Fakher Chaari

List of Publications by Year
in descending order

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90 papers	2,015 citations	331538 21 h-index	265120 42 g-index
114 all docs	114 docs citations	114 times ranked	943 citing authors

#	Article	IF	Citations
1	Analytical modelling of spur gear tooth crack and influence on gearmesh stiffness. European Journal of Mechanics, A/Solids, 2009, 28, 461-468.	2.1	338
2	Effect of spalling or tooth breakage on gearmesh stiffness and dynamic response of a one-stage spur gear transmission. European Journal of Mechanics, A/Solids, 2008, 27, 691-705.	2.1	282
3	Modelling of gearbox dynamics under time-varying nonstationary load for distributed fault detection and diagnosis. European Journal of Mechanics, A/Solids, 2010, 29, 637-646.	2.1	125
4	Study of a spur gear dynamic behavior in transient regime. Mechanical Systems and Signal Processing, 2011, 25, 3089-3101.	4.4	120
5	Influence of manufacturing errors on the dynamic behavior of planetary gears. International Journal of Advanced Manufacturing Technology, 2006, 27, 738-746.	1.5	116
6	Gearbox Vibration Signal Amplitude and Frequency Modulation. Shock and Vibration, 2012, 19, 635-652.	0.3	75
7	Numerical and experimental analysis of a gear system with teeth defects. International Journal of Advanced Manufacturing Technology, 2005, 25, 542-550.	1.5	71
8	An acousticâ€“structural interaction modelling for the evaluation of a gearbox-radiated noise. International Journal of Mechanical Sciences, 2008, 50, 569-577.	3.6	46
9	Analysis of planetary gear transmission in non-stationary operations. Frontiers of Mechanical Engineering, 2013, 8, 88-94.	2.5	45
10	Effects of variable loading conditions on the dynamic behaviour of planetary gear with power recirculation. Measurement: Journal of the International Measurement Confederation, 2016, 94, 306-315.	2.5	43
11	A new modeling of planetary gear set to predict modulation phenomenon. Mechanical Systems and Signal Processing, 2019, 127, 234-261.	4.4	38
12	Digital twin-driven machine learning: ball bearings fault severity classification. Measurement Science and Technology, 2021, 32, 044006.	1.4	37
13	Comparison of experimental and operational modal analysis on a back to back planetary gear. Mechanism and Machine Theory, 2018, 124, 226-247.	2.7	33
14	Detection of gear faults in variable rotating speed using variational mode decomposition (VMD). Mechanics and Industry, 2016, 17, 207.	0.5	31
15	Intelligent PD controller design for active suspension system based on robust model-free control strategy. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 4863-4880.	1.1	31
16	Road profile estimation using the dynamic responses of the full vehicle model. Applied Acoustics, 2019, 147, 87-99.	1.7	28
17	Effect of load and meshing stiffness variation on modal properties of planetary gear. Applied Acoustics, 2019, 147, 32-43.	1.7	27
18	Dynamic behaviour modelling of a flexible gear system by the elastic foundation theory in presence of defects. European Journal of Mechanics, A/Solids, 2010, 29, 887-896.	2.1	26

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19	Analytical Investigation on the Effect of Gear Teeth Faults on the Dynamic Response of a Planetary Gear Set. Noise and Vibration Worldwide, 2006, 37, 9-17.	0.4	25
20	Vibration-based diagnostics of epicyclic gearboxes â€“ From classical to soft-computing methods. Measurement: Journal of the International Measurement Confederation, 2019, 147, 106811.	2.5	23
21	Dynamic Behaviour of Back to Back Planetary Gear in Run Up and Run Down Transient Regimes. Journal of Mechanics, 2015, 31, 481-491.	0.7	22
22	Modal analysis of back-to-back planetary gear: experiments and correlation against lumped-parameter model. Journal of Theoretical and Applied Mechanics, 0, , 125.	0.2	20
23	Frequency analysis of a two-stage planetary gearbox using two different methodologies. Comptes Rendus - Mecanique, 2017, 345, 832-843.	2.1	19
24	Gear fault diagnosis under non-stationary operating mode based on EMD, TKEO, and Shock Detector. Comptes Rendus - Mecanique, 2019, 347, 663-675.	2.1	18
25	Simulation numÃ©rique du comportement dynamique d'une transmission par engrenages en prÃ©sence de dÃ©fauts de dentures. Mecanique Et Industries, 2005, 6, 625-633.	0.2	17
26	Passive vibration suppression using ball impact damper absorber. Applied Acoustics, 2019, 147, 72-76.	1.7	17
27	A Simple Condition Monitoring Method for Gearboxes Operating in Impulsive Environments. Sensors, 2020, 20, 2115.	2.1	17
28	Dynamic characteristics of a wind turbine gearbox with amplitude modulation and gravity effect: Theoretical and experimental investigation. Mechanism and Machine Theory, 2022, 167, 104468.	2.7	16
29	Effects of misfire on the dynamic behavior of gasoline Engine Crankshafts. Engineering Failure Analysis, 2021, 121, 105149.	1.8	15
30	Road profile identification with an algebraic estimator. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 1139-1155.	1.1	14
31	Damage detection in wind turbine gearbox using modal strain energy. Engineering Failure Analysis, 2020, 107, 104228.	1.8	14
32	Gear mesh stiffness of polymer-metal spur gear system using generalized Maxwell model. Mechanism and Machine Theory, 2022, 175, 104934.	2.7	13
33	Influence of the non-linear Hertzian stiffness on the dynamics of a spur gear system under transient regime and tooth defects. International Journal of Vehicle Noise and Vibration, 2011, 7, 149.	0.0	12
34	Simulating the dynamic behavior of planetary gearbox based on improved Hanning function. Comptes Rendus - Mecanique, 2019, 347, 49-61.	2.1	12
35	Effect of elastic coupling on the modal characteristics of spur gearbox system. Applied Acoustics, 2019, 144, 71-84.	1.7	12
36	Numerical model of a single stage gearbox under variable regime. Mechanics Based Design of Structures and Machines, 2023, 51, 1054-1081.	3.4	12

