Chengwang Lei

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.

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	Urban Heat Island and Its Interaction with Heatwaves: A Review of Studies on Mesoscale. *Sustainability*, **2021**, 13, 10923	3.6	9
107	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. *Physics of Fluids*, **2021**, 33, 101301	4.4	6
106	A particle image velocimetry measurement of flow over a highly confined circular cylinder at 60% blockage ratio. *Physics of Fluids*, **2021**, 33, 104111	4.4	2
105	Field measurement of the urban pedestrian level wind turbulence. *Building and Environment*, **2021**, 194, 107713	6.5	9
104	Convective heat loss from computational thermal manikin subject to outdoor wind environments. *Building and Environment*, **2021**, 188, 107469	6.5	2
103	Relative Performance of 1-D Versus 3-D Hydrodynamic, Water-Quality Models for Predicting Water Temperature and Oxygen in a Shallow, Eutrophic, Managed Reservoir. *Water (Switzerland)*, **2021**, 13, 88	3	2
102	Hydrodynamic characteristics of a confined circular cylinder in cross-flows. *Ocean Engineering*, **2021**, 221, 108567	3.9	4
101	Magnified heat transfer from curved surfaces: A scaling prediction. *Physics of Fluids*, **2021**, 33, 021702	4.4	2
100	A review of strategies for mitigating roadside air pollution in urban street canyons. *Environmental Pollution*, **2021**, 280, 116971	9.3	28
99	A CFD based approach for determining the optimum inclination angle of a roof-top solar chimney for building ventilation. *Solar Energy*, **2020**, 198, 555-569	6.8	30
98	CFD simulation of the drag effect of urban trees: Source term modification method revisited at the tree scale. *Sustainable Cities and Society*, **2020**, 56, 102079	10.1	9
97	Improved Modeling of Sediment Oxygen Kinetics and Fluxes in Lakes and Reservoirs. *Environmental Science & Technology*, **2020**, 54, 2658-2666	10.3	
96	A numerical investigation of combined solar chimney and water wall for building ventilation and thermal comfort. *Building and Environment*, **2020**, 171, 106616	6.5	18
95	A numerical investigation of conjugate thermal boundary layers in a differentially heated partitioned cavity filled with different fluids. *Physics of Fluids*, **2020**, 32, 074107	4.4	6
94	Statistical evaluation of on-road vehicle emissions measurement using a dual remote sensing technique. *Environmental Pollution*, **2020**, 267, 115456	9.3	5
93	A numerical study of drag reduction performance of simplified shell surface microstructures. *Ocean Engineering*, **2020**, 217, 107916	3.9	4
92	Natural convection in a reservoir induced by sinusoidally varying temperature at the water surface. *International Journal of Heat and Mass Transfer*, **2019**, 134, 610-627	4.9	4

91	Theoretical modeling of combined solar chimney and water wall for buildings. *Energy and Buildings*, **2019**, 187, 186-200	7	13
90	Modified smoothed particle hydrodynamics approach for modelling dynamic contact angle hysteresis. *Acta Mechanica Sinica/Lixue Xuebao*, **2019**, 35, 472-485	2	8
89	PIV measurements of the K-type transition in natural convection boundary layers. *Experimental Thermal and Fluid Science*, **2019**, 101, 62-75	3	20
88	Effectiveness of a bubble-plume mixing system for managing phytoplankton in lakes and reservoirs. *Ecological Engineering*, **2018**, 113, 43-51	3.9	18
87	Three-Dimensional Effects of Artificial Mixing in a Shallow Drinking-Water Reservoir. *Water Resources Research*, **2018**, 54, 425-441	5.4	9
86	Natural convection induced by absorption of solar radiation in the near shore region of lakes and reservoirs: Experimental results. *Experimental Thermal and Fluid Science*, **2018**, 90, 101-114	3	5
85	A coupled three-dimensional hydrodynamic model for predicting hypolimnetic oxygenation and epilimnetic mixing in a shallow eutrophic reservoir. *Water Resources Research*, **2017**, 53, 470-484	5.4	13
84	Convection and instability of thermocapillary flow in a liquid bridge subject to a non-uniform rotating magnetic field. *International Communications in Heat and Mass Transfer*, **2017**, 87, 52-60	5.8	3
83	The K-type and H-type transitions of natural convection boundary layers. *Journal of Fluid Mechanics*, **2017**, 824, 352-387	3.7	16
82	Natural convection induced by radiation in a water filled square cavity: Experimental observations. *Experimental Thermal and Fluid Science*, **2017**, 80, 105-116	3	12
81	Thermal modelling and experimental validation of a semi-transparent water wall system for Sydney climate. *Solar Energy*, **2016**, 136, 533-546	6.8	12
80	A numerical study on the thermal performance of night ventilated hollow core slabs cast with micro-encapsulated PCM concrete. *Energy and Buildings*, **2016**, 127, 892-906	7	24
79	Natural transition in natural convection boundary layers. *International Communications in Heat and Mass Transfer*, **2016**, 76, 366-375	5.8	18
78	A Numerical Study of Turbulent Mixed Convection in a Smooth Horizontal Pipe. *Journal of Heat Transfer*, **2016**, 138,	1.8	5
77	A review of research and development on water wall for building applications. *Energy and Buildings*, **2016**, 112, 198-208	7	15
76	CFD simulation of the thermal performance of an opaque water wall system for Australian climate. *Solar Energy*, **2016**, 133, 141-154	6.8	13
75	On the stability of transient penetrative convection driven by internal heating coupled with a thermal boundary condition. *International Communications in Heat and Mass Transfer*, **2015**, 64, 29-33	5.8	6
74	Characterization of linear and oscillatory behaviours of radiation-induced natural convection boundary layer in response to constant and time-varying thermal forcing. *International Journal of Heat and Mass Transfer*, **2015**, 87, 24-35	4.9	6

