Wilko Rohlfs

List of Publications by Year
in descending order

62 papers	965 citations	516561 16 h-index	580701 25 g-index
63 all docs	63 docs citations	63 times ranked	650 citing authors

#	Article	IF	Citations
1	Insights into the local heat transfer of a submerged impinging jet: Influence of local flow acceleration and vortex-wall interaction. International Journal of Heat and Mass Transfer, 2012, 55, 7728-7736.	2.5	68
2	Coalescence-induced droplet jumping on superhydrophobic surfaces: Effects of droplet mismatch. Physical Review Fluids, 2017, 2, .	1.0	60
3	Assessment of Clean-Coal Strategies: The Questionable Merits of Carbon Capture-Readiness. SSRN Electronic Journal, 0, , .	0.4	52
4	Direct Single Impinging Jet Cooling of a <sc>mosfet</sc> Power Electronic Module. IEEE Transactions on Power Electronics, 2018, 33, 4224-4237.	5.4	51
5	Valuation of CCS-ready coal-fired power plants: a multi-dimensional real options approach. Energy Systems, 2011, 2, 243-261.	1.8	37
6	Cost Effectiveness of Carbon Capture-Ready Coal Power Plants with Delayed Retrofit. SSRN Electronic Journal, 0, , .	0.4	37
7	Challenges in the Evaluation of Ultra-Long-Lived Projects: Risk Premia for Projects with Eternal Returns or Costs. SSRN Electronic Journal, 2013, , .	0.4	36
8	Optimal Power Generation Investment: Impact of Technology Choices and Existing Portfolios for Deploying Low-Carbon Coal Technologies. SSRN Electronic Journal, 0, , .	0.4	35
9	Local heat transfer coefficient measurement through a visibly-transparent heater under jet-impingement cooling. International Journal of Heat and Mass Transfer, 2012, 55, 6410-6424.	2.5	32
10	Three-dimensional flow structures in laminar falling liquid films. Journal of Fluid Mechanics, 2014, 743, 75-123.	1.4	31
11	Hydrodynamic waves in films flowing under an inclined plane. Physical Review Fluids, 2017, 2, .	1.0	31
12	Predicting the orientation of magnetic microgel rods for soft anisotropic biomimetic hydrogels. Polymer Chemistry, 2020, 11, 496-507.	1.9	29
13	Critical inclination for absolute/convective instability transition in inverted falling films. Physics of Fluids, 2016, 28, 044107.	1.6	28
14	Phase diagram for the onset of circulating waves and flow reversal in inclined falling films. Journal of Fluid Mechanics, 2015, 763, 322-351.	1.4	25
15	Dynamics of falling films on the outside of aÂvertical rotating cylinder: waves, rivulets andÂdripping transitions. Journal of Fluid Mechanics, 2017, 832, 189-211.	1.4	24
16	Implementation of a CFD model for wall condensation in the presence of non-condensable gas mixtures. Applied Thermal Engineering, 2021, 187, 116546.	3.0	23
17	Influence of viscous flow relaxation time on self-similarity in free-surface jet impingement. International Journal of Heat and Mass Transfer, 2014, 78, 435-446.	2.5	22
18	Assessment of clean-coal strategies: The questionable merits of carbon capture-readiness. Energy, 2013, 52, 27-36.	4.5	20

#	Article	IF	Citations
19	Prediction of two-dimensional dripping onset of a liquid film under an inclined plane. International Journal of Multiphase Flow, 2018, 104, 286-293.	1.6	19
20	Investment Decisions Under Uncertainty: CCS Competing with Green Energy Technologies. Energy Procedia, 2013, 37, 7029-7038.	1.8	18
21	Optimal investment strategies in power generation assets: The role of technological choice and existing portfolios in the deployment of low-carbon technologies. International Journal of Greenhouse Gas Control, 2014, 28, 114-125.	2.3	18
22	Multi-commodity real options analysis of power plant investments: discounting endogenous risk structures. Energy Systems, 2014, 5, 423-447.	1.8	16
23	Two-phase electrohydrodynamic simulations using a volume-of-fluid approach: A comment. Journal of Computational Physics, 2012, 231, 4454-4463.	1.9	14
24	Experimental investigation of thermal structures in regular three-dimensional falling films. European Physical Journal: Special Topics, 2015, 224, 355-368.	1.2	14
25	Entrance length effects on Graetz number scaling in laminar duct flows with periodic obstructions: Transport number correlations for spacer-filled membrane channel flows. International Journal of Heat and Mass Transfer, 2016, 97, 842-852.	2.5	14
26	A simple hydrodynamic model of a laminar free-surface jet in horizontal or vertical flight. Physics of Fluids, 2017, 29, .	1.6	14
27	Heat transfer in the hydraulic jump region of circular free-surface liquid jets. International Journal of Heat and Mass Transfer, 2020, 146, 118823.	2.5	14
28	Role of gravity and capillary waves in the origin of circular hydraulic jumps. Physical Review Fluids, 2019, 4, .	1.0	14
29	Self-similarity of heat transfer characteristics in laminar submerged and free-surface slot jet impingement. International Journal of Heat and Mass Transfer, 2017, 104, 1341-1352.	2.5	12
30	Multi-Commodity Real Options Analysis of Power Plant Investments: Discounting Endogenous Risk Structures. SSRN Electronic Journal, 2011, , .	0.4	11
31	Experimental investigation into three-dimensional wavy liquid films under the influence of electrostatic forces. Experiments in Fluids, 2012, 53, 1045-1056.	1.1	11
32	Hypothermic Oxygenated Machine Perfusion of Extended Criteria Kidney Allografts from Brain Dead Donors: Protocol for a Prospective Pilot Study. JMIR Research Protocols, 2019, 8, e14622.	0.5	11
33	Hypothermic oxygenated machine perfusionâ€"Preliminary experience with endâ€ischemic reconditioning of marginal kidney allografts. Clinical Transplantation, 2019, 33, e13673.	0.8	10
34	Flow Structures and Heat Transfer in Submerged and Free Laminar Jets. , 2014, , .		10
35	On the stabilizing effect of a liquid film on a cylindrical core by oscillatory motions. Physics of Fluids, 2014, 26, .	1.6	9
36	Modeling reverse osmosis element design using superposition and an analogy to convective heat transfer. Journal of Membrane Science, 2016, 512, 38-49.	4.1	8

