Igor V Shevchuk

List of Publications by Year in Descending Order

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	Analytical Modeling and Symmetry Analysis of Stable Film Boiling in Nanofluids. *Mathematical Engineering*, **2022**, 121-159	0.8	
98	Analytical Modeling of Film Condensation of Vapor with Nanoparticles. *Mathematical Engineering*, **2022**, 93-120	0.8	
97	Symmetry Analysis of Boundary Layer Flows (Parabolic Flows) of Nanofluids. *Mathematical Engineering*, **2022**, 39-91	0.8	
96	Centrifugal Instability in Flows of Nanofluids. *Mathematical Engineering*, **2022**, 227-260	0.8	
95	Instability of a Vapor Layer on a Vertical Surface at Presence of Nanoparticles. *Mathematical Engineering*, **2022**, 201-225	0.8	
94	Physical Foundations and Mathematical Models of Transport Processes in Nanofluids. *Mathematical Engineering*, **2022**, 1-12	0.8	
93	Instantaneous Transition to Film Boiling in Ordinary Fluids and Nanofluids on a Vertical Surface. *Mathematical Engineering*, **2022**, 161-200	0.8	
92	Simulation of the lubricant flow in thin slot channels with a moving wall under slip boundary conditions. *Physics of Fluids*, **2022**, 34, 032009	4.4	
91	Shock Wave in van der Waals Gas. *Journal of Non-Equilibrium Thermodynamics*, **2022**,	3.8	4
90	Analytical simulation of normal shock waves in turbulent flow. *Physics of Fluids*, **2022**, 34, 056101	4.4	2
89	An Analytical Investigation of Natural Convection of a Van Der Waals Gas over a Vertical Plate. *Fluids*, **2021**, 6, 121	1.6	3
88	Unsteady convective heat transfer in nanofluids at instantaneous transition to film boiling. *International Journal of Thermal Sciences*, **2021**, 164, 106873	4.1	3
87	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	1.8	1
86	Convective Instability in Slip Flow in a Vertical Circular Porous Microchannel. *Transport in Porous Media*, **2021**, 138, 661	3.1	
85	An Integral Method for Natural Convection of Van Der Waals Gases over a Vertical Plate. *Energies*, **2021**, 14, 4537	3.1	2
84	Heat transfer and hydrodynamics of slip confusor flow under second-order boundary conditions. *Journal of Thermal Analysis and Calorimetry*, **2021**, 144, 955-961	4.1	2
83	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	1	

82	Heat Transfer and Fluid Flow During Instantaneous Unsteady Condensation. *Journal of Thermophysics and Heat Transfer*, **2021**, 35, 279-287	1.3	
81	Convective instability of nanofluids in vertical circular porous microchannels. *Chaos, Solitons and Fractals*, **2021**, 149, 111093	9.3	1
80	DarcyBrinkmanForchheimer Model for Film Boiling in Porous Media. *Transport in Porous Media*, **2020**, 134, 503-536	3.1	7
79	Conditions of convective instability in a vertical circular microchannel with slippage effects. *International Communications in Heat and Mass Transfer*, **2020**, 119, 104954	5.8	2
78	Unsteady theory of heat transfer and fluid flow during instantaneous transition to film boiling. *International Journal of Thermal Sciences*, **2020**, 153, 106345	4.1	3
77	Heat Transfer in Porous Microchannels with Second-Order Slipping Boundary Conditions. *Transport in Porous Media*, **2019**, 129, 673-699	3.1	12
76	Heat transfer due to revolving flow of Reiner-Rivlin fluid over a stretchable surface. *Thermal Science and Engineering Progress*, **2019**, 10, 327-336	3.6	18
75	Renormalization group analysis of heat transfer in the presence of endothermic and exothermic chemical reactions. *Mathematical Biosciences and Engineering*, **2019**, 16, 2049-2062	2.1	
74	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	4.5	4
73	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	4.1	8
72	Instability of a vapor layer on a vertical surface at presence of nanoparticles. *Applied Thermal Engineering*, **2018**, 139, 87-98	5.8	9
71	Turbulent incompressible microflow between rotating parallel plates. *European Journal of Mechanics, B/Fluids*, **2018**, 71, 35-46	2.4	5
70	Application of renormalization group analysis to two-phase turbulent flows with solid dust particles. *Journal of Mathematical Physics*, **2018**, 59, 073101	1.2	
69	Mixed Convection in Vertical Flat and Circular Porous Microchannels. *Transport in Porous Media*, **2018**, 124, 919-941	3.1	17
68	Prandtl Number Effect on the Laminar Convective Heat Transfer From a Rotating Disk. *Journal of Heat Transfer*, **2017**, 139,	1.8	6
67	Self-similar analysis of fluid flow, heat, and mass transfer at orthogonal nanofluid impingement onto a flat surface. *Physics of Fluids*, **2017**, 29, 052005	4.4	11
66	Mixed convection in a vertical circular microchannel. *International Journal of Thermal Sciences*, **2017**, 121, 1-12	4.1	25
65	Perspective of mathematical modeling and research of targeted formation of disperse phase clusters in working media for the next-generation power engineering technologies **2017**,		13

