Maarten van Reeuwijk

List of Publications by Year
in descending order

75 papers	1,224 citations	394421 19 h-index	454955 30 g-index
84 all docs	84 docs citations	84 times ranked	825 citing authors

#	Article	IF	Citations
1	The turbulence boundary of a temporal jet. Journal of Fluid Mechanics, 2014, 739, 254-275.	3.4	91
2	Energy-consistent entrainment relations for jetsÂandÂplumes. Journal of Fluid Mechanics, 2015, 782, 333-355.	3.4	91
3	Energy dispersion in turbulent jets. PartÂ1. DirectÂsimulation of steady and unsteady jets. Journal of Fluid Mechanics, 2015, 763, 500-537.	3.4	59
4	Turbulent transport and entrainment in jets and plumes: A DNS study. Physical Review Fluids, 2016, 1, .	2.5	59
5	An urban planning sustainability framework: Systems approach to blue green urban design. Sustainable Cities and Society, 2021, 66, 102677.	10.4	53
6	Modelling of instantaneous emissions from diesel vehicles with a special focus on NOx: Insights from machine learning techniques. Science of the Total Environment, 2020, 737, 139625.	8.0	45
7	Visualization of three pathways for macromolecule transport across cultured endothelium and their modification by flow. American Journal of Physiology - Heart and Circulatory Physiology, 2017, 313, H959-H973.	3.2	38
8	Wind and boundary layers in Rayleigh-BÃ©nard convection. I. Analysis and modeling. Physical Review E, 2008, 77, 036311.	2.1	34
9	Insights from a pseudospectral approach to the Elder problem. Water Resources Research, 2009, 45, .	4.2	33
10	On the scaling of shear-driven entrainment: a DNS study. Journal of Fluid Mechanics, 2013, 732, 150-165.	3.4	33
11	Hydraulic Fracture Propagation with 3-D Leak-off. Transport in Porous Media, 2009, 80, 499-518.	2.6	32
12	Systematic investigation of non-Boussinesq effects in variable-density groundwater flow simulations. Journal of Contaminant Hydrology, 2015, 183, 82-98.	3.3	31
13	Generalised unsteady plume theory. Journal of Fluid Mechanics, 2016, 792, 1013-1052.	3.4	26
14	Wind and boundary layers in Rayleigh-BÃ©nard convection. II. Boundary layer character and scaling. Physical Review E, 2008, 77, 036312.	2.1	24
15	Identification of the wind in Rayleighâ€"BÃ©nard convection. Physics of Fluids, 2005, 17, 051704.	4.0	23
16	Incompressibility of the Leray-Î± model for wall-bounded flows. Physics of Fluids, 2006, 18, 018103.	4.0	23
17	Drag Distribution in Idealized Heterogeneous Urban Environments. Boundary-Layer Meteorology, 2021, 178, 225-248.	2.3	23
18	Robust and accurate open boundary conditions for incompressible turbulent jets and plumes. Computers and Fluids, 2013, 86, 284-297.	2.5	21

#	Article	IF	Citations
19	Steady-State Large-Eddy Simulations of Convective and Stable Urban Boundary Layers. Boundary-Layer Meteorology, 2020, 175, 309-341.	2.3	21
20	Mixing and entrainment are suppressed in inclined gravity currents. Journal of Fluid Mechanics, 2019, 873, 786-815.	3.4	18
21	Combined bulk and wall reactions in turbulent pipe flow: decay coefficients and concentration profiles. Journal of Hydroinformatics, 2011, 13, 324-333.	2.4	17
22	Modelling high Schmidt number turbulent mass transfer. International Journal of Heat and Fluid Flow, 2015, 51, 42-49.	2.4	17
23	WRFâ€TEB: Implementation and Evaluation of the Coupled Weather Research and Forecasting (WRF) and Town Energy Balance (TEB) Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001961.	3.8	17
24	Connecting the time evolution of the turbulence interface to coherent structures. Journal of Fluid Mechanics, 2020, 898, .	3.4	17
25	The turbulent Prandtl number in a pure plume is 3/5. Journal of Fluid Mechanics, 2017, 822, 774-790.	3.4	15
26	Leray-Î± simulations of wall-bounded turbulent flows. International Journal of Heat and Fluid Flow, 2009, 30, 1044-1053.	2.4	14
27	Simplified Numerical and Analytical Approach for Solutes in Turbulent Flow Reacting with Smooth Pipe Walls. Journal of Hydraulic Engineering, 2010, 136, 626-632.	1.5	14
28	Asymptotic solutions for turbulent mass transfer augmented by a first order chemical reaction. International Journal of Heat and Mass Transfer, 2012, 55, 6485-6490.	4.8	14
29	Energy dispersion in turbulent jets. PartÂ2. AÂrobust model for unsteady jets. Journal of Fluid Mechanics, 2015, 763, 538-566.	3.4	14
30	A neighbourhood-scale estimate for the cooling potential of green roofs. Urban Climate, 2017, 20, 33-45.	5.7	14
31	Fractal scaling of the turbulence interface in gravity currents. Journal of Fluid Mechanics, 2017, 820, .	3.4	14
32	Orbitally shaken shallow fluid layers. I. Regime classification. Physics of Fluids, 2018, 30, 032107.	4.0	14
33	Small-scale entrainment in inclined gravity currents. Environmental Fluid Mechanics, 2018, 18, 225-239.	1.6	14
34	Unified description of turbulent entrainment. Journal of Fluid Mechanics, 2021, 908, .	3.4	14
35	Spectral analysis of boundary layers in Rayleigh-BÃ©nard convection. Physical Review E, 2008, 77, 016303.	2.1	13
36	The role of geometry in rough wall turbulent mass transfer. Heat and Mass Transfer, 2013, 49, 1191-1203.	2.1	13

