

Kemal Hanjalic

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

122 papers	5,574 citations	37 h-index	72 g-index
133 ext. papers	6,220 ext. citations	3.3 avg, IF	5.81 L-index

#	Paper	IF	Citations
122	Reassessment of modeling turbulence via Reynolds averaging: A review of second-moment transport strategy. <i>Physics of Fluids</i> , 2021 , 33, 091302	4.4	1
121	On Impact of Helical Structures on Stabilization of Swirling Flames with Vortex Breakdown. <i>Flow, Turbulence and Combustion</i> , 2019 , 103, 887-911	2.5	12
120	Heat transfer in flow around a rotary oscillating cylinder at a high subcritical Reynolds number: A computational study. <i>International Journal of Heat and Fluid Flow</i> , 2019 , 79, 108441	2.4	4
119	River-Induced Anomalies in Seasonal Variation of Traffic-Emitted CO Distribution over the City of Krasnoyarsk. <i>Atmosphere</i> , 2019 , 10, 407	2.7	1
118	Numerical simulation of coal-air mixture flow in a real double-swirl burner and implications on combustion anomalies in a utility boiler. <i>Energy</i> , 2019 , 170, 942-953	7.9	17
117	Effects of reburning mechanically-activated micronized coal on reduction of NOx: Computational study of a real-scale tangentially-fired boiler. <i>Fuel</i> , 2018 , 214, 215-229	7.1	17
116	Unsteady regimes and pressure pulsations in draft tube of a model hydro turbine in a range of off-design conditions. <i>Experimental Thermal and Fluid Science</i> , 2018 , 91, 410-422	3	36
115	Manipulating cavitation by a wall jet: Experiments on a 2D hydrofoil. <i>International Journal of Multiphase Flow</i> , 2018 , 99, 312-328	3.6	18
114	Control of flow around a cylinder by rotary oscillations at a high subcritical Reynolds number. <i>Journal of Fluid Mechanics</i> , 2018 , 855, 236-266	3.7	11
113	Numerical Study of Winter Diurnal Convection Over the City of Krasnoyarsk: Effects of Non-freezing River, Undulating Fog and Steam Devils. <i>Boundary-Layer Meteorology</i> , 2017 , 163, 469-495	3.4	17
112	Vortex ropes in draft tube of a laboratory Kaplan hydroturbine at low load: an experimental and LES scrutiny of RANS and DES computational models. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2017 , 55, 668-685	1.9	12
111	Large-eddy simulations of heat transfer in asymmetric rib-roughened ducts: Effects of rotation. <i>International Journal of Heat and Fluid Flow</i> , 2017 , 68, 373-385	2.4	9
110	Laboratory modeling of flow regimes in a draft tube of Francis hydro-turbine. <i>EPJ Web of Conferences</i> , 2017 , 143, 02103	0.3	2
109	On coherent structures and mixing characteristics in the near field of a rotating-pipe jet. <i>International Journal of Heat and Fluid Flow</i> , 2017 , 63, 139-148	2.4	3
108	Vortical structures and pressure pulsations in draft tube of a Francis-99 turbine at part load: RANS and hybrid RANS/LES analysis. <i>International Journal of Heat and Fluid Flow</i> , 2017 , 63, 158-171	2.4	18
107	Helical modes in low- and high-swirl jets measured by tomographic PIV. <i>Journal of Turbulence</i> , 2016 , 17, 678-698	2.1	21
106	Ground Boundary Conditions for Thermal Convection Over Horizontal Surfaces at High Rayleigh Numbers. <i>Boundary-Layer Meteorology</i> , 2016 , 160, 41-61	3.4	4

