Christopher Niezrecki

List of Publications by Year
in descending order

65 papers	**2,952** citations	257450 **24** h-index	168389 **53** g-index
70 all docs	**70** docs citations	**70** times ranked	**2020** citing authors

#	Article	IF	Citations
1	Photogrammetry and optical methods in structural dynamics â€" A review. Mechanical Systems and Signal Processing, 2017, 86, 17-34.	8.0	357
2	3D digital image correlation methods for full-field vibration measurement. Mechanical Systems and Signal Processing, 2011, 25, 917-927.	8.0	346
3	Wireless MEMS-Based Accelerometer Sensor Boards for Structural Vibration Monitoring: A Review. IEEE Sensors Journal, 2017, 17, 226-235.	4.7	210
4	Vibration-based damage detection in wind turbine blades using Phase-based Motion Estimation and motion magnification. Journal of Sound and Vibration, 2018, 421, 300-318.	3.9	181
5	Miniature all-silica optical fiber pressure sensor with an ultrathin uniform diaphragm. Optics Express, 2010, 18, 9006.	3.4	165
6	Feasibility of using digital image correlation for unmanned aerial vehicle structural health monitoring of bridges. Structural Health Monitoring, 2018, 17, 1056-1072.	7.5	129
7	Large-area photogrammetry based testing of wind turbine blades. Mechanical Systems and Signal Processing, 2017, 86, 98-115.	8.0	126
8	Feasibility of extracting operating shapes using phase-based motion magnification technique and stereo-photogrammetry. Journal of Sound and Vibration, 2017, 407, 350-366.	3.9	117
9	Comparison of FRF measurements and mode shapes determined using optically image based, laser, and accelerometer measurements. Mechanical Systems and Signal Processing, 2011, 25, 2191-2202.	8.0	110
10	Extracting full-field dynamic strain on a wind turbine rotor subjected to arbitrary excitations using 3D point tracking and a modal expansion technique. Journal of Sound and Vibration, 2015, 352, 16-29.	3.9	103
11	Full-field dynamic strain prediction on a wind turbine using displacements of optical targets measured by stereophotogrammetry. Mechanical Systems and Signal Processing, 2015, 62-63, 284-295.	8.0	86
12	An adaptive wavelet packet denoising algorithm for enhanced active acoustic damage detection from wind turbine blades. Mechanical Systems and Signal Processing, 2020, 142, 106754.	8.0	72
13	Damage detection and full surface characterization of a wind turbine blade using three-dimensional digital image correlation. Structural Health Monitoring, 2013, 12, 430-439.	7.5	70
14	Feasibility of digital image correlation for railroad tie inspection and ballast support assessment. Measurement: Journal of the International Measurement Confederation, 2017, 103, 93-105.	5.0	61
15	Optical pressure/acoustic sensor with precise Fabry-Perot cavity length control using angle polished fiber. Optics Express, 2009, 17, 16613.	3.4	58
16	Inspection and monitoring of wind turbine blade-embedded wave defects during fatigue testing. Structural Health Monitoring, 2014, 13, 629-643.	7.5	45
17	Vibration prediction of thin-walled composite I-beams using scaled models. Thin-Walled Structures, 2017, 113, 151-161.	5.3	44
18	Structural health monitoring of wind turbine blades using acoustic microphone array. Structural Health Monitoring, 2017, 16, 471-485.	7.5	37

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19	Dynamic characteristics of a wind turbine blade using 3D digital image correlation. Proceedings of SPIE, 2012, , .	0.8	35
20	A Noncontacting Approach for Full-Field Strain Monitoring of Rotating Structures. Journal of Vibration and Acoustics, Transactions of the ASME, 2016, 138, .	1.6	35
21	Modal parameter estimation from optically-measured data using a hybrid output-only system identification method. Measurement: Journal of the International Measurement Confederation, 2017, 110, 134-145.	5.0	31
22	Multicamera measurement system to evaluate the dynamic response of utility‐scale wind turbine blades. Wind Energy, 2020, 23, 1619-1639.	4.2	30
23	Comparison of nondestructive testing techniques for the inspection of wind turbine blades' spar caps. Wind Energy, 2018, 21, 980-996.	4.2	29
24	Using High-Speed Stereophotogrammetry Techniques to Extract Shape Information from Wind Turbine/Rotor Operating Data. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 269-275.	0.5	26
25	Dynamic Stress–Strain on Turbine Blade Using Digital Image Correlation Techniques Part 1: Static Load and Calibration. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 215-220.	0.5	26
26	Dynamic Stress–Strain on Turbine Blades Using Digital Image Correlation Techniques Part 2: Dynamic Measurements. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 221-226.	0.5	26
27	An ultra-fast fiber optic pressure sensor for blast event measurements. Measurement Science and Technology, 2012, 23, 055102.	2.6	25
28	A Review of Digital Image Correlation Applied to Structura Dynamics. AIP Conference Proceedings, 2010, , .	0.4	24
29	Unmanned aerial vehicle acquisition of three-dimensional digital image correlation measurements for structural health monitoring of bridges. Proceedings of SPIE, 2017, , .	0.8	22
30	Low-cost rapid miniature optical pressure sensors for blast wave measurements. Optics Express, 2011, 19, 10797.	3.4	21
31	Comparison of Modal Parameters Extracted Using MIMO, SIMO, and Impact Hammer Tests on a Three-Bladed Wind Turbine. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 185-197.	0.5	21
32	Digital Image Correlation Techniques for NDE and SHM. , 2018, , 1-46.		21
33	Using High-Speed Stereophotogrammetry to Collect Operating Data on a Robinson R44 Helicopter. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 401-410.	0.5	21
34	Quantification of phase-based magnified motion using image enhancement and optical flow techniques. Measurement: Journal of the International Measurement Confederation, 2022, 189, 110508.	5.0	19
35	Ultrafast Fabry–Perot fiber-optic pressure sensors for multimedia blast event measurements. Applied Optics, 2013, 52, 1248.	1.8	17
36	Mode extraction on wind turbine blades via phase-based video motion estimation. Proceedings of SPIE, 2017, , .	0.8	16

