

Tamer A Zaki

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.

83

papers

1,881

citations

25

h-index

40

g-index

94

ext. papers

2,461

ext. citations

3.6

avg, IF

5.63

L-index

#	Paper	IF	Citations
83	Evolutional deep neural network. <i>Physical Review E</i> , 2021 , 104, 045303	2.4	2
82	Two-point stress-strain-rate correlation structure and non-local eddy viscosity in turbulent flows. <i>Journal of Fluid Mechanics</i> , 2021 , 914,	3.7	10
81	State estimation in turbulent channel flow from limited observations. <i>Journal of Fluid Mechanics</i> , 2021 , 917,	3.7	1
80	Observation-infused simulations of high-speed boundary-layer transition. <i>Journal of Fluid Mechanics</i> , 2021 , 916,	3.7	1
79	The dynamics of settling particles in vertical channel flows: gravity, lift and particle clusters. <i>Journal of Fluid Mechanics</i> , 2021 , 918,	3.7	2
78	DeepM&Mnet: Inferring the electroconvection multiphysics fields based on operator approximation by neural networks. <i>Journal of Computational Physics</i> , 2021 , 436, 110296	4.1	22
77	Spectral Universality of Elastoinertial Turbulence. <i>Physical Review Letters</i> , 2021 , 127, 074501	7.4	9
76	DeepM&Mnet for hypersonics: Predicting the coupled flow and finite-rate chemistry behind a normal shock using neural-network approximation of operators. <i>Journal of Computational Physics</i> , 2021 , 447, 110698	4.1	9
75	High-Reynolds-number fractal signature of nascent turbulence during transition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 3461-3468	11.5	3
74	Turbulent Heat-Transfer Enhancement in Boundary Layers Exposed to Free-Stream Turbulence. <i>Flow, Turbulence and Combustion</i> , 2020 , 104, 381-402	2.5	1
73	Viscoelasticity and the dynamics of concentrated particle suspension in channel flow. <i>Journal of Fluid Mechanics</i> , 2020 , 901,	3.7	2
72	Stochastic Lagrangian dynamics of vorticity. Part 1. General theory for viscous, incompressible fluids. <i>Journal of Fluid Mechanics</i> , 2020 , 901,	3.7	7
71	Stochastic Lagrangian dynamics of vorticity. Part 2. Application to near-wall channel-flow turbulence. <i>Journal of Fluid Mechanics</i> , 2020 , 901,	3.7	4
70	Spatial reconstruction of steady scalar sources from remote measurements in turbulent flow. <i>Journal of Fluid Mechanics</i> , 2019 , 870, 316-352	3.7	7
69	Low-frequency selectivity in flat-plate boundary layer with elliptic leading edge. <i>Journal of Fluid Mechanics</i> , 2019 , 866, 239-262	3.7	5
68	Conditional statistics and flow structures in turbulent boundary layers buffeted by free-stream disturbances. <i>Journal of Fluid Mechanics</i> , 2019 , 866, 526-566	3.7	10
67	Kriging-enhanced ensemble variational data assimilation for scalar-source identification in turbulent environments. <i>Journal of Computational Physics</i> , 2019 , 398, 108856	4.1	8

66	Nonlinearly most dangerous disturbance for high-speed boundary-layer transition. <i>Journal of Fluid Mechanics</i> , 2019 , 876, 87-121	3.7	5
65	Dilute suspension of neutrally buoyant particles in viscoelastic turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 2019 , 875, 286-320	3.7	4
64	Discrete adjoint of fractional-step incompressible Navier-Stokes solver in curvilinear coordinates and application to data assimilation. <i>Journal of Computational Physics</i> , 2019 , 396, 427-450	4.1	8
63	Application of a self-organizing map to identify the turbulent-boundary-layer interface in a transitional flow. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	16
62	The mean conformation tensor in viscoelastic turbulence. <i>Journal of Fluid Mechanics</i> , 2019 , 865, 363-380	3.7	5
61	Perturbative expansions of the conformation tensor in viscoelastic flows. <i>Journal of Fluid Mechanics</i> , 2019 , 858, 377-406	3.7	12
60	Sensitivity of high-speed boundary-layer stability to base-flow distortion. <i>Journal of Fluid Mechanics</i> , 2019 , 859, 476-515	3.7	7
59	Turbulence in intermittent transitional boundary layers and in turbulence spots. <i>Journal of Fluid Mechanics</i> , 2019 , 860, 350-383	3.7	16
58	Simulations of rib-roughened rough-to-smooth turbulent channel flows. <i>Journal of Fluid Mechanics</i> , 2018 , 843, 419-449	3.7	14
57	Geometric decomposition of the conformation tensor in viscoelastic turbulence. <i>Journal of Fluid Mechanics</i> , 2018 , 842, 395-427	3.7	20
56	Detection algorithm for turbulent interfaces and large-scale structures in intermittent flows. <i>Computers and Fluids</i> , 2018 , 175, 142-158	2.8	7
55	Instability waves and transition in adverse-pressure-gradient boundary layers. <i>Physical Review Fluids</i> , 2018 , 3,	2.8	5
54	Inertioelastic Poiseuille flow over a wavy surface. <i>Physical Review Fluids</i> , 2018 , 3,	2.8	7
53	Phase diagram for viscoelastic Poiseuille flow over a wavy surface. <i>Physics of Fluids</i> , 2018 , 30, 113101	4.4	9
52	The effect of cube-roughened walls on the response of rough-to-smooth (RTS) turbulent channel flows. <i>International Journal of Heat and Fluid Flow</i> , 2018 , 72, 174-185	2.4	7
51	Signature of large-scale motions on turbulent/non-turbulent interface in boundary layers. <i>Journal of Fluid Mechanics</i> , 2017 , 819, 165-187	3.7	39
50	Simulations of natural transition in viscoelastic channel flow. <i>Journal of Fluid Mechanics</i> , 2017 , 820, 232-262	3.7	25
49	Transition induced by linear and nonlinear perturbation growth in flow past a compressor blade. <i>Journal of Fluid Mechanics</i> , 2017 , 820, 604-632	3.7	10

