Maurizio Brocchini

List of Publications by Year
in descending order

152	3,610	136950	175258
papers	citations	32 h-index	52 g-index

156	156	156	2194
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Interaction between breaking-induced vortices and near-bed structures. Part 1. Experimental and theoretical investigation. Journal of Fluid Mechanics, 2022, 940, .	3.4	3
2	Waveâ€•and Tideâ€Induced Infragravity Dynamics at an Intermediateâ€Toâ€Dissipative Microtidal Beach. Journal of Geophysical Research: Oceans, 2022, 127, .	2.6	5
3	A Semiâ€Empirical Approach for Tsunami Inundation: An Application to the Coasts of South Italy. Geophysical Research Letters, 2022, 49, .	4.0	1
4	Effects of stiffness and configuration of brace-viscous damper systems on the response mitigation of offshore jacket platforms. Applied Ocean Research, 2021, 107, 102482.	4.1	14
5	Long-term evolution of an inner bar at the mouth of a microtidal river. Estuarine, Coastal and Shelf Science, 2021, 262, 107573.	2.1	5
6	Preliminary Results on the Dynamics of a Pile-Moored Fish Cage with Elastic Net in Currents and Waves. Journal of Marine Science and Engineering, 2021, 9, 14.	2.6	4
7	Efficiency evaluation of a ductless Archimedes turbine: Laboratory experiments and numerical simulations. Renewable Energy, 2020, 146, 867-879.	8.9	19
8	Waveâ€forced dynamics in the nearshore river mouths, and swash zones. Earth Surface Processes and Landforms, 2020, 45, 75-95.	2.5	17
9	Numerical Modeling of Flow and Bed Evolution of Bichromatic Wave Groups on an Intermediate Beach Using Nonhydrostatic XBeach. Journal of Waterway, Port, Coastal and Ocean Engineering, 2020, 146, .	1.2	18
10	Towards the simulation of flood evacuation in urban scenarios: Experiments to estimate human motion speed in floodwaters. Safety Science, 2020, 123, 104563.	4.9	38
11	Fluid dynamics in the functional foregut of xylem-sap feeding insects: A comparative study of two Xylella fastidiosa vectors. Journal of Insect Physiology, 2020, 120, 103995.	2.0	12
12	An analytical description of the energy balance in turbulent, round, free jets. AIP Advances, 2020, 10, 075218.	1.3	0
13	Sandbar dynamics in microtidal environments: Migration patterns in unprotected and bounded beaches. Coastal Engineering, 2020, 161, 103768.	4.0	16
14	Upstream Propagating Long-Wave Modes at a Microtidal River Mouth. Environmental Sciences Proceedings, 2020, 2, 15.	0.3	1
15	Wave-resolving shoreline boundary conditions for wave-averaged coastal models. Ocean Modelling, 2020, 153, 101661.	2.4	1
16	Hydrodynamics at a microtidal inlet: Analysis of propagation of the main wave components. Estuarine, Coastal and Shelf Science, 2020, 235, 106603.	2.1	20
17	Novel free surface boundary conditions for spilling breaking waves. Coastal Engineering, 2020, 159, 103717.	4.0	3
18	Wave-induced vortex generation around a slender vertical cylinder. Physics of Fluids, 2020, 32, .	4.0	10