64	Mixed convection in a vertical flat microchannel. *International Journal of Heat and Mass Transfer*, **2017**, 106, 1164-1173	4.9	20
63	Mathematical Modeling of Convective Heat Transfer in Rotating-Disk Systems. *Mathematical Engineering*, **2016**, 11-36	0.8	
62	Symmetry analysis for film boiling of nanofluids on a vertical plate using a nonlinear approach. *Journal of Molecular Liquids*, **2016**, 223, 156-164	6	11
61	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	2.4	8
60	Modelling of Convective Heat and Mass Transfer in Rotating Flows. *Mathematical Engineering*, **2016** ,	0.8	16
59	Overview of Rotating Flows. *Mathematical Engineering*, **2016**, 1-9	0.8	1
58	Forced External Flow Over a Rotating Disk. *Mathematical Engineering*, **2016**, 81-126	0.8	
57	Heat and Mass Transfer in Rotating Cone-and-Disk Systems for Laminar Flows. *Mathematical Engineering*, **2016**, 127-143	0.8	0
56	Heat and Mass Transfer of a Rotating Disk for Large Prandtl and Schmidt Numbers. *Mathematical Engineering*, **2016**, 145-170	0.8	
55	Convective Heat Transfer in a Pipe Rotating Around a Parallel Axis. *Mathematical Engineering*, **2016**, 171-192	0.8	2
54	Varying Aspect Ratio Two-Pass Internal Ribbed Cooling Channels with 180□Bends. *Mathematical Engineering*, **2016**, 193-231	0.8	
53	Free Rotating Disk. *Mathematical Engineering*, **2016**, 37-79	0.8	
52	Dean instability of nanofluids with radial temperature and concentration non-uniformity. *Physics of Fluids*, **2016**, 28, 034104	4.4	16
51	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	2.4	11
50	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, 042001	4.4	17
49	Thermocapillary instability in an evaporating two-dimensional thin layer film. *International Journal of Heat and Mass Transfer*, **2015**, 91, 77-88	4.9	12
48	Start-up slip flow in a microchannel with a rectangular cross section. *Theoretical and Computational Fluid Dynamics*, **2015**, 29, 351-371	2.3	17
47	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	4.9	29

46	Heat transfer in stable film boiling of a nanofluid over a vertical surface. *International Journal of Thermal Sciences*, **2015**, 92, 106-118	4.1	33
45	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	3.7	4
44	Heat transfer at film condensation of stationary vapor with nanoparticles near a vertical plate. *Applied Thermal Engineering*, **2014**, 73, 391-398	5.8	34
43	Numerical Study of Convective Heat Transfer Enhancement in a Pipe Rotating Around a Parallel Axis. *Journal of Heat Transfer*, **2014**, 136,	1.8	43
42	On flow structure, heat transfer and pressure drop in varying aspect ratio two-pass rectangular channel with ribs at 45□ *Heat and Mass Transfer*, **2013**, 49, 679-694	2.2	49
41	Review of fluid flow and convective heat transfer within rotating disk cavities with impinging jet. *International Journal of Thermal Sciences*, **2013**, 67, 1-30	4.1	70
40	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,	1.8	21
39	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	1.8	29
38	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, 092003	4.4	35
37	Flow structure, heat transfer and pressure drop in varying aspect ratio two-pass rectangular smooth channels. *Heat and Mass Transfer*, **2012**, 48, 735-748	2.2	43
36	Transient Thermal Field Measurements in a High Aspect Ratio Channel Related to Transient Thermochromic Liquid Crystal Experiments. *Journal of Turbomachinery*, **2012**, 134,	1.8	14
35	Validation and Analysis of Numerical Results for a Varying Aspect Ratio Two-Pass Internal Cooling Channel. *Journal of Heat Transfer*, **2011**, 133,	1.8	57
34	Validation and Analysis of Numerical Results for a Two-Pass Trapezoidal Channel With Different Cooling Configurations of Trailing Edge **2011**,		1
33	Self-similar analysis of fluid flow and heat-mass transfer of nanofluids in boundary layer. *Physics of Fluids*, **2011**, 23, 082002	4.4	45
32	Laminar Heat and Mass Transfer in Rotating Cone-and-Plate Devices. *Journal of Heat Transfer*, **2011**, 133,	1.8	14
31	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	2.2	21
30	Convective Heat and Mass Transfer in Rotating Disk Systems. *Lecture Notes in Applied and Computational Mechanics*, **2009**,	0.3	54
29	The Effect of Ribs and Tip Wall Distance on Heat Transfer for a Varying Aspect Ratio Two-Pass Ribbed Internal Cooling Channel **2008**,		9

