

# Igor V Shevchuk

## List of Publications by Citations

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99  
papers

1,148  
citations

20  
h-index

29  
g-index

115  
ext. papers

1,315  
ext. citations

2.3  
avg, IF

4.9  
L-index

#	Paper	IF	Citations
99	Review of fluid flow and convective heat transfer within rotating disk cavities with impinging jet. <i>International Journal of Thermal Sciences</i> , <b>2013</b> , 67, 1-30	4.1	70
98	Validation and Analysis of Numerical Results for a Varying Aspect Ratio Two-Pass Internal Cooling Channel. <i>Journal of Heat Transfer</i> , <b>2011</b> , 133,	1.8	57
97	Convective Heat and Mass Transfer in Rotating Disk Systems. <i>Lecture Notes in Applied and Computational Mechanics</i> , <b>2009</b> ,	0.3	54
96	On flow structure, heat transfer and pressure drop in varying aspect ratio two-pass rectangular channel with ribs at 45°. <i>Heat and Mass Transfer</i> , <b>2013</b> , 49, 679-694	2.2	49
95	Self-similar analysis of fluid flow and heat-mass transfer of nanofluids in boundary layer. <i>Physics of Fluids</i> , <b>2011</b> , 23, 082002	4.4	45
94	Numerical Study of Convective Heat Transfer Enhancement in a Pipe Rotating Around a Parallel Axis. <i>Journal of Heat Transfer</i> , <b>2014</b> , 136,	1.8	43
93	Flow structure, heat transfer and pressure drop in varying aspect ratio two-pass rectangular smooth channels. <i>Heat and Mass Transfer</i> , <b>2012</b> , 48, 735-748	2.2	43
92	Symmetry analysis and self-similar forms of fluid flow and heat-mass transfer in turbulent boundary layer flow of a nanofluid. <i>Physics of Fluids</i> , <b>2012</b> , 24, 092003	4.4	35
91	Heat transfer at film condensation of stationary vapor with nanoparticles near a vertical plate. <i>Applied Thermal Engineering</i> , <b>2014</b> , 73, 391-398	5.8	34
90	Heat transfer in stable film boiling of a nanofluid over a vertical surface. <i>International Journal of Thermal Sciences</i> , <b>2015</b> , 92, 106-118	4.1	33
89	Heat transfer at film condensation of moving vapor with nanoparticles over a flat surface. <i>International Journal of Heat and Mass Transfer</i> , <b>2015</b> , 82, 316-324	4.9	29
88	Validation and Analysis of Numerical Results for a Two-Pass Trapezoidal Channel With Different Cooling Configurations of Trailing Edge. <i>Journal of Turbomachinery</i> , <b>2013</b> , 135, 0110271-110278	1.8	29
87	Impingement Heat Transfer over a Rotating Disk: Integral Method. <i>Journal of Thermophysics and Heat Transfer</i> , <b>2003</b> , 17, 291-293	1.3	26
86	Rotating disk heat transfer in a fluid swirling as a forced vortex. <i>Heat and Mass Transfer</i> , <b>2005</b> , 41, 1112-1121		26
85	Mixed convection in a vertical circular microchannel. <i>International Journal of Thermal Sciences</i> , <b>2017</b> , 121, 1-12	4.1	25
84	Unsteady conjugate laminar heat transfer of a rotating non-uniformly heated disk: Application to the transient experimental technique. <i>International Journal of Heat and Mass Transfer</i> , <b>2006</b> , 49, 3530-3537	4.9	24
83	Transient laminar conjugate heat transfer of a rotating disk: theory and numerical simulations. <i>International Journal of Heat and Mass Transfer</i> , <b>2004</b> , 47, 3577-3581	4.9	23