48	Streak instability in viscoelastic Couette flow. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	18
47	Wavy Taylor vortices in molecular dynamics simulation of cylindrical Couette flow. <i>Physical Review E</i> , 2016 , 93, 043107	2.4	3
46	Reconstruction of Scalar Source Intensity Based on Sensor Signal in Turbulent Channel Flow. <i>Flow, Turbulence and Combustion</i> , 2016 , 97, 1211-1233	2.5	7
45	Data-enabled prediction of streak breakdown in pressure-gradient boundary layers. <i>Journal of Fluid Mechanics</i> , 2016 , 801, 43-64	3.7	12
44	Disturbance amplification in boundary layers over thin wall films. <i>Physics of Fluids</i> , 2016 , 28, 024108	4.4	1
43	Viscoelastic shear flow over a wavy surface. <i>Journal of Fluid Mechanics</i> , 2016 , 801, 392-429	3.7	9
42	Inner-outer interactions of large-scale structures in turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 2016 , 790, 128-157	3.7	52
41	Stability analysis of separated flows subject to control by zero-net-mass-flux jet. <i>Physics of Fluids</i> , 2015 , 27, 024107	4.4	27
40	Absolute/convective instability of planar viscoelastic jets. <i>Physics of Fluids</i> , 2015 , 27, 014110	4.4	9
39	The effect of a low-viscosity near-wall film on bypass transition in boundary layers. <i>Journal of Fluid Mechanics</i> , 2015 , 772, 330-360	3.7	4
38	A localized momentum constraint for non-equilibrium molecular dynamics simulations. <i>Journal of Chemical Physics</i> , 2015 , 142, 074110	3.9	5
37	The dynamics of spanwise vorticity perturbations in homogeneous viscoelastic shear flow. <i>Journal of Fluid Mechanics</i> , 2015 , 777, 327-363	3.7	24
36	Modal and non-modal stability of boundary layers forced by spanwise wall oscillations. <i>Journal of Fluid Mechanics</i> , 2015 , 778, 389-427	3.7	17
35	Bypass Transition in Three-dimensional Time-dependent Boundary Layers. <i>Procedia IUTAM</i> , 2015 , 14, 274-281		
34	Effect of Reynolds Number on Turbulent Drag Reduction by Superhydrophobic Surface Textures. <i>Flow, Turbulence and Combustion</i> , 2015 , 95, 277-300	2.5	34
33	The Effect of wake Turbulence Intensity on Transition in a Compressor Cascade. <i>Flow, Turbulence and Combustion</i> , 2014 , 93, 555-576	2.5	12
32	Streak evolution in viscoelastic Couette flow. <i>Journal of Fluid Mechanics</i> , 2014 , 742, 520-551	3.7	29
31	Linear and nonlinear evolution of a localized disturbance in polymeric channel flow. <i>Journal of Fluid Mechanics</i> , 2014 , 760, 278-303	3.7	25

