Tamer A Zaki

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3343568/publications.pdf

Version: 2024-02-01

94	2,894	172386	189801
papers	citations	29 h-index	50 g-index

94	94	94	1247
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Lagrangian relaxation towards equilibrium wall model for large eddy simulation. Journal of Fluid Mechanics, 2022, 934, .	1.4	12
2	Origin of enhanced skin friction at the onset of boundary-layer transition. Journal of Fluid Mechanics, 2022, 941, .	1.4	4
3	What is observable from wall data in turbulent channel flow?. Journal of Fluid Mechanics, 2022, 941, .	1.4	12
4	Spatiotemporal characterization of turbulent channel flow with a hyperelastic compliant wall. Journal of Fluid Mechanics, 2022, 942, .	1.4	6
5	Synchronization of turbulence in channel flow. Journal of Fluid Mechanics, 2022, 943, .	1.4	9
6	Concave-wall turbulent boundary layers without and with free-stream turbulence. Journal of Fluid Mechanics, 2021, 915, .	1.4	2
7	Two-point stressâ€“strain-rate correlation structure and non-local eddy viscosity in turbulent flows. Journal of Fluid Mechanics, 2021, 914, .	1.4	28
8	State estimation in turbulent channel flow from limited observations. Journal of Fluid Mechanics, 2021, 917, .	1.4	25
9	Optimal heat flux for delaying transition to turbulence in a high-speed boundary layer. Journal of Fluid Mechanics, 2021, 916, .	1.4	10
10	Observation-infused simulations of high-speed boundary-layer transition. Journal of Fluid Mechanics, 2021, 916, .	1.4	12
11	The dynamics of settling particles in vertical channel flows: gravity, lift and particle clusters. Journal of Fluid Mechanics, 2021, 918, .	1.4	6
12	DeepM&Mnet: Inferring the electroconvection multiphysics fields based on operator approximation by neural networks. Journal of Computational Physics, 2021, 436, 110296.	1.9	92
13	Large eddy simulation of transitional channel flow using a machine learning classifier to distinguish laminar and turbulent regions. Physical Review Fluids, 2021, 6, .	1.0	4
14	Spectral Universality of Elastoinertial Turbulence. Physical Review Letters, 2021, 127, 074501.	2.9	21
15	DeepM&Mnet for hypersonics: Predicting the coupled flow and finite-rate chemistry behind a normal shock using neural-network approximation of operators. Journal of Computational Physics, 2021, 447, 110698.	1.9	55
16	Ensemble-variational assimilation of statistical data in large-eddy simulation. Physical Review Fluids, 2021, 6, .	1.0	15
17	From limited observations to the state of turbulence: Fundamental difficulties of flow reconstruction. Physical Review Fluids, 2021, 6, .	1.0	12
18	Evolutional deep neural network. Physical Review E, 2021, 104, 045303.	0.8	19

#	Article	IF	Citations
19	Viscoelasticity and the dynamics of concentrated particle suspension in channel flow. Journal of Fluid Mechanics, 2020, 901, .	1.4	6
20	Stochastic Lagrangian dynamics of vorticity. Part 1. General theory for viscous, incompressible fluids. Journal of Fluid Mechanics, 2020, 901, .	1.4	14
21	Stochastic Lagrangian dynamics of vorticity. Part 2. Application to near-wall channel-flow turbulence. Journal of Fluid Mechanics, 2020, 901, .	1.4	10
22	High-Reynolds-number fractal signature of nascent turbulence during transition. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3461-3468.	3.3	8
23	Turbulent Heat-Transfer Enhancement in Boundary Layers Exposed to Free-Stream Turbulence. Flow, Turbulence and Combustion, 2020, 104, 381-402.	1.4	4
24	Data compression for turbulence databases using spatiotemporal subsampling and local resimulation. Physical Review Fluids, 2020, 5, .	1.0	3
25	Kriging-enhanced ensemble variational data assimilation for scalar-source identification in turbulent environments. Journal of Computational Physics, 2019, 398, 108856.	1.9	23
26	Nonlinearly most dangerous disturbance for high-speed boundary-layer transition. Journal of Fluid Mechanics, 2019, 876, 87-121.	1.4	19
27	Dilute suspension of neutrally buoyant particles in viscoelastic turbulent channel flow. Journal of Fluid Mechanics, 2019, 875, 286-320.	1.4	7
28	Discrete adjoint of fractional-step incompressible Navier-Stokes solver in curvilinear coordinates and application to data assimilation. Journal of Computational Physics, 2019, 396, 427-450.	1.9	27
29	Spatial reconstruction of steady scalar sources from remote measurements in turbulent flow. Journal of Fluid Mechanics, 2019, 870, 316-352.	1.4	23
30	Low-frequency selectivity in flat-plate boundaryÂlayer with elliptic leading edge. Journal of Fluid Mechanics, 2019, 866, 239-262.	1.4	12
31	Conditional statistics and flow structures in turbulent boundary layers buffeted by free-stream disturbances. Journal of Fluid Mechanics, 2019, 866, 526-566.	1.4	21
32	The mean conformation tensor in viscoelastic turbulence. Journal of Fluid Mechanics, 2019, 865, 363-380.	1.4	9
33	Perturbative expansions of the conformation tensor in viscoelastic flows. Journal of Fluid Mechanics, 2019, 858, 377-406.	1.4	15
34	Sensitivity of high-speed boundary-layer stability to base-flow distortion. Journal of Fluid Mechanics, 2019, 859, 476-515.	1.4	15
35	Turbulence in intermittent transitional boundary layers and in turbulence spots. Journal of Fluid Mechanics, 2019, 860, 350-383.	1.4	33
36	Application of a self-organizing map to identify the turbulent-boundary-layer interface in a transitional flow. Physical Review Fluids, 2019, 4, .	1.0	27