73	Mixing in internally heated natural convection flow and scaling for a quasi-steady boundary layer. *Journal of Fluid Mechanics*, **2015**, 763, 352-368	3.7	9
72	On numerical modelling of conjugate turbulent natural convection and radiation in a differentially heated cavity. *International Journal of Heat and Mass Transfer*, **2015**, 91, 454-466	4.9	42
71	On the stability of internally heated natural convection due to the absorption of radiation in a laterally confined fluid layer with a horizontal throughflow. *International Journal of Heat and Mass Transfer*, **2015**, 81, 846-861	4.9	3
70	Scaling and direct stability analyses of natural convection induced by absorption of solar radiation in a parallelepiped cavity. *International Journal of Thermal Sciences*, **2015**, 88, 19-32	4.1	8
69	A scaling analysis of transient natural convection in a reservoir model induced by iso-flux heating. *Journal of Fluid Mechanics*, **2015**, 764, 219-249	3.7	3
68	A numerical investigation of buoyancy induced turbulent air flow in an inclined passive wall solar chimney for natural ventilation. *Energy and Buildings*, **2015**, 93, 217-226	7	55
67	Plume separation from an adiabatic horizontal thin fin placed at different heights on the sidewall of a differentially heated cavity. *International Communications in Heat and Mass Transfer*, **2015**, 61, 162-169	5.8	19
66	A PIV measurement of the natural transition of a natural convection boundary layer. *Experiments in Fluids*, **2015**, 56, 1	2.5	11
65	Natural convection in a differentially heated cavity with two horizontal adiabatic fins on the sidewalls. *International Journal of Heat and Mass Transfer*, **2014**, 72, 23-36	4.9	41
64	A scaling investigation of the laminar convective flow in a solar chimney for natural ventilation. *International Journal of Heat and Fluid Flow*, **2014**, 45, 98-108	2.4	18
63	Transition of natural convection boundary layers revisit by Bicoherence analysis. *International Communications in Heat and Mass Transfer*, **2014**, 58, 147-155	5.8	11
62	An experimental investigation of an inclined passive wall solar chimney for natural ventilation. *Solar Energy*, **2014**, 107, 461-474	6.8	44
61	Transport of pollutant particles in a reservoir due to diurnal temperature variation. *International Communications in Heat and Mass Transfer*, **2014**, 53, 124-132	5.8	1
60	An experimental study of the coupled thermal boundary layers adjacent to a partition in a differentially heated cavity. *Experimental Thermal and Fluid Science*, **2014**, 54, 12-21	3	8
59	Study of unsteady natural convection induced by absorption of radiation based on a three-waveband attenuation model. *Journal of Physics: Conference Series*, **2014**, 530, 012036	0.3	4
58	Numerical Modeling of a Concurrent PIT/PIV Experiment with TLC Particles in a Reservoir Model Subject to Periodic Thermal Forcing. *Numerical Heat Transfer; Part A: Applications*, **2014**, 66, 64-88	2.3	3
57	Unsteady natural convection in a reservoir sidearm induced by time-varying isothermal surface heating. *International Journal of Thermal Sciences*, **2013**, 71, 61-73	4.1	3
56	Resonance of the thermal boundary layer adjacent to an isothermally heated vertical surface. *Journal of Fluid Mechanics*, **2013**, 724, 305-336	3.7	25

