Igor V Shevchuk

List of Publications by Year
in descending order

106 papers	1,556 citations	279487 23 h-index	360668 35 g-index
115 all docs	115 docs citations	115 times ranked	684 citing authors

#	Article	IF	Citations
1	Review of fluid flow and convective heat transfer within rotating disk cavities with impinging jet. International Journal of Thermal Sciences, 2013, 67, 1-30.	2.6	92
2	Convective Heat and Mass Transfer in Rotating Disk Systems. Lecture Notes in Applied and Computational Mechanics, 2009, , .	2.0	80
3	Validation and Analysis of Numerical Results for a Varying Aspect Ratio Two-Pass Internal Cooling Channel. Journal of Heat Transfer, 2011, 133, .	1.2	71
4	On flow structure, heat transfer and pressure drop in varying aspect ratio two-pass rectangular channel with ribs at 45Â°. Heat and Mass Transfer, 2013, 49, 679-694.	1.2	61
5	Self-similar analysis of fluid flow and heat-mass transfer of nanofluids in boundary layer. Physics of Fluids, 2011, 23, 082002.	1.6	60
6	Numerical Study of Convective Heat Transfer Enhancement in a Pipe Rotating Around a Parallel Axis. Journal of Heat Transfer, 2014, 136, .	1.2	53
7	Flow structure, heat transfer and pressure drop in varying aspect ratio two-pass rectangular smooth channels. Heat and Mass Transfer, 2012, 48, 735-748.	1.2	51
8	Validation and Analysis of Numerical Results for a Two-Pass Trapezoidal Channel With Different Cooling Configurations of Trailing Edge. Journal of Turbomachinery, 2013, 135, 0110271-110278.	0.9	45
9	Symmetry analysis and self-similar forms of fluid flow and heat-mass transfer in turbulent boundary layer flow of a nanofluid. Physics of Fluids, 2012, 24, .	1.6	44
10	Heat transfer at film condensation of stationary vapor with nanoparticles near a vertical plate. Applied Thermal Engineering, 2014, 73, 391-398.	3.0	38
11	Heat transfer in stable film boiling of a nanofluid over a vertical surface. International Journal of Thermal Sciences, 2015, 92, 106-118.	2.6	35
12	The Effects of Ribs and Tip Wall Distance on Heat Transfer for a Varying Aspect Ratio Two-Pass Ribbed Internal Cooling Channel. Journal of Turbomachinery, 2013, 135, .	0.9	34
13	Symmetry of turbulent boundary-layer flows: Investigation of different eddy viscosity models. Acta Mechanica, 2001, 151, 1-14.	1.1	33
14	Heat transfer due to revolving flow of Reiner-Rivlin fluid over a stretchable surface. Thermal Science and Engineering Progress, 2019, 10, 327-336.	1.3	33
15	Heat transfer at film condensation of moving vapor with nanoparticles over a flat surface. International Journal of Heat and Mass Transfer, 2015, 82, 316-324.	2.5	32
16	Mixed convection in a vertical circular microchannel. International Journal of Thermal Sciences, 2017, 121, 1-12.	2.6	32
17	Impingement Heat Transfer over a Rotating Disk: Integral Method. Journal of Thermophysics and Heat Transfer, 2003, 17, 291-293.	0.9	30
18	Transient laminar conjugate heat transfer of a rotating disk: theory and numerical simulations. International Journal of Heat and Mass Transfer, 2004, 47, 3577-3581.	2.5	29

