

Marius Ungarish

List of Publications by Year in descending order

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86
papers

1,329
citations

430754

18
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29
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90
all docs

90
docs citations

90
times ranked

419
citing authors

#	ARTICLE	IF	CITATIONS
1	On gravity currents propagating at the base of a stratified ambient. <i>Journal of Fluid Mechanics</i> , 2002, 458, 283-301.	1.4	63
2	On gravity currents in a linearly stratified ambient: a generalization of Benjamin's steady-state propagation results. <i>Journal of Fluid Mechanics</i> , 2006, 548, 49.	1.4	60
3	Axisymmetric gravity currents in a rotating system: experimental and numerical investigations. <i>Journal of Fluid Mechanics</i> , 2001, 447, 1-29.	1.4	57
4	Particle-driven gravity currents: asymptotic and box model solutions. <i>European Journal of Mechanics, B/Fluids</i> , 2000, 19, 139-165.	1.2	51
5	The effects of rotation on axisymmetric gravity currents. <i>Journal of Fluid Mechanics</i> , 1998, 362, 17-51.	1.4	47
6	Intrusive gravity currents in a stratified ambient: shallow-water theory and numerical results. <i>Journal of Fluid Mechanics</i> , 2005, 535, 287-323.	1.4	43
7	On the axisymmetric spreading of non-Newtonian power-law gravity currents of time-dependent volume: An experimental and theoretical investigation focused on the inference of rheological parameters. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 201, 69-79.	1.0	37
8	A shallow-water model for high-Reynolds-number gravity currents for a wide range of density differences and fractional depths. <i>Journal of Fluid Mechanics</i> , 2007, 579, 373-382.	1.4	31
9	Spin-up from rest in a stratified fluid: boundary flows. <i>Journal of Fluid Mechanics</i> , 2002, 472, 51-82.	1.4	30
10	High-Reynolds-number gravity currents over a porous boundary: shallow-water solutions and box-model approximations. <i>Journal of Fluid Mechanics</i> , 2000, 418, 1-23.	1.4	29
11	On gravity currents propagating at the base of a stratified ambient: effects of geometrical constraints and rotation. <i>Journal of Fluid Mechanics</i> , 2004, 521, 69-104.	1.4	26
12	Energy balances for propagating gravity currents: homogeneous and stratified ambients. <i>Journal of Fluid Mechanics</i> , 2006, 565, 363.	1.4	26
13	Sustained gravity currents in a channel. <i>Journal of Fluid Mechanics</i> , 2016, 798, 853-888.	1.4	26
14	Two-layer shallow-water dam-break solutions for non-Boussinesq gravity currents in a wide range of fractional depth. <i>Journal of Fluid Mechanics</i> , 2011, 675, 27-59.	1.4	25
15	On gravity currents in stratified ambients. <i>Physics of Fluids</i> , 2007, 19, .	1.6	24
16	A general solution of Benjamin-type gravity current in a channel of non-rectangular cross-section. <i>Environmental Fluid Mechanics</i> , 2012, 12, 251-263.	0.7	24
17	The propagation of gravity currents in a V-shaped triangular cross-section channel: experiments and theory. <i>Journal of Fluid Mechanics</i> , 2014, 754, 232-249.	1.4	21
18	Axisymmetric gravity currents at high Reynolds number: On the quality of shallow-water modeling of experimental observations. <i>Physics of Fluids</i> , 2007, 19, 036602.	1.6	18

