Peter A Troch

List of Publications by Year
in descending order

116 papers	2,423 citations	201658 27 h-index	254170 43 g-index
118 all docs	118 docs citations	118 times ranked	1827 citing authors

#	Article	IF	Citations
1	Application of a buoyancy-modified k-Ï‰ SST turbulence model to simulate wave run-up around a monopile subjected to regular waves using OpenFOAM Â®. Coastal Engineering, 2017, 125, 81-94.	4.0	97
2	SPH simulation of floating structures with moorings. Coastal Engineering, 2019, 153, 103560.	4.0	90
3	Wave Basin Experiments with Large Wave Energy Converter Arrays to Study Interactions between the Converters and Effects on Other Users in the Sea and the Coastal Area. Energies, 2014, 7, 701-734.	3.1	85
4	Performance of a buoyancy-modified k-Ï‰ and k-Ï‰ SST turbulence model for simulating wave breaking under regular waves using OpenFOAMÂ®. Coastal Engineering, 2018, 138, 49-65.	4.0	84
5	Effect of lubrication layer on velocity profile of concrete in a pumping pipe. Materials and Structures/Materiaux Et Constructions, 2015, 48, 3991-4003.	3.1	76
6	Determination of the Manning roughness coefficient influenced by vegetation in the river Aa and Biebrza river. Environmental Fluid Mechanics, 2009, 9, 549-567.	1.6	74
7	Application of the time-dependent mild-slope equations for the simulation of wake effects in the lee of a farm of Wave Dragon wave energy converters. Renewable Energy, 2010, 35, 1644-1661.	8.9	70
8	Efficient and robust wave overtopping estimation for impermeable coastal structures in shallow foreshores using SWASH. Coastal Engineering, 2017, 122, 108-123.	4.0	66
9	Effects of Wind Waves versus Ship Waves on Tidal Marsh Plants: A Flume Study on Different Life Stages of Scirpus maritimus. PLoS ONE, 2015, 10, e0118687.	2.5	66
10	Wave overtopping over a sea dike. Journal of Computational Physics, 2004, 198, 686-726.	3.8	64
11	Coupling methodology for smoothed particle hydrodynamics modelling of non-linear wave-structure interactions. Coastal Engineering, 2018, 138, 184-198.	4.0	60
12	Numerical implementation and sensitivity analysis of a wave energy converter in a time-dependent mild-slope equation model. Coastal Engineering, 2010, 57, 471-492.	4.0	57
13	An active wave generatingâ€“absorbing boundary condition for VOF type numerical model. Coastal Engineering, 1999, 38, 223-247.	4.0	51
14	A methodology for production and cost assessment of a farm of wave energy converters. Renewable Energy, 2011, 36, 3402-3416.	8.9	51
15	Description of loading conditions due to violent wave impacts on a vertical structure with an overhanging horizontal cantilever slab. Coastal Engineering, 2012, 60, 201-226.	4.0	51
16	Empirical design of scour protections around monopile foundations. Coastal Engineering, 2011, 58, 540-553.	4.0	50
17	Empirical design of scour protections around monopile foundations. Part 2: Dynamic approach. Coastal Engineering, 2012, 60, 286-298.	4.0	46
18	Probability distribution of individual wave overtopping volumes for smooth impermeable steep slopes with low crest freeboards. Coastal Engineering, 2012, 64, 87-101.	4.0	46

