

Chengwang Lei

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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.

108 papers	2,491 citations	30 h-index	43 g-index
114 ext. papers	2,878 ext. citations	4.4 avg, IF	5.61 L-index

#	Paper	IF	Citations
108	Re-examination of the effect of a plane boundary on force and vortex shedding of a circular cylinder. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 1999 , 80, 263-286	3.7	181
107	Solar chimney: A passive strategy for natural ventilation. <i>Energy and Buildings</i> , 2011 , 43, 1811-1819	7	102
106	Vortex shedding suppression for flow over a circular cylinder near a plane boundary. <i>Ocean Engineering</i> , 2000 , 27, 1109-1127	3.9	89
105	Unsteady natural convection in a triangular enclosure induced by absorption of radiation. <i>Journal of Fluid Mechanics</i> , 2002 , 460, 181-209	3.7	81
104	Flow reversal effects on buoyancy induced air flow in a solar chimney. <i>Solar Energy</i> , 2012 , 86, 2783-2794	6.8	65
103	A finite difference solution of the shear flow over a circular cylinder. <i>Ocean Engineering</i> , 2000 , 27, 271-290	3.9	63
102	Unsteady natural convection in a triangular enclosure induced by surface cooling. <i>International Journal of Heat and Fluid Flow</i> , 2005 , 26, 307-321	2.4	58
101	A numerical investigation of buoyancy induced turbulent air flow in an inclined passive wall solar chimney for natural ventilation. <i>Energy and Buildings</i> , 2015 , 93, 217-226	7	55
100	Natural convection in a reservoir sidearm subject to solar radiation: experimental observations. <i>Experiments in Fluids</i> , 2002 , 32, 590-599	2.5	54
99	Unsteady natural convection in a water-filled isosceles triangular enclosure heated from below. <i>International Journal of Heat and Mass Transfer</i> , 2008 , 51, 2637-2650	4.9	53
98	Transient natural convection flows around a thin fin on the sidewall of a differentially heated cavity. <i>Journal of Fluid Mechanics</i> , 2009 , 639, 261-290	3.7	51
97	Transition to a periodic flow induced by a thin fin on the sidewall of a differentially heated cavity. <i>International Journal of Heat and Mass Transfer</i> , 2009 , 52, 620-628	4.9	50
96	Spanwise length effects on three-dimensional modelling of flow over a circular cylinder. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001 , 190, 2909-2923	5.7	50
95	An experimental investigation of an inclined passive wall solar chimney for natural ventilation. <i>Solar Energy</i> , 2014 , 107, 461-474	6.8	44
94	Natural convection and heat transfer in attics subject to periodic thermal forcing. <i>International Journal of Thermal Sciences</i> , 2010 , 49, 1899-1910	4.1	44
93	Unsteady natural convection in a triangular enclosure induced by absorption of radiation: A revisit by improved scaling analysis. <i>Journal of Fluid Mechanics</i> , 2009 , 622, 75-102	3.7	43
92	On numerical modelling of conjugate turbulent natural convection and radiation in a differentially heated cavity. <i>International Journal of Heat and Mass Transfer</i> , 2015 , 91, 454-466	4.9	42

