David ValentÃ-n Ruiz

List of Publications by Year
in descending order

56 papers	1,451 citations	304368 22 h-index	329751 37 g-index
58 all docs	58 docs citations	58 times ranked	705 citing authors

#	Article	IF	Citations
1	Analysis of the Mode Shapes of Kaplan Runners. Applied Sciences (Switzerland), 2022, 12, 6708.	1.3	1
2	Improved damage detection in Pelton turbines using optimized condition indicators and data-driven techniques. Structural Health Monitoring, 2021, 20, 3239-3251.	4.3	6
3	On the quantification of local power densities in a new vibration bioreactor. PLoS ONE, 2021, 16, e0245768.	1.1	3
4	On the use of neural networks for dynamic stress prediction in Francis turbines by means of stationary sensors. Renewable Energy, 2021, 170, 652-660.	4.3	9
5	Implant resonance and the mechanostat theory: Applications of therapeutic ultrasound for porous metallic scaffolds. Materials Science and Engineering C, 2021, 125, 112070.	3.8	2
6	Exploring the Regulation Reliability of a Pumped Storage Power Plant in a Windâ€“Solar Hybrid Power Generation System. Water (Switzerland), 2021, 13, 2548.	1.2	8
7	Resonance vibration interventions in the femur: Experimental-numerical modelling approaches. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 124, 104850.	1.5	0
8	Multi-objective optimization of a hydro-wind-photovoltaic power complementary plant with a vibration avoidance strategy. Applied Energy, 2021, 301, 117459.	5.1	34
9	Ultrasonic Vibration-Assisted Ball Burnishing Tool for a Lathe Characterized by Acoustic Emission and Vibratory Measurements. Materials, 2021, 14, 5746.	1.3	4
10	Synchronous condenser operation in Francis turbines: Effects in the runner stress and machine vibration. Renewable Energy, 2020, 146, 890-900.	4.3	3
11	A Dataset to Evaluate IEEE 802.15.4g SUN for Dependable Low-Power Wireless Communications in Industrial Scenarios. Data, 2020, 5, 64.	1.2	4
12	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.	1.8	18
13	Transposition of the mechanical behavior from model to prototype of Francis turbines. Renewable Energy, 2020, 152, 1011-1023.	4.3	14
14	Response of Saos-2 osteoblast-like cells to kilohertz-resonance excitation in porous metallic scaffolds. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 106, 103726.	1.5	5
15	Dynamic response of Pelton runners: Numerical and experimental analysis in prototypes. Renewable Energy, 2020, 157, 116-129.	4.3	8
16	Detection of Hydraulic Phenomena in Francis Turbines with Different Sensors. Sensors, 2019, 19, 4053.	2.1	18
17	Influence of the hydrodynamic damping on the dynamic response of Francis turbine runners. Journal of Fluids and Structures, 2019, 90, 71-89.	1.5	7
18	Experimental-Numerical Design and Evaluation of a Vibration Bioreactor Using Piezoelectric Patches. Sensors, 2019, 19, 436.	2.1	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.	1.3	15
20	Failure investigation of a Kaplan turbine blade. Engineering Failure Analysis, 2019, 97, 690-700.	1.8	29
21	Advanced condition monitoring of Pelton turbines. Measurement: Journal of the International Measurement Confederation, 2018, 119, 46-55.	2.5	34
22	Sensor-Based Optimized Control of the Full Load Instability in Large Hydraulic Turbines. Sensors, 2018, 18, 1038.	2.1	13
23	Transmission of High Frequency Vibrations in Rotating Systems. Application to Cavitation Detection in Hydraulic Turbines. Applied Sciences (Switzerland), 2018, 8, 451.	1.3	21
24	Numerical Study on the Dynamic Behavior of a Francis Turbine Runner Model with a Crack. Energies, 2018, 11, 1630.	1.6	12
25	Feasibility of Detecting Natural Frequencies of Hydraulic Turbines While in Operation, Using Strain Gauges. Sensors, 2018, 18, 174.	2.1	24
26	A Review of PZT Patches Applications in Submerged Systems. Sensors, 2018, 18, 2251.	2.1	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, .	1.0	15
28	Overview of the experimental tests in prototype. Journal of Physics: Conference Series, 2017, 813, 012037.	0.3	6
29	Failure investigation of a Pelton turbine runner. Engineering Failure Analysis, 2017, 81, 234-244.	1.8	26
30	Detection and analysis of part load and full load instabilities in a real Francis turbine prototype. Journal of Physics: Conference Series, 2017, 813, 012038.	0.3	13
31	Dynamic response of the MICA runner. Experiment and simulation. Journal of Physics: Conference Series, 2017, 813, 012036.	0.3	3
32	Optimized Use of Sensors to Detect Critical Full Load Instability in Large Hydraulic Turbines. Proceedings (mdpi), 2017, 1, 822.	0.2	2
33	Accurate Determination of the Frequency Response Function of Submerged and Confined Structures by Using PZT-Patchesâ€. Sensors, 2017, 17, 660.	2.1	40
34	On the Use of PZT-Patches as Exciters in Modal Analysis: Application to Submerged Structures. Proceedings (mdpi), 2017, 1, 32.	0.2	3
35	Power Swing Generated in Francis Turbines by Part Load and Overload Instabilities. Energies, 2017, 10, 2124.	1.6	62
36	Extension of Operating Range in Pump-Turbines. Influence of Head and Load. Energies, 2017, 10, 2178.	1.6	28