#	Article	IF	Citations
37	Orbitally shaken shallow fluid layers. II. An improved wall shear stress model. Physics of Fluids, 2018, 30, 032108.	4.0	13
38	Pollutant dispersion by tall buildings: laboratory experiments and Large-Eddy Simulation. Experiments in Fluids, 2022, 63, .	2.4	13
39	Asymptotic solutions for turbulent mass transfer at high Schmidt number. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 1676-1695.	2.1	11
40	Clustering of particles in turbulence due to phoresis. Physical Review E, 2016, 93, 063110.	2.1	10
41	Transient stratification force on particles crossing a density interface. International Journal of Multiphase Flow, 2019, 121, 103109.	3.4	10
42	Spatially evolving cascades in temporal planar jets. Journal of Fluid Mechanics, 2021, 910, .	3.4	10
43	Steady state model and experiment for an oscillating grid turbulent two-layer stratified flow. Physical Review Fluids, 2017, 2, .	2.5	10
44	Investigation of hydromechanical processes during cyclic extraction recovery testing of a deformable rock fracture. International Journal of Rock Mechanics and Minings Sciences, 2010, 47, 517-522.	5.8	9
45	Shear-flow dispersion in turbulent jets. Journal of Fluid Mechanics, 2015, 781, 28-51.	3.4	9
46	The turbulent/nonturbulent interface in penetrative convection. Journal of Turbulence, 2017, 18, 260-270.	1.4	9
47	Evaluation of an operational air quality model using large-eddy simulation. Atmospheric Environment: X, 2019, 3, 100041.	1.4	9
48	Tree model with drag, transpiration, shading and deposition: Identification of cooling regimes and large-eddy simulation. Agricultural and Forest Meteorology, 2021, 298-299, 108288.	4.8	9
49	Dynamics of Subsiding Shells in Actively Growing Clouds with Vertical Updrafts. Journals of the Atmospheric Sciences, 2020, 77, 1353-1369.	1.7	8
50	Role of vortical structures for enstrophy and scalar transport in flows with and without stable stratification. Journal of Turbulence, 2021, 22, 393-412.	1.4	8
51	A mimetic mass, momentum and energy conserving discretization for the shallow water equations. Computers and Fluids, 2011, 46, 411-416.	2.5	7
52	Transition from shear-dominated to Rayleighâ€"Taylor turbulence. Journal of Fluid Mechanics, 2021, 924, .	3.4	7
53	Water neutrality framework for systemic design of new urban developments. Water Research, 2022, 219, 118583.	11.3	7
54	uDALES 1.0: a large-eddy simulation model for urban environments. Geoscientific Model Development, 2022, 15, 5309-5335.	3.6	7

#	Article	IF	Citations
55	Distributed urban drag parametrization for subâ€kilometre scale numerical weather prediction. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 3940-3956.	2.7	6
56	A Lagrangian Study of Interfaces at the Edges of Cumulus Clouds. Journals of the Atmospheric Sciences, 2021, 78, 2397-2412.	1.7	5
57	Under pressure: turbulent plumes in a uniform crossflow. Journal of Fluid Mechanics, 2022, 932, .	3.4	5
58	Interfacial layers in clear and cloudy atmospheric boundary layers. , 2012, , .		4
59	Machine Learning Emulation of Urban Land Surface Processes. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	4
60	Experimental study of the initial growth of a localized turbulent patch in a stably stratified fluid. International Journal of Heat and Fluid Flow, 2017, 66, 127-136.	2.4	3
61	uDALES: large-eddy-simulation software for urban flow, dispersion, and microclimate modelling. Journal of Open Source Software, 2021, 6, 3055.	4.6	3
62	Inhomogeneous growth of fluctuations of concentration of inertial particles in channel turbulence. Physical Review Fluids, 2018, 3, .	2.5	3
63	Potential-enstrophy lengthscale for the turbulent/nonturbulent interface in stratified flow. Physical Review Fluids, 2021, 6, .	2.5	3
64	Structure of turbulence in temporal planar jets. Physics of Fluids, 2022, 34, 045109.	4.0	2
65	Direct simulation of turbulent entrainment due to a plume impinging on a density interface. Journal of Physics: Conference Series, 2011, 318, 042061.	0.4	1
66	Development of porous glass surfaces with recoverable hydrophobicity. Materials Letters: X, 2019, 1, 100002.	0.7	1
67	Quantifying the Durability of a Friction-Reducing Surface with Recoverable Superhydrophobicity. Journal of Hydraulic Engineering, 2021, 147, .	1.5	1
68	Applying the Leray-Î± Model to Rayleigh-BÃ©nard Convection. Springer Proceedings in Physics, 2007, , 197-200.	0.2	1
69	Understanding Entrainment Processes in the Atmosphere: The Role of Numerical Simulation. ERCOFTAC Series, 2018, , 53-60.	0.1	1
70	Improving the worthiness of the Elder problem as a benchmark for buoyancy driven convection models. Nature Precedings, 2008, , .	0.1	0
71	Connecting the time evolution of the turbulence interface to coherent structures â€“ CORRIGENDUM. Journal of Fluid Mechanics, 2020, 899, .	3.4	0
72	Confined turbulent convection driven by a combination of line and distributed sources of buoyancy. Physical Review Fluids, 2021, 6, .	2.5	0

#	Article	IF	Citations
73	Geometry effects in rough wall turbulent mass transfer. , 2012, , .		0
74	LES study of a mixed layer above urban street canyons. , 2015, , .		0
75	Turbulent entrainment in jets and plumes. , 2015, , .		0