Andrzej Katunin

List of Publications by Year
in descending order

105 papers	1,653 citations	279798 23 h-index	345221 36 g-index
108 all docs	108 docs citations	108 times ranked	1330 citing authors

#	Article	IF	Citations
1	Damage identification in aircraft composite structures: A case study using various non-destructive testing techniques. Composite Structures, 2015, 127, 1-9.	5.8	246
2	Damage identification in composite plates using two-dimensional B-spline wavelets. Mechanical Systems and Signal Processing, 2011, 25, 3153-3167.	8.0	78
3	Vibration-based spatial damage identification in honeycomb-core sandwich composite structures using wavelet analysis. Composite Structures, 2014, 118, 385-391.	5.8	68
4	Fabrication and application of electrically conducting composites for electromagnetic interference shielding of remotely piloted aircraft systems. Composite Structures, 2020, 232, 111498.	5.8	61
5	Synthesis and characterization of the electrically conductive polymeric composite for lightning strike protection of aircraft structures. Composite Structures, 2017, 159, 773-783.	5.8	60
6	Criticality of the Self-Heating Effect in Polymers and Polymer Matrix Composites during Fatigue, and Their Application in Non-Destructive Testing. Polymers, 2019, 11, 19.	4.5	45
7	Early Crack Detection of Reinforced Concrete Structure Using Embedded Sensors. Sensors, 2019, 19, 3879.	3.8	42
8	Stone impact damage identification in composite plates using modal data and quincunx wavelet analysis. Archives of Civil and Mechanical Engineering, 2015, 15, 251-261.	3.8	41
9	Damage assessment in composite plates using fractional wavelet transform of modal shapes with optimized selection of spatial wavelets. Engineering Applications of Artificial Intelligence, 2014, 30, 73-85.	8.1	38
10	Concept of a Conducting Composite Material for Lightning Strike Protection. Advances in Materials Science, 2016, 16, 32-46.	1.0	37
11	The effect of reaction medium on the conductivity and morphology of polyaniline doped with camphorsulfonic acid. Synthetic Metals, 2016, 214, 45-49.	3.9	36
12	Self‐heating of polymeric laminated composite plates under the resonant vibrations: Theoretical and experimental study. Polymer Composites, 2012, 33, 138-146.	4.6	34
13	Reconstruction of Barely Visible Impact Damage in Composite Structures Based on Non-Destructive Evaluation Results. Sensors, 2019, 19, 4629.	3.8	34
14	Localizing impact damage of composite structures with modified RAPID algorithm and non-circular PZT arrays. Archives of Civil and Mechanical Engineering, 2017, 17, 178-187.	3.8	33
15	Criticality of self-heating in degradation processes of polymeric composites subjected to cyclic loading: A multiphysical approach. Archives of Civil and Mechanical Engineering, 2017, 17, 806-815.	3.8	31
16	Identification of multiple damage using modal rotation obtained with shearography and undecimated wavelet transform. Mechanical Systems and Signal Processing, 2019, 116, 725-740.	8.0	31
17	Automated identification and classification of internal defects in composite structures using computed tomography and 3D wavelet analysis. Archives of Civil and Mechanical Engineering, 2015, 15, 436-448.	3.8	30
18	Impact Damage Evaluation in Composite Structures Based on Fusion of Results of Ultrasonic Testing and X-ray Computed Tomography. Sensors, 2020, 20, 1867.	3.8	30