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19	Flooding Pedestriansâ€™ Evacuation in Historical Urban Scenario: A Tool for Risk Assessment Including Human Behaviors. RILEM Bookseries, 2019, , 1152-1161.	0.4	6
20	Linear depth inversion sensitivity to wave viewing angle using synthetic optical video. Coastal Engineering, 2019, 152, 103535.	4.0	11
21	A model chain approach for coastal inundation: Application to the bay of Alghero. Estuarine, Coastal and Shelf Science, 2019, 219, 56-70.	2.1	19
22	Monitoring for Coastal Resilience: Preliminary Data from Five Italian Sandy Beaches. Sensors, 2019, 19, 1854.	3.8	17
23	Long waves approaching the coast: Greenâ€™s law generalization. Journal of Ocean Engineering and Marine Energy, 2019, 5, 385-402.	1.7	6
24	On a layer model for spilling breakers: A preliminary experimental analysis. European Journal of Mechanics, B/Fluids, 2019, 73, 24-47.	2.5	6
25	Wave-induced morphodynamics and sediment transport around a slender vertical cylinder. Advances in Water Resources, 2019, 129, 263-280.	3.8	12
26	Research and Engineering for Resilient Infrastructures and Environment Protection. , 2019, , 311-324.		0
27	Sustainable Engineering for Resilient Built and Natural Environments. , 2019, , 297-310.		0
28	Normalized Scalar Product Approach for Nearshore Bathymetric Estimation From X-Band Radar Images: An Assessment Based on Simulated and Measured Data. IEEE Journal of Oceanic Engineering, 2018, 43, 221-237.	3.8	15
29	An assessment of the roller approach for wave breaking in a hybrid finite-volume finite-difference Boussinesq-type model for the surf-zone. Applied Ocean Research, 2018, 73, 160-178.	4.1	11
30	Monitoring for Coastal Resilience: A Project for Five Italian Beaches. , 2018, , .		1
31	Extra Strain Rates in an unsteady spilling breaking wave. Scientific Reports, 2018, 8, 13926.	3.3	3
32	Wave-Current Interactions and Infragravity Wave Propagation at a Microtidal Inlet. Proceedings (mdpi), 2018, 2, .	0.2	9
33	Experimental and Numerical Investigation of Pre-Breaking and Breaking Vorticity within a Plunging Breaker. Water (Switzerland), 2018, 10, 387.	2.7	20
34	Hydro- and Morpho-dynamics Induced by a Vertical Slender Pile under Regular and Random Waves. Journal of Waterway, Port, Coastal and Ocean Engineering, 2018, 144, .	1.2	24
35	Experimental Setup for the Validation of the Bio-Inspired Thruster of an Ostraciiform Swimming Robot. , 2018, , .		0
36	Waves and Currents at a River Mouth: The Role of Macrovortices, Sub-Grid Turbulence and Seabed Friction. Water (Switzerland), 2018, 10, 550.	2.7	6

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37	Prediction of scour depth at breakwaters due to non-breaking waves using machine learning approaches. Applied Ocean Research, 2017, 63, 120-128.	4.1	27
38	Prediction of non-breaking wave induced scour depth at the trunk section of breakwaters using Genetic Programming and Artificial Neural Networks. Coastal Engineering, 2017, 121, 107-118.	4.0	27
39	Snow avalanches striking water basins: behaviour of the avalancheâ€™s centre of mass and front. Natural Hazards, 2017, 88, 1297-1323.	3.4	13
40	A depth semi-averaged model for coastal dynamics. Physics of Fluids, 2017, 29, .	4.0	11
41	Comparison between the wintertime and summertime dynamics of the Misa River estuary. Marine Geology, 2017, 385, 27-40.	2.1	29
42	Wave attenuation over porous seabeds: A numerical study. Ocean Modelling, 2017, 117, 28-40.	2.4	8
43	Investigation of the Dynamic Loads on a Vertically Oscillating Circular Cylinder Close to the Sea Bed: The Role of Viscosity. Journal of Offshore Mechanics and Arctic Engineering, 2017, 139, .	1.2	3
44	A preliminary combined simulation tool for the risk assessment of pedestriansâ€™ flood-induced evacuation. Environmental Modelling and Software, 2017, 96, 14-29.	4.5	51
45	FLOW DYNAMICS OF WAVES PROPAGATING OVER DIFFERENT PERMEABLE BEDS. Coastal Engineering Proceedings, 2017, , 35.	0.1	0
46	Sensors for Coastal Monitoring. Journal of Sensors, 2016, 2016, 1-2.	1.1	1
47	Impulse waves generated by snow avalanches: Momentum and energy transfer to a water body. Journal of Geophysical Research F: Earth Surface, 2016, 121, 2399-2423.	2.8	48
48	60th Anniversary Special Issue on Significant Advances in Coastal Engineering. Journal of Waterway, Port, Coastal and Ocean Engineering, 2016, 142, 02016001.	1.2	0
49	Experimental study of the short-term efficiency of different breakwater configurations on beach protection. Journal of Ocean Engineering and Marine Energy, 2016, 2, 195-210.	1.7	24
50	Advances in numerical modelling of swash zone dynamics. Coastal Engineering, 2016, 115, 26-41.	4.0	69
51	Shock trains on a planar beach: quasi-analytical and fully numerical solutions. Natural Hazards, 2016, 84, 621-635.	3.4	0
52	Assessing the Hydro-Morphodynamic Response of a Beach Protected by Detached, Impermeable, Submerged Breakwaters: A Numerical Approach. Journal of Coastal Research, 2016, 32, 590.	0.3	16
53	Local scour around structures and the phenomenology of turbulence. Journal of Fluid Mechanics, 2015, 779, 309-324.	3.4	78
54	Advances in fluid mechanics for offshore engineering: a modelling perspective. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140115.	3.4	0

