinsic thermoacoustic and acoustic modes: non-normality and high sensitivities. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 878, 190-220	3.7	10
59	Global stability of swept flow around a parabolic body: the neutral curve. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 678, 589-599	3.7	10
58	Spatial optimal disturbances in swept attachment-line boundary layers. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 603, 179-188	3.7	10
57	Optimal disturbances in swept Hiemenz flow. <i>Journal of Fluid Mechanics</i> , <b>2007</b> , 578, 223-232	3.7	10
56	Projection-free approximate balanced truncation of large unstable systems. <i>Physical Review E</i> , <b>2015</b> , 92, 023012	2.4	9
55	The bifurcation structure of viscous steady axisymmetric vortex breakdown with open lateral boundaries. <i>Physics of Fluids</i> , <b>2009</b> , 21, 074107	4.4	9
54	Direct numerical study of hypersonic flow about a swept parabolic body. <i>Computers and Fluids</i> , <b>2010</b> , 39, 1932-1943	2.8	9
53	Stability of a moving radial liquid sheet: experiments. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 770, 398-423	3.7	8
52	On the collision of rigid spheres in a weakly compressible fluid. <i>Physics of Fluids A, Fluid Dynamics</i> , <b>1992</b> , 4, 2683-2689		8
51	Nonlinear model-order reduction for compressible flow solvers using the Discrete Empirical Interpolation Method. <i>Journal of Computational Physics</i> , <b>2016</b> , 324, 194-209	4.1	8
50	Mixing enhancement in binary fluids using optimised stirring strategies. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 899,	3.7	7
49	On the receptivity of aerofoil tonal noise: an adjoint analysis. <i>Journal of Fluid Mechanics</i> , <b>2017</b> , 812, 771-791	3.7	6

48	Nonlinear model reduction: A comparison between POD-Galerkin and POD-DEIM methods. <i>Computers and Fluids</i> , <b>2020</b> , 208, 104628	2.8	6
47	River bedform inception by flow unsteadiness: A modal and nonmodal analysis. <i>Physical Review E</i> , <b>2016</b> , 93, 053110	2.4	6
46	A note on measures of disturbance size for spatially evolving flows. <i>Physics of Fluids</i> , <b>1994</b> , 6, 2862-2864	4.4	6
45	Adjoint-based parametric sensitivity analysis for swirling M-flames. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 859, 516-542	3.7	6
44	A gradient-based framework for maximizing mixing in binary fluids. <i>Journal of Computational Physics</i> , <b>2018</b> , 368, 131-153	4.1	5
43	Twisted absolute instability in lifted flames. <i>Physics of Fluids</i> , <b>2009</b> , 21, 015110	4.4	5
42	Numerical Simulation of Supersonic Jet Noise. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , <b>2009</b> , 29-46	0.3	5
41	Active attenuation of a trailing vortex inspired by a parabolized stability analysis. <i>Journal of Fluid Mechanics</i> , <b>2018</b> , 855,	3.7	5
40	Linearised dynamics and non-modal instability analysis of an impinging under-expanded supersonic jet. <i>Journal of Physics: Conference Series</i> , <b>2018</b> , 1001, 012019	0.3	4
39	Receptivity and sensitivity of the leading-edge boundary layer of a swept wing. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 775,	3.7	4
38	Transient Growth in Exactly Counter-Rotating Couette-Taylor Flow. <i>Theoretical and Computational Fluid Dynamics</i> , <b>2002</b> , 16, 43-48	2.3	4
37	Frequency selection mechanisms in the flow of a laminar boundary layer over a shallow cavity. <i>Physical Review Fluids</i> , <b>2017</b> , 2,	2.8	4
36	Pressure wave generation from perturbed premixed flames. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 797, 231-246	3.9	4
35	Optimal frequency-response sensitivity of compressible flow over roughness elements*View all notes. <i>Journal of Turbulence</i> , <b>2017</b> , 18, 338-351	2.1	3
34	Shape optimization of stirring rods for mixing binary fluids. <i>IMA Journal of Applied Mathematics</i> , <b>2020</b> , 85, 762-789	1	3
33	Parametric resonance in unsteady water table flow. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 768, 524-548	3.7	3
32	Algebraically diverging modes upstream of a swept bluff body. <i>Journal of Fluid Mechanics</i> , <b>2011</b> , 683, 346-356	3.7	3
31	Control of instability by injection rate oscillations in a radial Hele-Shaw cell. <i>Physical Review Fluids</i> , <b>2020</b> , 5,	2.8	3

