Sebastian Muntean

List of Publications by Year
in descending order

77 papers	970 citations	516710 16 h-index	477307 29 g-index
79 all docs	79 docs citations	79 times ranked	520 citing authors

#	Article	IF	Citations
1	The Impact of Water Hammer on Hydraulic Power Units. Energies, 2022, 15, 1526.	3.1	6
2	Rainwater propeller pumps structural integrity. International Journal of Structural Integrity, 2021, 12, 645-665.	3.3	0
3	Influence of the Reshaped Elbow on the Unsteady Pressure Field in a Simplified Geometry of the Draft Tube. Energies, 2021, 14, 1393.	3.1	4
4	Assessing the energy potential of modernizing the European hydropower fleet. Energy Conversion and Management, 2021, 246, 114655.	9.2	48
5	Experimental and numerical analysis of decelerated swirling flow from the discharge cone of hydraulic turbines using pulsating jet technique. IOP Conference Series: Earth and Environmental Science, 2019, 240, 022010.	0.3	2
6	A benchmark test case for swirling flows: design of the swirl apparatus, experimental data, and numerical challenges. IOP Conference Series: Earth and Environmental Science, 2019, 240, 072004.	0.3	2
7	Francis turbine with tandem runners: a proof of concept. IOP Conference Series: Earth and Environmental Science, 2019, 240, 022012.	0.3	3
8	Experimental analysis of a pump equipped with an axial rotor with variable speed. IOP Conference Series: Earth and Environmental Science, 2019, 240, 032021.	0.3	1
9	Failure analysis of the rainwater axial pumps installed in a wastewater pumping station. IOP Conference Series: Earth and Environmental Science, 2019, 240, 032022.	0.3	1
10	Analysis of emerging technologies in the hydropower sector. Renewable and Sustainable Energy Reviews, 2019, 113, 109257.	16.4	177
11	Experimental Investigations of a Magneto-Rheological Brake Embedded in a Swirl Generator Apparatus. Advanced Structured Materials, 2019, , 265-279.	0.5	4
12	A Novel Passive Method to Control the Swirling Flow with Vortex Rope from the Conical Diffuser of Hydraulic Turbines with Fixed Blades. Applied Sciences (Switzerland), 2019, 9, 4910.	2.5	19
13	Software Solution for Efficiency Assessment of the Hydraulic Pumps in Service. , 2019, , .		0
14	Vortex Breakdown in Decelerated Swirling Flows. , 2019, , .		1
15	Experimental Investigations of a MR Clutch for a Centrifugal Pump. Advanced Structured Materials, 2019, , 253-263.	0.5	1
16	Investigation and Analysis of the Flow Field Induced by a Symmetrical Suction Elbow at the Pump Inlet. , 2019, , .		1
17	Analysis of a Centrifugal Pump Equipped With an Axial Rotor With Variable Speed. , 2019, , .		0
18	Evaluation of the mechanical properties and failure mechanism of fibres formed in municipal wastewater systems. IOP Conference Series: Materials Science and Engineering, 2018, 416, 012038.	0.6	0