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19	Rotating disk heat transfer in a fluid swirling as a forced vortex. Heat and Mass Transfer, 2005, 41, 1112-1121.	1.2	29
20	Unsteady conjugate laminar heat transfer of a rotating non-uniformly heated disk: Application to the transient experimental technique. International Journal of Heat and Mass Transfer, 2006, 49, 3530-3537.	2.5	28
21	Turbulent heat and mass transfer over a rotating disk for the Prandtl or Schmidt numbers much larger than unity: an integral method. Heat and Mass Transfer, 2009, 45, 1313-1321.	1.2	28
22	Modelling of Convective Heat and Mass Transfer in Rotating Flows. Mathematical Engineering, 2016, , .	0.1	28
23	Mixed convection in a vertical flat microchannel. International Journal of Heat and Mass Transfer, 2017, 106, 1164-1173.	2.5	28
24	Mixed Convection in Vertical Flat and Circular Porous Microchannels. Transport in Porous Media, 2018, 124, 919-941.	1.2	25
25	Title is missing!. High Temperature, 2001, 39, 637-640.	0.1	23
26	An analytical and numerical study on the start-up flow of slightly rarefied gases in a parallel-plate channel and a pipe. Physics of Fluids, 2015, 27, .	1.6	23
27	Laminar Heat and Mass Transfer in Rotating Cone-and-Plate Devices. Journal of Heat Transfer, 2011, 133, .	1.2	21
28	Start-up slip flow in a microchannel with a rectangular cross section. Theoretical and Computational Fluid Dynamics, 2015, 29, 351-371.	0.9	20
29	Dean instability of nanofluids with radial temperature and concentration non-uniformity. Physics of Fluids, 2016, 28, .	1.6	20
30	Turbulent heat transfer of rotating disk at constant temperature or density of heat flux to the wall. High Temperature, 2000, 38, 499-501.	0.1	19
31	A new evaluation method for Nusselt numbers in naphthalene sublimation experiments in rotating-disk systems. Heat and Mass Transfer, 2008, 44, 1409-1415.	1.2	19
32	Transient Thermal Field Measurements in a High Aspect Ratio Channel Related to Transient Thermochromic Liquid Crystal Experiments. Journal of Turbomachinery, 2012, 134, .	0.9	19
33	Symmetry analysis for film boiling of nanofluids on a vertical plate using a nonlinear approach. Journal of Molecular Liquids, 2016, 223, 156-164.	2.3	18
34	Thermocapillary instability in an evaporating two-dimensional thin layer film. International Journal of Heat and Mass Transfer, 2015, 91, 77-88.	2.5	17
35	Heat Transfer in Porous Microchannels with Second-Order Slipping Boundary Conditions. Transport in Porous Media, 2019, 129, 673-699.	1.2	15
36	Lie group analysis and general forms of self-similar parabolic equations for fluid flow, heat and mass transfer of nanofluids. Journal of Thermal Analysis and Calorimetry, 2019, 135, 223-235.	2.0	15

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37	A new type of the boundary condition allowing analytical solution of the thermal boundary layer equation. International Journal of Thermal Sciences, 2005, 44, 374-381.	2.6	14
38	Theoretical investigation of steady isothermal slip flow in a curved microchannel with a rectangular cross-section and constant radii of wall curvature. European Journal of Mechanics, B/Fluids, 2015, 54, 87-97.	1.2	14
39	Instability of a vapor layer on a vertical surface at presence of nanoparticles. Applied Thermal Engineering, 2018, 139, 87-98.	3.0	14
40	Perspective of mathematical modeling and research of targeted formation of disperse phase clusters in working media for the next-generation power engineering technologies. AIP Conference Proceedings, 2017, , .	0.3	13
41	A Self-Similar Solution of Navierâ€"Stokes and Energy Equations for Rotating Flows between a Cone and a Disk. High Temperature, 2004, 42, 104-110.	0.1	12
42	Validation and Analysis of Numerical Results for a Varying Aspect Ratio Two-Pass Internal Cooling Channel. , 2008, , .		12
43	Self-similar analysis of fluid flow, heat, and mass transfer at orthogonal nanofluid impingement onto a flat surface. Physics of Fluids, 2017, 29, 052005.	1.6	12
44	Darcyâ€"Brinkmanâ€"Forchheimer Model for Film Boiling in Porous Media. Transport in Porous Media, 2020, 134, 503-536.	1.2	12
45	Laminar Heat Transfer of a Swirled Flow in a Conical Diffuser. Self-similar Solution. Fluid Dynamics, 2004, 39, 42-46.	0.2	11
46	Unsteady convective heat transfer in nanofluids at instantaneous transition to film boiling. International Journal of Thermal Sciences, 2021, 164, 106873.	2.6	11
47	The Effect of Ribs and Tip Wall Distance on Heat Transfer for a Varying Aspect Ratio Two-Pass Ribbed Internal Cooling Channel. , 2008, , .		10
48	Centrifugal instability of nanofluids with radial temperature and concentration non-uniformity between co-axial rotating cylinders. European Journal of Mechanics, B/Fluids, 2016, 60, 90-98.	1.2	9
49	Concerning the effect of radial thermal conductivity in a self-similar solution for rotating cone-disk systems. International Journal of Numerical Methods for Heat and Fluid Flow, 2023, 33, 204-225.	1.6	9
50	Heat transfer of incompressible flow in a rotating microchannel with slip boundary conditions of second order. International Journal of Numerical Methods for Heat and Fluid Flow, 2019, 29, 1786-1814.	1.6	8
51	Heat transfer and hydrodynamics in channels rotating about their axis. Journal of Engineering Physics and Thermophysics, 1997, 70, 511.	0.2	7
52	Prandtl Number Effect on the Laminar Convective Heat Transfer From a Rotating Disk. Journal of Heat Transfer, 2017, 139, .	1.2	7
53	An Analytical Investigation of Natural Convection of a Van Der Waals Gas over a Vertical Plate. Fluids, 2021, 6, 121.	0.8	7
54	Integral Method for Calculating the Characteristics of a Turbulent Boundary Layer on a Rotating Disk: Quadratic Approximation of the Tangent of the Flow Swirl Angle. Heat Transfer Research, 1997, 28, 402-413.	0.9	7