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19	CFD Simulations of Floating Point Absorber Wave Energy Converter Arrays Subjected to Regular Waves. Energies, 2018, 11, 641.	3.1	45
20	Ecosystem Engineering by Plants on Wave-Exposed Intertidal Flats Is Governed by Relationships between Effect and Response Traits. PLoS ONE, 2015, 10, e0138086.	2.5	44
21	2D numerical simulation of large-scale physical model tests of wave interaction with a rubble-mound breakwater. Coastal Engineering, 2015, 103, 22-41.	4.0	40
22	Coping with waves: Plasticity in tidal marsh plants as selfâ€adapting coastal ecosystem engineers. Limnology and Oceanography, 2018, 63, 799-815.	3.1	38
23	Submerged macrophytes avoiding a negative feedback in reaction to hydrodynamic stress. Limnologica, 2013, 43, 371-380.	1.5	34
24	Investigation of uplift impact forces on a vertical wall with an overhanging horizontal cantilever slab. Coastal Engineering, 2014, 90, 12-22.	4.0	33
25	Non-linear wave generation and absorption using open boundaries within DualSPHysics. Computer Physics Communications, 2019, 240, 46-59.	7.5	33
26	Resistance and reconfiguration of natural flexible submerged vegetation in hydrodynamic river modelling. Environmental Fluid Mechanics, 2016, 16, 245-265.	1.6	29
27	Full-scale wave-overtopping measurements on the Zeebrugge rubble mound breakwater. Coastal Engineering, 2004, 51, 609-628.	4.0	28
28	Wave Overtopping at Smooth Impermeable Steep Slopes with Low Crest Freeboards. Journal of Waterway, Port, Coastal and Ocean Engineering, 2012, 138, 372-385.	1.2	28
29	Numerical investigations of wave overtopping at coastal structures. Coastal Engineering, 2009, 56, 190-202.	4.0	27
30	Experimental study of violent wave impact on a vertical structure with an overhanging horizontal cantilever slab. Ocean Engineering, 2012, 49, 1-15.	4.3	27
31	Risk assessment and water management. Environmental Modelling and Software, 2005, 20, 141-151.	4.5	26
32	A Review of Numerical Modelling of Wave Energy Converter Arrays. , 2012, , .		26
33	Quantifying critical conditions for seaward expansion of tidal marshes: A transplantation experiment. Estuarine, Coastal and Shelf Science, 2016, 169, 227-237.	2.1	26
34	Relation between resistance characteristics due to aquatic weed growth and the hydraulic capacity of the river Aa. River Research and Applications, 2009, 25, 1287-1303.	1.7	24
35	Large Scale Experimental Study of the Scour Protection Damage Around a Monopile Foundation Under Combined Wave and Current Conditions. Journal of Marine Science and Engineering, 2020, 8, 417.	2.6	24
36	Numerical simulation of formwork pressure while pumping self-compacting concrete bottom-up. Engineering Structures, 2014, 70, 218-233.	5.3	23

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37	Large-Scale Experiments to Improve Monopile Scour Protection Design Adapted to Climate Changeâ€"The PROTEUS Project. Energies, 2019, 12, 1709.	3.1	23
38	Instrumentation and prototype measurements at the Zeebrugge rubble mound breakwater. Coastal Engineering, 1998, 35, 141-166.	4.0	22
39	Biogeomorphic feedback between plant growth and flooding causes alternative stable states in an experimental floodplain. Advances in Water Resources, 2016, 93, 223-235.	3.8	22
40	Efficient response of an onshore Oscillating Water Column Wave Energy Converter using a one-phase SPH model coupled with a multiphysics library. Applied Ocean Research, 2021, 115, 102856.	4.1	22
41	Coupling Methodology for Studying the Far Field Effects of Wave Energy Converter Arrays over a Varying Bathymetry. Energies, 2018, 11, 2899.	3.1	21
42	Implementation of Open Boundaries within a Two-Way Coupled SPH Model to Simulate Nonlinear Waveâ€"Structure Interactions. Energies, 2019, 12, 697.	3.1	21
43	Sea-state modification and heaving float interaction factors from physical modelling of arrays of wave energy converters. Journal of Renewable and Sustainable Energy, 2015, 7, .	2.0	20
44	A Comparison Study of a Generic Coupling Methodology for Modeling Wake Effects of Wave Energy Converter Arrays. Energies, 2017, 10, 1697.	3.1	20
45	Assessment of the Power Output of a Two-Array Clustered WEC Farm Using a BEM Solver Coupling and a Wave-Propagation Model. Energies, 2018, 11, 2907.	3.1	20
46	Influence of the viscosity of self-compacting concrete and the presence of rebars on the formwork pressure while filling bottom-up. Engineering Structures, 2015, 101, 698-714.	5.3	19
47	Modelling river-floodplain interaction during flood propagation. Natural Hazards, 2010, 55, 111-121.	3.4	18
48	Interactions of breaking waves with a current over cut cells. Journal of Computational Physics, 2007, 223, 865-897.	3.8	17
49	An improved calculation model for the wave-induced pore pressure distribution in a rubble-mound breakwater core. Coastal Engineering, 2012, 66, 8-23.	4.0	17
50	Wave overtopping at coastal structures: prediction tools and related hazard analysis. Journal of Cleaner Production, 2007, 15, 1514-1521.	9.3	16
51	On the Effects of Geometry Control on the Performance of Overtopping Wave Energy Converters. Energies, 2011, 4, 1574-1600.	3.1	16
52	Evaluation of the Effectiveness of a Living Shoreline in a Confined, Nonâ€Tidal Waterway Subject to Heavy Shipping Traffic. River Research and Applications, 2015, 31, 1028-1039.	1.7	16
53	Effects of contrasting wave conditions on scour and drag on pioneer tidal marsh plants. Geomorphology, 2016, 255, 49-62.	2.6	16
54	What is a macrophyte patch? Patch identification in aquatic ecosystems and guidelines for consistent delineation. Ecohydrology and Hydrobiology, 2018, 18, 1-9.	2.3	16