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55	Whole-wavelength description of a wave boundary layer over permeable wall. Experiments in Fluids, 2015, 56, 1.	2.4	11
56	Scour depth under pipelines placed on weakly cohesive soils. Applied Ocean Research, 2015, 52, 73-79.	4.1	20
57	Summertime conditions of a muddy estuarine environment: the EsCoSed project contribution. Water Science and Technology, 2015, 71, 1451-1457.	2.5	11
58	Gas cavityâ€“body interactions: Efficient numerical solution. Computers and Fluids, 2015, 113, 14-19.	2.5	1
59	Hydroelastic behaviour of a structure exposed to an underwater explosion. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140103.	3.4	3
60	Turbulence in Rivers. GeoPlanet: Earth and Planetary Sciences, 2015, , 51-78.	0.2	18
61	Vorticity generation due to cross-sea. Journal of Fluid Mechanics, 2014, 744, 286-309.	3.4	10
62	A shallow-water sloshing model for wave breaking in rectangular tanks. Journal of Fluid Mechanics, 2014, 746, 437-465.	3.4	18
63	Modeling and Analysis of an Electrically Actuated Microbeam Based on Nonclassical Beam Theory. Journal of Computational and Nonlinear Dynamics, 2014, 9, .	1.2	18
64	Flow dynamics on a porous medium. Coastal Engineering, 2014, 91, 280-298.	4.0	22
65	Fluidâ€“particle interaction and generation of coherent structures over permeable beds: an experimental analysis. Advances in Water Resources, 2014, 72, 97-109.	3.8	16
66	A wave-by-wave analysis for the evaluation of the breaking-wave celerity. Applied Ocean Research, 2014, 46, 15-27.	4.1	18
67	Sediment transport and morphodynamics generated by a dam-break swash uprush: Coupled vs uncoupled modeling. Coastal Engineering, 2014, 89, 99-105.	4.0	25
68	A natural-scale study of cohesive sediment transport: The Misa River case. , 2014, , 843-850.		1
69	Numerical Modeling of the Influence of the Beach Profile on Wave Run-Up. Journal of Waterway, Port, Coastal and Ocean Engineering, 2013, 139, 61-71.	1.2	24
70	A reasoned overview on Boussinesq-type models: the interplay between physics, mathematics and numerics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130496.	2.1	109
71	Bore-generated macrovortices on erodible beds. Journal of Fluid Mechanics, 2013, 734, 486-508.	3.4	13
72	Experimental investigation of the wave-induced flow around a surface-touching cylinder. Journal of Fluids and Structures, 2013, 37, 62-87.	3.4	37

