Hendrik C Kuhlmann

List of Publications by Year
in descending order

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84	1,829	257101	288905
papers	citations	24 h-index	40 g-index

89	89	89	682
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Accurate three-dimensional lid-driven cavity flow. Journal of Computational Physics, 2005, 206, 536-558.	1.9	183
2	Three-dimensional numerical simulation of thermocapillary flows in cylindrical liquid bridges. Journal of Fluid Mechanics, 2000, 414, 285-314.	1.4	146
3	Hydrodynamic instabilities in cylindrical thermocapillary liquid bridges. Journal of Fluid Mechanics, 1993, 247, 247-274.	1.4	136
4	Stability of thermocapillary flows in non-cylindrical liquid bridges. Journal of Fluid Mechanics, 2002, 458, 35-73.	1.4	77
5	Multiplicity of Steady Two-Dimensional Flows in Two-Sided Lid-Driven Cavities. Theoretical and Computational Fluid Dynamics, 2001, 14, 223-241.	0.9	71
6	The two-sided lid-driven cavity: experiments on stationary and time-dependent flows. Journal of Fluid Mechanics, 2002, 450, 67-95.	1.4	59
7	Particle accumulation on periodic orbits by repeated free surface collisions. Physics of Fluids, 2011, 23, .	1.6	58
8	Global stability of the two-dimensional flow over a backward-facing step. Journal of Fluid Mechanics, 2012, 693, 1-27.	1.4	44
9	Linear stability of rectangular cavity flows driven by anti-parallel motion of two facing walls. Journal of Fluid Mechanics, 2002, 458, 153-180.	1.4	40
10	Coherent particulate structures by boundary interaction of small particles in confined periodic flows. Physica D: Nonlinear Phenomena, 2013, 253, 40-65.	1.3	38
11	Particleâ€“boundary interaction in a shear-driven cavity flow. Theoretical and Computational Fluid Dynamics, 2017, 31, 427-445.	0.9	37
12	Dynamic free-surface deformations in thermocapillary liquid bridges. Fluid Dynamics Research, 2002, 31, 103-127.	0.6	35
13	Linear stability of thermocapillary convection in cylindrical liquid bridges under axial magnetic fields. Journal of Fluid Mechanics, 1999, 394, 281-302.	1.4	33
14	Nonlinear three-dimensional flow in the lid-driven square cavity. Journal of Fluid Mechanics, 2006, 569, 465.	1.4	33
15	The Lid-Driven Cavity. Computational Methods in Applied Sciences (Springer), 2019, , 233-309.	0.1	33
16	Model for Taylor-Couette flow. Physical Review A, 1985, 32, 1703-1707.	1.0	31
17	Topology of hydrothermal waves in liquid bridges and dissipative structures of transported particles. Physical Review E, 2013, 88, 053016.	0.8	31
18	On the interpretation of phase measurements of oscillatory thermocapillary convection in liquid bridges. Physics of Fluids A, Fluid Dynamics, 1993, 5, 2117-2120.	1.6	30

#	Article	IF	Citations
19	Three-dimensional instability of the flow over a forward-facing step. Journal of Fluid Mechanics, 2012, 695, 390-404.	1.4	30
20	Limit cycles for the motion of finite-size particles in axisymmetric thermocapillary flows in liquid bridges. Physics of Fluids, 2017, 29, .	1.6	30
21	Finite-size Lagrangian coherent structures in thermocapillary liquid bridges. Physical Review Fluids, 2018, 3, .	1.0	29
22	Stability of the steady three-dimensional lid-driven flow in a cube and the supercritical flow dynamics. Physics of Fluids, 2014, 26, .	1.6	27
23	Three-dimensional flow instability in a lid-driven isosceles triangular cavity. Journal of Fluid Mechanics, 2011, 675, 369-396.	1.4	26
24	Particle-accumulation structures in periodic free-surface flows: Inertia versus surface collisions. Physical Review E, 2012, 85, 046310.	0.8	26
25	Topology of three-dimensional steady cellular flow in a two-sided anti-parallel lid-driven cavity. Journal of Fluid Mechanics, 2017, 826, 302-334.	1.4	24
26	Linear stability of two-dimensional combined buoyant-thermocapillary flow in cylindrical liquid bridges. Physical Review E, 1997, 55, 7036-7042.	0.8	23
27	Structure and dynamics of particle-accumulation in thermocapillary liquid bridges. Fluid Dynamics Research, 2014, 46, 041421.	0.6	23
28	Investigation of three-dimensional thermocapillary convection in a cubic container by a multi-grid method. International Journal of Heat and Mass Transfer, 1996, 39, 603-613.	2.5	22
29	Flow instabilities in thermocapillary-buoyant liquid pools. Journal of Fluid Mechanics, 2010, 644, 509-535.	1.4	20
30	Numerical investigation of the interaction of a finite-size particle with a tangentially moving boundary. International Journal of Heat and Fluid Flow, 2016, 62, 75-82.	1.1	19
31	A generic mechanism for finite-size coherent particle structures. International Journal of Multiphase Flow, 2019, 111, 42-52.	1.6	19
32	Small amplitude thermocapillary flow and surface deformations in a liquid bridge. Physics of Fluids A, Fluid Dynamics, 1989, 1, 672-677.	1.6	18
33	Finite-size Lagrangian coherent structures in a two-sided lid-driven cavity. Physical Review Fluids, 2019, 4, .	1.0	18
34	Two- and three-dimensional flows in nearly rectangular cavities driven by collinear motion of two facing walls. Experiments in Fluids, 2008, 45, 781-796.	1.1	17
35	Airflow elicits a spider's jump towards airborne prey. I. Airflow around a flying blowfly. Journal of the Royal Society Interface, 2012, 9, 2591-2602.	1.5	17
36	Origin of particle accumulation structures in liquid bridges: Particleâ€“boundary-interactions versus inertia. Physics of Fluids, 2016, 28, .	1.6	17