105	Comparative analysis of twin vortex ropes in laboratory models of two hydro-turbine draft-tubes. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2016 , 54, 450-460	1.9	29
104	Cavitating flow around a scaled-down model of guide vanes of a high-pressure turbine. <i>International Journal of Multiphase Flow</i> , 2016 , 78, 75-87	3.6	18
103	Cavitation on NACA0015 hydrofoils with different wall roughness: high-speed visualization of the surface texture effects. <i>Journal of Visualization</i> , 2016 , 19, 587-590	1.6	11
102	Scrutinizing URANS in Shedding Flows: The Case of Cylinder in Cross-Flow in the Subcritical Regime. <i>Flow, Turbulence and Combustion</i> , 2016 , 97, 1017-1046	2.5	29
101	Effects of rotation on flow in an asymmetric rib-roughened duct: LES study. <i>International Journal of Heat and Fluid Flow</i> , 2015 , 55, 104-119	2.4	15
100	On dynamics and secondary currents in meandering confined turbulent shallow jet. <i>International Journal of Heat and Fluid Flow</i> , 2015 , 56, 284-289	2.4	9
99	Mechanical activation of micronized coal: Prospects for new combustion applications. <i>Applied Thermal Engineering</i> , 2015 , 74, 174-181	5.8	29
98	LES Investigation of the Hysteresis Regime in the Cold Model of a Rotating-Pipe Swirl Burner. <i>Flow, Turbulence and Combustion</i> , 2015 , 94, 175-198	2.5	8
97	Computational modeling of autothermal combustion of mechanically-activated micronized coal. <i>Fuel</i> , 2014 , 135, 443-458	7.1	28
96	High-speed visualization and PIV measurements of cavitating flows around a semi-circular leading-edge flat plate and NACA0015 hydrofoil. <i>International Journal of Multiphase Flow</i> , 2014 , 60, 119-134	3.6	83
95	Cavitation on a semicircular leading-edge plate and NACA0015 hydrofoil: Visualization and velocity measurement. <i>Thermal Engineering (English Translation of Teploenergetika)</i> , 2014 , 61, 1007-1014	0.8	4
94	Comparative analysis of low- and high-swirl confined flames and jets by proper orthogonal and dynamic mode decompositions. <i>Physics of Fluids</i> , 2014 , 26, 065109	4.4	54
93	Autothermal combustion of mechanically-activated micronized coal in a 5MW pilot-scale combustor. <i>Fuel</i> , 2014 , 122, 103-111	7.1	34
92	High-speed imaging of cavitation regimes on a round-leading-edge flat plate and NACA0015 hydrofoil. <i>Journal of Visualization</i> , 2013 , 16, 181-184	1.6	8
91	Determining instability modes in a gas flame. <i>Technical Physics Letters</i> , 2013 , 39, 308-311	0.7	5
90	Experimental study and analytical reconstruction of precessing vortex in a tangential swirler. <i>International Journal of Heat and Fluid Flow</i> , 2013 , 42, 251-264	2.4	52
89	Characterization of the flame blow-off conditions in a laminar boundary layer with hydrogen injection. <i>Combustion and Flame</i> , 2013 , 160, 1999-2008	5.3	10
88	LES of turbulent flow in a concentric annulus with rotating outer wall. <i>International Journal of Heat and Fluid Flow</i> , 2013 , 43, 74-84	2.4	11

87	On the Application of the Levenberg-Marquardt Method in Conjunction with an Explicit Runge-Kutta and an Implicit Rosenbrock Method to Assess Burning Velocities from Confined Deflagrations. <i>Flow, Turbulence and Combustion</i> , 2013 , 91, 281-317	2.5	10
86	Experimental and numerical simulation for swirl flow in a combustor. <i>Thermal Engineering (English Translation of Teploenergetika)</i> , 2013 , 60, 990-997	0.8	4
85	Expanding the Stability Range of a Lifted Propane Flame by Resonant Acoustic Excitation. <i>Combustion Science and Technology</i> , 2013 , 185, 1644-1666	1.5	6
84	Leray- ϵ Regularization of the Smagorinsky-Closed Filtered Equations for Turbulent Jets at High Reynolds Numbers. <i>Flow, Turbulence and Combustion</i> , 2012 , 89, 627-650	2.5	11
83	Modelling of particles deposition in an environment relevant to solid fuel boilers. <i>Applied Thermal Engineering</i> , 2012 , 49, 131-138	5.8	32
82	Vortex structures and heat transfer in a wall-bounded pin matrix: LES with a RANS wall-treatment. <i>International Journal of Heat and Fluid Flow</i> , 2010 , 31, 740-753	2.4	37
81	Tackling complex turbulent flows with transient RANS. <i>Fluid Dynamics Research</i> , 2009 , 41, 012201	1.2	23
80	Numerical and experimental study of electromagnetically driven vortical flows. <i>International Journal of Heat and Fluid Flow</i> , 2009 , 30, 494-504	2.4	14
79	Vortices and heat flux around a wall-mounted cube cooled simultaneously by a jet and a crossflow. <i>International Journal of Heat and Mass Transfer</i> , 2009 , 52, 4047-4062	4.9	21
78	URANS of flow and endwall heat transfer in a pinned passage relevant to gas-turbine blade cooling. <i>International Journal of Heat and Fluid Flow</i> , 2009 , 30, 549-560	2.4	28
77	Hysteresis and transition in swirling nonpremixed flames. <i>Combustion and Flame</i> , 2009 , 156, 447-459	5.3	17
76	Vortical structures and heat transfer in a round impinging jet. <i>Journal of Fluid Mechanics</i> , 2008 , 596, 221-260	3.60	208
75	Some developments in turbulence modeling for wind and environmental engineering. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2008 , 96, 1537-1570	3.7	44
74	Heat transfer correlation for hexagonal and in-line arrays of impinging jets. <i>International Journal of Heat and Mass Transfer</i> , 2008 , 51, 5389-5399	4.9	49
73	Computations of a turbulent wake in a strong adverse pressure gradient. <i>International Journal of Heat and Fluid Flow</i> , 2007 , 28, 418-428	2.4	12
72	Large-eddy simulations of flow over a jet-impinged wall-mounted cube in a cross stream. <i>International Journal of Heat and Fluid Flow</i> , 2007 , 28, 1360-1378	2.4	20
71	Compound Wall Treatment for RANS Computation of Complex Turbulent Flows and Heat Transfer. <i>Flow, Turbulence and Combustion</i> , 2007 , 78, 177-202	2.5	146
70	Computation of tip-leakage flow in a linear compressor cascade with a second-moment turbulence closure. <i>International Journal of Heat and Fluid Flow</i> , 2007 , 28, 587-601	2.4	26