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19	Energy balances and front speed conditions of two-layer models for gravity currents produced by lock release. <i>Acta Mechanica</i> , 2008, 201, 63-81.	1.1	18
20	Two-layer shallow-water dam-break solutions for gravity currents in non-rectangular cross-area channels. <i>Journal of Fluid Mechanics</i> , 2013, 732, 537-570.	1.4	18
21	The motion generated by a slowly rising disk in an unbounded rotating fluid for arbitrary Taylor number. <i>Journal of Fluid Mechanics</i> , 1994, 262, 1-26.	1.4	17
22	The propagation of gravity currents in a circular cross-section channel: experiments and theory. <i>Journal of Fluid Mechanics</i> , 2015, 764, 513-537.	1.4	17
23	A numerical investigation of high-Reynolds-number constant-volume non-Boussinesq density currents in deep ambient. <i>Journal of Fluid Mechanics</i> , 2011, 673, 574-602.	1.4	16
24	The motion of a rising disk in a rotating axially bounded fluid for large Taylor number. <i>Journal of Fluid Mechanics</i> , 1995, 291, 1-32.	1.4	15
25	On axisymmetric rotating gravity currents: two-layer shallow-water and numerical solutions. <i>Journal of Fluid Mechanics</i> , 2003, 481, 37-66.	1.4	15
26	Energy balances for gravity currents with a jump at the interface produced by lock release. <i>Acta Mechanica</i> , 2010, 211, 1-21.	1.1	15
27	Gravity currents in a linearly stratified ambient fluid created by lock release and influx in semi-circular and rectangular channels. <i>Physics of Fluids</i> , 2016, 28, .	1.6	15
28	Models of internal jumps and the fronts of gravity currents: unifying two-layer theories and deriving new results. <i>Journal of Fluid Mechanics</i> , 2018, 846, 654-685.	1.4	15
29	Gravity currents in a two-layer stratified ambient: The theory for the steady-state (front condition) and lock-released flows, and experimental confirmations. <i>Physics of Fluids</i> , 2012, 24, .	1.6	14
30	Gravity currents in non-rectangular cross-section channels: Analytical and numerical solutions of the one-layer shallow-water model for high-Reynolds-number propagation. <i>Physics of Fluids</i> , 2013, 25, 026601.	1.6	14
31	Gravity currents produced by constant and time varying inflow in a circular cross-section channel: Experiments and theory. <i>Advances in Water Resources</i> , 2016, 90, 10-23.	1.7	13
32	On inwardly propagating high-Reynolds-number axisymmetric gravity currents. <i>Journal of Fluid Mechanics</i> , 2003, 494, 255-274.	1.4	12
33	On axisymmetric intrusive gravity currents in a stratified ambient – shallow-water theory and numerical results. <i>European Journal of Mechanics, B/Fluids</i> , 2007, 26, 220-235.	1.2	12
34	Gravity currents and intrusions of stratified fluids into a stratified ambient. <i>Environmental Fluid Mechanics</i> , 2012, 12, 115-132.	0.7	12
35	Gravity currents produced by lock-release: Theory and experiments concerning the effect of a free top in non-Boussinesq systems. <i>Advances in Water Resources</i> , 2018, 121, 456-471.	1.7	12
36	Front conditions of high-Re gravity currents produced by constant and time-dependent influx: An analytical and numerical study. <i>European Journal of Mechanics, B/Fluids</i> , 2013, 41, 109-122.	1.2	11