30	Uncertainty propagation in model extraction by system identification and its implication for control design. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 791, 214-236	3.7	3
29	Mean and Unsteady Flow Reconstruction Using Data-Assimilation and Resolvent Analysis. <i>AIAA Journal</i> , <b>2020</b> , 58, 575-588	2.1	3
28	Analysis of degenerate mechanisms triggering finite-amplitude thermo-acoustic oscillations in annular combustors. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 881, 384-419	3.7	2
27	Role of Transient Growth in Subcritical Transition to Thermoacoustic Instability in a Horizontal Rijke Tube <b>2010</b> ,		2
26	Bifurcation Structure of Viscous Vortex Breakdown <b>2008</b> ,		2
25	The description of fluid behavior by coherent structures. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2010</b> , 51-58	0.3	2
24	Recovery of the inherent dynamics of noise-driven amplifier flows. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 797, 130-145	3.7	2
23	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> , <b>2017</b> , 375,	3	1
22	A Comprehensive Study of Adjoint-Based Optimization of Non-Linear Systems with Application to Burgers' Equation <b>2016</b> ,		1
21	Matrix extraction technique for global stability of compressible flows and applications <b>2011</b> ,		1
20	Global linear stability of a model subsonic jet <b>2011</b> ,		1
19	Secondary Global Modes of Variable-Density Jets <b>2008</b> ,		1
18	Effect of nonlinearities on the frequency response of a round jet. <i>Physical Review Fluids</i> , <b>2017</b> , 2,	2.8	1
17	Unravelling the large-scale circulation modes in turbulent Rayleigh-Bénard convection. <i>Europhysics Letters</i> ,	1.6	1
16	Transition and Transition Control in a Square Cavity <b>2007</b> , 562-569		1
15	Secondary instability in variable-density round jets <b>2007</b> , 32-34		1
14	Wave packet pseudomodes upstream of a swept cylinder. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2010</b> , 295-300	0.3	1
13	Using adjoint-based optimization to enhance ignition in non-premixed jets. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2021</b> , 477, 20200472	2.4	1



12	Frequency response analysis of a (non-)reactive jet in crossflow. <i>Journal of Fluid Mechanics</i> , <b>2021</b> , 922,	3.7	1
11	Data-driven and operator-based tools for the analysis of turbulent flows <b>2021</b> , 243-305		1
10	A parallel-in-time approach for accelerating direct-adjoint studies. <i>Journal of Computational Physics</i> , <b>2021</b> , 429, 110033	4.1	0
9	Nonlinear Model-order Reduction for Oscillator Flows Using POD-DEIM. <i>Procedia IUTAM</i> , <b>2015</b> , 14, 329-336		
8	Linear stability of plane Poiseuille flow over a generalized Stokes layer. <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 318, 022033	0.3	
7	A FRAMEWORK FOR CONTROL OF FLUID FLOW. <i>Lecture Notes Series, Institute for Mathematical Sciences</i> , <b>2005</b> , 141-165	0.1	
6	Transient Growth Before Coupled-Mode Flutter <b>2002</b> , 1055		
5	A general framework for stability, receptivity, and optimal control <b>2004</b> , 13-24		
4	Closed-Loop Control of an Unstable Open Cavity. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , <b>2010</b> , 275-289	0.3	
3	Global Stability Analysis of Compressible Flow around Swept Wings. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , <b>2010</b> , 249-256	0.3	
2	Experimental Attenuation of a Trailing Vortex Inspired by Stability Analysis. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2022</b> , 313-323	0.3	
1	Sensitivity of Reacting Hypersonic Boundary Layers to n-periodic Surface Roughness. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2022</b> , 599-612	0.3	