82	Symmetry of turbulent boundary-layer flows: Investigation of different eddy viscosity models. <i>Acta Mechanica</i> , <b>2001</b> , 151, 1-14	2.1	22
81	The Effects of Ribs and Tip Wall Distance on Heat Transfer for a Varying Aspect Ratio Two-Pass Ribbed Internal Cooling Channel. <i>Journal of Turbomachinery</i> , <b>2013</b> , 135,	1.8	21
80	Turbulent heat and mass transfer over a rotating disk for the Prandtl or Schmidt numbers much larger than unity: an integral method. <i>Heat and Mass Transfer</i> , <b>2009</b> , 45, 1313-1321	2.2	21
79	Mixed convection in a vertical flat microchannel. <i>International Journal of Heat and Mass Transfer</i> , <b>2017</b> , 106, 1164-1173	4.9	20
78	Heat transfer due to revolving flow of Reiner-Rivlin fluid over a stretchable surface. <i>Thermal Science and Engineering Progress</i> , <b>2019</b> , 10, 327-336	3.6	18
77	An analytical and numerical study on the start-up flow of slightly rarefied gases in a parallel-plate channel and a pipe. <i>Physics of Fluids</i> , <b>2015</b> , 27, 042001	4.4	17
76	Start-up slip flow in a microchannel with a rectangular cross section. <i>Theoretical and Computational Fluid Dynamics</i> , <b>2015</b> , 29, 351-371	2.3	17
75	Mixed Convection in Vertical Flat and Circular Porous Microchannels. <i>Transport in Porous Media</i> , <b>2018</b> , 124, 919-941	3.1	17
74	Modelling of Convective Heat and Mass Transfer in Rotating Flows. <i>Mathematical Engineering</i> , <b>2016</b> ,	0.8	16
73	Effect of the Wall Temperature on Laminar Heat Transfer in a Rotating Disk: An Approximate Analytical Solution. <i>High Temperature</i> , <b>2001</b> , 39, 637-640	0.8	16
72	Dean instability of nanofluids with radial temperature and concentration non-uniformity. <i>Physics of Fluids</i> , <b>2016</b> , 28, 034104	4.4	16
71	Laminar Heat and Mass Transfer in Rotating Cone-and-Plate Devices. <i>Journal of Heat Transfer</i> , <b>2011</b> , 133,	1.8	14
70	Transient Thermal Field Measurements in a High Aspect Ratio Channel Related to Transient Thermochromic Liquid Crystal Experiments. <i>Journal of Turbomachinery</i> , <b>2012</b> , 134,	1.8	14
69	A new evaluation method for Nusselt numbers in naphthalene sublimation experiments in rotating-disk systems. <i>Heat and Mass Transfer</i> , <b>2008</b> , 44, 1409-1415	2.2	14
68	Perspective of mathematical modeling and research of targeted formation of disperse phase clusters in working media for the next-generation power engineering technologies <b>2017</b> ,		13
67	Heat Transfer in Porous Microchannels with Second-Order Slipping Boundary Conditions. <i>Transport in Porous Media</i> , <b>2019</b> , 129, 673-699	3.1	12
66	Thermocapillary instability in an evaporating two-dimensional thin layer film. <i>International Journal of Heat and Mass Transfer</i> , <b>2015</b> , 91, 77-88	4.9	12
65	A new type of the boundary condition allowing analytical solution of the thermal boundary layer equation. <i>International Journal of Thermal Sciences</i> , <b>2005</b> , 44, 374-381	4.1	12

64	Turbulent heat transfer of rotating disk at constant temperature or density of heat flux to the wall. <i>High Temperature</i> , <b>2000</b> , 38, 499-501	0.8	12
63	Self-similar analysis of fluid flow, heat, and mass transfer at orthogonal nanofluid impingement onto a flat surface. <i>Physics of Fluids</i> , <b>2017</b> , 29, 052005	4.4	11
62	Theoretical investigation of steady isothermal slip flow in a curved microchannel with a rectangular cross-section and constant radii of wall curvature. <i>European Journal of Mechanics, B/Fluids</i> , <b>2015</b> , 54, 87-97	3.4	11
61	Symmetry analysis for film boiling of nanofluids on a vertical plate using a nonlinear approach. <i>Journal of Molecular Liquids</i> , <b>2016</b> , 223, 156-164	6	11
60	Validation and Analysis of Numerical Results for a Varying Aspect Ratio Two-Pass Internal Cooling Channel <b>2008</b> ,		11
59	Instability of a vapor layer on a vertical surface at presence of nanoparticles. <i>Applied Thermal Engineering</i> , <b>2018</b> , 139, 87-98	5.8	9
58	The Effect of Ribs and Tip Wall Distance on Heat Transfer for a Varying Aspect Ratio Two-Pass Ribbed Internal Cooling Channel <b>2008</b> ,		9
57	Centrifugal instability of nanofluids with radial temperature and concentration non-uniformity between co-axial rotating cylinders. <i>European Journal of Mechanics, B/Fluids</i> , <b>2016</b> , 60, 90-98	2.4	8
56	Lie group analysis and general forms of self-similar parabolic equations for fluid flow, heat and mass transfer of nanofluids. <i>Journal of Thermal Analysis and Calorimetry</i> , <b>2019</b> , 135, 223-235	4.1	8
55	DarcyBrinkmanBorchheimer Model for Film Boiling in Porous Media. <i>Transport in Porous Media</i> , <b>2020</b> , 134, 503-536	3.1	7
54	Prandtl Number Effect on the Laminar Convective Heat Transfer From a Rotating Disk. <i>Journal of Heat Transfer</i> , <b>2017</b> , 139,	1.8	6
53	Heat Transfer in Turbulent Centrifugal How between Rotating Discs with Flow Swirling at the Inlet. <i>Heat Transfer Research</i> , <b>1998</b> , 29, 383-390	3.9	6
52	Turbulent incompressible microflow between rotating parallel plates. <i>European Journal of Mechanics, B/Fluids</i> , <b>2018</b> , 71, 35-46	2.4	5
51	Heat transfer and hydrodynamics in channels rotating about their axis. <i>Journal of Engineering Physics and Thermophysics</i> , <b>1997</b> , 70, 511-527	0.6	5
50	Transient Thermal Field Measurements in a High Aspect Ratio Channel Related to Transient Thermochromic Liquid Crystal Experiments <b>2007</b> , 623		5
49	Laminar Heat Transfer of a Swirled Flow in a Conical Diffuser. Self-similar Solution. <i>Fluid Dynamics</i> , <b>2004</b> , 39, 42-46	0.7	5
48	A Self-Similar Solution of NavierStokes and Energy Equations for Rotating Flows between a Cone and a Disk. <i>High Temperature</i> , <b>2004</b> , 42, 104-110	0.8	5
47	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. <i>Heat Transfer Research</i> , <b>1997</b> , 28, 402-413	3.9	5