55	Effect of the fin length on natural convection flow transition in a cavity. *International Journal of Thermal Sciences*, **2013**, 70, 92-101	4.1	25
54	Numerical Simulation and Stability Study of Natural Convection in an Inclined Rectangular Cavity. *Mathematical Problems in Engineering*, **2013**, 2013, 1-12	1.1	5
53	Transient Behaviour of Natural Convection in a Reservoir Model Induced by Surface Heating. *Journal of Thermal Science and Technology*, **2012**, 7, 211-226	0.6	3
52	Unsteady nearshore natural convection induced by constant isothermal surface heating. *Journal of Fluid Mechanics*, **2012**, 707, 342-368	3.7	7
51	A numerical simulation of transient near-shore natural convection induced by ramped iso-flux cooling. *International Journal of Heat and Fluid Flow*, **2012**, 38, 107-117	2.4	3
50	Flow reversal effects on buoyancy induced air flow in a solar chimney. *Solar Energy*, **2012**, 86, 2783-2794	6.8	65
49	Solar chimney A passive strategy for natural ventilation. *Energy and Buildings*, **2011**, 43, 1811-1819	7	102
48	Experimental observation of surface morphology effect on crystallization fouling in plate heat exchangers. *International Communications in Heat and Mass Transfer*, **2011**, 38, 25-30	5.8	24
47	Unsteady flow and heat transfer adjacent to the sidewall wall of a differentially heated cavity with a conducting and an adiabatic fin. *International Journal of Heat and Fluid Flow*, **2011**, 32, 680-687	2.4	17
46	Scaling of Natural Convection of an Inclined Flat Plate: Sudden Cooling Condition. *Journal of Heat Transfer*, **2011**, 133,	1.8	17
45	Pr. *Physical Review E*, **2010**, 82, 026318	2.4	15
44	Unsteady near-shore natural convection induced by surface cooling. *Journal of Fluid Mechanics*, **2010**, 642, 213-233	3.7	34
43	Natural convection in attic-shaped spaces subject to sudden and ramp heating boundary conditions. *Heat and Mass Transfer*, **2010**, 46, 621-638	2.2	30
42	Effects of adiabatic extensions on heat transfer through a differentially heated square cavity. *International Communications in Heat and Mass Transfer*, **2010**, 37, 1221-1225	5.8	1
41	Natural convection boundary-layer adjacent to an inclined flat plate subject to sudden and ramp heating. *International Journal of Thermal Sciences*, **2010**, 49, 1600-1612	4.1	24
40	Various aspects of camera settings and image processing in the calibration of thermo-chromic liquid crystals for accurate particle image thermometry measurements. *Journal of Visualization*, **2010**, 13, 241-250	1.6	4
39	Temperature oscillations in a differentially heated cavity with and without a fin on the sidewall. *International Communications in Heat and Mass Transfer*, **2010**, 37, 350-359	5.8	10
38	Scaling of natural convection of an inclined flat plate: Ramp cooling condition. *International Journal of Heat and Mass Transfer*, **2010**, 53, 5156-5166	4.9	15

37	Natural convection in attics subject to instantaneous and ramp cooling boundary conditions. *Energy and Buildings*, **2010**, 42, 1192-1204	7	38
36	Characteristics of instability of radiation-induced natural convection in shallow littoral waters. *International Journal of Thermal Sciences*, **2010**, 49, 170-181	4.1	13
35	Natural convection and heat transfer in attics subject to periodic thermal forcing. *International Journal of Thermal Sciences*, **2010**, 49, 1899-1910	4.1	44
34	Prandtl number scaling of unsteady natural convection boundary layers for Pr>1 fluids under isothermal heating. *Physical Review E*, **2009**, 79, 066313	2.4	34
33	Unsteady natural convection in a triangular enclosure induced by absorption of radiation a revisit by improved scaling analysis. *Journal of Fluid Mechanics*, **2009**, 622, 75-102	3.7	43
32	Transient natural convection flows around a thin fin on the sidewall of a differentially heated cavity. *Journal of Fluid Mechanics*, **2009**, 639, 261-290	3.7	51
31	A numerical study of unsteady natural convection induced by iso-flux surface cooling in a reservoir model. *International Journal of Heat and Mass Transfer*, **2009**, 52, 56-66	4.9	27
30	An experimental study of unsteady natural convection in a reservoir model subject to periodic thermal forcing using combined PIV and PIT techniques. *Experiments in Fluids*, **2009**, 47, 107-117	2.5	18
29	Suppressing RayleighBenard convection in a cube using a strong magnetic field Experimental heat transfer rate measurements and flow visualization. *International Communications in Heat and Mass Transfer*, **2009**, 36, 97-102	5.8	12
28	Enhancing natural convection in a cube using a strong magnetic field Experimental heat transfer rate measurements and flow visualization. *International Communications in Heat and Mass Transfer*, **2009**, 36, 781-786	5.8	32
27	Scaling for unsteady thermo-magnetic convection boundary layer of paramagnetic fluids of Pr>1 in micro-gravity conditions. *International Journal of Heat and Fluid Flow*, **2009**, 30, 1157-1170	2.4	13
26	Transition to a periodic flow induced by a thin fin on the sidewall of a differentially heated cavity. *International Journal of Heat and Mass Transfer*, **2009**, 52, 620-628	4.9	50
25	Heat transfer through coupled thermal boundary layers induced by a suddenly generated temperature difference. *International Journal of Heat and Mass Transfer*, **2009**, 52, 4966-4975	4.9	30
24	Effects of a transverse, horizontal magnetic field on natural convection of a paramagnetic fluid in a cube. *International Journal of Thermal Sciences*, **2009**, 48, 26-33	4.1	30
23	Unsteady natural convection induced by diurnal temperature changes in a reservoir with slowly varying bottom topography. *International Journal of Thermal Sciences*, **2009**, 48, 1932-1942	4.1	16
22	Scaling of unsteady natural convection boundary layers with a non-instantaneous initiation. *International Journal of Thermal Sciences*, **2009**, 48, 1843-1852	4.1	25
21	Influence of a horizontal magnetic field on the natural convection of paramagnetic fluid in a cube heated and cooled from two vertical side walls. *International Journal of Thermal Sciences*, **2008**, 47, 668-679	4.1	31
20	An experimental study of the unsteady thermal flow around a thin fin on a sidewall of a differentially heated cavity. *International Journal of Heat and Fluid Flow*, **2008**, 29, 1139-1153	2.4	40

