Franco Concli

List of Publications by Year
in descending order

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68

papers

1,332

citations

304743

22

h-index

414414

32

g-index

69

all docs

69

docs citations

69

times ranked

440

citing authors

#	Article	IF	Citations
1	High and low-cycle-fatigue properties of 17â€“4 PH manufactured via selective laser melting in as-built, machined and hipped conditions. Progress in Additive Manufacturing, 2022, 7, 99-109.	4.8	11
2	Particle Image Velocimetry measurements inside a tapered roller bearing with an outer ring made of sapphire: Design and operation of an innovative test rig. Tribology International, 2022, 165, 107313.	5.9	20
3	Study of the impact of aeration on the lubricant behavior in a tapered roller bearing: Innovative numerical modelling and validation via particle image velocimetry. Tribology International, 2022, 165, 107301.	5.9	26
4	Gear root bending strength: statistical treatment of Single Tooth Bending Fatigue tests results. Forschung Im Ingenieurwesen/Engineering Research, 2022, 86, 251-258.	1.6	5
5	A Multi Domain Modeling Approach for the CFD Simulation of Multi-Stage Gearboxes. Energies, 2022, 15, 837.	3.1	8
6	Effect of Gear Design Parameters on Stress Histories Induced by Different Tooth Bending Fatigue Tests: A Numerical-Statistical Investigation. Applied Sciences (Switzerland), 2022, 12, 3950.	2.5	8
7	An Element Deletion Algorithm for an Open-Source Finite Element Software. Lecture Notes in Mechanical Engineering, 2022, , 137-144.	0.4	1
8	Experimentalâ€“numerical assessment of ductile failure of Additive Manufacturing selective laser melting reticular structures made of Al A357. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2021, 235, 1909-1916.	2.1	17
9	Ductile damage assessment of Ti6Al4V, 17-4PH and AlSi10Mg for additive manufacturing. Engineering Fracture Mechanics, 2021, 241, 107395.	4.3	24
10	Cyclic behavior and fatigue resistance of AISI H11 and AISI H13 tool steels. Engineering Failure Analysis, 2021, 121, 105096.	4.0	10
11	Numerical modeling of selective laser melting lattice structures: A review of approaches. IOP Conference Series: Materials Science and Engineering, 2021, 1038, 012002.	0.6	2
12	A Model-Based SHM Strategy for Gearsâ€”Development of a Hybrid FEM-Analytical Approach to Investigate the Effects of Surface Fatigue on the Vibrational Spectra of a Back-to-Back Test Rig. Applied Sciences (Switzerland), 2021, 11, 2026.	2.5	8
13	Structural modelling of multilayer skis with an open source FEM software. IOP Conference Series: Materials Science and Engineering, 2021, 1038, 012005.	0.6	0
14	Preliminary Evaluation of the Influence of Surface and Tooth Root Damage on the Stress and Strain State of a Planetary Gearbox: An Innovative Hybrid Numericalâ€“Analytical Approach for Further Development of Structural Health Monitoring Models. Computation, 2021, 9, 38.	2.0	7
15	Tooth Root Bending Strength of Gears: Dimensional Effect for Small Gears Having a Module below 5 mm. Applied Sciences (Switzerland), 2021, 11, 2416.	2.5	7
16	Bending Fatigue Behavior of 17-4 PH Gears Produced by Additive Manufacturing. Applied Sciences (Switzerland), 2021, 11, 3019.	2.5	13
17	Gear Root Bending Strength: A New Multiaxial Approach to Translate the Results of Single Tooth Bending Fatigue Tests to Meshing Gears. Metals, 2021, 11, 863.	2.3	16
18	Power Losses of Spiral Bevel Gears: An Analysis Based on Computational Fluid Dynamics. Frontiers in Mechanical Engineering, 2021, 7, .	1.8	3

