Gregory John Sheard

List of Publications by Year
in descending order

67 papers	1,347 citations	361413 20 h-index	377865 34 g-index
67 all docs	67 docs citations	67 times ranked	812 citing authors

#	Article	IF	Citations
1	Linear stability analysis of horizontal convection under a Gay-Lussac type approximation. International Journal of Heat and Mass Transfer, 2022, 182, 121929.	4.8	7
2	Energy saving and performance analysis of airâ€cooled photovoltaic panels. International Journal of Energy Research, 2022, 46, 4825-4834.	4.5	4
3	An entropy generation analysis of horizontal convection under the centrifugal buoyancy approximation. International Communications in Heat and Mass Transfer, 2022, 133, 105923.	5.6	5
4	Stability of flow in a channel with repeated flow-facing wedge-shaped protrusions. Journal of Fluid Mechanics, 2022, 941, .	3.4	2
5	A centrifugal buoyancy formulation for Boussinesqâ€type natural convection flows applied to the annulus cavity problem. International Journal for Numerical Methods in Fluids, 2021, 93, 683-702.	1.6	9
6	Transition to turbulence in quasi-two-dimensional MHD flow driven by lateral walls. Physical Review Fluids, 2021, 6, .	2.5	3
7	Natural convection and entropy generation in square and skew cavities due to large temperature differences: AÂ<scp>Gayâ€“Lussac</scp>â€type vorticity streamâ€function approach. International Journal for Numerical Methods in Fluids, 2021, 93, 2396-2420.	1.6	10
8	Stability of pulsatile quasi-two-dimensional duct flows under a transverse magnetic field. Physical Review Fluids, 2021, 6, .	2.5	1
9	Heat transfer enhancement in quasi-two-dimensional magnetohydrodynamic duct flows using repeated flow-facing wedge-shaped protrusions. International Journal of Heat and Mass Transfer, 2021, 171, 121066.	4.8	4
10	Buoyancy-driven flows beyond the Boussinesq approximation: A brief review. International Communications in Heat and Mass Transfer, 2021, 125, 105316.	5.6	57
11	A simplified and efficient Gay-Lussac approach for non-Boussinesq treatment of natural convection problems. Numerical Heat Transfer, Part B: Fundamentals, 2021, 80, 115-135.	0.9	3
12	An efficient and simplified <scp>Gayâ€Lussac</scp> approach in secondary variables form for the <scp>nonâ€Boussinesq</scp> simulation of free convection problems. International Journal for Numerical Methods in Fluids, 2021, 93, 3264-3279.	1.6	4
13	Transitions and scaling in horizontal convection driven by different temperature profiles. International Journal of Thermal Sciences, 2020, 148, 106166.	4.9	17
14	Subcritical route to turbulence via the Orr mechanism in a quasi-two-dimensional boundary layer. Physical Review Fluids, 2020, 5, .	2.5	4
15	Horizontal convection in shallow enclosures scales with height, not length, at low Rayleigh numbers. International Communications in Heat and Mass Transfer, 2019, 109, 104308.	5.6	7
16	Natural convection heat transfer utilizing nanofluid in a cavity with a periodic side-wall temperature in the presence of a magnetic field. International Communications in Heat and Mass Transfer, 2019, 104, 127-135.	5.6	36
17	From three-dimensional to quasi-two-dimensional: transient growth in magnetohydrodynamic duct flows. Journal of Fluid Mechanics, 2019, 861, 382-406.	3.4	7
18	Stability of the wakes of cylinders with triangular cross-sections. Journal of Fluid Mechanics, 2018, 844, 721-745.	3.4	19

