

# Milan Sãjga

## List of Publications by Year in descending order

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Version: 2024-02-01

101  
papers

966  
citations

394421

19  
h-index

552781

26  
g-index

104  
all docs

104  
docs citations

104  
times ranked

598  
citing authors

#	ARTICLE	IF	CITATIONS
1	Development of simulation software for mobile robot path planning within multilayer map system based on metric and topological maps. International Journal of Advanced Robotic Systems, 2017, 14, 172988141774302.	2.1	60
2	Modeling and Experimental Analysis of the Aluminium Alloy Fatigue Damage in the case of Bending and Torsion Loading. Procedia Engineering, 2012, 48, 599-606.	1.2	44
3	Application of optimization algorithms for robot systems designing. International Journal of Advanced Robotic Systems, 2018, 15, 172988141775415.	2.1	43
4	Parameter Identification of Cutting Forces in Crankshaft Grinding Using Artificial Neural Networks. Materials, 2020, 13, 5357.	2.9	41
5	Path planning optimization of six-degree-of-freedom robotic manipulators using evolutionary algorithms. International Journal of Advanced Robotic Systems, 2020, 17, 172988142090807.	2.1	35
6	Identification of Material Damping of a Carbon Composite Bar and Study of Its Effect on Attenuation of Its Transient Lateral Vibrations. International Journal of Applied Mechanics, 2015, 07, 1550081.	2.2	34
7	Research of the Fatigue Life of Welded Joints of High Strength Steel S960 QL Created Using Laser and Electron Beams. Materials, 2020, 13, 2539.	2.9	32
8	Optimization of the Induction Heating Process in Order to Achieve Uniform Surface Temperature. Procedia Engineering, 2016, 136, 125-131.	1.2	28
9	Application of Abaqus Software for the Modeling of Surface Progressive Hardening. Procedia Engineering, 2017, 177, 64-69.	1.2	28
10	Controlling of Local search Methods' Parameters in Memetic Algorithms Using the Principles of Simulated Annealing. Procedia Engineering, 2016, 136, 70-76.	1.2	26
11	Design of a Mechanical Part of an Automated Platform for Oblique Manipulation. Applied Sciences (Switzerland), 2020, 10, 8467.	2.5	25
12	Case study: Performance analysis and development of robotized screwing application with integrated vision sensing system for automotive industry. International Journal of Advanced Robotic Systems, 2020, 17, 172988142092399.	2.1	25
13	Application of Light Metal Alloy EN AW 6063 to Vehicle Frame Construction with an Innovated Steering Mechanism. Materials, 2020, 13, 817.	2.9	24
14	Computational Analysis of Contact Stress Distribution in the Case of Mutual Slewing of Roller Bearing Rings. Applied Mechanics and Materials, 0, 474, 363-368.	0.2	23
15	Experimental Determination of the Manson-Coffin Curves for an Original Unconventional Vehicle Frame. Materials, 2020, 13, 4675.	2.9	23
16	Contribution to Modal and Spectral Interval Finite Element Analysis. Springer Proceedings in Physics, 2011, , 269-274.	0.2	23
17	CONTRIBUTION TO RANDOM VIBRATION NUMERICAL SIMULATION AND OPTIMISATION OF NONLINEAR MECHANICAL SYSTEMS. Scientific Journal of Silesian University of Technology Series Transport, 2019, 103, 143-154.	0.4	22
18	Chosen Numerical Algorithms for Interval Finite Element Analysis. Procedia Engineering, 2014, 96, 400-409.	1.2	21