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37	Feasibility to Detect Natural Frequencies of Hydraulic Turbines under Operation Using Strain Gauges. Proceedings (mdpi), 2017, 1, 821.	0.2	2
38	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, .	1.0	14
39	Influence of the boundary conditions on the natural frequencies of a Francis turbine. IOP Conference Series: Earth and Environmental Science, 2016, 49, 072004.	0.2	12
40	Natural frequencies of rotating disk-like structures submerged viewed from the stationary frame. IOP Conference Series: Earth and Environmental Science, 2016, 49, 082023.	0.2	3
41	Dynamic response of a rotating disk submerged and confined. Influence of the axial gap. Journal of Fluids and Structures, 2016, 62, 332-349.	1.5	26
42	Analysis of the dynamic response of pump-turbine impellers. Influence of the rotor. Mechanical Systems and Signal Processing, 2016, 68-69, 330-341.	4.4	43
43	Thermal Performance of Ventilated Double Skin FaÃ§ades with Venetian Blinds. Energies, 2015, 8, 4882-4898.	1.6	54
44	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.	4.4	30
45	Condition monitoring of pump-turbines. New challenges. Measurement: Journal of the International Measurement Confederation, 2015, 67, 151-163.	2.5	53
46	Influence of the rotation on the natural frequencies of a submerged-confined disk in water. Journal of Sound and Vibration, 2015, 337, 161-180.	2.1	37
47	Monitoring of Rotor-Stator Interaction in Pump-Turbine Using Vibrations Measured with On-Board Sensors Rotating with Shaft. Shock and Vibration, 2014, 2014, 1-8.	0.3	31
48	Feasibility of Using PZT Actuators to Study the Dynamic Behavior of a Rotating Disk due to Rotor-Stator Interaction. Sensors, 2014, 14, 11919-11942.	2.1	32
49	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.	1.5	52
50	Numerical and experimental analysis of the dynamic response of large submerged trash-racks. Computers and Fluids, 2013, 71, 54-64.	1.3	15
51	Assessment of the Economic and Environmental Impact of Double Glazed FaÃ§ade Ventilation Systems in Mediterranean Climates. Energies, 2013, 6, 5069-5087.	1.6	8
52	Failure investigation of a large pump-turbine runner. Engineering Failure Analysis, 2012, 23, 27-34.	1.8	140
53	Failures due to ingested bodies in hydraulic turbines. Engineering Failure Analysis, 2011, 18, 464-473.	1.8	25
54	Dynamic Analysis of Francis Runners - Experiment and Numerical Simulation. International Journal of Fluid Machinery and Systems, 2009, 2, 303-314.	0.5	39

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55	Dynamics and Intensity of Erosive Partial Cavitation. Journal of Fluids Engineering, Transactions of the ASME, 2007, 129, 886-893.	0.8	13
56	Detection of cavitation in hydraulic turbines. Mechanical Systems and Signal Processing, 2006, 20, 983-1007.	4.4	294