RÃ¼diger Schwarze

List of Publications by Year
in descending order

83 papers	1,073 citations	516215 16 h-index	500791 28 g-index
88 all docs	88 docs citations	88 times ranked	1024 citing authors

#	Article	IF	Citations
1	Numerical simulation of a single rising bubble by VOF with surface compression. International Journal for Numerical Methods in Fluids, 2013, 71, 960-982.	0.9	167
2	Assessment of particle-tracking models for dispersed particle-laden flows implemented in OpenFOAM and ANSYS FLUENT. Engineering Applications of Computational Fluid Mechanics, 2016, 10, 30-43.	1.5	80
3	Mathematical Models and Numerical Schemes for the Simulation of Human Phonation. Current Bioinformatics, 2011, 6, 323-343.	0.7	56
4	Comparison of different capillary bridge models for application in the discrete element method. Granular Matter, 2014, 16, 911-920.	1.1	44
5	Surface tension and density data for Feâ€“Crâ€“Mo, Feâ€“Crâ€“Ni, and Feâ€“Crâ€“Mnâ€“Ni steels. Journal of Materials Science, 2015, 50, 7227-7237.	1.7	41
6	Rheology of weakly wetted granular materials: a comparison of experimental and numerical data. Granular Matter, 2013, 15, 455-465.	1.1	37
7	Model Investigations on the Stability of the Steel-Slag Interface in Continuous-Casting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2013, 44, 80-90.	1.0	37
8	CFD-Modellierung. , 2013, , .		27
9	Modelling of unsteady electromagnetically driven recirculating melt flows. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 985-993.	0.8	26
10	Experimental and numerical investigation of a viscoplastic Carbopol gel injected into a prototype 3D mold cavity. Journal of Non-Newtonian Fluid Mechanics, 2009, 161, 60-68.	1.0	22
11	Numerical Investigation of the Free Surface in a Model Mold. Steel Research International, 2016, 87, 181-190.	1.0	22
12	3D-coupling of Volume-of-Fluid and Lagrangian particle tracking for spray atomization simulation in OpenFOAM. SoftwareX, 2020, 11, 100483.	1.2	22
13	Experiments and modeling of the breakup mechanisms of an attenuating liquid sheet. International Journal of Multiphase Flow, 2020, 130, 103347.	1.6	21
14	Part2Track: A MATLAB package for double frame and time resolved Particle Tracking Velocimetry. SoftwareX, 2020, 11, 100413.	1.2	21
15	Discrete element modeling of deformable particles in YADE. SoftwareX, 2017, 6, 118-123.	1.2	20
16	Starting jet flows in a three-dimensional channel with larynx-shaped constriction. Computers and Fluids, 2011, 48, 68-83.	1.3	19
17	Electron beam welding of CrMnNi-steels: CFD-modeling with temperature sensitive thermophysical properties. International Journal of Heat and Mass Transfer, 2019, 139, 442-455.	2.5	18
18	Experimental and numerical investigations of a turbulent round jet into a cavity. International Journal of Heat and Fluid Flow, 2008, 29, 1688-1698.	1.1	17