69	Numerical simulation of a turbulent magnetic dynamo. <i>Physical Review Letters</i> , 2007 , 98, 104501	7.4	32
68	Numerical insights into magnetic dynamo action in a turbulent regime. <i>New Journal of Physics</i> , 2007 , 9, 306-306	2.9	17
67	Coupled fluid-flow and magnetic-field simulation of the Riga dynamo experiment. <i>Physics of Plasmas</i> , 2006 , 13, 122308	2.1	18
66	Large-eddy simulation and deduced scaling analysis of Rayleigh-Bénard convection up to $Ra = 10^9$. <i>Journal of Turbulence</i> , 2006 , 7, N66	2.1	19
65	Wall imprint of turbulent structures and heat transfer in multiple impinging jet arrays. <i>Journal of Fluid Mechanics</i> , 2006 , 546, 255	3.7	44
64	LES, T-RANS and hybrid simulations of thermal convection at high Ra numbers. <i>International Journal of Heat and Fluid Flow</i> , 2006 , 27, 800-810	2.4	47
63	Particle imaging velocimetry-based identification of coherent structures in normally impinging multiple jets. <i>Physics of Fluids</i> , 2005 , 17, 055105	4.4	35
62	Prediction of Cascade Flows With Innovative Second-Moment Closures. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2005 , 127, 1059-1070	2.1	17
61	Contribution to elliptic relaxation modelling of turbulent natural and mixed convection. <i>International Journal of Heat and Fluid Flow</i> , 2005 , 26, 569-586	2.4	78
60	Synergy of experiments and computer simulations in research of turbulent convection. <i>International Journal of Heat and Fluid Flow</i> , 2005 , 26, 828-842	2.4	9
59	Dynamic simulation of pollutant dispersion over complex urban terrains: A tool for sustainable development, control and management*1. <i>Energy</i> , 2005 , 30, 1481-1497	7.9	16
58	A KIVA code with Reynolds-stress model for engine flow simulation. <i>Energy</i> , 2005 , 30, 427-445	7.9	9
57	A hybrid two-layer URANS-LES approach for large eddy simulation at high Reynolds numbers. <i>International Journal of Heat and Fluid Flow</i> , 2005 , 26, 173-190	2.4	120
56	Unstructured large eddy and conjugate heat transfer simulations of wall-bounded flows. <i>WIT Transactions on State-of-the-art in Science and Engineering</i> , 2005 , 30-68		7
55	A direct-numerical-simulation-based second-moment closure for turbulent magnetohydrodynamic flows. <i>Physics of Fluids</i> , 2004 , 16, 1229-1241	4.4	31
54	Visualization of turbulence structures reorganization in thermal convection subjected to external magnetic field. <i>Journal of Visualization</i> , 2004 , 7, 6-6	1.6	
53	Visualization of air flow and smoke spreading for realistic indoor-climate situations. <i>Journal of Visualization</i> , 2004 , 7, 268-268	1.6	1
52	Large eddy simulations of turbulent thermal convection at high Rayleigh number. <i>Journal of Visualization</i> , 2004 , 7, 105-105	1.6	