#	Article	IF	Citations
37	Simulations of rib-roughened rough-to-smooth turbulent channel flows. Journal of Fluid Mechanics, 2018, 843, 419-449.	1.4	30
38	Geometric decomposition of the conformation tensor in viscoelastic turbulence. Journal of Fluid Mechanics, 2018, 842, 395-427.	1.4	31
39	â€œPhase diagramâ€•for viscoelastic Poiseuille flow over a wavy surface. Physics of Fluids, 2018, 30, .	1.6	12
40	The effect of cube-roughened walls on the response of rough-to-smooth (RTS) turbulent channel flows. International Journal of Heat and Fluid Flow, 2018, 72, 174-185.	1.1	12
41	Detection algorithm for turbulent interfaces and large-scale structures in intermittent flows. Computers and Fluids, 2018, 175, 142-158.	1.3	14
42	Instability waves and transition in adverse-pressure-gradient boundary layers. Physical Review Fluids, 2018, 3, .	1.0	5
43	Inertioelastic Poiseuille flow over a wavy surface. Physical Review Fluids, 2018, 3, .	1.0	9
44	Signature of large-scale motions on turbulent/non-turbulent interface in boundaryÂlayers. Journal of Fluid Mechanics, 2017, 819, 165-187.	1.4	61
45	Simulations of natural transition in viscoelasticÂchannel flow. Journal of Fluid Mechanics, 2017, 820, 232-262.	1.4	35
46	Transition induced by linear and nonlinear perturbation growth in flow past a compressor blade. Journal of Fluid Mechanics, 2017, 820, 604-632.	1.4	12
47	Streak instability in viscoelastic Couette flow. Physical Review Fluids, 2017, 2, .	1.0	20
48	Viscoelastic shear flow over a wavy surface. Journal of Fluid Mechanics, 2016, 801, 392-429.	1.4	13
49	Innerâ€“outer interactions of large-scale structures in turbulent channel flow. Journal of Fluid Mechanics, 2016, 790, 128-157.	1.4	79
50	Wavy Taylor vortices in molecular dynamics simulation of cylindrical Couette flow. Physical Review E, 2016, 93, 043107.	0.8	4
51	Reconstruction of Scalar Source Intensity Based on Sensor Signal in Turbulent Channel Flow. Flow, Turbulence and Combustion, 2016, 97, 1211-1233.	1.4	10
52	Data-enabled prediction of streak breakdown in pressure-gradient boundary layers. Journal of Fluid Mechanics, 2016, 801, 43-64.	1.4	15
53	Disturbance amplification in boundary layers over thin wall films. Physics of Fluids, 2016, 28, .	1.6	1
54	The dynamics of spanwise vorticity perturbations in homogeneous viscoelastic shearÂflow. Journal of Fluid Mechanics, 2015, 777, 327-363.	1.4	31