19	An experimental study of unsteady natural convection in a reservoir model cooled from the water surface. *Experimental Thermal and Fluid Science*, **2008**, 32, 844-856	3	22
18	Unsteady natural convection in a water-filled isosceles triangular enclosure heated from below. *International Journal of Heat and Mass Transfer*, **2008**, 51, 2637-2650	4.9	53
17	On the double-layer structure of the boundary layer adjacent to a sidewall of a differentially heated cavity. *International Journal of Heat and Mass Transfer*, **2008**, 51, 3803-3815	4.9	19
16	Natural Convection Induced by Diurnal Heating and Cooling in a Reservoir with Slowly Varying Topography. *JSME International Journal Series B*, **2006**, 49, 605-615		23
15	Experimental observations of the thermal flow around a square obstruction on a vertical wall in a differentially heated cavity. *Experiments in Fluids*, **2006**, 40, 364-371	2.5	26
14	Shadowgraph observations of the transition of the thermal boundary layer in a side-heated cavity. *Experiments in Fluids*, **2005**, 38, 770-779	2.5	40
13	Unsteady natural convection in a triangular enclosure induced by surface cooling. *International Journal of Heat and Fluid Flow*, **2005**, 26, 307-321	2.4	58
12	A direct three-dimensional simulation of radiation-induced natural convection in a shallow wedge. *International Journal of Heat and Mass Transfer*, **2003**, 46, 1183-1197	4.9	35
11	A direct stability analysis of a radiation-induced natural convection boundary layer in a shallow wedge. *Journal of Fluid Mechanics*, **2003**, 480, 161-184	3.7	32
10	Thermal Layer Instability in a Shallow Wedge Subject to Solar Radiation **2003**, 797-798		
9	Natural convection in a reservoir sidearm subject to solar radiation: experimental observations. *Experiments in Fluids*, **2002**, 32, 590-599	2.5	54
8	Unsteady natural convection in a triangular enclosure induced by absorption of radiation. *Journal of Fluid Mechanics*, **2002**, 460, 181-209	3.7	81
7	NATURAL CONVECTION IN A RESERVOIR SIDEARM SUBJECT TO SOLAR RADIATION: A TWO-DIMENSIONAL SIMULATION. *Numerical Heat Transfer; Part A: Applications*, **2002**, 42, 13-32	2.3	32
6	Spanwise length effects on three-dimensional modelling of flow over a circular cylinder. *Computer Methods in Applied Mechanics and Engineering*, **2001**, 190, 2909-2923	5.7	50
5	A finite difference solution of the shear flow over a circular cylinder. *Ocean Engineering*, **2000**, 27, 271-290	3.9	63
4	Vortex shedding suppression for flow over a circular cylinder near a plane boundary. *Ocean Engineering*, **2000**, 27, 1109-1127	3.9	89
3	Re-examination of the effect of a plane boundary on force and vortex shedding of a circular cylinder. *Journal of Wind Engineering and Industrial Aerodynamics*, **1999**, 80, 263-286	3.7	181
2	The leading edge effect in a suddenly differentially heated cavity. *ANZIAM Journal*,48, 790		3

1 Numerical investigation of the ventilation performance of a solar chimney. *ANZIAM Journal*,52, 899 15