51	A robust near-wall elliptic-relaxation eddy-viscosity turbulence model for CFD. <i>International Journal of Heat and Fluid Flow</i> , 2004 , 25, 1047-1051	2.4	305
50	Experimental investigation of impinging jet arrays. <i>Experiments in Fluids</i> , 2004 , 36, 946-958	2.5	83
49	Measurement of velocity-temperature correlations in a turbulent diffusion flame. <i>Experiments in Fluids</i> , 2004 , 37, 364-374	2.5	10
48	A two-scale second-moment turbulence closure based on weighted spectrum integration. <i>Theoretical and Computational Fluid Dynamics</i> , 2004 , 18, 1-26	2.3	14
47	Numerical simulation of magnetic control of heat transfer in thermal convection. <i>International Journal of Heat and Fluid Flow</i> , 2004 , 25, 559-568	2.4	42
46	Estimation of shape factor for transient conduction. <i>International Journal of Refrigeration</i> , 2003 , 26, 360-367	3.87	7
45	Symmetry breaking of flow and heat transfer in multiple impinging jets. <i>International Journal of Heat and Fluid Flow</i> , 2003 , 24, 444-453	2.4	32
44	Experiments on a rotating-pipe swirl burner. <i>Experimental Thermal and Fluid Science</i> , 2003 , 27, 481-489	3	24
43	Determination of the laminar burning velocity and the Markstein length of powder-air flames. <i>Powder Technology</i> , 2002 , 122, 222-238	5.2	37
42	Heat transfer of phase-locked modulated impinging-jet arrays. <i>Experimental Thermal and Fluid Science</i> , 2002 , 26, 299-304	3	2
41	Turbulent heat transfer from a multi-layered wall-mounted cube matrix: a large eddy simulation. <i>International Journal of Heat and Fluid Flow</i> , 2002 , 23, 173-185	2.4	51
40	Simulation and identification of deterministic structures in thermal and magnetic convection. <i>Annals of the New York Academy of Sciences</i> , 2002 , 972, 19-28	6.5	4
39	Experimental study of the convective heat transfer from in-line and staggered configurations of two wall-mounted cubes. <i>International Journal of Heat and Mass Transfer</i> , 2002 , 45, 465-482	4.9	46
38	Elliptic blending model: A new near-wall Reynolds-stress turbulence closure. <i>Physics of Fluids</i> , 2002 , 14, 744-754	4.4	186
37	ONE-POINT CLOSURE MODELS FOR BUOYANCY-DRIVEN TURBULENT FLOWS. <i>Annual Review of Fluid Mechanics</i> , 2002 , 34, 321-347	22	103
36	Modeling Rotating and Swirling Turbulent Flows: A Perpetual Challenge. <i>AIAA Journal</i> , 2002 , 40, 1984-1996	19.6	140
35	A new approach to modelling near-wall turbulence energy and stress dissipation. <i>Journal of Fluid Mechanics</i> , 2002 , 459, 139-166	3.7	120
34	Modeling rotating and swirling turbulent flows - A perpetual challenge. <i>AIAA Journal</i> , 2002 , 40, 1984-1996	19.6	2