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19	In situ Measurements on the Electrical Motors of Hydraulic Pumps Installed in a Wastewater Station. , 2018, , .		3
20	Integrity Analysis of the Rainwater Pump Impeller. MATEC Web of Conferences, 2018, 188, 04005.	0.2	3
21	Numerical simulation of an axial rotor with variable speed in a pump impeller. AIP Conference Proceedings, 2018, , .	0.4	0
22	Hydrodynamic Investigations in a Swirl Generator Using a Magneto-Rheological Brake. Advanced Structured Materials, 2017, , 209-218.	0.5	4
23	Proper Orthogonal Decomposition of Self-Induced Instabilities in Decelerated Swirling Flows and Their Mitigation Through Axial Water Injection. Journal of Fluids Engineering, Transactions of the ASME, 2017, 139, .	1.5	27
24	Experimental Analysis of the Global Performances for a Pump with Symmetrical Suction Elbow at Two Speeds. Energy Procedia, 2017, 112, 225-231.	1.8	3
25	Numerical assessment of pulsating water jet in the conical diffusers. AIP Conference Proceedings, 2017, , .	0.4	6
26	Experimental Investigation of the Unsteady Pressure Field in Decelerated Swirling Flow with 74° Sharp Heel Elbow. Journal of Physics: Conference Series, 2017, 813, 012046.	0.4	4
27	Experimental Investigations of MR Fluids in Air and Water Used for Brakes and Clutches. Advanced Structured Materials, 2017, , 197-207.	0.5	4
28	Scenarios for refurbishment of a hydropower plant equipped with Francis turbines. Renewable Energy and Environmental Sustainability, 2016, 1, 30.	1.4	6
29	Analysis of Drying Kiln Aerodynamics Based on a Full Three-Dimensional Turbulent Numerical Computation. Drvna Industrija, 2016, 67, 53-64.	0.6	2
30	Swirling Flow Computation at the Trailing Edge of Radial-Axial Hydraulic Turbines. IOP Conference Series: Earth and Environmental Science, 2016, 49, 082012.	0.3	0
31	3D Numerical Simulation versus Experimental Assessment of Pressure Pulsations Using a Passive Method for Swirling Flow Control in Conical Diffusers of Hydraulic Turbines. IOP Conference Series: Earth and Environmental Science, 2016, 49, 082018.	0.3	3
32	Experimental and Numerical Investigation of the Precessing Helical Vortex in a Conical Diffuser, With Rotor–Stator Interaction. Journal of Fluids Engineering, Transactions of the ASME, 2016, 138, .	1.5	33
33	Hydrodynamic Analysis of the Flow in an Axial Rotor and Impeller for Large Storage Pump. IOP Conference Series: Earth and Environmental Science, 2016, 49, 032016.	0.3	3
34	A variational model for swirling flow states with stagnant region. European Journal of Mechanics, B/Fluids, 2016, 55, 104-115.	2.5	7
35	Hydrodynamic Analysis of the Flow Field Induced by a Symmetrical Suction Elbow at the Pump Inlet. IOP Conference Series: Earth and Environmental Science, 2016, 49, 032014.	0.3	3
36	Investigation of the Plunging Pressure Pulsation in a Swirling Flow with Precessing Vortex Rope in a Straight Diffuser. IOP Conference Series: Earth and Environmental Science, 2016, 49, 082010.	0.3	10

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37	Modelling and optimization of the velocity profiles at the draft tube inlet of a Francis turbine within an operating range. Journal of Hydraulic Research/De Recherches Hydrauliques, 2016, 54, 74-89.	1.7	18
38	A method for data handling numerical results in parallel OpenFOAM simulations. AIP Conference Proceedings, 2015, , .	0.4	0
39	Numerical analysis of the temperature field in a magneto-rheological brake. AIP Conference Proceedings, 2015, , .	0.4	0
40	A Mathematical Model for the Swirling Flow Ingested by the Draft Tube of Francis Turbines. Wasserwirtschaft, 2015, 105, 23-27.	0.3	3
41	Hydrodynamic Design of a Storage Pump Impeller using Inverse Method and Experimental Investigation of the Global Performances. Wasserwirtschaft, 2015, 105, 28-32.	0.3	7
42	Numerical assessment of a novel concept for mitigating the unsteady pressure pulsations associated to decelerating swirling flow with precessing helical vortex. AIP Conference Proceedings, 2015, , .	0.4	5
43	Surrogate runner model for draft tube losses computation within a wide range of operating points. IOP Conference Series: Earth and Environmental Science, 2014, 22, 012022.	0.3	6
44	Velocity and pressure fluctuations induced by the precessing helical vortex in a conical diffuser. IOP Conference Series: Earth and Environmental Science, 2014, 22, 032009.	0.3	11
45	Failure assessment of the shaft of a pumped storage unit. Fatigue and Fracture of Engineering Materials and Structures, 2014, 37, 807-820.	3.4	16
46	A model for precessing helical vortex in the turbine discharge cone. IOP Conference Series: Earth and Environmental Science, 2014, 22, 022024.	0.3	5
47	Unsteady pressure measurements of decelerated swirling flow in a discharge cone at lower runner speeds. IOP Conference Series: Earth and Environmental Science, 2014, 22, 032008.	0.3	20
48	LDV measurements of the velocity field on the inlet section of a pumped storage equipped with a symmetrical suction elbow for variable discharge values. IOP Conference Series: Earth and Environmental Science, 2014, 22, 032017.	0.3	5
49	Flow-Feedback Method for Mitigating the Vortex Rope in Decelerated Swirling Flows. Journal of Fluids Engineering, Transactions of the ASME, 2013, 135, .	1.5	32
50	Efficient solver for swirling flow problems in ducts with variable radius. Proceedings in Applied Mathematics and Mechanics, 2013, 13, 441-442.	0.2	0
51	Proper orthogonal decomposition method in swirling flows applications. , 2013, , .		2
52	Numerical simulation of the swirl generator discharge cone at lower runner speeds. , 2013, , .		2
53	A Multi-Purpose Vision-Equipped-Remotely-Operable Rig for Hydro-Units Monitoring. Advanced Engineering Forum, 2013, 8-9, 175-184.	0.3	0
54	Estimation of the Stress Intensity Factor for 3D Cracked T – Joint. , 2013, , 273-280.		3