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19	Characterization of failure mechanisms of composite structures subjected to fatigue dominated by the self-heating effect. Composite Structures, 2017, 180, 1-8.	5.8	27
20	Crack identification in composite elements with non-linear geometry using spatial wavelet transform. Archives of Civil and Mechanical Engineering, 2013, 13, 287-296.	3.8	26
21	Lightning strike resistance of an electrically conductive CFRP with a CSA-doped PANI/epoxy matrix. Composite Structures, 2017, 181, 203-213.	5.8	26
22	Damage progression in fibre reinforced polymer composites subjected to low-velocity repeated impact loading. Composite Structures, 2020, 252, 112735.	5.8	25
23	Electrical percolation in composites of conducting polymers and dielectrics. Journal of Polymer Engineering, 2015, 35, 731-741.	1.4	24
24	Influence of heating rate on evolution of dynamic properties of polymeric laminates. Plastics, Rubber and Composites, 2012, 41, 233-239.	2.0	23
25	Thermal fatigue of polymeric composites under repeated loading. Journal of Reinforced Plastics and Composites, 2012, 31, 1037-1044.	3.1	20
26	Fatigue and Thermal Failure of Polymeric Composites Subjected to Cyclic Loading. Advanced Composites Letters, 2012, 21, 096369351202100.	1.3	19
27	Damage resistance of CSA-doped PANI/epoxy CFRP composite during passing the artificial lightning through the aircraft rivet. Engineering Failure Analysis, 2017, 82, 116-122.	4.0	19
28	Impact damage assessment in polymer matrix composites using self-heating based vibrothermography. Composite Structures, 2019, 214, 214-226.	5.8	18
29	Nondestructive Damage Assessment of Composite Structures Based on Wavelet Analysis of Modal Curvatures: State-of-the-Art Review and Description of Wavelet-Based Damage Assessment Benchmark. Shock and Vibration, 2015, 2015, 1-19.	0.6	17
30	Evaluation of Criticality of Self-Heating of Polymer Composites by Estimating the Heat Dissipation Rate. Mechanics of Composite Materials, 2018, 54, 53-60.	1.4	17
31	Analysis of defect detectability in polymeric composites using self-heating based vibrothermography. Composite Structures, 2018, 201, 760-765.	5.8	17
32	Damage identification by wavelet analysis of modal rotation differences. Structures, 2021, 30, 1-10.	3.6	17
33	Modeling of a realistic barely visible impact damage in composite structures based on NDT techniques and numerical simulations. Composite Structures, 2021, 267, 113889.	5.8	17
34	Optimal Sensor Placement for Modal-Based Health Monitoring of a Composite Structure. Sensors, 2022, 22, 3867.	3.8	17
35	Domination of self-heating effect during fatigue of polymeric composites. Procedia Structural Integrity, 2017, 5, 93-98.	0.8	14
36	A Concept of Thermographic Method for Non-Destructive Testing of Polymeric Composite Structures Using Self-Heating Effect. Sensors, 2018, 18, 74.	3.8	14

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37	Identification of structural damage using S-transform from 1D and 2D mode shapes. Measurement: Journal of the International Measurement Confederation, 2021, 173, 108656.	5.0	14
38	Modelling the electro-mechanical properties of PPy/epoxy conductive composites. Computational Materials Science, 2016, 113, 88-97.	3.0	13
39	Electrically conductive carbon fibre-reinforced composite for aircraft lightning strike protection. IOP Conference Series: Materials Science and Engineering, 2017, 201, 012008.	0.6	13
40	Determination of fatigue limit of polymeric composites in fully reversed bending loading mode using self-heating effect. Journal of Composite Materials, 2019, 53, 83-91.	2.4	13
41	Vibration-Based Damage Identification Using Wavelet Transform and a Numerical Model of Shearography. International Journal of Structural Stability and Dynamics, 2019, 19, 1950038.	2.4	13
42	A hybrid method for determination of fatigue limit and non-destructive evaluation of composite structures after low-velocity impact loading. Composites Part B: Engineering, 2022, 238, 109898.	12.0	13
43	Modeling and simulation of longwall scraper conveyor considering operational faults. Studia Geotechnica Et Mechanica, 2016, 38, 15-27.	0.5	12
44	The conception of the fatigue model for layered composites considering thermal effects. Archives of Civil and Mechanical Engineering, 2011, 11, 333-343.	3.8	11
45	Embedded ultrasonic transmission sensors and signal processing techniques for structural change detection in the Gliwice bridge. Procedia Structural Integrity, 2019, 17, 387-394.	0.8	11
46	Detection of structural changes in concrete using embedded ultrasonic sensors based on autoregressive model. Diagnostyka, 2018, 20, 103-110.	0.8	10
47	Damage Identification and Quantification in Beams Using Wigner-Ville Distribution. Sensors, 2020, 20, 6638.	3.8	9
48	Quality Control Approach for the Detection of Internal Lower Density Areas in Composite Disks in Industrial Conditions Based on a Combination of NDT Techniques. Sensors, 2021, 21, 7174.	3.8	9
49	Lightning Strike Protection of Aircraft Composite Structures: Analysis and Comparative Study. Fatigue of Aircraft Structures, 2016, 2016, 49-54.	0.3	8
50	Synthesis and testing of a conducting polymeric composite material for lightning strike protection applications. AIP Conference Proceedings, 2017, , .	0.4	8
51	Evolution of Static and Dynamic Properties of Gfrp Laminates during Ageing in Deionized and Seawater. Advanced Composites Letters, 2015, 24, 096369351502400.	1.3	7
52	Minimizing self-heating based fatigue degradation in polymeric composites by air cooling. Procedia Structural Integrity, 2019, 18, 20-27.	0.8	7
53	Faults diagnosis using self-organizing maps: A case study on the DAMADICS benchmark problem. , 0, , .		6
54	Evaluation of Structural Degradation of Polymeric Composites Subjected to Self-Heating by the Thermal Diffusivity Analysis. Arabian Journal for Science and Engineering, 2018, 43, 4541-4547.	3.0	6