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73	Dynamical characteristics of an electrically actuated microbeam under the effects of squeeze-film and thermoelastic damping. International Journal of Engineering Science, 2013, 69, 16-32.	5.0	38
74	A Novel Two-fluid Model for the Identification of Possible Multiple Solutions in Slightly Inclined Pipelines. International Journal of Nonlinear Sciences and Numerical Simulation, 2013, 14, 45-59.	1.0	0
75	Beyond Boussinesq-type equations: Semi-integrated models for coastal dynamics. Physics of Fluids, 2013, 25, .	4.0	31
76	Experimental Rotations of a Pendulum on Water Waves. Journal of Computational and Nonlinear Dynamics, 2012, 7, .	1.2	31
77	A multi-purpose, intra-wave, shallow water hydro-morphodynamic solver. Advances in Water Resources, 2012, 38, 13-26.	3.8	43
78	An experimental study on sediment transport and bed evolution under different swash zone morphological conditions. Coastal Engineering, 2012, 68, 31-43.	4.0	47
79	Transversal and longitudinal mixing in compound channels. Water Resources Research, 2012, 48, .	4.2	21
80	Experimental investigation of the nearbed dynamics around a submarine pipeline laying on different types of seabed: The interaction between turbulent structures and particles. Advances in Water Resources, 2012, 48, 31-46.	3.8	51
81	Dynamics of a Micro Electrical Mechanical System Subject to Thermoelastic and Squeeze-Film Damping. MATEC Web of Conferences, 2012, 1, 04004.	0.2	0
82	On the role of the Chezy frictional term near the shoreline. Theoretical and Computational Fluid Dynamics, 2012, 26, 105-116.	2.2	24
83	THE MORPHOLOGICAL RESPONSE OF BEACHES PROTECTED BY DIFFERENT BREAKWATER CONFIGURATIONS. Coastal Engineering Proceedings, 2012, 1, 52.	0.1	7
84	Comparative analysis of sea wave dissipation induced by three flow mechanisms. Journal of Hydraulic Research/De Recherches Hydrauliques, 2011, 49, 554-561.	1.7	18
85	Swash Zone Dynamics due to Impulsive Waves. Journal of Waterway, Port, Coastal and Ocean Engineering, 2011, 137, 192-203.	1.2	5
86	Lagrangian mixing in straight compound channels. Journal of Fluid Mechanics, 2011, 675, 168-198.	3.4	21
87	INFLUENCE OF SWASH ZONE MORPHOLOGY ON OFFSHORE BAR MIGRATION. , 2011, , .		0
88	Swash zone response under various wave regimes. Journal of Hydraulic Research/De Recherches Hydrauliques, 2011, 49, 55-63.	1.7	9
89	Solving the nonlinear shallow-water equations in physical space. Journal of Fluid Mechanics, 2010, 643, 207-232.	3.4	42
90	Dispersive nonlinear shallow-water equations: some preliminary numerical results. Journal of Engineering Mathematics, 2010, 67, 71-84.	1.2	13