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37	Particle Entrainment in a Bounded Rotating Flow With a Drain. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 1998, 120, 676-679.	0.8	10
38	The motion generated by a rising particle in a rotating fluid – numerical solutions. Part 2. The long container case. <i>Journal of Fluid Mechanics</i> , 2002, 454, 345-364.	1.4	10
39	An experimental investigation of spin-up from rest of a stratified fluid. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2004, 98, 277-296.	0.4	10
40	The propagation of particulate gravity currents in a V-shaped triangular cross section channel: Lock-release experiments and shallow-water numerical simulations. <i>Physics of Fluids</i> , 2016, 28, 036601.	1.6	10
41	On gravity currents of fixed volume that encounter a down-slope or up-slope bottom. <i>Physics of Fluids</i> , 2019, 31, .	1.6	10
42	The motion generated by a rising particle in a rotating fluid – numerical solutions. Part 1. A short container. <i>Journal of Fluid Mechanics</i> , 2000, 413, 111-148.	1.4	9
43	Energy balances for axisymmetric gravity currents in homogeneous and linearly stratified ambients. <i>Journal of Fluid Mechanics</i> , 2008, 616, 303-326.	1.4	9
44	The flow field and bare-spot formation in spin-up from rest of a two-layer fluid about a vertical axis. <i>Journal of Fluid Mechanics</i> , 2003, 474, 117-145.	1.4	8
45	On the propagation of particulate gravity currents in circular and semi-circular channels partially filled with homogeneous or stratified ambient fluid. <i>Physics of Fluids</i> , 2017, 29, 106605.	1.6	8
46	Axisymmetric compressible flow in a rotating cylinder with axial convection. <i>Journal of Fluid Mechanics</i> , 1985, 154, 121-144.	1.4	7
47	On the self-similar propagation of gravity currents through an array of emergent vegetation-like obstacles. <i>Physics of Fluids</i> , 2016, 28, 056605.	1.6	7
48	Benjamin’s gravity current into an ambient fluid with an open surface. <i>Journal of Fluid Mechanics</i> , 2017, 825, .	1.4	7
49	Thin-layer models for gravity currents in channels of general cross-section area, a review. <i>Environmental Fluid Mechanics</i> , 2018, 18, 283-333.	0.7	7
50	Propagation of a continuously supplied gravity current head down bottom slopes. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	7
51	Some shear-layer and inertial modifications to the geostrophic drag on a slowly rising particle or drop in a rotating fluid. <i>Journal of Fluid Mechanics</i> , 1996, 319, 219.	1.4	6
52	The propagation of high-Reynolds-number non-Boussinesq gravity currents in axisymmetric geometry. <i>Journal of Fluid Mechanics</i> , 2010, 643, 267-277.	1.4	6
53	Inertial gravity current produced by the drainage of a cylindrical reservoir from an outer or inner edge. <i>Journal of Fluid Mechanics</i> , 2019, 874, 185-209.	1.4	6
54	Rotating planar gravity currents at moderate Rossby numbers: fully resolved simulations and shallow-water modelling. <i>Journal of Fluid Mechanics</i> , 2019, 867, 114-145.	1.4	6

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55	On shear layers in mixture separation in rotating containers with inclined walls. <i>Journal of Fluid Mechanics</i> , 1988, 193, 27.	1.4	5
56	Side wall effects in centrifugal separation of mixtures. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989, 1, 810-818.	1.6	5
57	Spin-up from rest of a mixture. <i>Physics of Fluids A, Fluid Dynamics</i> , 1990, 2, 160-166.	1.6	5
58	On the separation of a suspension in a tube centrifuge: critical comments on theoretical models and experimental verifications. <i>Archive of Applied Mechanics</i> , 2003, 73, 399-408.	1.2	5
59	A non-dissipative solution of Benjamin-type gravity current for a wide range of depth ratios. <i>Journal of Fluid Mechanics</i> , 2011, 682, 54-65.	1.4	5
60	Gravity currents with double stratification: a numerical and analytical investigation. <i>Environmental Fluid Mechanics</i> , 2014, 14, 471-499.	0.7	5
61	Axisymmetric gravity currents in two-layer density-stratified media. <i>Environmental Fluid Mechanics</i> , 2015, 15, 1035-1051.	0.7	5
62	Critical regime of gravity currents flowing in non-rectangular channels with density stratification. <i>Journal of Fluid Mechanics</i> , 2018, 840, 579-612.	1.4	5
63	Non-Boussinesq gravity currents and surface waves generated by lock release in a circular-section channel: theoretical and experimental investigation. <i>Journal of Fluid Mechanics</i> , 2019, 869, 610-633.	1.4	5
64	Draining of a thin film on the wall of a conical container set into rapid rotation about its vertical axis. <i>Physics of Fluids</i> , 2012, 24, 023602.	1.6	4
65	Shallow-water solutions for gravity currents in non-rectangular cross-area channels with stratified ambient. <i>Environmental Fluid Mechanics</i> , 2015, 15, 793-820.	0.7	4
66	The flow of high-Reynolds axisymmetric gravity currents of a stratified fluid into a stratified ambient: shallow-water and box model solutions. <i>Environmental Fluid Mechanics</i> , 2012, 12, 347-359.	0.7	3
67	Gravity currents with tailwaters in Boussinesq and non-Boussinesq systems: two-layer shallow-water dam-break solutions and Navier-Stokes simulations. <i>Environmental Fluid Mechanics</i> , 2014, 14, 451-470.	0.7	3
68	On the coupling between spin-up and aspect ratio of vortices in rotating stratified flows: a predictive model. <i>Journal of Fluid Mechanics</i> , 2015, 777, 461-481.	1.4	3
69	A novel hybrid model for the motion of sustained axisymmetric gravity currents and intrusions. <i>European Journal of Mechanics, B/Fluids</i> , 2015, 49, 108-120.	1.2	3
70	Sustained axisymmetric intrusions in a rotating system. <i>European Journal of Mechanics, B/Fluids</i> , 2016, 56, 110-119.	1.2	3
71	On the front conditions for gravity currents in channels of general cross-section. <i>Environmental Fluid Mechanics</i> , 2016, 16, 747-775.	0.7	3
72	Benjamin's gravity current into an ambient fluid with an open surface in a channel of general cross-section. <i>Journal of Fluid Mechanics</i> , 2019, 859, 972-991.	1.4	2