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37	Performance of a Non Linear Dynamic Vibration Absorbers. Journal of Mechanics, 2015, 31, 345-353.	0.7	11
38	Angular-based modeling of induction motors for monitoring. Journal of Sound and Vibration, 2017, 395, 371-392.	2.1	11
39	Modeling of a passive absorber in milling tool machine. Applied Acoustics, 2017, 128, 94-110.	1.7	10
40	Effect of Load Shape in Cyclic Load Variation on Dynamic Behavior of Spur Gear System. Key Engineering Materials, 0, 518, 119-126.	0.4	9
41	Modal analysis of gearbox transmission system in Bucket wheel excavator. Journal of Theoretical and Applied Mechanics, 0, , 253.	0.2	9
42	Dynamic response simulation of planetary gears by the iterative spectral method. International Journal of Simulation Modelling, 2005, 4, 35-45.	0.6	9
43	Intelligent optimal controller design applied to quarter car model based on non-asymptotic observer for improved vehicle dynamics. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2021, 235, 929-942.	0.7	7
44	Road profile identification using estimation techniques: comparison between independent component analysis and Kalman filter. Journal of Theoretical and Applied Mechanics, 2019, 57, 397-409.	0.2	7
45	Dynamic behavior of the nonlinear planetary gear model in nonstationary conditions. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2021, 235, 4648-4662.	1.1	6
46	Electrical Modeling for Faults Detection Based on Motor Current Signal Analysis and Angular Approach. Applied Condition Monitoring, 2016, , 15-25.	0.4	5
47	Dynamic analysis of gearbox behaviour in milling process: Non-stationary operations. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2016, 230, 3372-3388.	1.1	5
48	Early Detection of Gear Faults in Variable Load and Local Defect Size Using Ensemble Empirical Mode Decomposition (EEMD). Applied Condition Monitoring, 2017, , 13-22.	0.4	5
49	The effect of a cracked tooth on the dynamic response of a simple gearbox with a flexible coupling under acyclism operation. Journal of Theoretical and Applied Mechanics, 2019, 57, 591-603.	0.2	5
50	ASYMPTOTIC NUMERICAL METHOD FOR THE DYNAMIC STUDY OF NONLINEAR VIBRATION ABSORBERS. International Journal of Applied Mechanics, 2014, 06, 1450053.	1.3	4
51	Real time algorithm implemented in Altera's FPGA for a newly designed mobile robot. Multidiscipline Modeling in Materials and Structures, 2014, 10, 75-93.	0.6	4
52	Load Sharing Behavior in Planetary Gear Set. Applied Condition Monitoring, 2015, , 459-468.	0.4	4
53	Analysis of a Planetary Gearbox Under Non-stationary Operating Conditions: Numerical and Experimental Results. Applied Condition Monitoring, 2016, , 351-362.	0.4	4
54	Passive vibration absorber effect on the machining surface quality of a flexible workpiece. Comptes Rendus - Mecanique, 2019, 347, 903-911.	2.1	4