46	Approximate modelling of the leftward flow and morphogen transport in the embryonic node by specifying vorticity at the ciliated surface. <i>Journal of Fluid Mechanics</i> , <b>2014</b> , 738, 492-521	3.7	4
45	Unsteady-State Laminar Heat Transfer in a Rotating Disk: Self- Similar Solution. <i>High Temperature</i> , <b>2004</b> , 42, 592-595	0.8	4
44	Laminar Heat Transfer in a Rotating Disk under Conditions of Forced Air Impingement Cooling: Approximate Analytical Solution. <i>High Temperature</i> , <b>2002</b> , 40, 684-692	0.8	4
43	Heat transfer of incompressible flow in a rotating microchannel with slip boundary conditions of second order. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , <b>2019</b> , 29, 1786-1814	4.5	4
42	Shock Wave in van der Waals Gas. <i>Journal of Non-Equilibrium Thermodynamics</i> , <b>2022</b> ,	3.8	4
41	Effect of wall-temperature distribution on heat transfer in centrifugal flow in the gap between parallel rotating disks. <i>Journal of Engineering Physics and Thermophysics</i> , <b>1999</b> , 72, 896-899	0.6	3
40	Integral Method of Calculation of a Turbulent Centrifugal Underswirl Flow in a Gap between Parallel Rotating. <i>Heat Transfer Research</i> , <b>1999</b> , 30, 238-248	3.9	3
39	An Analytical Investigation of Natural Convection of a Van Der Waals Gas over a Vertical Plate. <i>Fluids</i> , <b>2021</b> , 6, 121	1.6	3
38	Unsteady convective heat transfer in nanofluids at instantaneous transition to film boiling. <i>International Journal of Thermal Sciences</i> , <b>2021</b> , 164, 106873	4.1	3
37	Unsteady theory of heat transfer and fluid flow during instantaneous transition to film boiling. <i>International Journal of Thermal Sciences</i> , <b>2020</b> , 153, 106345	4.1	3
36	Convective Heat Transfer in a Pipe Rotating Around a Parallel Axis. <i>Mathematical Engineering</i> , <b>2016</b> , 171-182	1.92	2
35	Laminar forced convection in curved channel with vortex structures. <i>Journal of Thermal Science</i> , <b>2004</b> , 13, 143-150	1.9	2
34	Numerical Simulation of Turbulent Heat Transfer in a Rotating Disk at Arbitrary Distribution of the Wall Temperature. <i>Journal of Engineering Physics and Thermophysics</i> , <b>2002</b> , 75, 885-889	0.6	2
33	Exact Solution of the Heat Transfer Problem for a Rotating Disk under Uniform Jet Impingement. <i>Fluid Dynamics</i> , <b>2003</b> , 38, 18-27	0.7	2
32	Impinging Jet Heat Transfer Over a Rotating Disk: Exact Solution and Experiments <b>2002</b> ,		2
31	Simulation of heat transfer and hydrodynamics over a free rotating disk using an improved radial velocity profile. <i>Journal of Thermal Science</i> , <b>1999</b> , 8, 243-249	1.9	2
30	Aerodynamics and Turbulent Flow Heat Exchange in the Rotary Disk Air Cleaner. <i>Heat Transfer Research</i> , <b>2005</b> , 36, 104-113	3.9	2
29	Conditions of convective instability in a vertical circular microchannel with slippage effects. <i>International Communications in Heat and Mass Transfer</i> , <b>2020</b> , 119, 104954	5.8	2