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73	A model for the propagation of inertial gravity currents released from a two-layer stratified lock. <i>Journal of Fluid Mechanics</i> , 2020, 903, .	1.4	2
74	Development of supercritical motion and internal jumps within lock-release radial currents and draining flows. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	2
75	Gravity currents with internal stratification in channels of non-rectangular cross-section. <i>European Journal of Mechanics, B/Fluids</i> , 2021, 89, 83-92.	1.2	2
76	An analogy of Taylor's instability criterion in Couette and rotating-magnetic-field-driven flows. <i>Physics of Fluids</i> , 2012, 24, 011704.	1.6	1
77	The flow of an axisymmetric stratified gravity current into a stratified ambient in a rotating system. <i>Environmental Fluid Mechanics</i> , 2013, 13, 337-351.	0.7	1
78	Tailwater gravity currents and their connection to perfectly subcritical flow: laboratory experiments and shallow-water and direct numerical solutions. <i>Environmental Fluid Mechanics</i> , 2020, 20, 1141-1171.	0.7	1
79	Rotating planar gravity currents at moderate Rossby numbers: fully resolved simulations and shallow-water modelling – ERRATUM. <i>Journal of Fluid Mechanics</i> , 2020, 891, .	1.4	1
80	Experimental verification of theoretical approaches for radial gravity currents draining from an edge. <i>Acta Mechanica</i> , 2021, 232, 4461-4483.	1.1	1
81	On symmetric intrusions in a linearly stratified ambient: a revisit of Benjamin's steady-state propagation results. <i>Journal of Fluid Mechanics</i> , 2021, 929, .	1.4	1
82	Experimental study on radial gravity currents flowing in a vegetated channel. <i>Journal of Fluid Mechanics</i> , 2022, 933, .	1.4	1
83	A simple model for the reflection by a vertical barrier of a dambreak flow over a dry or pre-wetted bottom. <i>Journal of Fluid Mechanics</i> , 2022, 942, .	1.4	1
84	On the spinup and spreadout of a Cartesian gravity current on a slope in a rotating system. <i>Journal of Fluid Mechanics</i> , 2022, 943, .	1.4	1
85	Numerical investigation of the spin-up of a two-layer fluid. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2001, 81, 479-480.	0.9	0
86	A steady-state model for asymmetric intrusive gravity currents in a linearly stratified ambient. <i>Environmental Fluid Mechanics</i> , 2011, 11, 231-246.	0.7	0