91	Natural convection in a differentially heated cavity with two horizontal adiabatic fins on the sidewalls. <i>International Journal of Heat and Mass Transfer</i> , 2014 , 72, 23-36	4.9	41
90	An experimental study of the unsteady thermal flow around a thin fin on a sidewall of a differentially heated cavity. <i>International Journal of Heat and Fluid Flow</i> , 2008 , 29, 1139-1153	2.4	40
89	Shadowgraph observations of the transition of the thermal boundary layer in a side-heated cavity. <i>Experiments in Fluids</i> , 2005 , 38, 770-779	2.5	40
88	Natural convection in attics subject to instantaneous and ramp cooling boundary conditions. <i>Energy and Buildings</i> , 2010 , 42, 1192-1204	7	38
87	A direct three-dimensional simulation of radiation-induced natural convection in a shallow wedge. <i>International Journal of Heat and Mass Transfer</i> , 2003 , 46, 1183-1197	4.9	35
86	Prandtl number scaling of unsteady natural convection boundary layers for $Pr > 1$ fluids under isothermal heating. <i>Physical Review E</i> , 2009 , 79, 066313	2.4	34
85	Unsteady near-shore natural convection induced by surface cooling. <i>Journal of Fluid Mechanics</i> , 2010 , 642, 213-233	3.7	34
84	Enhancing natural convection in a cube using a strong magnetic field [Experimental heat transfer rate measurements and flow visualization. <i>International Communications in Heat and Mass Transfer</i> , 2009 , 36, 781-786	5.8	32
83	A direct stability analysis of a radiation-induced natural convection boundary layer in a shallow wedge. <i>Journal of Fluid Mechanics</i> , 2003 , 480, 161-184	3.7	32
82	NATURAL CONVECTION IN A RESERVOIR SIDEARM SUBJECT TO SOLAR RADIATION: A TWO-DIMENSIONAL SIMULATION. <i>Numerical Heat Transfer; Part A: Applications</i> , 2002 , 42, 13-32	2.3	32
81	Influence of a horizontal magnetic field on the natural convection of paramagnetic fluid in a cube heated and cooled from two vertical side walls. <i>International Journal of Thermal Sciences</i> , 2008 , 47, 668-679	4.1	31
80	A CFD based approach for determining the optimum inclination angle of a roof-top solar chimney for building ventilation. <i>Solar Energy</i> , 2020 , 198, 555-569	6.8	30
79	Heat transfer through coupled thermal boundary layers induced by a suddenly generated temperature difference. <i>International Journal of Heat and Mass Transfer</i> , 2009 , 52, 4966-4975	4.9	30
78	Effects of a transverse, horizontal magnetic field on natural convection of a paramagnetic fluid in a cube. <i>International Journal of Thermal Sciences</i> , 2009 , 48, 26-33	4.1	30
77	Natural convection in attic-shaped spaces subject to sudden and ramp heating boundary conditions. <i>Heat and Mass Transfer</i> , 2010 , 46, 621-638	2.2	30
76	A review of strategies for mitigating roadside air pollution in urban street canyons. <i>Environmental Pollution</i> , 2021 , 280, 116971	9.3	28
75	A numerical study of unsteady natural convection induced by iso-flux surface cooling in a reservoir model. <i>International Journal of Heat and Mass Transfer</i> , 2009 , 52, 56-66	4.9	27
74	Experimental observations of the thermal flow around a square obstruction on a vertical wall in a differentially heated cavity. <i>Experiments in Fluids</i> , 2006 , 40, 364-371	2.5	26