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55	Application of wavelet analysis to differences in modal rotations for damage identification. IOP Conference Series: Materials Science and Engineering, 2019, 561, 012024.	0.6	6
56	Analysis of selected parameters in numerical modeling of low-velocity impact damage in composite structures. Procedia Structural Integrity, 2020, 25, 19-26.	0.8	6
57	Meta-optimization method for wavelet-based damage identification in composite structures. , 2014, , .		5
58	Identification of material properties of a laminated plate from measurements of natural frequencies and modal rotations. Procedia Structural Integrity, 2019, 17, 971-978.	0.8	5
59	Enhancement of damage identification in composite structures with self-heating based vibrothermography. Optik, 2019, 181, 545-554.	2.9	5
60	On a visualization of the convergence of the boundary of generalized Mandelbrot set to (n-1)-sphere. Journal of Applied Mathematics and Computational Mechanics, 2015, 14, 63-69.	0.7	5
61	Characterization of damage evolution during fatigue of composite structures accompanied with self-heating effect by means of acoustic emission. Journal of Vibroengineering, 2018, 20, 954-962.	1.0	5
62	Modeling and synthesis of all-polymeric conducting composite material for aircraft lightning strike protection applications. Materials Today: Proceedings, 2017, 4, 8010-8015.	1.8	4
63	Spectroscopic evaluation of structural changes in composite materials subjected to self-heating effect. Composite Structures, 2018, 204, 192-197.	5.8	4
64	Three-dimensional octonion wavelet transform. Journal of Applied Mathematics and Computational Mechanics, 2014, 13, 33-38.	0.7	4
65	Analysis of critical percolation clusters of mixtures of conducting and dielectric polymers. Journal of Applied Mathematics and Computational Mechanics, 2016, 15, 59-69.	0.7	4
66	Percolation thresholds of 3D all-sided percolation clusters in non-cubic domains. Journal of Applied Mathematics and Computational Mechanics, 2016, 15, 63-69.	0.7	4
67	SiC Nanofibres Produced by the Combustion Synthesis as the Nanocomposites Fillers. Macromolecular Symposia, 2013, 327, 94-98.	0.7	3
68	Analysis of influence of fibre type and orientation on dynamic properties of polymer laminates for evaluation of their damping and self-heating. Science and Engineering of Composite Materials, 2017, 24, 387-399.	1.4	3
69	Vibration-Based Damage Identification and Condition Monitoring in Mechanical Structures and Components. Shock and Vibration, 2018, 2018, 1-2.	0.6	3
70	Numerical analysis of electrically conductive fillers of composites for aircraft lightning strike protection. Aircraft Engineering and Aerospace Technology, 2020, 92, 1441-1450.	1.2	3
71	Remarks on quasi-static and interlaminar fracture toughness tests of composite structures. Procedia Structural Integrity, 2020, 25, 13-18.	0.8	3
72	Solution of plane Dirichlet problem using compactly supported 2D wavelet scaling functions. Scientific Research of the Institute of Mathematics and Computer Science, 2012, 11, 31-40.	0.2	3

