Toshio Tagawa

List of Publications by Year
in descending order

92	1,352	331538	377752
papers	citations	21 h-index	34 g-index

92	92	92	543
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Magnetizing force modeled and numerically solved for natural convection of air in a cubic enclosure: effect of the direction of the magnetic field. International Journal of Heat and Mass Transfer, 2002, 45, 267-277.	2.5	134
2	DISCUSSION ON MOMENTUM INTERPOLATION METHOD FOR COLLOCATED GRIDS OF INCOMPRESSIBLE FLOW. Numerical Heat Transfer, Part B: Fundamentals, 2002, 42, 141-166.	0.6	73
3	Numerical computation for Rayleighâ€“Benard convection of water in a magnetic field. International Journal of Heat and Mass Transfer, 2003, 46, 4097-4104.	2.5	64
4	Heat transfer characteristics of concave and convex curved vortex generators in the channel of plate heat exchanger under laminar flow. International Journal of Thermal Sciences, 2019, 137, 215-228.	2.6	59
5	Convection Induced by a Cusp-Shaped Magnetic Field for Air in a Cube Heated From Above and Cooled From Below. Journal of Heat Transfer, 2002, 124, 17-25.	1.2	58
6	Enhancement of Heat Transfer Rate by Application of a Static Magnetic Field During Natural Convection of Liquid Metal in a Cube. Journal of Heat Transfer, 1997, 119, 265-271.	1.2	57
7	Buoyant flow in long vertical enclosures in the presence ofÂaÂstrongÂhorizontal magnetic field. PartÂ2. Finite enclosures. European Journal of Mechanics, B/Fluids, 2003, 22, 203-220.	1.2	49
8	EFFECT OF PRANDTL NUMBER AND COMPUTATIONAL SCHEMES ON THE OSCILLATORY NATURAL CONVECTION IN AN ENCLOSURE. Numerical Heat Transfer; Part A: Applications, 1996, 30, 271-282.	1.2	48
9	The optimal arrangement of vortex generators for best heat transfer enhancement in flat-tube-fin heat exchanger. International Journal of Thermal Sciences, 2018, 132, 355-367.	2.6	45
10	NUMERICAL COMPUTATION FOR NATURAL CONVECTION OF AIR IN A CUBIC ENCLOSURE UNDER COMBINATION OF MAGNETIZING AND GRAVITATIONAL FORCES. Numerical Heat Transfer; Part A: Applications, 2003, 43, 449-463.	1.2	41
11	Buoyant flow in long vertical enclosures in the presence of a strong horizontal magnetic field. Part 1. Fully-established flow. European Journal of Mechanics, B/Fluids, 2002, 21, 383-398.	1.2	39
12	Enhanced Convection or Quasi-Conduction States Measured in a Super-Conducting Magnet for Air in a Vertical Cylindrical Enclosure Heated From Below and Cooled From Above in a Gravity Field. Journal of Heat Transfer, 2002, 124, 667-673.	1.2	38
13	Enhanced Heat Transfer Rate Measured for Natural Convection in Liquid Gallium in a Cubical Enclosure Under a Static Magnetic Field. Journal of Heat Transfer, 1998, 120, 1027-1032.	1.2	33
14	Experimental and numerical analyses of magnetic convection of paramagnetic fluid in a cube heated and cooled from opposing verticals walls. International Journal of Thermal Sciences, 2005, 44, 933-943.	2.6	33
15	Transient characteristics of convection and diffusion of oxygen gas in an open vertical cylinder under magnetizing and gravitational forces. Chemical Engineering Science, 2001, 56, 4217-4223.	1.9	30
16	Thermal performance of a zig-zag channel formed by two wavy fins mounted with vortex generators. International Journal of Thermal Sciences, 2020, 153, 106361.	2.6	30
17	Simple and environmentally friendly preparation and size control of silver nanoparticles using an inhomogeneous system with silver-containing glass powder. Journal of Nanoparticle Research, 2011, 13, 2799-2806.	0.8	28
18	The natural convection of liquid metal in a cubical enclosure with various electro-conductivities of the wall under the magnetic field. International Journal of Heat and Mass Transfer, 1998, 41, 1917-1928.	2.5	27