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55	Shock Wave in van der Waals Gas. Journal of Non-Equilibrium Thermodynamics, 2022, 47, 255-267.	2.4	7
56	An Integral Method for Natural Convection of Van Der Waals Gases over a Vertical Plate. Energies, 2021, 14, 4537.	1.6	6
57	Heat Transfer in Turbulent Centrifugal How between Rotating Discs with Flow Swirling at the Inlet. Heat Transfer Research, 1998, 29, 383-390.	0.9	6
58	Effect of wall-temperature distribution on heat transfer in centrifugal flow in the gap between parallel rotating disks. Journal of Engineering Physics and Thermophysics, 1999, 72, 896-899.	0.2	5
59	Unsteady-State Laminar Heat Transfer in a Rotating Disk: Self- Similar Solution. High Temperature, 2004, 42, 592-595.	0.1	5
60	Laminar forced convection in curved channel with vortex structures. Journal of Thermal Science, 2004, 13, 143-150.	0.9	5
61	Transient Thermal Field Measurements in a High Aspect Ratio Channel Related to Transient Thermochromic Liquid Crystal Experiments. , 2007, , 623.		5
62	Approximate modelling of the leftward flow and morphogen transport in the embryonic node by specifying vorticity at the ciliated surface. Journal of Fluid Mechanics, 2014, 738, 492-521.	1.4	5
63	Turbulent incompressible microflow between rotating parallel plates. European Journal of Mechanics, B/Fluids, 2018, 71, 35-46.	1.2	5
64	Self-similar analysis of Eyring-Powell fluid in boundary layer without simplification. Chinese Journal of Physics, 2022, 75, 28-37.	2.0	5
65	Symmetry and self-similar analysis of natural convection of van der Waals gases over a vertical plate. International Journal of Heat and Mass Transfer, 2022, 195, 123114.	2.5	5
66	Simulation of heat transfer and hydrodynamics over a free rotating disk using an improved radial velocity profile. Journal of Thermal Science, 1999, 8, 243-249.	0.9	4
67	Title is missing!. High Temperature, 2002, 40, 684-692.	0.1	4
68	Unsteady theory of heat transfer and fluid flow during instantaneous transition to film boiling. International Journal of Thermal Sciences, 2020, 153, 106345.	2.6	4
69	Convective instability of nanofluids in vertical circular porous microchannels. Chaos, Solitons and Fractals, 2021, 149, 111093.	2.5	4
70	Title is missing!. Journal of Engineering Physics and Thermophysics, 2002, 75, 885-889.	0.2	3
71	Exact Solution of the Heat Transfer Problem for a Rotating Disk under Uniform Jet Impingement. Fluid Dynamics, 2003, 38, 18-27.	0.2	3
72	Heat transfer and hydrodynamics of slip confusor flow under second-order boundary conditions. Journal of Thermal Analysis and Calorimetry, 2021, 144, 955-961.	2.0	3