#	Article	IF	Citations
19	Numerical simulation of fluid flow and disperse phase behaviour in continuous casting tundishes. Modelling and Simulation in Materials Science and Engineering, 2001, 9, 279-287.	0.8	16
20	Numerical study of particle filtration in an induction crucible furnace. International Journal of Heat and Fluid Flow, 2016, 62, 299-312.	1.1	16
21	URANS Simulation of Continuous Casting Mold Flow: Assessment of Revised Turbulence Models. Steel Research International, 2015, 86, 400-410.	1.0	15
22	Numerical Modeling of Flow Conditions during Steel Filtration Experiments. Advanced Engineering Materials, 2017, 19, 1700085.	1.6	15
23	Experimental and Numerical Modeling of Fluid Flow Processes in Continuous Casting: Results from the LIMMCAST-Project. IOP Conference Series: Materials Science and Engineering, 2017, 228, 012019.	0.3	13
24	Numerical Simulation of Metal Melt Flow in a One-Strand Tundish Regarding Active Filtration and Reactive Cleaning. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 2334-2342.	1.0	13
25	Numerical study of effects of pour box design on tundish flow characteristics. Ironmaking and Steelmaking, 2015, 42, 148-153.	1.1	12
26	Genetic Algorithm Optimization of the Volute Shape of a Centrifugal Compressor. International Journal of Rotating Machinery, 2016, 2016, 1-13.	0.8	12
27	Influence of drag closures and inlet conditions on bubble dynamics and flow behavior inside a bubble column. Engineering Applications of Computational Fluid Mechanics, 2017, 11, 127-141.	1.5	12
28	Numerical Assessment of a Filtration Experiment Influenced by Microscale Carbon Monoxide Bubbles Arising in Steel Melt. Jom, 2018, 70, 2927-2933.	0.9	12
29	Numerical Simulation of an Industrialâ€Scale Prototypical Steel Melt Tundish Considering Flow Control and Cleaning Strategies. Advanced Engineering Materials, 2020, 22, 1900658.	1.6	12
30	Particle detection in VOF-simulations with OpenFOAM. SoftwareX, 2020, 11, 100382.	1.2	12
31	Investigation of Fluid-Structure Interaction Induced Bending for Elastic Flaps in a Cross Flow. Applied Sciences (Switzerland), 2020, 10, 6177.	1.3	12
32	Transparent model concrete with tunable rheology for investigating flow and particle-migration during transport in pipes. Materials and Design, 2020, 193, 108673.	3.3	12
33	Mixing and Residence Time Distribution in an Inert Gas-Shrouded Tundish. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 17-21.	1.0	11
34	Measuring three-dimensional flow structures in the conductive airways using 3D-PTV. Experiments in Fluids, 2017, 58, 1.	1.1	10
35	Mathematical modelling of flows and discrete phase behaviour in a V-shaped tundish. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 2001, 72, 215-220.	0.2	9
36	Meshing of porous foam structures on the micro-scale. Engineering With Computers, 2013, 29, 95-110.	3.5	9

#	Article	IF	Citations
37	Unsteady RANS simulation of oscillating mould flows. International Journal for Numerical Methods in Fluids, 2006, 52, 883-902.	0.9	8
38	Investigation of the Gasâ€Liquid Flow in a Stopper Rod Controlled SEN. Steel Research International, 2007, 78, 595-601.	1.0	8
39	Numerical Investigation of the Circumferential Pressure Distortion Induced by a Centrifugal Compressorâ€™s External Volute. , 2018, , .		8
40	Computational Fluid Dynamic (CFD) Simulations of Liquid Steel Infiltration in Ceramic Foam Structures. Part II: Application to Laboratory-Scale Experiments. Steel Research International, 2011, 82, 1113-1121.	1.0	7
41	Experimental and numerical investigation of a gearless one-motor contra-rotating fan. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2016, 230, 467-476.	0.8	7
42	Numerical and Experimental Modeling of the Recirculating Melt Flow Inside an Induction Crucible Furnace. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 1378-1387.	1.0	7
43	Segregation of granular materials in a pulsating pumping regime. Granular Matter, 2019, 21, 1.	1.1	7
44	Numerical analysis of flow-induced gas entrainment in roll coating. Applied Mathematical Modelling, 2011, 35, 3516-3526.	2.2	6
45	Computational Fluid Dynamic (CFD) Simulations of Liquid Steel Infiltration in Ceramic Foam Structures. Part I: Fundamentals and Validation. Steel Research International, 2011, 82, 56-62.	1.0	6
46	Influencing Parameter Study on Primary Breakup of Free Falling Steel Melt Jets Using Volume of Fluid Simulation. Steel Research International, 2016, 87, 1002-1013.	1.0	6
47	CFD Simulation of Incompressible Turbomachinery â€" A Comparison of Results From ANSYS Fluent and OpenFOAM. , 2014, , .		5
48	Collision of Micro-sized Non-metallic Inclusions in Liquid Steel Flows: A Computational Study. Jom, 2018, 70, 2943-2949.	0.9	5
49	Experimental Investigation of the Pumping of a Model-Concrete through Pipes. Materials, 2020, 13, 1161.	1.3	5
50	Effect of Flexible Flaps on Lift and Drag of Laminar Profile Flow. Energies, 2020, 13, 1077.	1.6	5
51	Benchmark Simulations of Dense Suspensions Flow Using Computational Fluid Dynamics. Frontiers in Materials, 2022, 9, .	1.2	5
52	Computational Fluid Dynamic (CFD) Simulations of Liquid Steel Infiltration in Porous Ceramic Structures: Dynamics of the Penetrating Melt Surface. Steel Research International, 2016, 87, 465-471.	1.0	4
53	Scripted CFD-Tool for the Automated Design of Volutes for Centrifugal Compressors. , 2015, , .		3
54	Density-based solver for all Mach number flows. Progress in Computational Fluid Dynamics, 2016, 16, 271.	0.1	3