30	The method of planes pressure tensor for a spherical subvolume. <i>Journal of Chemical Physics</i> , 2014 , 140, 054506	3.9	11
29	Absolute instability in viscoelastic mixing layers. <i>Physics of Fluids</i> , 2014 , 26, 014103	4.4	13
28	Turbulence and skin friction modification in channel flow with streamwise-aligned superhydrophobic surface texture. <i>Physics of Fluids</i> , 2014 , 26, 095102	4.4	72
27	An exact representation of the nonlinear triad interaction terms in spectral space. <i>Journal of Fluid Mechanics</i> , 2014 , 748, 175-188	3.7	7
26	The influence of harmonic wall motion on transitional boundary layers. <i>Journal of Fluid Mechanics</i> , 2014 , 760, 63-94	3.7	15
25	Streak instabilities in boundary layers beneath free-stream turbulence. <i>Journal of Fluid Mechanics</i> , 2014 , 741, 280-315	3.7	66
24	Turbulent thermal boundary layers with temperature-dependent viscosity. <i>International Journal of Heat and Fluid Flow</i> , 2014 , 49, 43-52	2.4	8
23	Linear stability analysis of channel flow of viscoelastic Oldroyd-B and FENE-P fluids. <i>Journal of Fluid Mechanics</i> , 2013 , 737, 249-279	3.7	50
22	From Streaks to Spots and on to Turbulence: Exploring the Dynamics of Boundary Layer Transition. <i>Flow, Turbulence and Combustion</i> , 2013 , 91, 451-473	2.5	90
21	Conditional sampling of transitional boundary layers in pressure gradients. <i>Journal of Fluid Mechanics</i> , 2013 , 728, 306-339	3.7	75
20	Effect of wall heating on turbulent boundary layers with temperature-dependent viscosity. <i>Journal of Fluid Mechanics</i> , 2013 , 726, 196-225	3.7	73
19	Identifying Turbulent Spots in Transitional Boundary Layers. <i>Journal of Turbomachinery</i> , 2013 , 135,	1.8	5
18	Large Eddy Simulation of Transitional Separated Flow over a Flat Plate and a Compressor Blade. <i>Flow, Turbulence and Combustion</i> , 2012 , 88, 19-44	2.5	61
17	Control-volume representation of molecular dynamics. <i>Physical Review E</i> , 2012 , 85, 056705	2.4	25
16	Stability of zero-pressure-gradient boundary layer distorted by unsteady Klebanoff streaks. <i>Journal of Fluid Mechanics</i> , 2011 , 681, 116-153	3.7	71
15	Receptivity, instability and breakdown of Görtler flow. <i>Journal of Fluid Mechanics</i> , 2011 , 682, 362-396	3.7	49
14	Turbulent flow over a liquid layer revisited: multi-equation turbulence modelling. <i>Journal of Fluid Mechanics</i> , 2011 , 683, 357-394	3.7	8
13	A nonlinear PSE method for two-fluid shear flows with complex interfacial topology. <i>Journal of Computational Physics</i> , 2011 , 230, 6756-6777	4.1	6

12	The equivalence between volume averaging and method of planes definitions of the pressure tensor at a plane. <i>Journal of Chemical Physics</i> , 2011 , 135, 024512	3.9	31
11	Flow estimation of boundary layers using DNS-based wall shear information. <i>International Journal of Control</i> , 2011 , 84, 1310-1325	1.5	11
10	On the relationship between the wall-shear-stress and transient-growth disturbances in a laminar boundary layer. <i>Physics of Fluids</i> , 2010 , 22, 054103	4.4	8
9	Linear and nonlinear instability waves in spatially developing two-phase mixing layers. <i>Physics of Fluids</i> , 2010 , 22, 052103	4.4	12
8	Direct numerical simulations of transition in a compressor cascade: the influence of free-stream turbulence. <i>Journal of Fluid Mechanics</i> , 2010 , 665, 57-98	3.7	83
7	Direct Computations of Boundary Layers Distorted by Migrating Wakes in a Linear Compressor Cascade. <i>Flow, Turbulence and Combustion</i> , 2009 , 83, 307-322	2.5	33
6	On shear sheltering and the structure of vortical modes in single- and two-fluid boundary layers. <i>Journal of Fluid Mechanics</i> , 2009 , 626, 111-147	3.7	67
5	Floquet analysis of secondary instability of boundary layers distorted by Klebanoff streaks and Tollmien-Schlichting waves. <i>Physics of Fluids</i> , 2008 , 20, 124102	4.4	30
4	Boundary-layer transition by interaction of discrete and continuous modes. <i>Journal of Fluid Mechanics</i> , 2008 , 604, 199-233	3.7	58
3	Direct Numerical Simulation of By-Pass and Separation-Induced Transition in a Linear Compressor Cascade 2006 , 1421		8
2	Continuous mode transition and the effects of pressure gradient. <i>Journal of Fluid Mechanics</i> , 2006 , 563, 357	3.7	71
1	Mode interaction and the bypass route to transition. <i>Journal of Fluid Mechanics</i> , 2005 , 531, 85-111	3.7	156