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73	Heat transfer and fluid flow of helium coolant in a model of the core zone of a pebble-bed nuclear reactor. Nuclear Engineering and Design, 2021, 377, 111148.	0.8	3
74	Integral Method of Calculation of a Turbulent Centrifugal Underswirl Flow in a Gap between Parallel Rotating. Heat Transfer Research, 1999, 30, 238-248.	0.9	3
75	Impinging Jet Heat Transfer Over a Rotating Disk: Exact Solution and Experiments. , 2002, , .		2
76	Free Rotating Disk. Lecture Notes in Applied and Computational Mechanics, 2009, , 33-76.	2.0	2
77	Validation and Analysis of Numerical Results for a Two-Pass Trapezoidal Channel With Different Cooling Configurations of Trailing Edge. , 2011, , .		2
78	Heat and Mass Transfer in Rotating Cone-and-Disk Systems for Laminar Flows. Mathematical Engineering, 2016, , 127-143.	0.1	2
79	Conditions of convective instability in a vertical circular microchannel with slippage effects. International Communications in Heat and Mass Transfer, 2020, 119, 104954.	2.9	2
80	Aerodynamics and Turbulent Flow Heat Exchange in the Rotary Disk Air Cleaner. Heat Transfer Research, 2005, 36, 104-113.	0.9	2
81	Simulation of the lubricant flow in thin slot channels with a moving wall under slip boundary conditions. Physics of Fluids, 2022, 34, .	1.6	2
82	Analytical simulation of normal shock waves in turbulent flow. Physics of Fluids, 2022, 34, .	1.6	2
83	An exact solution for heat transfer of a jet co-axially impinging on a rotating disk and its comparisons with stagnation point experiments. Journal of Thermal Science, 2002, 11, 53-59.	0.9	1
84	Heat transfer and fluid flow over a single disk in a fluid rotating as a rigid body. Journal of Thermal Science, 2004, 13, 279-282.	0.9	1
85	Laminar Fluid Flow and Heat Transfer in a Gap Between a Disk and a Cone that Touches the Disk with Its Apex. Lecture Notes in Applied and Computational Mechanics, 2009, , 179-192.	2.0	1
86	Modelling of Fluid Flow and Heat Transfer in Rotating-Disk Systems. Lecture Notes in Applied and Computational Mechanics, 2009, , 11-31.	2.0	1
87	General Characteristic of Rotating-Disk Systems. Lecture Notes in Applied and Computational Mechanics, 2009, , 1-9.	2.0	1
88	Overview of Rotating Flows. Mathematical Engineering, 2016, , 1-9.	0.1	1
89	Application of renormalization group analysis to two-phase turbulent flows with solid dust particles. Journal of Mathematical Physics, 2018, 59, .	0.5	1
90	Heat Transfer and Fluid Flow During Instantaneous Unsteady Condensation. Journal of Thermophysics and Heat Transfer, 2021, 35, 279-287.	0.9	1

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91	Modeling Leftward Flow in the Embryonic Node. , 2013, , .		1
92	External Flow Imposed over a Rotating Disk. Lecture Notes in Applied and Computational Mechanics, 2009, , 101-146.	2.0	0
93	Outward Underswirled and Overswirled Radial Flow Between Parallel Co-rotating Disks. Lecture Notes in Applied and Computational Mechanics, 2009, , 147-177.	2.0	0
94	Forced External Flow Over a Rotating Disk. Mathematical Engineering, 2016, , 81-126.	0.1	0
95	Heat and Mass Transfer of a Rotating Disk for Large Prandtl and Schmidt Numbers. Mathematical Engineering, 2016, , 145-170.	0.1	0
96	Varying Aspect Ratio Two-Pass Internal Ribbed Cooling Channels with 180Â°ÂBends. Mathematical Engineering, 2016, , 193-231.	0.1	0
97	Mathematical Modeling of Convective Heat Transfer in Rotating-Disk Systems. Mathematical Engineering, 2016, , 11-36.	0.1	0
98	Comparison analysis of analytical and lattice Boltzmann methods for simulation of turbulence decay in flows in converging and diverging channels. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2021, 101, e201900301.	0.9	0
99	Convective Instability in Slip Flow in a Vertical Circular Porous Microchannel. Transport in Porous Media, 2021, 138, 661-678.	1.2	0
100	Unsteady Laminar Heat Transfer of a Free Rotating Disk. Lecture Notes in Applied and Computational Mechanics, 2009, , 77-100.	2.0	0
101	Free Rotating Disk. Mathematical Engineering, 2016, , 37-79.	0.1	0
102	Renormalization group analysis of heat transfer in the presence of endothermic and exothermic chemical reactions. Mathematical Biosciences and Engineering, 2019, 16, 2049-2062.	1.0	0
103	Analytical Modeling and Symmetry Analysis of Stable Film Boiling in Nanofluids. Mathematical Engineering, 2022, , 121-159.	0.1	0
104	Symmetry Analysis of Boundary Layer Flows (Parabolic Flows) of Nanofluids. Mathematical Engineering, 2022, , 39-91.	0.1	0
105	Physical Foundations and Mathematical Models of Transport Processes in Nanofluids. Mathematical Engineering, 2022, , 1-12.	0.1	0
106	Instantaneous Transition to Film Boiling in Ordinary Fluids and Nanofluids on a Vertical Surface. Mathematical Engineering, 2022, , 161-200.	0.1	0