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19	Thermomagnetic convection of oxygen in a square enclosure under non-uniform magnetic field. International Journal of Thermal Sciences, 2018, 125, 52-65.	2.6	25
20	Natural convection of a paramagnetic liquid controlled by magnetization force. AICHE Journal, 2005, 51, 1096-1103.	1.8	24
21	Computation of a Rising Bubble in an Enclosure Filled with Liquid Metal under Vertical Magnetic Fields. ISIJ International, 2010, 50, 363-370.	0.6	24
22	Average heat transfer rates measured in two different temperature ranges for magnetic convection of horizontal water layer heated from below. International Journal of Heat and Mass Transfer, 2006, 49, 3555-3560.	2.5	20
23	MAGNETIC AND GRAVITATIONAL CONVECTION OF AIR WITH A COIL INCLINED AROUND THE X AXIS. Numerical Heat Transfer; Part A: Applications, 2004, 46, 99-113.	1.2	19
24	Numerical simulation of two-phase flows in the presence of a magnetic field. Mathematics and Computers in Simulation, 2006, 72, 212-219.	2.4	19
25	CONVECTIVE AND DIFFUSIVE PHENOMENA OF AIR IN A VERTICAL CYLINDER UNDER A STRONG MAGNETIC FIELD. Numerical Heat Transfer, Part B: Fundamentals, 2002, 41, 383-395.	0.6	18
26	Natural convection of liquid metal under a uniform magnetic field with an electric current supplied from outside. Experimental Thermal and Fluid Science, 2006, 30, 243-252.	1.5	18
27	Three-dimensional numerical computation for magnetic convection of air inside a cylinder heated and cooled isothermally from a side wall. International Journal of Heat and Mass Transfer, 2005, 48, 1858-1867.	2.5	16
28	Effect of a magnetic field on the convection of paramagnetic fluid in unstable and stable thermosyphon-like configurations. International Journal of Heat and Mass Transfer, 2006, 49, 2642-2651.	2.5	16
29	Convection of air in a cubic enclosure with an electric coil inclined in general orientations. Fluid Dynamics Research, 2005, 36, 91-106.	0.6	14
30	Thermal convection of water filled in a tall vessel at or near the center of a solenoidal magnet. Physics of Fluids, 2007, 19, 087104.	1.6	14
31	Numerical Simulation of a Falling Droplet of Liquid Metal into a Liquid Layer in the Presence of a Uniform Vertical Magnetic Field. ISIJ International, 2005, 45, 954-961.	0.6	12
32	Experimental study on the magnetic convection in a vertical cylinder. Experimental Thermal and Fluid Science, 2005, 29, 971-980.	1.5	12
33	Numerical and Experimental Analyses of Magnetic Convection of Paramagnetic Fluid in a Cylinder. Journal of Heat Transfer, 2006, 128, 183-191.	1.2	12
34	Numerical Simulation of Liquid Metal Free-surface Flows in the Presence of a Uniform Static Magnetic Field. ISIJ International, 2007, 47, 574-581.	0.6	11
35	Heat Transfer Enhancement in a Novel Annular Tube with Outer Straight and Inner Twisted Oval Tubes. Symmetry, 2020, 12, 1213.	1.1	10
36	Numerical Computation for the Melt Convection of the Model System of Continuous Steel Casting with Various Magnetic Fields. ISIJ International, 2003, 43, 907-914.	0.6	10