#	Article	IF	Citations
55	Modal and non-modal stability of boundary layers forced by spanwise wall oscillations. Journal of Fluid Mechanics, 2015, 778, 389-427.	1.4	27
56	Bypass Transition in Three-dimensional Time-dependent Boundary Layers. Procedia IUTAM, 2015, 14, 274-281.	1.2	0
57	Effect of Reynolds Number on Turbulent Drag Reduction by Superhydrophobic Surface Textures. Flow, Turbulence and Combustion, 2015, 95, 277-300.	1.4	41
58	Stability analysis of separated flows subject to control by zero-net-mass-flux jet. Physics of Fluids, 2015, 27, .	1.6	36
59	Absolute/convective instability of planar viscoelastic jets. Physics of Fluids, 2015, 27, .	1.6	17
60	The effect of a low-viscosity near-wall film on bypass transition in boundary layers. Journal of Fluid Mechanics, 2015, 772, 330-360.	1.4	6
61	A localized momentum constraint for non-equilibrium molecular dynamics simulations. Journal of Chemical Physics, 2015, 142, 074110.	1.2	7
62	Linear and nonlinear evolution of a localized disturbance in polymeric channel flow. Journal of Fluid Mechanics, 2014, 760, 278-303.	1.4	30
63	The method of planes pressure tensor for a spherical subvolume. Journal of Chemical Physics, 2014, 140, 054506.	1.2	14
64	Absolute instability in viscoelastic mixing layers. Physics of Fluids, 2014, 26, 014103.	1.6	22
65	Turbulence and skin friction modification in channel flow with streamwise-aligned superhydrophobic surface texture. Physics of Fluids, 2014, 26, .	1.6	90
66	An exact representation of the nonlinear triad interaction terms in spectral space. Journal of Fluid Mechanics, 2014, 748, 175-188.	1.4	10
67	The influence of harmonic wall motion on transitional boundary layers. Journal of Fluid Mechanics, 2014, 760, 63-94.	1.4	19
68	Streak instabilities in boundary layers beneath free-stream turbulence. Journal of Fluid Mechanics, 2014, 741, 280-315.	1.4	94
69	Turbulent thermal boundary layers with temperature-dependent viscosity. International Journal of Heat and Fluid Flow, 2014, 49, 43-52.	1.1	15
70	The Effect of wake Turbulence Intensity on Transition in a Compressor Cascade. Flow, Turbulence and Combustion, 2014, 93, 555-576.	1.4	17
71	Streak evolution in viscoelastic Couette flow. Journal of Fluid Mechanics, 2014, 742, 520-551.	1.4	34
72	Linear stability analysis of channel flow of viscoelastic Oldroyd-B and FENE-P fluids. Journal of Fluid Mechanics, 2013, 737, 249-279.	1.4	67

#	Article	IF	Citations
73	From Streaks to Spots and on to Turbulence: Exploring the Dynamics of Boundary Layer Transition. Flow, Turbulence and Combustion, 2013, 91, 451-473.	1.4	132
74	Conditional sampling of transitional boundary layers in pressure gradients. Journal of Fluid Mechanics, 2013, 728, 306-339.	1.4	100
75	Effect of wall heating on turbulent boundary layers with temperature-dependent viscosity. Journal of Fluid Mechanics, 2013, 726, 196-225.	1.4	104
76	Identifying Turbulent Spots in Transitional Boundary Layers. Journal of Turbomachinery, 2013, 135, .	0.9	6
77	Control-volume representation of molecular dynamics. Physical Review E, 2012, 85, 056705.	0.8	30
78	Large Eddy Simulation of Transitional Separated Flow over a Flat Plate and a Compressor Blade. Flow, Turbulence and Combustion, 2012, 88, 19-44.	1.4	85
79	Stability of zero-pressure-gradient boundary layer distorted by unsteady Klebanoff streaks. Journal of Fluid Mechanics, 2011, 681, 116-153.	1.4	96
80	Receptivity, instability and breakdown of GÃ¶rtler flow. Journal of Fluid Mechanics, 2011, 682, 362-396.	1.4	61
81	Turbulent flow over a liquid layer revisited: multi-equation turbulence modelling. Journal of Fluid Mechanics, 2011, 683, 357-394.	1.4	11
82	A nonlinear PSE method for two-fluid shear flows with complex interfacial topology. Journal of Computational Physics, 2011, 230, 6756-6777.	1.9	9
83	The equivalence between volume averaging and method of planes definitions of the pressure tensor at a plane. Journal of Chemical Physics, 2011, 135, 024512.	1.2	37
84	Flow estimation of boundary layers using DNS-based wall shear information. International Journal of Control, 2011, 84, 1310-1325.	1.2	12
85	Direct numerical simulations of transition in a compressor cascade: the influence of free-stream turbulence. Journal of Fluid Mechanics, 2010, 665, 57-98.	1.4	118
86	On the relationship between the wall-shear-stress and transient-growth disturbances in a laminar boundary layer. Physics of Fluids, 2010, 22, .	1.6	9
87	Linear and nonlinear instability waves in spatially developing two-phase mixing layers. Physics of Fluids, 2010, 22, .	1.6	14
88	Direct Computations of Boundary Layers Distorted by Migrating Wakes in a Linear Compressor Cascade. Flow, Turbulence and Combustion, 2009, 83, 307-322.	1.4	41
89	On shear sheltering and the structure of vortical modes in single- and two-fluid boundary layers. Journal of Fluid Mechanics, 2009, 626, 111-147.	1.4	86
90	Floquet analysis of secondary instability of boundary layers distorted by Klebanoff streaks and Tollmienâ€“Schlichting waves. Physics of Fluids, 2008, 20, .	1.6	36

#	Article	IF	Citations
91	Boundary-layer transition by interaction of discrete and continuous modes. Journal of Fluid Mechanics, 2008, 604, 199-233.	1.4	62
92	Continuous mode transition and the effects of pressure gradient. Journal of Fluid Mechanics, 2006, 563, 357.	1.4	88
93	Direct Numerical Simulation of By-Pass and Separation-Induced Transition in a Linear Compressor Cascade. , 2006, , 1421.		13
94	Mode interaction and the bypass route to transition. Journal of Fluid Mechanics, 2005, 531, 85-111.	1.4	184