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55	Experimental Study of a Moored Floating Oscillating Water Column Wave-Energy Converter and of a Moored Cubic Box. Energies, 2019, 12, 1834.	3.1	16
56	Influence of the Drag Force on the Average Absorbed Power of Heaving Wave Energy Converters Using Smoothed Particle Hydrodynamics. Water (Switzerland), 2021, 13, 384.	2.7	16
57	Field Monitoring of Ship Wave Action on Environmentally Friendly Bank Protection in a Confined Waterway. Journal of Waterway, Port, Coastal and Ocean Engineering, 2013, 139, 527-534.	1.2	15
58	An approximate solution to the flow field on vegetated intertidal platforms: Applicability and limitations. Journal of Geophysical Research F: Earth Surface, 2014, 119, 1682-1703.	2.8	15
59	Effects of new variables on the overtopping discharge at steep rubble mound breakwaters â€" The Zeebrugge case. Coastal Engineering, 2009, 56, 141-153.	4.0	14
60	A fundamental coupling methodology for modeling near-field and far-field wave effects of floating structures and wave energy devices. Renewable Energy, 2019, 143, 1608-1627.	8.9	14
61	Wake effect assessment of a flap type wave energy converter farm under realistic environmental conditions by using a numerical coupling methodology. Coastal Engineering, 2019, 143, 96-112.	4.0	14
62	An Inter-Model Comparison for Wave Interactions with Sea Dikes on Shallow Foreshores. Journal of Marine Science and Engineering, 2020, 8, 985.	2.6	14
63	Validation of RANS Modelling for Wave Interactions with Sea Dikes on Shallow Foreshores Using a Large-Scale Experimental Dataset. Journal of Marine Science and Engineering, 2020, 8, 650.	2.6	14
64	Irregular Wave Validation of a Coupling Methodology for Numerical Modelling of Near and Far Field Effects of Wave Energy Converter Arrays. Energies, 2019, 12, 538.	3.1	12
65	A simplified model for frictionally dominated tidal flows. Geophysical Research Letters, 2012, 39, .	4.0	11
66	Analyzing the Near-Field Effects and the Power Production of an Array of Heaving Cylindrical WECs and OSWECs Using a Coupled Hydrodynamic-PTO Model. Energies, 2018, 11, 3489.	3.1	10
67	COMPARISON OF NUMERICAL MODELS FOR WAVE OVERTOPPING AND IMPACT ON A SEA WALL. Coastal Engineering Proceedings, 2015, 1, 5.	0.1	10
68	Validation of large-scale particle image velocimetry to acquire free-surface flow fields in vegetated rivers. Journal of Applied Water Engineering and Research, 2018, 6, 171-182.	1.8	9
69	Analysing the Near-Field Effects and the Power Production of Near-Shore WEC Array Using a New Wave-to-Wire Model. Water (Switzerland), 2019, 11, 1137.	2.7	9
70	Accurate and Fast Generation of Irregular Short Crested Waves by Using Periodic Boundaries in a Mild-Slope Wave Model. Energies, 2019, 12, 785.	3.1	9
71	Development of Two-Dimensional Numerical Wave Flume for Wave Interaction with Rubble Mound Breakwaters. , 1999, , 1638.		8
72	Accuracy of discharge measurements in a vegetated river. Flow Measurement and Instrumentation, 2008, 19, 29-40.	2.0	8