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37	Average heat transfer rates measured and numerically analyzed for combined convection of air in an inclined cylindrical enclosure due to both magnetic and gravitational fields. Experimental Thermal and Fluid Science, 2003, 27, 891-899.	1.5	9
38	Numerical study of joint magnetisation and gravitational convection of air in a cubic enclosure with an inclined electric coil. Progress in Computational Fluid Dynamics, 2005, 5, 261.	0.1	8
39	Numerical Study of the Magnetic Damping Effect on the Sloshing of Liquid Oxygen in a Propellant Tank. Fluids, 2020, 5, 88.	0.8	8
40	Heat transfer enhancement of a double pipe heat exchanger by Co-Twisting oval pipes with unequal twist pitches. Case Studies in Thermal Engineering, 2021, 28, 101411.	2.8	8
41	Enhancement of Heat Transfer and Air Flow Rates in a Pipe with Application of a Magnetic Field. Journal of Enhanced Heat Transfer, 2003, 10, 45-60.	0.5	8
42	Numerical Analysis of Magnetic Effect on Human Breathing. JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing, 2003, 46, 572-582.	0.3	7
43	Observation of Single and Continuous Bubbles Rising in Reduced Pressure Vessel. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2015, 101, 93-100.	0.1	7
44	Stability of an Axisymmetric Liquid Metal Flow Driven by a Multi-Pole Rotating Magnetic Field. Fluids, 2019, 4, 77.	0.8	7
45	Thermomagnetic Convection of Paramagnetic Gas in an Enclosure under No Gravity Condition. Fluids, 2019, 4, 49.	0.8	6
46	Linear Stability Analysis of Liquid Metal Flow in an Insulating Rectangular Duct under External Uniform Magnetic Field. Fluids, 2019, 4, 177.	0.8	6
47	Effect of Inclination on the Convection of Air in a Cubic Enclosure under Both Magnetic and Gravitational Fields with Flow Visualization. Journal of Chemical Engineering of Japan, 2004, 37, 338-346.	0.3	6
48	Magnetic Fields in Semiconductor Crystal Growth. Fluid Mechanics and Its Applications, 2007, , 375-390.	0.1	5
49	Effect of the Direction of Uniform Horizontal Magnetic Field on the Linear Stability of Natural Convection in a Long Vertical Rectangular Enclosure. Symmetry, 2020, 12, 1689.	1.1	5
50	Numerical analyses of a Couette-Taylor flow in the presence of a magnetic field. Journal of Physics: Conference Series, 2005, 14, 48-54.	0.3	4
51	Variations in driving torque in Couette-Taylor flow subject to a vertical magnetic field. Journal of Physics: Conference Series, 2005, 14, 42-47.	0.3	4
52	THE BEHAVIOR OF MICROSCALED BROWNIAN PARTICLES IN A CYLINDER UNDER NATURAL-AND MAGNETIC-CONVECTION FLOW FIELD OF AIR. Numerical Heat Transfer; Part A: Applications, 2005, 47, 353-373.	1.2	4
53	CONJUGATE NUMERICAL COMPUTATION FOR THE NATURAL CONVECTION OF LIQUID METAL HEATED FROM BELOW. Numerical Heat Transfer; Part A: Applications, 2005, 47, 709-723.	1.2	4
54	Spin-up from rest in a cylinder of an electrically conducting fluid in an axial magnetic field. Acta Mechanica, 2006, 186, 203-220.	1.1	4

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55	Measurement of Surface Tension for Molten Silver by Oscillating Droplet Method Using Electromagnetic Levitation Furnace. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2008, 72, 708-713.	0.2	4
56	Quasi-Periodic Oscillating Flows in a Channel with a Suddenly Expanded Section. Symmetry, 2019, 11, 1403.	1.1	4
57	Numerical Analyses for Magnetically Enhanced Natural Convection of Air in an Inclined Rectangular Enclosure Heated from Below. Journal of Enhanced Heat Transfer, 2002, 9, 89-97.	0.5	4
58	Enhanced Heat Transfer Rates Caused by Magnetic Field for Natural Convection of Air in an Inclined Cubic Enclosure. Journal of Enhanced Heat Transfer, 2003, 10, 159-170.	0.5	4
59	Water mist flow in a vertical bore of a superconducting magnet. Journal of Applied Physics, 2005, 98, 114906.	1.1	3
60	Numerical Investigation for the Modeling of the Magnetic Buoyancy Force during the Natural Convection of Air in a Square Enclosure. Advances in Mechanical Engineering, 2014, 6, 873260.	0.8	3
61	Numerical Analyses of Single Rising Bubble in a Viscous Fluid in an Enclosure. Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan, 2015, 101, 101-108.	0.1	3
62	Linear stability analysis of three-dimensional natural convection at low Prandtl number in an annular enclosure in the presence of a toroidal magnetic field. AIP Advances, 2020, 10, .	0.6	3
63	Axisymmetric Natural Convection of Liquid Metal in an Annular Enclosure under the Influence of Azimuthal Magnetic Field. Energies, 2020, 13, 2896.	1.6	3
64	Numerical Analysis of Magnetohydrodynamic Flows. Fluids, 2020, 5, 23.	0.8	3
65	Numerical Simulation of Fluid Flow and Heat Transfer Processes. Advances in Mechanical Engineering, 2013, 5, 497950.	0.8	3
66	Effect of Asymmetry of Channels on Flows in Parallel Plates with a Sudden Expansion. Symmetry, 2021, 13, 1857.	1.1	3
67	Transition of natural convection of liquid metal in an annular enclosure. Physics of Fluids, 2022, 34, .	1.6	3
68	MAGNETICALLY CONTROLLED AIR FLOW AND HEAT TRANSFER IN A PIPE WITH UNIFORM HEAT FLUX ONITS LATTER HALF-LENGTH. Numerical Heat Transfer; Part A: Applications, 2004, 45, 377-390.	1.2	2
69	Numerical analysis for air convection in a vertical cylinder heated and cooled from a side wall under a strong magnetic field. Progress in Computational Fluid Dynamics, 2005, 5, 252.	0.1	2
70	The behaviour of a water droplet in a flow field of natural convection in a cubic enclosure with magnetic field. Progress in Computational Fluid Dynamics, 2005, 5, 271.	0.1	2
71	Effect of external magnetic fields on various free-surface flows. Progress in Computational Fluid Dynamics, 2008, 8, 461.	0.1	2
72	Fluid Flow of a Liquid Metal in a Cylinder Driven by a Rotating Magnetic Field. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2012, 78, 1680-1695.	0.2	2