28	Validation and Analysis of Numerical Results for a Varying Aspect Ratio Two-Pass Internal Cooling Channel **2008**,		11
27	A new evaluation method for Nusselt numbers in naphthalene sublimation experiments in rotating-disk systems. *Heat and Mass Transfer*, **2008**, 44, 1409-1415	2.2	14
26	Transient Thermal Field Measurements in a High Aspect Ratio Channel Related to Transient Thermochromic Liquid Crystal Experiments **2007**, 623		5
25	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	4.9	24
24	Rotating disk heat transfer in a fluid swirling as a forced vortex. *Heat and Mass Transfer*, **2005**, 41, 1112-1121	2.2	26
23	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	4.1	12
22	Aerodynamics and Turbulent Flow Heat Exchange in the Rotary Disk Air Cleaner. *Heat Transfer Research*, **2005**, 36, 104-113	3.9	2
21	Laminar Heat Transfer of a Swirled Flow in a Conical Diffuser. Self-similar Solution. *Fluid Dynamics*, **2004**, 39, 42-46	0.7	5
20	A Self-Similar Solution of Navier–Stokes and Energy Equations for Rotating Flows between a Cone and a Disk. *High Temperature*, **2004**, 42, 104-110	0.8	5
19	Unsteady-State Laminar Heat Transfer in a Rotating Disk: Self- Similar Solution. *High Temperature*, **2004**, 42, 592-595	0.8	4
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	4.9	23
17	Laminar forced convection in curved channel with vortex structures. *Journal of Thermal Science*, **2004**, 13, 143-150	1.9	2
16	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	1.9	1
15	Impingement Heat Transfer over a Rotating Disk: Integral Method. *Journal of Thermophysics and Heat Transfer*, **2003**, 17, 291-293	1.3	26
14	Exact Solution of the Heat Transfer Problem for a Rotating Disk under Uniform Jet Impingement. *Fluid Dynamics*, **2003**, 38, 18-27	0.7	2
13	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	1.9	1
12	Numerical Simulation of Turbulent Heat Transfer in a Rotating Disk at Arbitrary Distribution of the Wall Temperature. *Journal of Engineering Physics and Thermophysics*, **2002**, 75, 885-889	0.6	2
11	Laminar Heat Transfer in a Rotating Disk under Conditions of Forced Air Impingement Cooling: Approximate Analytical Solution. *High Temperature*, **2002**, 40, 684-692	0.8	4

10	Impinging Jet Heat Transfer Over a Rotating Disk: Exact Solution and Experiments **2002**,		2
9	Symmetry of turbulent boundary-layer flows: Investigation of different eddy viscosity models. *Acta Mechanica*, **2001**, 151, 1-14	2.1	22
8	Effect of the Wall Temperature on Laminar Heat Transfer in a Rotating Disk: An Approximate Analytical Solution. *High Temperature*, **2001**, 39, 637-640	0.8	16
7	Turbulent heat transfer of rotating disk at constant temperature or density of heat flux to the wall. *High Temperature*, **2000**, 38, 499-501	0.8	12
6	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	0.6	3
5	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	1.9	2
4	Integral Method of Calculation of a Turbulent Centrifugal Underswirl Flow in a Gap between Parallel Rotating. *Heat Transfer Research*, **1999**, 30, 238-248	3.9	3
3	Heat Transfer in Turbulent Centrifugal How between Rotating Discs with Flow Swirling at the Inlet. *Heat Transfer Research*, **1998**, 29, 383-390	3.9	6
2	Heat transfer and hydrodynamics in channels rotating about their axis. *Journal of Engineering Physics and Thermophysics*, **1997**, 70, 511-527	0.6	5
1	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	3.9	5