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55	Mathematical, numerical and experimental analysis of the swirling flow at a Kaplan runner outlet. IOP Conference Series: Earth and Environmental Science, 2012, 15, 032001.	0.3	4
56	Experimental investigations of the swirling flow in the conical diffuser using flow-feedback control technique with additional energy source. IOP Conference Series: Earth and Environmental Science, 2012, 15, 062043.	0.3	5
57	Influence of the velocity field at the inlet of a Francis turbine draft tube on performance over an operating range. IOP Conference Series: Earth and Environmental Science, 2012, 15, 032008.	0.3	8
58	Unsteady Pressure Analysis of a Swirling Flow With Vortex Rope and Axial Water Injection in a Discharge Cone. Journal of Fluids Engineering, Transactions of the ASME, 2012, 134, .	1.5	105
59	Computation of stress distribution in a Francis turbine runner induced by fluid flow. Computational Materials Science, 2012, 64, 253-259.	3.0	20
60	A New Approach in Numerical Assessment of the Cavitation Behaviour of Centrifugal Pumps. International Journal of Fluid Machinery and Systems, 2011, 4, 104-113.	0.2	8
61	Mathematical modelling of swirling flow in hydraulic turbines for the full operating range. Applied Mathematical Modelling, 2011, 35, 4759-4773.	4.2	51
62	Flow-Feedback for Pressure Fluctuation Mitigation and Pressure Recovery Improvement in a Conical Diffuser with Swirl. International Journal of Fluid Machinery and Systems, 2011, 4, 47-56.	0.2	5
63	Unsteady Simulations of the Flow in a Swirl Generator, Using OpenFOAM. International Journal of Fluid Machinery and Systems, 2011, 4, 199-208.	0.2	28
64	Mitigation of pressure fluctuations in the discharge cone of hydraulic turbines using flow-feedback. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012067.	0.3	3
65	Numerical investigation of the cavitational behaviour into a storage pump at off design operating points. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012068.	0.3	5
66	A swirl generator case study for OpenFOAM. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012056.	0.3	2
67	Analysis of the flow field into a two stages and double entry storage pump taking into account two geometries of stator blades. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012016.	0.3	2
68	Experimental investigations of the unsteady flow in a Francis turbine draft tube cone. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012007.	0.3	18
69	Optimization of the hydrofoil cascade and validation with quasi-analytical solution for hydraulic machinery. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012075.	0.3	1
70	Analysis and Prevention of Vortex Breakdown in the Simplified Discharge Cone of a Francis Turbine. Journal of Fluids Engineering, Transactions of the ASME, 2010, 132, .	1.5	55
71	Unsteady pressure measurements and numerical investigation of the jet control method in a conical diffuser with swirling flow. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012017.	0.3	10
72	Validation of mathematical models for predicting the swirling flow and the vortex rope in a Francis turbine operated at partial discharge. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012051.	0.3	10

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73	Failure analysis of a Francis turbine runner. IOP Conference Series: Earth and Environmental Science, 2010, 12, 012115.	0.3	55
74	Axisymmetric Swirling Flow Simulation of the Draft Tube Vortex in Francis Turbines at Partial Discharge. International Journal of Fluid Machinery and Systems, 2009, 2, 295-302.	0.2	36
75	Decelerated Swirling Flow Control in the Discharge Cone of Francis Turbines. , 2009, , 89-96.		7
76	Mixing interface algorithm for 3D turbulent flow analysis of the GAMM Francis turbine. , 2004, , 359-372.		3
77	Fatigue Behaviour of Stainless Steel Used for Turbine Runners. Advanced Engineering Forum, 0, 8-9, 413-420.	0.3	3