73	Resonance of the thermal boundary layer adjacent to an isothermally heated vertical surface. <i>Journal of Fluid Mechanics</i> , 2013 , 724, 305-336	3.7	25
72	Effect of the fin length on natural convection flow transition in a cavity. <i>International Journal of Thermal Sciences</i> , 2013 , 70, 92-101	4.1	25
71	Scaling of unsteady natural convection boundary layers with a non-instantaneous initiation. <i>International Journal of Thermal Sciences</i> , 2009 , 48, 1843-1852	4.1	25
70	A numerical study on the thermal performance of night ventilated hollow core slabs cast with micro-encapsulated PCM concrete. <i>Energy and Buildings</i> , 2016 , 127, 892-906	7	24
69	Experimental observation of surface morphology effect on crystallization fouling in plate heat exchangers. <i>International Communications in Heat and Mass Transfer</i> , 2011 , 38, 25-30	5.8	24
68	Natural convection boundary-layer adjacent to an inclined flat plate subject to sudden and ramp heating. <i>International Journal of Thermal Sciences</i> , 2010 , 49, 1600-1612	4.1	24
67	Natural Convection Induced by Diurnal Heating and Cooling in a Reservoir with Slowly Varying Topography. <i>JSME International Journal Series B</i> , 2006 , 49, 605-615		23
66	An experimental study of unsteady natural convection in a reservoir model cooled from the water surface. <i>Experimental Thermal and Fluid Science</i> , 2008 , 32, 844-856	3	22
65	PIV measurements of the K-type transition in natural convection boundary layers. <i>Experimental Thermal and Fluid Science</i> , 2019 , 101, 62-75	3	20
64	Plume separation from an adiabatic horizontal thin fin placed at different heights on the sidewall of a differentially heated cavity. <i>International Communications in Heat and Mass Transfer</i> , 2015 , 61, 162-169	5.8	19
63	On the double-layer structure of the boundary layer adjacent to a sidewall of a differentially heated cavity. <i>International Journal of Heat and Mass Transfer</i> , 2008 , 51, 3803-3815	4.9	19
62	Effectiveness of a bubble-plume mixing system for managing phytoplankton in lakes and reservoirs. <i>Ecological Engineering</i> , 2018 , 113, 43-51	3.9	18
61	Natural transition in natural convection boundary layers. <i>International Communications in Heat and Mass Transfer</i> , 2016 , 76, 366-375	5.8	18
60	A scaling investigation of the laminar convective flow in a solar chimney for natural ventilation. <i>International Journal of Heat and Fluid Flow</i> , 2014 , 45, 98-108	2.4	18
59	An experimental study of unsteady natural convection in a reservoir model subject to periodic thermal forcing using combined PIV and PIT techniques. <i>Experiments in Fluids</i> , 2009 , 47, 107-117	2.5	18
58	A numerical investigation of combined solar chimney and water wall for building ventilation and thermal comfort. <i>Building and Environment</i> , 2020 , 171, 106616	6.5	18
57	Unsteady flow and heat transfer adjacent to the sidewall wall of a differentially heated cavity with a conducting and an adiabatic fin. <i>International Journal of Heat and Fluid Flow</i> , 2011 , 32, 680-687	2.4	17
56	Scaling of Natural Convection of an Inclined Flat Plate: Sudden Cooling Condition. <i>Journal of Heat Transfer</i> , 2011 , 133,	1.8	17

55	The K-type and H-type transitions of natural convection boundary layers. <i>Journal of Fluid Mechanics</i> , 2017 , 824, 352-387	3.7	16
54	Unsteady natural convection induced by diurnal temperature changes in a reservoir with slowly varying bottom topography. <i>International Journal of Thermal Sciences</i> , 2009 , 48, 1932-1942	4.1	16
53	A review of research and development on water wall for building applications. <i>Energy and Buildings</i> , 2016 , 112, 198-208	7	15
52	Pr. <i>Physical Review E</i> , 2010 , 82, 026318	2.4	15
51	Scaling of natural convection of an inclined flat plate: Ramp cooling condition. <i>International Journal of Heat and Mass Transfer</i> , 2010 , 53, 5156-5166	4.9	15
50	Numerical investigation of the ventilation performance of a solar chimney. <i>ANZIAM Journal</i> , 52 , 899		15
49	A coupled three-dimensional hydrodynamic model for predicting hypolimnetic oxygenation and epilimnetic mixing in a shallow eutrophic reservoir. <i>Water Resources Research</i> , 2017 , 53, 470-484	5.4	13
48	Theoretical modeling of combined solar chimney and water wall for buildings. <i>Energy and Buildings</i> , 2019 , 187, 186-200	7	13
47	Scaling for unsteady thermo-magnetic convection boundary layer of paramagnetic fluids of $Pr > 1$ in micro-gravity conditions. <i>International Journal of Heat and Fluid Flow</i> , 2009 , 30, 1157-1170	2.4	13
46	Characteristics of instability of radiation-induced natural convection in shallow littoral waters. <i>International Journal of Thermal Sciences</i> , 2010 , 49, 170-181	4.1	13
45	CFD simulation of the thermal performance of an opaque water wall system for Australian climate. <i>Solar Energy</i> , 2016 , 133, 141-154	6.8	13
44	Thermal modelling and experimental validation of a semi-transparent water wall system for Sydney climate. <i>Solar Energy</i> , 2016 , 136, 533-546	6.8	12
43	Natural convection induced by radiation in a water filled square cavity: Experimental observations. <i>Experimental Thermal and Fluid Science</i> , 2017 , 80, 105-116	3	12
42	Suppressing Rayleigh-Benard convection in a cube using a strong magnetic field [Experimental heat transfer rate measurements and flow visualization. <i>International Communications in Heat and Mass Transfer</i> , 2009 , 36, 97-102	5.8	12
41	Transition of natural convection boundary layers [a revisit by Bicoherence analysis. <i>International Communications in Heat and Mass Transfer</i> , 2014 , 58, 147-155	5.8	11
40	A PIV measurement of the natural transition of a natural convection boundary layer. <i>Experiments in Fluids</i> , 2015 , 56, 1	2.5	11
39	Temperature oscillations in a differentially heated cavity with and without a fin on the sidewall. <i>International Communications in Heat and Mass Transfer</i> , 2010 , 37, 350-359	5.8	10
38	Mixing in internally heated natural convection flow and scaling for a quasi-steady boundary layer. <i>Journal of Fluid Mechanics</i> , 2015 , 763, 352-368	3.7	9