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73	Accelerated numerical simulations of a heaving floating body by coupling a motion solver with a two-phase fluid solver. Computers and Mathematics With Applications, 2019, 77, 1605-1625.	2.7	8
74	Feasibility of a Dynamically Stable Rock Armour Layer Scour Protection for Offshore Wind Farms. , 2014, , .		8
75	Internal Wave Generation in a Non-Hydrostatic Wave Model. Water (Switzerland), 2019, 11, 986.	2.7	7
76	Deriving the relationship among discharge, biomass and Manning's coefficient through a calibration approach. Hydrological Processes, 2011, 25, 1979-1995.	2.6	6
77	Efficiency and Survivability of a Floating Oscillating Water Column Wave Energy Converter Moored to the Seabed: An Overview of the EsflOWC MaRINET2 Database. Water (Switzerland), 2020, 12, 992.	2.7	6
78	ROMS Based Hydrodynamic Modelling Focusing on the Belgian Part of the Southern North Sea. Journal of Marine Science and Engineering, 2021, 9, 58.	2.6	6
79	NUMERICAL MODELING OF WAVE PENETRATION IN OSTEND HARBOUR. Coastal Engineering Proceedings, 2011, 1, 42.	0.1	6
80	Wave Run-Up on the Zeebrugge Rubble Mound Breakwater: Full-Scale Measurement Results Versus Laboratory Results. Journal of Coastal Research, 2007, 233, 584-591.	0.3	5
81	A new average wave overtopping prediction formula with improved accuracy for smooth steep low-crested structures. Coastal Engineering, 2021, 163, 103800.	4.0	5
82	Appropriate rehabilitation strategy for a traditional irrigation supply system: a case from the Babai area in Nepal. Water Science and Technology, 2009, 60, 2819-2828.	2.5	4
83	Wake Effect Assessment in Long- and Short-Crested Seas of Heaving-Point Absorber and Oscillating Wave Surge WEC Arrays. Water (Switzerland), 2019, 11, 1126.	2.7	4
84	High-resolution, large-scale laboratory measurements of a sandy beach and dynamic cobble berm revetment. Scientific Data, 2021, 8, 22.	5.3	4
85	Wave run-up on sloping coastal structures: prototype measurements versus scale model tests. , 2002, , 233-244.		3
86	Wave Run-Up on the Zeebrugge Rubble Mound Breakwater: Full-Scale Measurement Results. Journal of Coastal Research, 2007, 233, 577-583.	0.3	3
87	Fair and sustainable irrigation water management in the Babai basin, Nepal. Water Science and Technology, 2009, 59, 1505-1513.	2.5	3
88	Water rights of the head reach farmers in view of a water supply scenario at the extension area of the Babai Irrigation Project, Nepal. Physics and Chemistry of the Earth, 2009, 34, 99-106.	2.9	3
89	MODELLING OF WAVE ATTENUATION INDUCED BY MULTI-PURPOSE FLOATING STRUCTURES USED FOR POWER SUPPLY AND COASTAL PROTECTION. Coastal Engineering Proceedings, 2015, 1, 20.	0.1	3
90	EXPERIMENTAL STUDY OF OVERTOPPING PERFORMANCE FOR THE CASES OF VERY STEEP SLOPES AND VERTICAL WALLS WITH VERY SMALL FREEBOARDS. Coastal Engineering Proceedings, 2015, 1, 2.	0.1	3