#	ARTICLE	IF	CITATIONS
19	A Plastic Strain and Stress Analysis of Bending and Torsion Fatigue Specimens in the Low-cycle Fatigue Region Using the Finite Element Methods. <i>Procedia Engineering</i> , 2017, 177, 526-531.	1.2	21
20	Analysis of Stress and Strain of Fatigue Specimens Localised in the Cross-sectional Area of the Gauge Section Testing on Bi-axial Fatigue Machine Loaded in the High-cycle Fatigue Region. <i>Procedia Engineering</i> , 2017, 177, 516-519.	1.2	20
21	Design and Application of Multi-software Platform for Solving of Mechanical Multi-body System Problems. , 2011, , 345-354.		20
22	The Complex Application of Monitoring and Express Diagnosing for Searching Failures on Common Rail System Units. , 2018, , .		17
23	Mechanical properties of structures produced by 3D printing from composite materials. <i>MATEC Web of Conferences</i> , 2019, 254, 01018.	0.2	17
24	Industrial Robot Positioning Performance Measured on Inclined and Parallel Planes by Double Ballbar. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 1777.	2.5	15
25	Memetic Algorithm with Normalized RBF ANN for Approximation of Objective Function and Secondary RBF ANN for Error Mapping. <i>Procedia Engineering</i> , 2017, 177, 540-547.	1.2	14
26	Development of a New System for Attaching the Wheels of the Front Axle in the Cross-Country Vehicle. <i>Symmetry</i> , 2020, 12, 1156.	2.2	13
27	Application of Fuzzy Structural Analysis for Damage Prediction Considering Uncertain S/N Curve. <i>Applied Mechanics and Materials</i> , 0, 420, 21-29.	0.2	12
28	Design of a robotic manipulator for handling products of automotive industry. <i>International Journal of Advanced Robotic Systems</i> , 2020, 17, 172988142090629.	2.1	12
29	Effective Methods of Parameters Refinement of Machinery in the Program MSC.ADAMS. <i>Applied Mechanics and Materials</i> , 0, 611, 67-74.	0.2	11
30	Analysis of the Possibilities of Tire-Defect Inspection Based on Unsupervised Learning and Deep Learning. <i>Sensors</i> , 2021, 21, 7073.	3.8	11
31	Measurement and Numerical Analyses of Residual Stress Distribution Near Weld Joint. <i>Procedia Engineering</i> , 2017, 192, 22-27.	1.2	10
32	Information and analytical system to monitor operating processes and environmental performance of vehicle propulsion systems. <i>IOP Conference Series: Materials Science and Engineering</i> , 2020, 776, 012064.	0.6	10
33	In-phase multiaxial fatigue experimental analysis of welded cylindrical 6063-T66 aluminium alloy specimens. <i>Manufacturing Technology</i> , 2013, 13, 59-64.	1.4	10
34	Improving the Process of Vehicle Units Diagnosis by Applying Harmonic Analysis to the Processing of Discrete Signals. , 0, , .		10
35	Approach to Automated Visual Inspection of Objects Based on Artificial Intelligence. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 864.	2.5	10
36	FEM analysis of long-fibre composite structures created by 3D printing. <i>Transportation Research Procedia</i> , 2019, 40, 792-799.	1.5	9

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37	Impact Toughness of FRTP Composites Produced by 3D Printing. <i>Materials</i> , 2020, 13, 5654.	2.9	9
38	Comparison of Analytical Stress Analysis and Numerical Calculation of Mobile Work Machine Part. <i>Manufacturing Technology</i> , 2018, 18, 190-193.	1.4	9
39	Tensile Properties of Additively Manufactured Thermoplastic Composites Reinforced with Chopped Carbon Fibre. <i>Materials</i> , 2022, 15, 4224.	2.9	9
40	Analysis of Force Conditions of the Hot Forming Machine in Rolling-Out of Bearing Rings. <i>Manufacturing Technology</i> , 2015, 15, 821-825.	1.4	8
41	Measurement of Residual Stresses of Locomotive Wheel Treads During the Manufacturing Technological Cycle. <i>Management Systems in Production Engineering</i> , 2019, 27, 236-241.	1.1	7
42	Implementation of Predictive Models in Industrial Machines with Proposed Automatic Adaptation Algorithm. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 1853.	2.5	7
43	Modeling of Non-elastic Properties of Polymeric Foams Used in Sports Helmets. <i>Procedia Engineering</i> , 2017, 177, 314-317.	1.2	6
44	Comparison of the mechanical properties and microstructural evolution in the HAZ of HSLA DOMEX 700MC welded by gas metal arc welding and electron beam welding. <i>MATEC Web of Conferences</i> , 2018, 244, 01009.	0.2	6
45	Development and Testing of a Block Hydrocyclone. <i>Processes</i> , 2020, 8, 1577.	2.8	6
46	Development of an automated diagnostic and inspection system based on artificial intelligence designed to eliminate risks in transport and industrial companies. <i>Transportation Research Procedia</i> , 2021, 55, 805-813.	1.5	6
47	Dynamic and Stress Analysis of a Locking Mechanism in the Ansys Workbench Software Environment. <i>Advances in Science and Technology Research Journal</i> , 2019, 13, 23-28.	0.8	6
48	Identification of Physical Characteristic of Composite Materials Produced by Additive Technology from Perspective of Selected Mechanical Properties. <i>Acta Physica Polonica A</i> , 2020, 138, 249-252.	0.5	5
49	Application of analytical methods for determination of hardness distribution in welded joint made of S1100QL steel. <i>MATEC Web of Conferences</i> , 2018, 157, 02041.	0.2	4
50	A Numerical Study of a Compressed Air Engine with Rotating Cylinders. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 7504.	2.5	4
51	Proposal of Physical Model for Damage Simulation of Composite Structures Produced by 3D Printing. <i>Acta Physica Polonica A</i> , 2020, 138, 245-248.	0.5	4
52	Feasibility Study of Using Artificial Neural Networks for Approximation of n-dimensional Objective Functions in Memetic Algorithms for Structural Optimization. <i>Procedia Engineering</i> , 2017, 192, 671-676.	1.2	3
53	Low-cycle fatigue behaviour of laser welded high-strength steel DOMEX 700 MC. <i>MATEC Web of Conferences</i> , 2018, 157, 05013.	0.2	3
54	Contribution to fatigue damage prediction of thin shell finite element models. <i>MATEC Web of Conferences</i> , 2018, 157, 01017.	0.2	3