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37	WaveMaker: The three-dimensional wave simulation tool for falling liquid films. SoftwareX, 2018, 7, 211-216.	1.2	8
38	Hot spot removal in power electronics by means of direct liquid jet cooling. , 2017, , .		7
39	Inverse correlation between vascular endothelial growth factor back-filtration and capillary filtration pressures. Nephrology Dialysis Transplantation, 2018, 33, 1514-1525.	0.4	7
40	FLOW STRUCTURES AND HEAT TRANSFER IN SUBMERGED LAMINAR JET IMPINGEMENT. , 2016, , .		7
41	Flow structures and heat transfer characteristics in arrays of submerged laminar impinging jets. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 953-956.	0.2	6
42	On the effect of electrostatic surface forces on dielectric falling films. Journal of Fluid Mechanics, 2021, 906, .	1.4	6
43	Influence of high shear on the effective thermal conduction of spherical micro- and nanoparticle suspensions in view of particle rotation. International Journal of Heat and Mass Transfer, 2021, 175, 121251.	2.5	5
44	Influence of Local Flow Acceleration on the Heat Transfer of Submerged and Free-surface Jet Impingement. , 2014, , .		5
45	Experimental investigation of 3-dimensional wavy liquid films under the coupled influence of thermo-capillary and electrostatic forces. European Physical Journal: Special Topics, 2013, 219, 111-119.	1.2	4
46	Influence of micro-scale aspects and jet-to-jet interaction on free-surface liquid jet impingement for micro-jet array cooling. , 2014, , .		4
47	Direct numerical simulations of a thin liquid film coating an axially oscillating cylindrical surface. Fluid Dynamics Research, 2014, 46, 041402.	0.6	4
48	ASSESSMENT OF THE INTERFACE COMPRESSION SCHEME IN THE VOLUME-OF-FLUID MODELING OF CIRCULAR HYDRAULIC JUMPS. Atomization and Sprays, 2021, 31, 21-35.	0.3	4
49	A SPIN COATING DEVICE FOR THE INVESTIGATION OF SPRAY-FILM INTERACTIONS UNDER ENGINE RELEVANT CONDITIONS. Atomization and Sprays, 2016, 26, 1111-1125.	0.3	3
50	Comparison of scattering phase functions of reacting and non-reacting pulverised fuel particles. Fuel, 2021, 287, 119415.	3.4	3
51	HeatQuiz: An app framework for game-based learning in STEM education. , 2021, , .		3
52	Modeling of wave modes on a vertical film of a viscous ferromagnetic fluid flowing down a cylindrical electric conductor. Physics of Fluids, 2013, 25, 092101.	1.6	2
53	Design, development, and validation of concepts for generating passive pulsation in cooling nozzles. Case Studies in Thermal Engineering, 2016, 7, 103-108.	2.8	2
54	Physically-motivated Figure of Merit (FOM) assessing the cooling performance of fluids suitable for the direct cooling of electrical components. , 2020, , .		2

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55	Spanwise structuring and rivulet formation in suspended falling liquid films. Physical Review Fluids, 2021, 6, .	1.0	2
56	SMOOTH INTERFACE COMPRESSION: AN IMPROVED ALGEBRAIC VOF METHOD TO MODEL FLOWS DOMINATED BY CAPILLARY FORCES. Multiphase Science and Technology, 2020, 32, 259-293.	0.2	2
57	The Influence of Subsurface Temperature Measurements on the Determination of Transient Wall-Side Boundary Conditions: An Analytical Tool. Heat Transfer Engineering, 2017, 38, 206-216.	1.2	1
58	Evaluation of the sensitivity and response of IR thermography from a transparent heater under liquid jet impingement. Journal of Physics: Conference Series, 2012, 395, 012083.	0.3	0
59	Development of Heat Transfer in a Two-Dimensional Wavy Falling Film of Water and its Influence on Wave Stability. , 2013, , .		0
60	Modelling the defrost process in complex geometries â€“ part 2: wall-function based coupling to a multi-region CFD solver. E3S Web of Conferences, 2017, 22, 00064.	0.2	0
61	Modeling the defrost process in complex geometries â€“ Part 1: Development of a one-dimensional defrost model. E3S Web of Conferences, 2017, 22, 00023.	0.2	0
62	Physically-Derived Figure of Merit (FOM) Quantifying the Cooling Performance of Fluids in Laminar Free-Surface Jet Impingement Cooling of Electrical Components. , 2021, , .		0