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37	Lagrangian chaos in steady three-dimensional lid-driven cavity flow. Chaos, 2020, 30, 073121.	1.0	17
38	Linear stability of thermocapillary flow in partially confined half-zones. Physics of Fluids, 2007, 19, 044103.	1.6	16
39	Attractors for the motion of a finite-size particle in a two-sided lid-driven cavity. Journal of Fluid Mechanics, 2021, 906, .	1.4	16
40	Airflow elicits a spider's jump towards airborne prey. II. Flow characteristics guiding behaviour. Journal of the Royal Society Interface, 2013, 10, 20120820.	1.5	15
41	Stability of Thermocapillary Flow in High-Prandtl-Number Liquid Bridges Exposed to a Coaxial Gas Stream. Microgravity Science and Technology, 2020, 32, 953-959.	0.7	15
42	Global stability of multiple solutions in plane sudden-expansion flow. Journal of Fluid Mechanics, 2012, 702, 378-402.	1.4	14
43	Comment on â€œOrdering of Small Particles in One-Dimensional Coherent Structures by Time-Periodic Flowsâ€. Physical Review Letters, 2012, 108, 249401; author reply 249402.	2.9	13
44	On the optimum mass transfer of flat absorbing falling films. International Journal of Heat and Mass Transfer, 2012, 55, 7686-7697.	2.5	13
45	Thermocapillary flows in finite size systems. Mathematical and Computer Modelling, 1994, 20, 145-173.	2.0	12
46	Different particle-accumulation structures arising from particleâ€“boundary interactions in a liquid bridge. International Journal of Multiphase Flow, 2014, 59, 145-159.	1.6	12
47	Smoothedâ€profile method for momentum and heat transfer in particulate flows. International Journal for Numerical Methods in Fluids, 2017, 83, 485-512.	0.9	12
48	Numerical simulation of three-dimensional oscillatory thermocapillary flow in a half zone of Pr=1 fluid. Advances in Space Research, 1999, 24, 1385-1390.	1.2	11
49	Flow instability in triangular lid-driven cavities with wall motion away from a rectangular corner. Fluid Dynamics Research, 2012, 44, 025501.	0.6	10
50	Numerical error in modeling of particle-accumulation structures in periodic free-surface flows. Computers and Fluids, 2013, 88, 43-50.	1.3	10
51	Large-Scale Liquid Motion in Free Thermocapillary Films. Microgravity Science and Technology, 2014, 26, 397-400.	0.7	9
52	Particle accumulation in highâ€Prandtlâ€number liquid bridges. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900058.	0.2	9
53	Cellular flow in a partially filled rotating drum: regular and chaotic advection. Journal of Fluid Mechanics, 2017, 825, 631-650.	1.4	8
54	The local flow in a wedge between a rigid wall and a surface of constant shear stress. Journal of Engineering Mathematics, 1999, 36, 207-218.	0.6	7

