David ValentÃn

List of Publications by Year
in descending order

46 papers	800 citations	471509 17 h-index	526287 27 g-index
46 all docs	46 docs citations	46 times ranked	363 citing authors

#	Article	IF	Citations
1	On the use of Vibrational Hill Charts for improved condition monitoring and diagnosis of hydraulic turbines. Structural Health Monitoring, 2022, 21, 2547-2568.	7.5	3
2	Improved damage detection in Pelton turbines using optimized condition indicators and data-driven techniques. Structural Health Monitoring, 2021, 20, 3239-3251.	7.5	6
3	On the use of neural networks for dynamic stress prediction in Francis turbines by means of stationary sensors. Renewable Energy, 2021, 170, 652-660.	8.9	9
4	Selection and Optimization of Sensors for Monitoring of Francis Turbines. IOP Conference Series: Earth and Environmental Science, 2021, 774, 012028.	0.3	0
5	Strain prediction in Francis runners by means of stationary sensors. IOP Conference Series: Earth and Environmental Science, 2021, 774, 012084.	0.3	1
6	Implant resonance and the mechanostat theory: Applications of therapeutic ultrasound for porous metallic scaffolds. Materials Science and Engineering C, 2021, 125, 112070.	7.3	2
7	Increasing the operating range and energy production in Francis turbines by an early detection of the overload instability. Measurement: Journal of the International Measurement Confederation, 2021, 181, 109580.	5.0	10
8	Synchronous condenser operation in Francis turbines: Effects in the runner stress and machine vibration. Renewable Energy, 2020, 146, 890-900.	8.9	3
9	Experimental and numerical investigation on the influence of a large crack on the modal behaviour of a Kaplan turbine blade. Engineering Failure Analysis, 2020, 109, 104389.	4.0	18
10	Transposition of the mechanical behavior from model to prototype of Francis turbines. Renewable Energy, 2020, 152, 1011-1023.	8.9	14
11	On the use of artificial neural networks for condition monitoring of pump-turbines with extended operation. Measurement: Journal of the International Measurement Confederation, 2020, 163, 107952.	5.0	24
12	Dynamic response of Pelton runners: Numerical and experimental analysis in prototypes. Renewable Energy, 2020, 157, 116-129.	8.9	8
13	Experimental investigation on the dynamic response of Pelton runners. IOP Conference Series: Earth and Environmental Science, 2019, 240, 022062.	0.3	0
14	Behavior of Francis turbines at part load. Field assessment in prototype: Effects on the hydraulic system. IOP Conference Series: Earth and Environmental Science, 2019, 240, 052029.	0.3	0
15	Detection of erosive cavitation on hydraulic turbines through demodulation analysis. IOP Conference Series: Earth and Environmental Science, 2019, 240, 062048.	0.3	4
16	Detection of Hydraulic Phenomena in Francis Turbines with Different Sensors. Sensors, 2019, 19, 4053.	3.8	18
17	Influence of the hydrodynamic damping on the dynamic response of Francis turbine runners. Journal of Fluids and Structures, 2019, 90, 71-89.	3.4	7
18	Experimental-Numerical Design and Evaluation of a Vibration Bioreactor Using Piezoelectric Patches. Sensors, 2019, 19, 436.	3.8	6