28	An Integral Method for Natural Convection of Van Der Waals Gases over a Vertical Plate. <i>Energies</i> , <b>2021</b> , 14, 4537	3.1	2
27	Heat transfer and hydrodynamics of slip confusor flow under second-order boundary conditions. <i>Journal of Thermal Analysis and Calorimetry</i> , <b>2021</b> , 144, 955-961	4.1	2
26	Analytical simulation of normal shock waves in turbulent flow. <i>Physics of Fluids</i> , <b>2022</b> , 34, 056101	4.4	2
25	Overview of Rotating Flows. <i>Mathematical Engineering</i> , <b>2016</b> , 1-9	0.8	1
24	Validation and Analysis of Numerical Results for a Two-Pass Trapezoidal Channel With Different Cooling Configurations of Trailing Edge <b>2011</b> ,		1
23	Heat transfer and fluid flow over a single disk in a fluid rotating as a rigid body. <i>Journal of Thermal Science</i> , <b>2004</b> , 13, 279-282	1.9	1
22	An exact solution for heat transfer of a jet co-axially impinging on a rotating disk and its comparisons with stagnation point experiments. <i>Journal of Thermal Science</i> , <b>2002</b> , 11, 53-59	1.9	1
21	Heat transfer and fluid flow of helium coolant in a model of the core zone of a pebble-bed nuclear reactor. <i>Nuclear Engineering and Design</i> , <b>2021</b> , 377, 111148	1.8	1
20	Convective instability of nanofluids in vertical circular porous microchannels. <i>Chaos, Solitons and Fractals</i> , <b>2021</b> , 149, 111093	9.3	1
19	Heat and Mass Transfer in Rotating Cone-and-Disk Systems for Laminar Flows. <i>Mathematical Engineering</i> , <b>2016</b> , 127-143	0.8	0
18	Mathematical Modeling of Convective Heat Transfer in Rotating-Disk Systems. <i>Mathematical Engineering</i> , <b>2016</b> , 11-36	0.8	
17	Forced External Flow Over a Rotating Disk. <i>Mathematical Engineering</i> , <b>2016</b> , 81-126	0.8	
16	Heat and Mass Transfer of a Rotating Disk for Large Prandtl and Schmidt Numbers. <i>Mathematical Engineering</i> , <b>2016</b> , 145-170	0.8	
15	Varying Aspect Ratio Two-Pass Internal Ribbed Cooling Channels with 180° Bends. <i>Mathematical Engineering</i> , <b>2016</b> , 193-231	0.8	
14	Application of renormalization group analysis to two-phase turbulent flows with solid dust particles. <i>Journal of Mathematical Physics</i> , <b>2018</b> , 59, 073101	1.2	
13	Analytical Modeling and Symmetry Analysis of Stable Film Boiling in Nanofluids. <i>Mathematical Engineering</i> , <b>2022</b> , 121-159	0.8	
12	Analytical Modeling of Film Condensation of Vapor with Nanoparticles. <i>Mathematical Engineering</i> , <b>2022</b> , 93-120	0.8	
11	Symmetry Analysis of Boundary Layer Flows (Parabolic Flows) of Nanofluids. <i>Mathematical Engineering</i> , <b>2022</b> , 39-91	0.8	

10	Centrifugal Instability in Flows of Nanofluids. <i>Mathematical Engineering</i> , <b>2022</b> , 227-260	0.8
9	Instability of a Vapor Layer on a Vertical Surface at Presence of Nanoparticles. <i>Mathematical Engineering</i> , <b>2022</b> , 201-225	0.8
8	Physical Foundations and Mathematical Models of Transport Processes in Nanofluids. <i>Mathematical Engineering</i> , <b>2022</b> , 1-12	0.8
7	Instantaneous Transition to Film Boiling in Ordinary Fluids and Nanofluids on a Vertical Surface. <i>Mathematical Engineering</i> , <b>2022</b> , 161-200	0.8
6	Renormalization group analysis of heat transfer in the presence of endothermic and exothermic chemical reactions. <i>Mathematical Biosciences and Engineering</i> , <b>2019</b> , 16, 2049-2062	2.1
5	Free Rotating Disk. <i>Mathematical Engineering</i> , <b>2016</b> , 37-79	0.8
4	Convective Instability in Slip Flow in a Vertical Circular Porous Microchannel. <i>Transport in Porous Media</i> , <b>2021</b> , 138, 661	3.1
3	Comparison analysis of analytical and lattice Boltzmann methods for simulation of turbulence decay in flows in converging and diverging channels. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , <b>2021</b> , 101, e201900301	1
2	Heat Transfer and Fluid Flow During Instantaneous Unsteady Condensation. <i>Journal of Thermophysics and Heat Transfer</i> , <b>2021</b> , 35, 279-287	1.3
1	Simulation of the lubricant flow in thin slot channels with a moving wall under slip boundary conditions. <i>Physics of Fluids</i> , <b>2022</b> , 34, 032009	4.4