#	Article	IF	Citations
55	Numerical Simulation of the Particle Displacement during Electron Beam Welding of a Dissimilar Weld Joint with TRIPâ€Matrixâ€Composite. Advanced Engineering Materials, 2019, 21, 1800741.	1.6	3
56	Numerical Investigation of Filtration Influenced by Microscale CO Bubbles in Steel Melt. Advanced Engineering Materials, 2020, 22, 1900591.	1.6	3
57	Numerical Modeling of Soil Bioventing Processes â€“ Fundamentals and Validation. Transport in Porous Media, 2004, 55, 257-273.	1.2	2
58	Upâ€scaled Dynamical Model of the Human Vocal Folds. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10643-10644.	0.2	2
59	Simulation of the Compressor Stage of a Turbocharger: Validation of the Open Source Library OpenFOAM. , 2013, , .		2
60	CFD of the MHD Mold Flow by Means of Hybrid LES/RANS Turbulence Modeling. Journal for Manufacturing Science and Production, 2015, 15, 49-57.	0.1	2
61	Comparison of different Methods to model Transient Turbulent Magnetohydrodynamic Flow in Continuous Casting Molds. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012025.	0.3	2
62	A compact device for the deterministic generation of medium-sized bubbles. Review of Scientific Instruments, 2018, 89, 125108.	0.6	2
63	Effect of Turbulence Modeling on the Melt Flow and Inclusions Transport in a Steel Filtration Experiment. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 2270-2277.	1.0	2
64	Numerical Investigation of the Combined Effect of Reactive Cleaning and Active Filtration on Inclusion Removal in an Induction Crucible Furnace. Steel Research International, 2021, 92, 2100122.	1.0	2
65	Mathematical Modeling of Molten Salt Electrolytic Cells for Sodium and Lithium Production. Minerals, Metals and Materials Series, 2017, , 129-138.	0.3	2
66	Investigation of the Gas-Liquid Flow in a Stopper-Rod Controlled SEN. , 2009, 80, 834.		2
67	A new 1D method for assessing volute induced circumferential pressure distortion at the exit of a centrifugal impeller. , 2019, , .		2
68	Optical investigation of dense suspensions with non-Newtonian matrix under pulsating pumping. Journal of Non-Newtonian Fluid Mechanics, 2022, 303, 104778.	1.0	2
69	Long-Term Fluctuating Flow Fields in Tundish and Mould. Steel Research International, 2007, 78, 151-155.	1.0	1
70	Numerical Simulations Of Three Dimensional Glottis Flows. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10619-10620.	0.2	1
71	Simulation and validation of the compressor stage of a turbocharger using OpenFOAM. , 2013, , 659-667.		1
72	Numerical benchmarking of granular flow with shear dependent incompressible flow models. Journal of Non-Newtonian Fluid Mechanics, 2018, 262, 92-106.	1.0	1

#	Article	IF	Citations
73	Numerical modeling of bulk flow on a pelletizing disc in different rotational regimes. Granular Matter, 2021, 23, 1.	1.1	1
74	Segregation of Granular Material During the Transport in Pipes. RILEM Bookseries, 2020, , 596-601.	0.2	1
75	Oxygen transport during liquid ventilation: an in vitro study. Scientific Reports, 2022, 12, 1244.	1.6	1
76	All-Mach Number Density Based Flow Solver for OpenFOAM. , 2014, , .		0
77	A CFD Model for Simulating the Electron Beam Welding of TRIPâ€Matrixâ€Composites. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900249.	0.2	0
78	Effect of a rotating magnetic field on the decay of a freeâ€falling metal jet. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900066.	0.2	0
79	Assessment of the Loss Map of a Centrifugal Compressor's External Volute. Journal of Turbomachinery, 2021, 143, .	0.9	0
80	Numerical Assessment of the Immersion Process of a Ceramic Foam Filter in a Steel Melt. Advanced Engineering Materials, 0, , 2100753.	1.6	0
81	Low-Frequency Coherent Structures in Turbulent Flows. Springer Proceedings in Physics, 2007, , 131-134.	0.1	0
82	CFD Analysis of the Particle and Melt Flow Behavior During Fabrication and Processing of TRIP-Matrix-Composites. Springer Series in Materials Science, 2020, , 585-619.	0.4	0
83	Assessment of the Loss Map of a Centrifugal Compressorâ€™s External Volute. , 2020, , .		0