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91	On the wave damping due to a permeable seabed. Coastal Engineering, 2010, 57, 1029-1041.	4.0	26
92	Analysis of the Nonlinear Shallow Water Equations Over Nonplanar Topography. Studies in Applied Mathematics, 2010, 124, 85-103.	2.4	7
93	Horizontal mixing of quasi-uniform straight compound channel flows. Journal of Fluid Mechanics, 2010, 643, 425-435.	3.4	30
94	Evolution of the air cavity during a depressurized wave impact. II. The dynamic field. Physics of Fluids, 2010, 22, .	4.0	40
95	Evolution of the air cavity during a depressurized wave impact. I. The kinematic flow field. Physics of Fluids, 2010, 22, .	4.0	41
96	Working of Defense Coastal Structures Dissipating by Macroroughness. Journal of Waterway, Port, Coastal and Ocean Engineering, 2010, 136, 79-90.	1.2	11
97	Scouring Below Pipelines: The Role of Vorticity and Turbulence. , 2010, , .		0
98	A study of violent sloshing wave impacts using an improved SPH method. Journal of Hydraulic Research/De Recherches Hydrauliques, 2010, 48, 94-104.	1.7	57
99	Nearshore bar migration and sediment-induced buoyancy effects. Continental Shelf Research, 2010, 30, 226-238.	1.8	11
100	Modeling of the Wave Setup Inshore of an Array of Submerged Breakwaters. Journal of Waterway, Port, Coastal and Ocean Engineering, 2009, 135, 38-51.	1.2	10
101	Dispersive Nonlinear Shallowâ€Water Equations. Studies in Applied Mathematics, 2009, 122, 1-28.	2.4	31
102	The early stages of shallow flows in an inclined flume. Journal of Fluid Mechanics, 2009, 633, 285-309.	3.4	11
103	The morphodynamics of tidal sand waves: A model overview. Coastal Engineering, 2008, 55, 657-670.	4.0	51
104	Use of numerical models to study land-based sedimentation and subsequent nearshore morphological evolution. Coastal Engineering, 2008, 55, 601-621.	4.0	8
105	Maximum run-up, breaking conditions and dynamical forces in the swash zone: a boundary value approach. Coastal Engineering, 2008, 55, 732-740.	4.0	27
106	The effects of flow stratification by non-cohesive sediment on transport in high-energy wave-driven flows. Journal of Fluid Mechanics, 2008, 610, 43-67.	3.4	29
107	Recent advances in modeling swash zone dynamics: Influence of surfâ€swash interaction on nearshore hydrodynamics and morphodynamics. Reviews of Geophysics, 2008, 46, .	23.0	108
108	Nonlinear Shallow Water Equation Modeling for Coastal Engineering. Journal of Waterway, Port, Coastal and Ocean Engineering, 2008, 134, 104-120.	1.2	81

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109	Dispersive effects on wave-current interaction and vorticity transport in nearshore flows. Physics of Fluids, 2008, 20, .	4.0	7
110	The mean and turbulent flow structure of a weak hydraulic jump. Physics of Fluids, 2008, 20, .	4.0	51
111	Pipe-Soil Interaction: An Evaluation of a Numerical Model. , 2007, , 259.		1
112	A dissipative point-vortex model for nearshore circulation. Journal of Fluid Mechanics, 2007, 589, 455-478.	3.4	7
113	Integral properties of the swash zone and averaging. Part 3. Longshore shoreline boundary conditions for wave-averaged nearshore circulation models. Journal of Fluid Mechanics, 2007, 573, 399-415.	3.4	8
114	Examining the Contribution of Sediment Stratification to the Evolutionof Seabed Morphology. , 2007, , .		0
115	The Boundary Value Problem for the Nonlinear Shallow Water Equations. Studies in Applied Mathematics, 2007, 119, 73-93.	2.4	63
116	On shallow-water wakes: an analytical study. Journal of Fluid Mechanics, 2006, 567, 457.	3.4	21
117	Topographically controlled, breaking-wave-induced macrovortices. Part 2. Changing geometries. Journal of Fluid Mechanics, 2006, 559, 57.	3.4	37
118	Topographically controlled, breaking-wave-induced macrovortices. Part 3. The mixing features. Journal of Fluid Mechanics, 2006, 559, 81.	3.4	17
119	Integral swash-zone models. Continental Shelf Research, 2006, 26, 653-660.	1.8	8
120	Estimation of complex airâ€“water interfaces from particle image velocimetry images. Experiments in Fluids, 2006, 40, 764-775.	2.4	19
121	Topographically-induced enstrophy production/dissipation in coastal models. Physics of Fluids, 2006, 18, 126603.	4.0	6
122	Wave impact loads: The role of the flip-through. Physics of Fluids, 2006, 18, 122101.	4.0	145
123	Swash zone boundary conditions for long-wave models. Coastal Engineering, 2005, 52, 971-976.	4.0	7
124	A note on the decay of vorticity in shallow flow calculations. Physics of Fluids, 2004, 16, 2469-2475.	4.0	8
125	Macrovortices-induced horizontal mixing in compound channels. Ocean Dynamics, 2004, 54, 333.	2.2	16
126	On the modeling of sand wave migration. Journal of Geophysical Research, 2004, 109, .	3.3	79