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73	Numerical computation for clustering of carbon particles with various sizes under both natural and magnetizing convections. Chemical Engineering Science, 2005, 60, 5105-5117.	1.9	1
74	Magnetic Rayleigh-BÃ©nard Convection of Air in a Coaxial Double Cylinder. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2011, 77, 106-119.	0.2	1
75	Effect of Magnetic Fields on Oscillatory Marangoni Convection in a Half-Zone of an Electric Conducting Liquid Bridge. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2013, 79, 848-862.	0.2	1
76	Effect of the electric conductivity and Seebeck coefficient of the rods on the oscillatory Marangoni convection in the presence of a uniform axial magnetic field. Transactions of the JSME (in Japanese), 2017, 83, 17-00011-17-00011.	0.1	1
77	Numerical Analysis of Flow around a Moving Object by an Immersed Boundary Method with the Level Set Method. Advances in Mechanical Engineering, 2013, 5, 868240.	0.8	1
78	Linear Stability Analysis of Thermal Convection in an Infinitely Long Vertical Rectangular Enclosure in the Presence of a Uniform Horizontal Magnetic Field. Journal of Fluids, 2014, 2014, 1-8.	1.4	1
79	Combined Effect of the Magnetic Strengths and Electro-Conductivity of the Enclosure Wall on the Natural Convection of Liquid Metal in a Cubical Enclosure. Journal of Materials Processings and Manufacturing Science, 2002, 10, 137-146.	0.1	1
80	The Behavior of Diamagnetic Brownian Particles in the Presence of a Gradient Magnetic Field. Journal of Chemical Engineering of Japan, 2005, 38, 24-33.	0.3	1
81	Numerical Investigation of Benard-Marangoni Convection of Paramagnetic Liquid in Annular Layers. , 2014, , .		1
82	Experimental and Computational Studies on Water Mist Flow in the Horizontal Bore of a Superconducting Magnet: Example of Magnetic Force Application on Micron-Sized Objects. Japanese Journal of Applied Physics, 2005, 44, 8189-8195.	0.8	0
83	WATER MIST FLOW IN A SUPERCONDUCTING MAGNET INCLINED AT VARIOUS ANGLES. Chemical Engineering Communications, 2007, 194, 835-848.	1.5	0
84	Magnetic BÃ©nard-Marangoni Convection in an Annular Liquid Layer. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 2012, 78, 618-633.	0.2	0
85	Linear stability of parallel flow of liquid metal in a rectangular duct driven by a constant pressure gradient under the influence of a uniform magnetic field. IOP Conference Series: Materials Science and Engineering, 2018, 424, 012016.	0.3	0
86	Numerical Analysis of the Incompressible Fluid Flow and Heat Transfer. , 0, , .		0
87	Three-dimensional numerical computation of gas-liquid two-phase flow under pseudo microgravity environment using a superconducting electromagnet. IOP Conference Series: Materials Science and Engineering, 2018, 424, 012068.	0.3	0
88	A212 Natural convection of liquid metal with electric current added in a magnetic field. Proceedings of Thermal Engineering Conference, 2001, 2001, 363-364.	0.0	0
89	301 The behavior of a water droplet in a flow field of natural convection in a cubic enclosure with magnetic field. The Proceedings of the Computational Mechanics Conference, 2003, 2003.16, 175-176.	0.0	0
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91	NUMERICAL STUDY FOR A THERMAL CONVECTION IN A ROTAING SPHERICAL SHELL WITH GROWTH OF MAGNETIC FIELD. , 2018, , .		0
92	Spin-Up from Rest of a Liquid Metal with Deformable Free Surface in a Cylinder under the Influence of a Uniform Axial Magnetic Field. Fluids, 2021, 6, 438.	0.8	0