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19	Effect of vortex promoter shape on heat transfer in MHD duct flow with axial magnetic field. International Journal of Thermal Sciences, 2018, 134, 453-464.	4.9	14
20	Cardiogenic Airflow in the Lung Revealed Using Synchrotron-Based Dynamic Lung Imaging. Scientific Reports, 2018, 8, 4930.	3.3	10
21	Linear stability of confined flow around a 180-degree sharp bend. Journal of Fluid Mechanics, 2017, 822, 813-847.	3.4	12
22	Linear stability of horizontal, laminar fully developed, quasi-two-dimensional liquid metal duct flow under a transverse magnetic field and heated from below. Physical Review Fluids, 2017, 2, .	2.5	16
23	Linear stability and energetics of rotating radial horizontal convection. Journal of Fluid Mechanics, 2016, 795, 1-35.	3.4	21
24	Combining an obstacle and electrically driven vortices to enhance heat transfer in a quasi-two-dimensional MHD duct flow. Journal of Fluid Mechanics, 2016, 792, 364-396.	3.4	16
25	Two-dimensional wake dynamics behind cylinders with triangular cross-section under incidence angle variation. Journal of Fluids and Structures, 2016, 63, 302-324.	3.4	31
26	Heat transfer augmentation of a quasi-two-dimensional MHD duct flow via electrically driven vortices. Numerical Heat Transfer; Part A: Applications, 2016, 70, 847-869.	2.1	9
27	Probing horizontal convection instability via perturbation of the forcing boundary layer using a synthetic jet. International Journal of Thermal Sciences, 2016, 110, 251-260.	4.9	5
28	The origin of instability in enclosed horizontally driven convection. International Journal of Heat and Mass Transfer, 2016, 94, 509-515.	4.8	21
29	Heat transfer enhancement using rectangular vortex promoters in confined quasi-two-dimensional magnetohydrodynamic flows. International Journal of Heat and Mass Transfer, 2016, 93, 186-199.	4.8	20
30	Non-axisymmetric flows in a differential-disk rotating system. Journal of Fluid Mechanics, 2015, 775, 349-386.	3.4	7
31	Effect of enclosure height on the structure and stability of shear layers induced by differential rotation. Journal of Fluid Mechanics, 2015, 765, 45-81.	3.4	6
32	Spatial evolution of a quasi-two-dimensional KÃ¡rmÃ¡n vortex street subjected to a strong uniform magnetic field. Physics of Fluids, 2015, 27, .	4.0	12
33	Linear stability analysis of a shear layer induced by differential coaxial rotation within a cylindrical enclosure. Journal of Fluid Mechanics, 2014, 738, 299-334.	3.4	7
34	Erythrocyte deformation in a microfluidic cross-slot channel. RSC Advances, 2014, 4, 36079.	3.6	30
35	The effect of rotation on radial horizontal convection and Nusselt number scaling in a cylindrical container. International Journal of Heat and Mass Transfer, 2014, 77, 46-59.	4.8	14
36	Heat transfer in a high Hartmann number MHD duct flow with a circular cylinder placed near the heated side-wall. International Journal of Heat and Mass Transfer, 2013, 67, 944-954.	4.8	33