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127	Boussinesq modeling of breaking waves: Description of turbulence. Journal of Geophysical Research, 2004, 109, .	3.3	32
128	Topographically controlled, breaking-wave-induced macrovortices. Part 1. Widely separated breakwaters. Journal of Fluid Mechanics, 2004, 507, 289-307.	3.4	42
129	Experimental investigation and numerical modelling of steep forced water waves. Journal of Fluid Mechanics, 2003, 490, 217-249.	3.4	88
130	Experimental validation and characterization of mean swash zone boundary conditions. Journal of Geophysical Research, 2003, 108, .	3.3	13
131	ON SWASH ZONE BOUNDARY CONDITIONS FOR WAVE-AVERAGED MODELS. , 2003, , .		0
132	STRUCTURE-GENERATED MACROVORTICES AND THEIR EVOLUTION IN VERY SHALLOW DEPTHS. , 2003, , .		3
133	Free surface boundary conditions at a bubbly/weakly splashing airâ€“water interface. Physics of Fluids, 2002, 14, 1834-1840.	4.0	36
134	Sea waves and mass transport on a sloping beach. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 2053-2082.	2.1	13
135	Integral flow properties of the swash zone and averaging. Part 2. Shoreline boundary conditions for wave-averaged models. Journal of Fluid Mechanics, 2002, 458, 269-281.	3.4	17
136	An integral swash zone model with friction: an experimental and numerical investigation. Coastal Engineering, 2002, 45, 89-110.	4.0	40
137	A comparison of two different types of shoreline boundary conditions. Computer Methods in Applied Mechanics and Engineering, 2002, 191, 4475-4496.	6.6	23
138	On using Boussinesq-type equations near the shoreline: a note of caution. Ocean Engineering, 2002, 29, 1569-1575.	4.3	21
139	The dynamics of strong turbulence at free surfaces. Part 1. Description. Journal of Fluid Mechanics, 2001, 449, 225-254.	3.4	250
140	The dynamics of strong turbulence at free surfaces. Part 2. Free-surface boundary conditions. Journal of Fluid Mechanics, 2001, 449, 255-290.	3.4	102
141	Modelling the run-up of significant wave groups. Continental Shelf Research, 2001, 21, 1533-1550.	1.8	29
142	On the shoreline boundary conditions for Boussinesq-type models. International Journal for Numerical Methods in Fluids, 2001, 37, 479-500.	1.6	28
143	An efficient solver for nearshore flows based on the WAF method. Coastal Engineering, 2001, 43, 105-129.	4.0	94
144	The Modelling of a Spilling Breaker: Strong Turbulence at a Free Surface. , 1999, , 72.		0

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145	The run-up of weakly-two-dimensional solitary pulses. Nonlinear Processes in Geophysics, 1998, 5, 27-38.	1.3	8
146	The Equations for Integral and Mean Flow Properties in the Swash Zone. , 1997, , 4134.		0
147	Eulerian and Lagrangian aspects of the longshore drift in the surf and swash zones. Journal of Geophysical Research, 1997, 102, 23155-23168.	3.3	16
148	Hindcast of a storm surge induced by local real wind fields in the Venice Lagoon. Continental Shelf Research, 1997, 17, 1513-1538.	1.8	28
149	Integral flow properties of the swash zone and averaging. Journal of Fluid Mechanics, 1996, 317, 241-273.	3.4	94
150	Calculation of a Mass-Consistent Two-Dimensional Wind Field with Divergence Control. Journal of Applied Meteorology and Climatology, 1995, 34, 2543-2555.	1.7	19
151	The modelling of short waves in shallow waters and in the surf zone. Il Nuovo Cimento Della SocietÃ Italiana Di Fisica C, 1994, 17, 549-564.	0.2	1
152	Wave-Forced Dynamics at Microtidal River Mouths. , 0, , .		0