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55	L-Kurtosis and Improved Complete Ensemble EMD in Early Fault Detection Under Variable Load and Speed. Applied Condition Monitoring, 2019, , 3-15.	0.4	4
56	Special feature on rotating machinery condition monitoring by connecting physics-based and data-driven methods. Measurement Science and Technology, 2022, 33, 010103.	1.4	4
57	Obstacle avoidance of a mobile robot using a hierarchical control. , 2008, , .		3
58	Nonlinear modeling and simulation of spur gear with defected bearings. Multidiscipline Modeling in Materials and Structures, 2012, 8, 197-212.	0.6	3
59	Identification of nonlinear anti-vibration isolator properties. Comptes Rendus - Mecanique, 2017, 345, 386-398.	2.1	3
60	Effect of Gravity of Carrier on the Dynamic Behavior of Planetary Gears. Lecture Notes in Mechanical Engineering, 2018, , 975-983.	0.3	3
61	Order-Based Identification of Bearing Defects under Variable Speed Condition. Applied Sciences (Switzerland), 2021, 11, 3962.	1.3	3
62	Modal Analysis of Spur Gearbox with an Elastic Coupling. Applied Condition Monitoring, 2017, , 153-163.	0.4	3
63	Dynamic Behavior of Back to Back Planetary Gear in Presence of Pitting Defects. Applied Condition Monitoring, 2019, , 16-22.	0.4	3
64	Implementation of applications on a newly designed robot prototype: “Autonomous navigation and parallel parking”. , 2009, , .		2
65	An Experimental Investigation of the Dynamic Behavior of Planetary Gear Set. Lecture Notes in Mechanical Engineering, 2013, , 199-206.	0.3	2
66	Modeling of Gear Transmissions Dynamics in Non-stationary Conditions. Lecture Notes in Mechanical Engineering, 2014, , 109-124.	0.3	2
67	Experimental study of passive vibration suppression using absorber with spherical ball impact damper. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2017, 231, 3193-3201.	1.1	2
68	Experimental Investigation on the Influence of Relative Density on the Compressive Behaviour of Metal Mesh Isolator. Lecture Notes in Mechanical Engineering, 2018, , 941-947.	0.3	2
69	Influence of the Non-linear Hertzian Stiffness on the Dynamic Behavior of Planetary Gear During Run up Condition. Applied Condition Monitoring, 2019, , 30-38.	0.4	2
70	Alternating Frequency Time Domains identification technique: Parameters determination for nonlinear system from measured transmissibility data. European Journal of Mechanics, A/Solids, 2020, 80, 103886.	2.1	2
71	Tooth defect detection in planetary gears by the current signature analysis: numerical modelling and experimental measurements. Comptes Rendus - Mecanique, 2021, 349, 275-298.	0.3	2
72	Early Damage Detection in Planetary Gear Transmission in Down-Time Regime. Applied Condition Monitoring, 2022, , 31-37.	0.4	2

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73	On-line Adaptive Scaling Parameter in Active Disturbance Rejection Controller. Applied Condition Monitoring, 2019, , 79-86.	0.4	2
74	Porous material effect on gearbox vibration and acoustic behavior. Journal of Theoretical and Applied Mechanics, 0, , 1381.	0.2	2
75	Influence of the Acyclism on the Dynamics of a Spur Gear System. , 2012, , 125-132.		1
76	Modal Analysis of Helical Planetary Gear Train Coupled to Bevel Gear. Lecture Notes in Mechanical Engineering, 2014, , 149-158.	0.3	1
77	New Modeling of Planetary Gear Transmission. Lecture Notes in Mechanical Engineering, 2018, , 1227-1233.	0.3	1
78	Dynamic Behavior of Spur Gearbox with Elastic Coupling in the Presence of Eccentricity Defect Under Acyclism Regime. Applied Condition Monitoring, 2019, , 123-132.	0.4	1
79	A New Dynamic Model for Worm Drives. Applied Condition Monitoring, 2021, , 235-242.	0.4	1
80	Gearbox Fault Identification Under Non-Gaussian Noise and Time-Varying Operating Conditions. Applied Condition Monitoring, 2021, , 1-9.	0.4	1
81	Dynamic Behavior of Spur Gearbox with an Elastic Coupling Under Acyclism Regime. Applied Condition Monitoring, 2018, , 319-327.	0.4	1
82	Experimental Investigation of Normal/Lateral Excitation Direction Influence on the Dynamic Characteristics of Metal Mesh Isolator. Applied Condition Monitoring, 2019, , 227-234.	0.4	1
83	Modeling the Transmission Path in a Planetary Gearbox: A Comparison of Two Methods. Lecture Notes in Mechanical Engineering, 2020, , 95-104.	0.3	1
84	Eccentricity Incidence on the Nonlinear Behavior of a Helical Gear. , 2012, , 175-182.		0
85	Operational Modal Analysis for a Half Vehicle Model. Applied Condition Monitoring, 2019, , 51-60.	0.4	0
86	Effect of Non-linear Suspension on the Recognition of the Road Disturbance. Applied Condition Monitoring, 2022, , 65-74.	0.4	0
87	The Time-Frequency Filtering (TFF) Method Used in Early Detection of Gear Faults in Variable Load and Dimensions Defect. Applied Condition Monitoring, 2019, , 56-67.	0.4	0
88	Transfer Path Analysis of Planetary Gear with Mechanical Power Recirculation. Applied Condition Monitoring, 2019, , 104-115.	0.4	0
89	Default Detection in a Back-to-Back Planetary Gearbox Through Current and Vibration Signals. Applied Condition Monitoring, 2019, , 189-197.	0.4	0
90	Maintenance 4.0 of Wind Turbine. Lecture Notes in Mechanical Engineering, 2020, , 1-10.	0.3	0