37	CFD simulation of the drag effect of urban trees: Source term modification method revisited at the tree scale. <i>Sustainable Cities and Society</i> , 2020 , 56, 102079	10.1	9
36	Three-Dimensional Effects of Artificial Mixing in a Shallow Drinking-Water Reservoir. <i>Water Resources Research</i> , 2018 , 54, 425-441	5.4	9
35	Urban Heat Island and Its Interaction with Heatwaves: A Review of Studies on Mesoscale. <i>Sustainability</i> , 2021 , 13, 10923	3.6	9
34	Field measurement of the urban pedestrian level wind turbulence. <i>Building and Environment</i> , 2021 , 194, 107713	6.5	9
33	Modified smoothed particle hydrodynamics approach for modelling dynamic contact angle hysteresis. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2019 , 35, 472-485	2	8
32	Scaling and direct stability analyses of natural convection induced by absorption of solar radiation in a parallelepiped cavity. <i>International Journal of Thermal Sciences</i> , 2015 , 88, 19-32	4.1	8
31	An experimental study of the coupled thermal boundary layers adjacent to a partition in a differentially heated cavity. <i>Experimental Thermal and Fluid Science</i> , 2014 , 54, 12-21	3	8
30	Unsteady nearshore natural convection induced by constant isothermal surface heating. <i>Journal of Fluid Mechanics</i> , 2012 , 707, 342-368	3.7	7
29	On the stability of transient penetrative convection driven by internal heating coupled with a thermal boundary condition. <i>International Communications in Heat and Mass Transfer</i> , 2015 , 64, 29-33	5.8	6
28	Characterization of linear and oscillatory behaviours of radiation-induced natural convection boundary layer in response to constant and time-varying thermal forcing. <i>International Journal of Heat and Mass Transfer</i> , 2015 , 87, 24-35	4.9	6
27	Natural convection over vertical and horizontal heated flat surfaces: A review of recent progress focusing on underpinnings and implications for heat transfer and environmental applications. <i>Physics of Fluids</i> , 2021 , 33, 101301	4.4	6
26	A numerical investigation of conjugate thermal boundary layers in a differentially heated partitioned cavity filled with different fluids. <i>Physics of Fluids</i> , 2020 , 32, 074107	4.4	6
25	Natural convection induced by absorption of solar radiation in the near shore region of lakes and reservoirs: Experimental results. <i>Experimental Thermal and Fluid Science</i> , 2018 , 90, 101-114	3	5
24	A Numerical Study of Turbulent Mixed Convection in a Smooth Horizontal Pipe. <i>Journal of Heat Transfer</i> , 2016 , 138,	1.8	5
23	Numerical Simulation and Stability Study of Natural Convection in an Inclined Rectangular Cavity. <i>Mathematical Problems in Engineering</i> , 2013 , 2013, 1-12	1.1	5
22	Statistical evaluation of on-road vehicle emissions measurement using a dual remote sensing technique. <i>Environmental Pollution</i> , 2020 , 267, 115456	9.3	5
21	Natural convection in a reservoir induced by sinusoidally varying temperature at the water surface. <i>International Journal of Heat and Mass Transfer</i> , 2019 , 134, 610-627	4.9	4
20	Study of unsteady natural convection induced by absorption of radiation based on a three-waveband attenuation model. <i>Journal of Physics: Conference Series</i> , 2014 , 530, 012036	0.3	4