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19	Experimental Measurements of the Natural Frequencies and Mode Shapes of Rotating Disk-Blades-Disk Assemblies from the Stationary Frame. Applied Sciences (Switzerland), 2019, 9, 3864.	2.5	15
20	Failure investigation of a Kaplan turbine blade. Engineering Failure Analysis, 2019, 97, 690-700.	4.0	29
21	Advanced condition monitoring of Pelton turbines. Measurement: Journal of the International Measurement Confederation, 2018, 119, 46-55.	5.0	34
22	Sensor-Based Optimized Control of the Full Load Instability in Large Hydraulic Turbines. Sensors, 2018, 18, 1038.	3.8	13
23	Transmission of High Frequency Vibrations in Rotating Systems. Application to Cavitation Detection in Hydraulic Turbines. Applied Sciences (Switzerland), 2018, 8, 451.	2.5	21
24	Numerical Study on the Dynamic Behavior of a Francis Turbine Runner Model with a Crack. Energies, 2018, 11, 1630.	3.1	12
25	Feasibility of Detecting Natural Frequencies of Hydraulic Turbines While in Operation, Using Strain Gauges. Sensors, 2018, 18, 174.	3.8	24
26	A Review of PZT Patches Applications in Submerged Systems. Sensors, 2018, 18, 2251.	3.8	31
27	Experimental Study of a Vibrating Disk Submerged in a Fluid-Filled Tank and Confined With a Nonrigid Cover. Journal of Vibration and Acoustics, Transactions of the ASME, 2017, 139, .	1.6	15
28	Failure investigation of a Pelton turbine runner. Engineering Failure Analysis, 2017, 81, 234-244.	4.0	26
29	Detection and analysis of part load and full load instabilities in a real Francis turbine prototype. Journal of Physics: Conference Series, 2017, 813, 012038.	0.4	13
30	Numerical study on the influence of acoustic natural frequencies on the dynamic behaviour of submerged and confined disk-like structures. Journal of Fluids and Structures, 2017, 73, 53-69.	3.4	27
31	Dynamic response of the MICA runner. Experiment and simulation. Journal of Physics: Conference Series, 2017, 813, 012036.	0.4	3
32	Accurate Determination of the Frequency Response Function of Submerged and Confined Structures by Using PZT-Patchesâ€. Sensors, 2017, 17, 660.	3.8	40
33	On the Use of PZT-Patches as Exciters in Modal Analysis: Application to Submerged Structures. Proceedings (mdpi), 2017, 1, 32.	0.2	3
34	Power Swing Generated in Francis Turbines by Part Load and Overload Instabilities. Energies, 2017, 10, 2124.	3.1	62
35	Extension of Operating Range in Pump-Turbines. Influence of Head and Load. Energies, 2017, 10, 2178.	3.1	28
36	On the Capability of Structuralâ€"Acoustical Fluidâ€"Structure Interaction Simulations to Predict Natural Frequencies of Rotating Disklike Structures Submerged in a Heavy Fluid. Journal of Vibration and Acoustics, Transactions of the ASME, 2016, 138, .	1.6	14

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37	Influence of the boundary conditions on the natural frequencies of a Francis turbine. IOP Conference Series: Earth and Environmental Science, 2016, 49, 072004.	0.3	12
38	Natural frequencies of rotating disk-like structures submerged viewed from the stationary frame. IOP Conference Series: Earth and Environmental Science, 2016, 49, 082023.	0.3	3
39	Dynamic response of a rotating disk submerged and confined. Influence of the axial gap. Journal of Fluids and Structures, 2016, 62, 332-349.	3.4	26
40	On the detection of natural frequencies and mode shapes of submerged rotating disk-like structures from the casing. Mechanical Systems and Signal Processing, 2015, 60-61, 547-570.	8.0	30
41	Condition monitoring of pump-turbines. New challenges. Measurement: Journal of the International Measurement Confederation, 2015, 67, 151-163.	5.0	53
42	Influence of the rotation on the natural frequencies of a submerged-confined disk in water. Journal of Sound and Vibration, 2015, 337, 161-180.	3.9	37
43	Feasibility of Using PZT Actuators to Study the Dynamic Behavior of a Rotating Disk due to Rotor-Stator Interaction. Sensors, 2014, 14, 11919-11942.	3.8	32
44	Experimental study on the added mass and damping of a disk submerged in a partially fluid-filled tank with small radial confinement. Journal of Fluids and Structures, 2014, 50, 1-17.	3.4	52
45	Assessment of the Economic and Environmental Impact of Double Glazed Façade Ventilation Systems in Mediterranean Climates. Energies, 2013, 6, 5069-5087.	3.1	8
46	Behavior of Francis turbines at part load. Field assessment in prototype: Effects on power swing. IOP Conference Series: Earth and Environmental Science, 0, 240, 062012.	0.3	4