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55	Experimental and computational comparative study of the specimens loaded by bending and torsion. MATEC Web of Conferences, 2018, 157, 02016.	0.2	3
56	Applied Research of Applicability of High-Strength Steel for a Track of a Demining Machine in Term of Its Tribological Properties. Metals, 2021, 11, 505.	2.3	3
57	Analytical Synthesis of Non-Linear Control Algorithms of a Chemical Reactor Thermal Mode. Processes, 2021, 9, 644.	2.8	3
58	Effective algorithm for structural optimization subjected to fatigue damage and random excitation. Scientific Journal of Silesian University of Technology Series Transport, 2018, 99, 149-161.	0.4	3
59	Comparison of Residual Stress in High Strength Steel Sample before and after Laser Welding. Manufacturing Technology, 2018, 18, 369-371.	1.4	3
60	Impact of Magnetic-Pulse and Chemical-Thermal Treatment on Alloyed Steels™ Surface Layer. Applied Sciences (Switzerland), 2022, 12, 469.	2.5	3
61	Analysis of Symmetrical/Asymmetrical Loading Influence of the Full-Suspension Downhill Bicycle™s Frame on the Crack Failure Formation at a Critical Point during Different Driving Scenarios and Design Improvement. Symmetry, 2022, 14, 255.	2.2	3
62	Experimental Research on Manson™ Coffin Curves for the Frame Material of an Unconventional Vehicle. Materials, 2022, 15, 1768.	2.9	3
63	The Effect of Blade Angle Deviation on Mixed Inflow Turbine Performances. Applied Sciences (Switzerland), 2022, 12, 3781.	2.5	3
64	Application of Karray-Bouc Hysteretic Model for Cumulative Damage Calculation Using Energy Fatigue Curve. Applied Mechanics and Materials, 2014, 611, 32-39.	0.2	2
65	Existence and Stability of Periodic Solution Related to Valveless Pumping. Mathematical Problems in Engineering, 2018, 2018, 1-8.	1.1	2
66	Numerical analysis of stiffener for hybrid drive unite. MATEC Web of Conferences, 2018, 157, 02015.	0.2	2
67	Modification of the optimization model for simulation of large-diameter pipes bending. MATEC Web of Conferences, 2019, 254, 02024.	0.2	2
68	Reasons for the Formation of Non-Fibrous Inclusions When Preparing Basalt Fibers by the Duplex Method. Materials, 2020, 13, 5033.	2.9	2
69	Infill shape effects on bending stiffness of additively manufactured short fibre reinforced polymer sandwich specimens. Journal of Reinforced Plastics and Composites, 2021, 40, 927-938.	3.1	2
70	Generating Random Pattern for Homogenization of Fiber Reinforced Composites Using Memetic Algorithm. Manufacturing Technology, 2017, 17, 354-360.	1.4	2
71	Influence of the Shape of the Test Specimen Produced by 3D Printing on the Stress Distribution in the Matrix and in Long Reinforcing Fibers. Strojnický Casopis, 2019, 69, 61-68.	0.9	2
72	New Generation of the Compact System for Performing Measurements of Sold Liquids by Gas Station Dispensers. Journal of Marine Science and Engineering, 2022, 10, 524.	2.6	2