33	Computational study of turbulent natural convection in a side-heated near-cubic enclosure at a high Rayleigh number. <i>International Journal of Heat and Mass Transfer</i> , 2001 , 44, 2323-2344	4.9	54
32	'T-RANS' Simulation of Deterministic Eddy Structure in Flows Driven by Thermal Buoyancy and Lorentz Force. <i>Flow, Turbulence and Combustion</i> , 2001 , 66, 427-451	2.5	50
31	A new form of the elliptic relaxation equation to account for wall effects in RANS modeling. <i>Physics of Fluids</i> , 2000 , 12, 2345-2351	4.4	34
30	On the implementation of effects of Lorentz force in turbulence closure models. <i>International Journal of Heat and Fluid Flow</i> , 2000 , 21, 329-337	2.4	63
29	DNS, experimental and modelling study of axially compressed in-cylinder swirling flow. <i>International Journal of Heat and Fluid Flow</i> , 2000 , 21, 627-639	2.4	9
28	Separation-Induced Transition to Turbulence: Second-Moment Closure Modelling. <i>Flow, Turbulence and Combustion</i> , 2000 , 63, 153-173	2.5	22
27	Second-Moment Closure Model for IC Engine Flow Simulation Using Kiva Code1. <i>Journal of Engineering for Gas Turbines and Power</i> , 2000 , 122, 355-363	1.7	13
26	Convective rolls and heat transfer in finite-length rayleigh-Benard convection: A two-dimensional numerical study. <i>Physical Review E</i> , 2000 , 62, 7987-98	2.4	48
25	Experimental Study of the Local Convection Heat Transfer From a Wall-Mounted Cube in Turbulent Channel Flow. <i>Journal of Heat Transfer</i> , 1999 , 121, 564-573	1.8	78
24	Transient analysis of Rayleigh-Benard convection with a RANS model. <i>International Journal of Heat and Fluid Flow</i> , 1999 , 20, 329-340	2.4	65
23	Vortex structure and heat transfer in turbulent flow over a wall-mounted matrix of cubes. <i>International Journal of Heat and Fluid Flow</i> , 1999 , 20, 255-267	2.4	107
22	Identification and visualization of coherent structures in rayleigh-benard convection with a time-dependent RANS. <i>Journal of Visualization</i> , 1999 , 2, 169-176	1.6	6
21	A DNS-based thermal second-moment closure for buoyant convection at vertical walls. <i>Journal of Fluid Mechanics</i> , 1999 , 391, 211-247	3.7	20
20	Local convective heat transfer from an array of wall-mounted cubes. <i>International Journal of Heat and Mass Transfer</i> , 1998 , 41, 335-346	4.9	59
19	Double-diffusive natural convection in trapezoidal enclosures. <i>International Journal of Heat and Mass Transfer</i> , 1998 , 41, 1885-1898	4.9	34
18	Contribution towards the second-moment closure modelling of separating turbulent flows. <i>Computers and Fluids</i> , 1998 , 27, 137-156	2.8	91
17	Expanding the limits of 'Equilibrium' second-moment turbulence closures. <i>Fluid Dynamics Research</i> , 1997 , 20, 25-41	1.2	29
16	Application of infrared thermography to the evaluation of local convective heat transfer on arrays of cubical protrusions. <i>International Journal of Heat and Fluid Flow</i> , 1997 , 18, 152-159	2.4	25

15	A comparative assessment of the second-moment differential and algebraic models in turbulent natural convection. <i>International Journal of Heat and Fluid Flow</i> , 1997 , 18, 4-14	2.4	44
14	Modeling the dynamics of double-diffusive scalar fields at various stability conditions. <i>International Journal of Heat and Fluid Flow</i> , 1997 , 18, 360-367	2.4	9
13	Natural convection in partitioned two-dimensional enclosures at higher Rayleigh numbers. <i>International Journal of Heat and Mass Transfer</i> , 1996 , 39, 1407-1427	4.9	58
12	Some resolved and unresolved issues in modelling non-equilibrium and unsteady turbulent flows 1996 , 3-18		12
11	Prediction of turbulent thermal convection in concentric and eccentric horizontal annuli. <i>International Journal of Heat and Fluid Flow</i> , 1995 , 16, 429-439	2.4	40
10	Computation of Oscillating Turbulent Flows at Transitional Re-Numbers 1995 , 323-342		23
9	A computational study of joint effects of transverse shear and streamwise acceleration on three-dimensional boundary layers. <i>International Journal of Heat and Fluid Flow</i> , 1994 , 15, 269-282	2.4	10
8	Advanced turbulence closure models: a view of current status and future prospects. <i>International Journal of Heat and Fluid Flow</i> , 1994 , 15, 178-203	2.4	159
7	Computation of turbulent natural convection in rectangular enclosures with an algebraic flux model. <i>International Journal of Heat and Mass Transfer</i> , 1993 , 36, 3603-3624	4.9	37
6	A model of stress dissipation in second-moment closures. <i>Flow, Turbulence and Combustion</i> , 1993 , 51, 513-518		25
5	Investigation of the influence of oil injection upon the screw compressor working process. <i>International Journal of Refrigeration</i> , 1992 , 15, 206-220	3.8	54
4	Contribution towards modelling of two-stage reciprocating compressors. <i>International Journal of Mechanical Sciences</i> , 1977 , 19, 439-445	5.5	7
3	Contribution towards a Reynolds-stress closure for low-Reynolds-number turbulence. <i>Journal of Fluid Mechanics</i> , 1976 , 74, 593-610	3.7	299
2	Fully developed asymmetric flow in a plane channel. <i>Journal of Fluid Mechanics</i> , 1972 , 51, 301-335	3.7	173
1	A Reynolds stress model of turbulence and its application to thin shear flows. <i>Journal of Fluid Mechanics</i> , 1972 , 52, 609-638	3.7	758