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91	Wave-induced uprush jet velocity on a vertical structure. Ocean Engineering, 2016, 127, 103-113.	4.3	3
92	Hydrodynamic conditions in front of a vertical wall with an overhanging horizontal cantilever slab. Journal of Ocean University of China, 2017, 16, 978-990.	1.2	3
93	Modelling of a flapâ€type wave energy converter farm in a mildâ€slope equation model for a wake effect assessment. IET Renewable Power Generation, 2017, 11, 1142-1152.	3.1	3
94	A Critical Analysis and Validation of the Accuracy of Wave Overtopping Prediction Formulae for OWECs. Energies, 2018, 11, 133.	3.1	3
95	On the accuracy of internal wave generation method in a non-hydrostatic wave model to generate and absorb dispersive and directional waves. Ocean Engineering, 2021, 219, 108303.	4.3	3
96	Quantification of Measurement and Model Effects in Monopile Foundation Scour Protection Experiments. Journal of Marine Science and Engineering, 2021, 9, 585.	2.6	3
97	EXPERIMENTAL STUDY AND NUMERICAL MODELING OF WAVE INDUCED PORE PRESSURE ATTENUATION INSIDE A RUBBLE MOUND BREAKWATER. , 2003, , .		3
98	A geometric multigrid solver for the free-surface equation in environmental models featuring irregular coastlines. Journal of Computational and Applied Mathematics, 2015, 289, 22-36.	2.0	2
99	Influence of Power Take-Off Modelling on the Far-Field Effects of Wave Energy Converter Farms. Water (Switzerland), 2021, 13, 429.	2.7	2
100	Numerical modelling of the filling of formworks with self-compacting concrete. WIT Transactions on Engineering Sciences, 2010, , .	0.0	2
101	Wave Run-Up and Overtopping: Prototype Versus Scale Models. , 1999, , 1039.		1
102	Numerical Simulation of Wake Effects in the Lee of a Farm of Wave Energy Converters. , 2009, , .		1
103	Validation of the STRIVE model for coupling ecological processes and surface water flow. Journal of Hydroinformatics, 2011, 13, 741-759.	2.4	1
104	Individual Overtopping Volumes for Steep Low-Crested Structures. , 2017, , .		1
105	Floating Moored Oscillating Water Column With Meshless SPH Method. , 2018, , .		1
106	The gravity database for Belgium. Geoscience Data Journal, 2019, 6, 116-125.	4.4	1
107	2D OVERTOPPING AND IMPACT EXPERIMENTS IN SHALLOW FORESHORE CONDITIONS. Coastal Engineering Proceedings, 2018, , 67.	0.1	1
108	WAVE OVERTOPPING AT OSTIA YACHT HARBOUR BREAKWATER: COMPARISON BETWEEN FIELD MEASUREMENTS AND MODEL TESTS IN 2D AND 3D. , 2005, , .		1

#	ARTICLE	IF	CITATIONS
109	THE INFLUENCE OF AN EXISTING VERTICAL STRUCTURE ON THE INCEPTION OF WAVE BREAKING POINT. Coastal Engineering Proceedings, 2015, 1, 54.	0.1	0
110	Wake Effect Assessment of a Flap Type Wave Energy Converter Farm Using a Coupling Methodology. , 2017, , .		0
111	Coupling Methodology for Modelling the Near-Field and Far-Field Effects of a Wave Energy Converter. , 2017, , .		0
112	EXTREME WAVES REVISITED. , 2007, , .		0
113	EXPERIMENTAL ANALYSIS OF SCALE EFFECTS OF THE WAVE INDUCED FLOW FIELD AROUND A MONOPILE USING PARTICLE IMAGE VELOCIMETRY. , 2009, , .		0
114	Simulation of the filling and emptying processes between a river and its storage areas. , 2009, , 37-39.		0
115	Hydrodynamic Behavior of Overtopping Wave Energy Converters Built in Sea Defense Structures. , 2010, , .		0
116	HYDRODYNAMIC LOADING OF WAVE RETURN WALLS ON TOP OF SEASIDE PROMENADES. , 2013, , .		0