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55	Three-dimensional flow in a lid-driven cavity with width-to-height ratio of 1.6. Experiments in Fluids, 2013, 54, 1.	1.1	7
56	Interaction of a finite-size particle with the moving lid of a cavity. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 519-520.	0.2	7
57	Finite-size coherent particle structures in high-Prandtl-number liquid bridges. Physical Review Fluids, 2021, 6, .	1.0	7
58	Tracking particles in flows near invariant manifolds via balance functions. Nonlinear Dynamics, 2018, 92, 983-1000.	2.7	6
59	Hydraulic niche utilization by larvae of the three Drusinae clades (Insecta: Trichoptera). Biologia (Poland), 2021, 76, 1465-1473.	0.8	6
60	Influence of the volume of liquid on the onset of three-dimensional flow in thermocapillary liquid bridges. Advances in Space Research, 2002, 29, 639-644.	1.2	5
61	Comment on â€œSynchronization of finite-size particles by a traveling wave in a cylindrical flowâ€•[Phys. Fluids 25, 092108 (2013)]. Physics of Fluids, 2014, 26, 099101.	1.6	5
62	Axisymmetric buoyantâ€“thermocapillary flow in sessile and hanging droplets. Journal of Fluid Mechanics, 2017, 826, 1066-1095.	1.4	5
63	Coherent Particle Structures in High-Prandtl-Number Liquid Bridges. Microgravity Science and Technology, 2021, 33, 1.	0.7	5
64	Attractors for the motion of finiteâ€size particles in a twoâ€sided lidâ€driven cavity. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 669-670.	0.2	4
65	Comparing head muscles among Drusinae clades (Insecta: Trichoptera) reveals high congruence despite strong contrasts in head shape. Scientific Reports, 2022, 12, 1047.	1.6	4
66	Pattern formation and transient thermocapillary flow in a rectangular side-heated open cavity. Microgravity Science and Technology, 2002, 13, 30-35.	0.7	3
67	Hydraulic stress parameters of a cased caddis larva (Drusus biguttatus) using spatio-temporally filtered velocity measurements. Hydrobiologia, 2020, 847, 3437-3451.	1.0	3
68	A new Drusinae species from the western Alps with comments on the subfamily and an updated key to filtering carnivore larvae of Drusinae species (Insecta: Trichoptera: Limnephilidae). Zootaxa, 2020, 4790, 491-504.	0.2	3
69	The Influence of Static and Dynamic Free-Surface Deformations on the Three-Dimensional Thermocapillary Flow in Liquid Bridges. Lecture Notes in Physics, 2003, , 213-239.	0.3	3
70	Biorthogonal series method for Oseen type flows. International Journal of Engineering Science, 1993, 31, 1243-1258.	2.7	2
71	Pattern formation of thermocapillary flows in liquid bridges. , 1999, 3792, 334.		2
72	Stokesian motion of a spherical particle near a right corner made by tangentially moving walls. Journal of Fluid Mechanics, 2021, 927, .	1.4	2

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73	Instabilities and bifurcations in lid-driven cavity flows. Proceedings in Applied Mathematics and Mechanics, 2003, 3, 372-373.	0.2	1
74	Effect of centrifugal forces on the instability of the thermocapillary flow in partially confined half-zones. Microgravity Science and Technology, 2006, 18, 132-136.	0.7	1
75	Threeâ€dimensional flow in a shearâ€driven cube. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900090.	0.2	1
76	Flow instability in highâ€Prandtlâ€number thermocapillary liquid bridges exposed to a coaxial ambient gas stream. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000123.	0.2	1
77	Stability of obliquely driven cavity flow. Journal of Fluid Mechanics, 2021, 928, .	1.4	1
78	Accurate three-dimensional simulation of lid-driven cavity flow. Proceedings in Applied Mathematics and Mechanics, 2003, 3, 366-367.	0.2	0
79	Direct numerical simulation of particles in a fluid interacting with a wall. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 481-482.	0.2	0
80	Axisymmetric flow over a backward-facing step in an annular pipe. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 473-474.	0.2	0
81	Objective function choice for control of a thermocapillary flow using an adjoint-based control strategy. International Journal of Heat and Fluid Flow, 2015, 56, 28-42.	1.1	0
82	Lagrangian transport in twoâ€dimensional timeâ€periodic cavity flow. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000194.	0.2	0
83	Linear stability of the flow in a cavity driven at yaw. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000057.	0.2	0
84	Project overview: Intricate bodies in the boundary layer - bridging fluid mechanics, morphology and ecology in larval Drusinae (Insecta: Trichoptera). Lauterbornia, 2019, 86, 169-174.	2.0	0