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73	FEM Simulation of Non-proportional Multiaxial Fatigue Damage. MATEC Web of Conferences, 2022, 357, 02006.	0.2	2
74	Application of Multi-Criteria Optimization to Large-Scale Structures Design. Applied Mechanics and Materials, 0, 693, 171-176.	0.2	1
75	Analysis of the influence of the pipe's wall thickness on the corrugation of the surface during inductive bending of pipes. MATEC Web of Conferences, 2018, 157, 02044.	0.2	1
76	Design of pallet, frame and chain of soldering station conveyor. MATEC Web of Conferences, 2018, 157, 01001.	0.2	1
77	Numerical simulation of blanking process. MATEC Web of Conferences, 2018, 157, 02038.	0.2	1
78	Contribution to numerical study of vehicle vertical stochastic vibration. MATEC Web of Conferences, 2018, 157, 03015.	0.2	1
79	Numerical study of the relation between chosen statistical parameters of input stresses and cumulative fatigue damage provided rainflow decomposition. MATEC Web of Conferences, 2019, 254, 02006.	0.2	1
80	Design and stress analysis of wheeled compactor construction. MATEC Web of Conferences, 2019, 254, 02012.	0.2	1
81	Design and strength analysis of mechanical rack system. MATEC Web of Conferences, 2019, 254, 01017.	0.2	1
82	FE modeling of continuous fiber reinforced thermoplastic composite structures produced by additive manufacturing. IOP Conference Series: Materials Science and Engineering, 2020, 776, 012080.	0.6	1
83	Energy consumption optimization for AC drives position control. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2021, 40, 309-324.	0.9	1
84	Methods of Pre-Identification of TITO Systems. Applied Sciences (Switzerland), 2021, 11, 6954.	2.5	1
85	Prediction of load on the cutting tools in tunnel boring machines. Acta Montanistica Slovaca, 2020, 25, 444-452.	0.4	1
86	Method and Device Based on Multiscan for Measuring the Geometric Parameters of Objects. Processes, 2021, 9, 24.	2.8	1
87	An Automated Diagnostic and Surveillance System for Eliminating the Community Spread of Infectious Respiratory Diseases in the Industry. Lecture Notes in Mechanical Engineering, 2022, , 94-103.	0.4	1
88	Innovation of hardness tester mechanism and its functionality test. MATEC Web of Conferences, 2018, 244, 01022.	0.2	0
89	Numerical simulation and experimental verification of torsion fatigue tests for material Weldox. Transportation Research Procedia, 2019, 40, 631-638.	1.5	0
90	Fatigue characteristics of welded high strength steel in the low cycle region of loading. MATEC Web of Conferences, 2019, 254, 07002.	0.2	0

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91	Numerical study of linearization techniques for Bouc-Wen hysteresis model considering random inputs. IOP Conference Series: Materials Science and Engineering, 2020, 776, 012059.	0.6	0
92	Numerical estimation of heat affected zone in spirally laser quenched shaft. IOP Conference Series: Materials Science and Engineering, 2020, 776, 012111.	0.6	0
93	Thermal-stress analysis of vulcanization molds to determine the dilatation gap between aluminum segments. IOP Conference Series: Materials Science and Engineering, 2020, 776, 012053.	0.6	0
94	Measurement and comparison study of deformation using extensometer and 2D DIC technology. IOP Conference Series: Materials Science and Engineering, 2020, 776, 012065.	0.6	0
95	The requirements for the design of dual-mass flywheels. IOP Conference Series: Materials Science and Engineering, 2020, 776, 012004.	0.6	0
96	Influence of Fiber Deposition and Orientation on Stress Distribution in Specimens Produced Using 3D Printing. Strojnicky Casopis, 2019, 69, 81-88.	0.9	0
97	Realization and Verification of Data Conversion from Laser Scanner to FEM. Advances in Science and Technology Research Journal, 2020, 14, 69-74.	0.8	0
98	Application of Memetic Algorithms in Multi-Criteria Structural Optimization. Communications - Scientific Letters of the University of Zilina, 2017, 19, 106-111.	0.6	0
99	The Modern Conveyor System and its Construction. MATEC Web of Conferences, 2022, 357, 02010.	0.2	0
100	Analysis of Stress Intensity Factor on Weld Surface. MATEC Web of Conferences, 2022, 357, 02005.	0.2	0
101	Numerical analysis and optimization of large dimensioned structures considering stress concentrations in welded joint. MATEC Web of Conferences, 2022, 357, 02002.	0.2	0