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73	Spatial damage identification in composite plates using multiwavelets. Journal of Applied Mathematics and Computational Mechanics, 2013, 12, 69-78.	0.7	3
74	Classification of Cracks in Composite Structures Subjected to Low-Velocity Impact Using Distribution-Based Segmentation and Wavelet Analysis of X-ray Tomograms. Sensors, 2021, 21, 8342.	3.8	3
75	Characterisation of Impact Damage of Composite Structures Using Wavelet-Based Fusion of Ultrasonic and Optical Images. Advanced Composites Letters, 2014, 23, 096369351402300.	1.3	2
76	Evolution of a fracture mechanism in a polymeric composite subjected to fatigue with the self-heating effect. Procedia Structural Integrity, 2017, 5, 416-421.	0.8	2
77	Enhancement of shearography-based damage identification using best tree wavelet packet analysis. MATEC Web of Conferences, 2018, 204, 06002.	0.2	2
78	Design of the composite casing of microstrip antenna for the aerospace satellite. Aircraft Engineering and Aerospace Technology, 2018, 90, 788-805.	1.2	2
79	Damage Detection in Four Point Bending Test on Benchmark RC Structure Using Feature based Fusion. Procedia Structural Integrity, 2020, 25, 324-333.	0.8	2
80	Damage Identification in Beams by Post-processing Modal Displacements and Rotations with Haar Wavelet. Lecture Notes in Civil Engineering, 2021, , 817-824.	0.4	2
81	Assessment of Internal Damage in Sandwich Structures by Post-Processing of Mode Shapes Using Curvelet Transform. Materials, 2021, 14, 4517.	2.9	2
82	Enhancement of Damage Detectability in Aircraft Structures Using the Fusion of NDT Results. Fatigue of Aircraft Structures, 2017, 2017, 55-74.	0.3	2
83	A Concept of Automatic Tuning of Longwall Scraper Conveyor Model. , 0, , .		2
84	On the convergence of multicomplex M-J sets to the Steinmetz hypersolids. Journal of Applied Mathematics and Computational Mechanics, 2016, 15, 67-74.	0.7	2
85	Efficiency assessment of wavelet transforms and wavelets for damage localization in beams using shearography. Diagnostyka, 2018, 19, 71-79.	0.8	2
86	On the symmetry of bioctonionic Julia sets. Journal of Applied Mathematics and Computational Mechanics, 2013, 12, 23-28.	0.7	2
87	Damage detection and classification in composite structure after water-jet cutting using computed tomography and wavelet analysis. , 2015, , 557-561.		2
88	Vibration-Based Non-Destructive Evaluation of Internal Damage in Foam Cored Sandwich Structures Using Wavelet Analysis. , 2019, 24, .		2
89	Damage classification in composite structures based on X-ray computed tomography scans using features evaluation and deep neural networks. Procedia Structural Integrity, 2022, 37, 187-194.	0.8	2
90	Effectiveness of damage identification in composite plates using damage indices based on smoothing polynomials and curvelet transform: A comparative study. Procedia Structural Integrity, 2022, 37, 292-298.	0.8	2

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91	Evaluation of self-activating temperature influence on cracks initiation in GRP laminates. Proceedings in Applied Mathematics and Mechanics, 2009, 9, 403-404.	0.2	1
92	Stationary Self-Heating of the Circular and Annular Composite Plates Hinged on the Boundary under Axisymmetric Cyclic Loading. Advanced Composites Letters, 2011, 20, 096369351102000.	1.3	1
93	Recent Research on Thermal Fatigue of Composite Elements of Transport Means. Key Engineering Materials, 0, 588, 243-248.	0.4	1
94	Generalized chemical distance distribution in all-sided critical percolation clusters. AIP Conference Proceedings, 2016, , .	0.4	1
95	Multi-Objective Meta-Evolution Method for Large-Scale Optimization Problems. Studies in Computational Intelligence, 2016, , 165-182.	0.9	1
96	Self-heating based vibrothermography â€" A non-destructive testing method for polymeric composite structures. AIP Conference Proceedings, 2018, , .	0.4	1
97	Addressing the detection capability for scalable energy consumption using primary data acquisition system of embedded ultrasonic sensors in SHM. , 2019, , .		1
98	Influence of Air Cooling on the Fatigue of a Polymer Composite Under Self-Heating. Mechanics of Composite Materials, 2020, 56, 93-102.	1.4	1
99	Performance of Damage Identification Based on Directional Wavelet Transforms and Entopic Weights Using Experimental Shearographic Testing Results. Sensors, 2021, 21, 714.	3.8	1
100	Variable Surface Temperature Distribution as a Criticality Indicator of the Self-Heating Effect in Composites. Advances in Materials Science, 2018, 18, 5-12.	1.0	1
101	Clustering of Delaminations in Composite Rotors Using Self-Organizing Maps. Advances in Intelligent Systems and Computing, 2014, , 149-159.	0.6	1
102	Structural Diagnostics of Composite Beams Using Optimally Selected Fractional B-spline Wavelets. Advances in Intelligent Systems and Computing, 2014, , 475-486.	0.6	1
103	Stress concentration at the circular hole of cyclically bent layered composite plate within the framework of a moment theory of thermoviscoelasticity. Journal of Applied Mathematics and Computational Mechanics, 2014, 13, 75-83.	0.7	1
104	Identification of Delamination in Composite Beams using the Fractal Dimension-Based Damage Identification Algorithm. Fatigue of Aircraft Structures, 2017, 2017, 5-16.	0.3	1
105	A reverse engineering approach for modeling of barely visible impact damage by combining results of non-destructive testing and numerical simulations. Procedia Structural Integrity, 2022, 37, 195-202.	0.8	1