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37	Full-field inspection of a wind turbine blade using three-dimensional digital image correlation. Proceedings of SPIE, 2011, , .	0.8	15
38	Active acoustic damage detection of structural cavities using internal acoustic excitations. Structural Health Monitoring, 2020, 19, 48-65.	7.5	15
39	Streamlined particle filtering of phase-based magnified videos for quantified operational deflection shapes. Mechanical Systems and Signal Processing, 2022, 177, 109233.	8.0	15
40	Rapid miniature fiber optic pressure sensors for blast wave measurements. Optics and Lasers in Engineering, 2013, 51, 134-139.	3.8	13
41	A Complex Convolution Kernel-Based Optical Displacement Sensor. IEEE Sensors Journal, 2020, 20, 9753-9762.	4.7	11
42	Passive acoustic damage detection of structural cavities using flow-induced acoustic excitations. Structural Health Monitoring, 2020, 19, 751-764.	7.5	10
43	Predicting Dynamic Strain on Wind Turbine Blade Using Digital Image Correlation Techniques in Conjunction with Analytical Expansion Methodologies. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 295-302.	0.5	10
44	Dynamic Characterization of a Free-Free Wind Turbine Blade Assembly. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 303-312.	0.5	9
45	Predicting Full-Field Strain on a Wind Turbine for Arbitrary Excitation Using Displacements of Optical Targets Measured with Photogrammetry. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 99-114.	0.5	8
46	Digital Image Correlation Techniques for NDE and SHM. , 2019, , 1545-1590.		8
47	Volumetric Motion Magnification: Subtle Motion Extraction from 4D Data. Measurement: Journal of the International Measurement Confederation, 2021, 176, 109211.	5.0	7
48	Sensing performance of electrically conductive fabrics and suspension lines for parachute systems. Journal of Intelligent Material Systems and Structures, 2012, 23, 1969-1986.	2.5	6
49	Practical Techniques for Scaling of Optically Measured Operating Deflection Shapes. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 1-17.	0.5	6
50	An acoustic-array based structural health monitoring technique for wind turbine blades. , 2015, , .		5
51	Acoustic Sensing Based Operational Monitoring of Wind Turbine Blades. Journal of Physics: Conference Series, 2020, 1452, 012050.	0.4	5
52	Development of an IMU-radar sensor board for three-dimensional digital image correlation camera triangulation. , 2019, , .		5
53	A novel camera localization system for extending three-dimensional digital image correlation. , 2018, , .		3
54	Template Matching and Particle Filtering for Structural Identification of High- and Low-Frequency Vibration. Conference Proceedings of the Society for Experimental Mechanics, 2023, , 43-50.	0.5	3

#	Article	IF	Citations
55	A sensor-based calibration system for three-dimensional digital image correlation. , 2022, , .		2
56	Study of blast event propagation in different media using a novel ultrafast miniature optical pressure sensor. , 2011, , .		1
57	A Complex Convolution Based Optical Displacement Sensor. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 145-153.	0.5	1
58	Dynamic test of an acoustic/pressure sensor with precise cavity length control. Proceedings of SPIE, 2010, , .	0.8	0
59	Ultra fast all-optical fiber pressure sensor for blast event evaluation. , 2011, , .		0
60	A miniature pressure sensor for blast event evaluation. Proceedings of SPIE, 2011, , .	0.8	0
61	Reliability of Using Stereo Photogrammetry to Estimate Modal Parameters. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 147-151.	0.5	0
62	Scaled Composite I-Beams for Subcomponent Testing of Wind Turbine Blades: An Experimental Study. Conference Proceedings of the Society for Experimental Mechanics, 2018, , 71-78.	0.5	0
63	Applying video magnification for vision-based operating deflection shape evaluation on a wind turbine blade cross-section. , 2018, , .		0
64	DIC and Photogrammetry for Structural Dynamic Analysis and High-Speed Testing. , 2020, , 1-70.		0
65	DIC and Photogrammetry for Structural Dynamic Analysis and High-Speed Testing. , 2022, , 409-478.		0