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37	Polynomial element velocimetry (PEV): a technique for continuous in-plane velocity and velocity gradient measurements for low Reynolds number flows. Measurement Science and Technology, 2012, 23, 105304.	2.6	2
38	Enhancing heat transfer in a high Hartmann number magnetohydrodynamic channel flow via torsional oscillation of a cylindrical obstacle. Physics of Fluids, 2012, 24, .	4.0	26
39	Optimal transient disturbances behind a circular cylinder in a quasi-two-dimensional magnetohydrodynamic duct flow. Physics of Fluids, 2012, 24, .	4.0	20
40	Application of a novel diffraction-based tomography method for imaging biological samples. , 2012, , .		0
41	Stability characteristics of a counter-rotating unequal-strength Batchelor vortex pair. Journal of Fluid Mechanics, 2012, 696, 374-401.	3.4	9
42	Haemodynamic forces on in vitro thrombi: a numerical analysis. Medical and Biological Engineering and Computing, 2012, 50, 493-502.	2.8	1
43	Feedback control system simulator for the control of biological cells in microfluidic cross slots and integrated microfluidic systems. Lab on A Chip, 2011, 11, 2343.	6.0	10
44	Symmetry breaking and instability mechanisms in medium depth torsionally driven open cylinder flows. Journal of Fluid Mechanics, 2011, 672, 521-544.	3.4	11
45	Effect of Hemodynamic Forces on Platelet Aggregation Geometry. Annals of Biomedical Engineering, 2011, 39, 1403-1413.	2.5	11
46	Experimental study of simultaneous measurement of velocity and surface topography: in the wake of a circular cylinder at low Reynolds number. Experiments in Fluids, 2011, 50, 587-595.	2.4	16
47	Application of Particle Image Velocimetry and Reference Image Topography to jet shock cells using the hydraulic analogy. Experiments in Fluids, 2011, 51, 543-551.	2.4	3
48	Wake stability features behind a square cylinder: Focus on small incidence angles. Journal of Fluids and Structures, 2011, 27, 734-742.	3.4	42
49	Short-wave instabilities on a vortex pair of unequal strength circulation ratio. Applied Mathematical Modelling, 2011, 35, 1581-1590.	4.2	6
50	Horizontal convection: Effect of aspect ratio on Rayleigh number scaling and stability. Applied Mathematical Modelling, 2011, 35, 1647-1655.	4.2	46
51	Dynamics and heat transfer in a quasi-two-dimensional MHD flow past a circular cylinder in a duct at high Hartmann number. International Journal of Heat and Mass Transfer, 2011, 54, 1091-1100.	4.8	58
52	Preface to special issue of selected papers from CFD in the minerals and process industries. Applied Mathematical Modelling, 2011, 35, 2051.	4.2	0
53	The effects of vortex breakdown bubbles on the mixing environment inside a base driven bioreactor. Applied Mathematical Modelling, 2011, 35, 1628-1637.	4.2	4
54	High resolution optical calorimetry for synchrotron microbeam radiation therapy. Journal of Instrumentation, 2011, 6, P03003-P03003.	1.2	10

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55	Short-wave instability growth in closely spaced vortex pairs. Progress in Computational Fluid Dynamics, 2010, 10, 276.	0.2	2
56	Surface topography of jet shock cells in a hydraulic analogy. Journal of Visualization, 2010, 13, 175-176.	1.8	3
57	Swirl mixing at microfluidic junctions due to low frequency side channel fluidic perturbations. Sensors and Actuators B: Chemical, 2010, 150, 811-818.	7.8	27
58	Cylinders with square cross-section: wake instabilities with incidence angle variation. Journal of Fluid Mechanics, 2009, 630, 43-69.	3.4	136
59	Flow dynamics and wall shear-stress variation in a fusiform aneurysm. Journal of Engineering Mathematics, 2009, 64, 379-390.	1.2	33
60	Measurement of instantaneous velocity and surface topography in the wake of a cylinder at low Reynolds number. Journal of Fluids and Structures, 2008, 24, 1271-1277.	3.4	24
61	Pressure-driven flow past spheres moving in a circular tube. Journal of Fluid Mechanics, 2007, 592, 233-262.	3.4	24
62	Wake transition of two-dimensional cylinders and axisymmetric bluff bodies. Journal of Fluids and Structures, 2006, 22, 793-806.	3.4	53
63	The evolution of a subharmonic mode in a vortex street. Journal of Fluid Mechanics, 2005, 534, 23-38.	3.4	32
64	Computations of the drag coefficients for low-Reynolds-number flow past rings. Journal of Fluid Mechanics, 2005, 526, 257-275.	3.4	57
65	Asymmetric structure and non-linear transition behaviour of the wakes of toroidal bodies. European Journal of Mechanics, B/Fluids, 2004, 23, 167-179.	2.5	19
66	From spheres to circular cylinders: non-axisymmetric transitions in the flow past rings. Journal of Fluid Mechanics, 2004, 506, 45-78.	3.4	70
67	From spheres to circular cylinders: the stability and flow structures of bluff ring wakes. Journal of Fluid Mechanics, 2003, 492, 147-180.	3.4	109