19	Various aspects of camera settings and image processing in the calibration of thermo-chromic liquid crystals for accurate particle image thermometry measurements. <i>Journal of Visualization</i> , 2010 , 13, 241-250	1.6	4
18	A numerical study of drag reduction performance of simplified shell surface microstructures. <i>Ocean Engineering</i> , 2020 , 217, 107916	3.9	4
17	Hydrodynamic characteristics of a confined circular cylinder in cross-flows. <i>Ocean Engineering</i> , 2021 , 221, 108567	3.9	4
16	On the stability of internally heated natural convection due to the absorption of radiation in a laterally confined fluid layer with a horizontal throughflow. <i>International Journal of Heat and Mass Transfer</i> , 2015 , 81, 846-861	4.9	3
15	A scaling analysis of transient natural convection in a reservoir model induced by iso-flux heating. <i>Journal of Fluid Mechanics</i> , 2015 , 764, 219-249	3.7	3
14	Unsteady natural convection in a reservoir sidearm induced by time-varying isothermal surface heating. <i>International Journal of Thermal Sciences</i> , 2013 , 71, 61-73	4.1	3
13	Convection and instability of thermocapillary flow in a liquid bridge subject to a non-uniform rotating magnetic field. <i>International Communications in Heat and Mass Transfer</i> , 2017 , 87, 52-60	5.8	3
12	Numerical Modeling of a Concurrent PIT/PIV Experiment with TLC Particles in a Reservoir Model Subject to Periodic Thermal Forcing. <i>Numerical Heat Transfer; Part A: Applications</i> , 2014 , 66, 64-88	2.3	3
11	Transient Behaviour of Natural Convection in a Reservoir Model Induced by Surface Heating. <i>Journal of Thermal Science and Technology</i> , 2012 , 7, 211-226	0.6	3
10	A numerical simulation of transient near-shore natural convection induced by ramped iso-flux cooling. <i>International Journal of Heat and Fluid Flow</i> , 2012 , 38, 107-117	2.4	3
9	The leading edge effect in a suddenly differentially heated cavity. <i>ANZIAM Journal</i> , 48, 790		3
8	A particle image velocimetry measurement of flow over a highly confined circular cylinder at 60% blockage ratio. <i>Physics of Fluids</i> , 2021 , 33, 104111	4.4	2
7	Convective heat loss from computational thermal manikin subject to outdoor wind environments. <i>Building and Environment</i> , 2021 , 188, 107469	6.5	2
6	Relative Performance of 1-D Versus 3-D Hydrodynamic, Water-Quality Models for Predicting Water Temperature and Oxygen in a Shallow, Eutrophic, Managed Reservoir. <i>Water (Switzerland)</i> , 2021 , 13, 88	3	2
5	Magnified heat transfer from curved surfaces: A scaling prediction. <i>Physics of Fluids</i> , 2021 , 33, 021702	4.4	2
4	Transport of pollutant particles in a reservoir due to diurnal temperature variation. <i>International Communications in Heat and Mass Transfer</i> , 2014 , 53, 124-132	5.8	1
3	Effects of adiabatic extensions on heat transfer through a differentially heated square cavity. <i>International Communications in Heat and Mass Transfer</i> , 2010 , 37, 1221-1225	5.8	1
2	Improved Modeling of Sediment Oxygen Kinetics and Fluxes in Lakes and Reservoirs. <i>Environmental Science & Technology</i> , 2020 , 54, 2658-2666	10.3	

- 1 Thermal Layer Instability in a Shallow Wedge Subject to Solar Radiation **2003**, 797-798