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19	Gear Root Bending Strength: A Comparison Between Single Tooth Bending Fatigue Tests and Meshing Gears. Journal of Mechanical Design, Transactions of the ASME, 2021, 143, .	2.9	20
20	Compressive behavior assessment of a newly developed circular cell-based lattice structure. Materials and Design, 2021, 205, 109716.	7.0	47
21	A Multibody Dynamic Model for Evaluating the Vibrating Modes of Gear Train Systems. International Journal of Transport Development and Integration, 2021, 5, 264-277.	0.9	2
22	RELIABLE GEAR DESIGN: TRANSLATION OF THE RESULTS OF SINGLE TOOTH BENDING FATIGUE TESTS THROUGH THE COMBINATION OF NUMERICAL SIMULATIONS AND FATIGUE CRITERIA. WIT Transactions on Engineering Sciences, 2021, , .	0.0	10
23	CFD simulations of gearboxes: implementation of a mesh clustering algorithm for efficient simulations of complex systemâ€™s architectures. International Journal of Mechanical and Materials Engineering, 2021, 16, .	2.2	12
24	DEVELOPMENT OF A MESH CLUSTERING ALGORITHM AIMED AT REDUCING THE COMPUTATIONAL EFFORT OF GEARBOXESâ€™ CFD SIMULATIONS. WIT Transactions on Engineering Sciences, 2021, , .	0.0	1
25	Impact of the LACKS of Fusion Induced by Additive Manufacturing on the Lubrication of a Gear Flank. Lubricants, 2021, 9, 83.	2.9	2
26	CRITICAL PLANES CRITERIA APPLIED TO GEAR TEETH: WHICH ONE IS THE MOST APPROPRIATE TO CHARACTERIZE CRACK PROPAGATION?. WIT Transactions on Engineering Sciences, 2021, , .	0.0	6
27	BENDING FATIGUE STRENGTH OF SMALL SIZE 2 MM MODULE GEARS. WIT Transactions on Engineering Sciences, 2021, , .	0.0	1
28	CFD simulation of grease lubrication: Analysis of the power losses and lubricant flows inside a back-to-back test rig gearbox. Journal of Non-Newtonian Fluid Mechanics, 2021, 297, 104652.	2.4	13
29	Early Crack Propagation in Single Tooth Bending Fatigue: Combination of Finite Element Analysis and Critical-Planes Fatigue Criteria. Metals, 2021, 11, 1871.	2.3	13
30	Introduction of Open-Source Engineering Tools for the Structural Modeling of a Multilayer Mountaineering Ski under Operation. Applied Sciences (Switzerland), 2020, 10, 5310.	2.5	8
31	A Review of the Selective Laser Melting Lattice Structures and Their Numerical Models. Advanced Engineering Materials, 2020, 22, 2000611.	3.5	62
32	Journal Bearing: An Integrated CFD-Analytical Approach for the Estimation of the Trajectory and Equilibrium Position. Applied Sciences (Switzerland), 2020, 10, 8573.	2.5	3
33	Computational Fluid Dynamics Applied to Lubricated Mechanical Components: Review of the Approaches to Simulate Gears, Bearings, and Pumps. Applied Sciences (Switzerland), 2020, 10, 8810.	2.5	23
34	Oil distribution and churning losses of gearboxes: Experimental and numerical analysis. Tribology International, 2020, 151, 106496.	5.9	37
35	Innovative Meshing Strategies for Bearing Lubrication Simulations. Lubricants, 2020, 8, 46.	2.9	26
36	High Power Density Speed Reducers: A TRIZ Based Classification of Mechanical Solutions. IFIP Advances in Information and Communication Technology, 2020, , 243-253.	0.7	1

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37	Hybrid transmissions for the Optimisation of the efficiency of Internal Combustion Engines. International Journal of Transport Development and Integration, 2020, 4, 321-329.	0.9	1
38	Effect of the static pressure on the power dissipation of gearboxes. Lubrication Science, 2019, 31, 347-355.	2.1	5
39	Numerical and experimental assessment of the mechanical properties of 3D printed 18-Ni300 steel trabecular structures produced by Selective Laser Melting â€“ a lean design approach. Virtual and Physical Prototyping, 2019, 14, 267-276.	10.4	39
40	Experimental testing and Numerical modelling of a Kevlar woven â€“ epoxy matrix composite subjected to a punch test. Procedia Structural Integrity, 2019, 24, 3-10.	0.8	1
41	Bending fatigue behaviour of 17-4 PH gears produced via selective laser melting. Procedia Structural Integrity, 2019, 24, 764-774.	0.8	26
42	Fracture locus of a CORTEN steel: Finite Element calibration based on experimental results. Procedia Structural Integrity, 2019, 24, 738-745.	0.8	5
43	LUBRICATION OF GEARBOXES: CFD ANALYSIS OF A CYCLOIDAL GEAR SET. WIT Transactions on Engineering Sciences, 2019, , .	0.0	23
44	Austempered Ductile Iron (ADI) for gears: Contact and bending fatigue behavior. Procedia Structural Integrity, 2018, 8, 14-23.	0.8	32
45	Contact and bending fatigue behaviour of austempered ductile iron gears. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 998-1008.	2.1	29
46	Numerical and experimental assessment of the static behavior of 3D printed reticular Al structures produced by Selective Laser Melting: progressive damage and failure. Procedia Structural Integrity, 2018, 12, 204-212.	0.8	18
47	A mixed FEM and lumped-parameter dynamic model for evaluating the modal properties of planetary gearboxes. Journal of Mechanical Science and Technology, 2018, 32, 3047-3056.	1.5	36
48	Low-loss gears precision planetary gearboxes: reduction of the load dependent power losses and efficiency estimation through aÂhybrid analytical-numerical optimization tool. Forschung Im Ingenieurwesen/Engineering Research, 2017, 81, 395-407.	1.6	29
49	Numerical modeling of the churning power losses in planetary gearboxes: An innovative partitioningâ€•based meshing methodology for the application of a computational effort reduction strategy to complex gearbox configurations. Lubrication Science, 2017, 29, 455-474.	2.1	52
50	A New Integrated Approach for the Prediction of the Load Independent Power Losses of Gears: Development of a Mesh-Handling Algorithm to Reduce the CFD Simulation Time. Advances in Tribology, 2016, 2016, 1-8.	2.1	36
51	Numerical modeling of the power losses in geared transmissions: Windage, churning and cavitation simulations with a new integrated approach that drastically reduces the computational effort. Tribology International, 2016, 103, 58-68.	5.9	83
52	Pressure distribution in small hydrodynamic journal bearings considering cavitation: a numerical approach based on the openâ€•source CFD code OpenFOAMÂ®. Lubrication Science, 2016, 28, 329-347.	2.1	34
53	Windage, churning and pocketing power losses of gears: different modeling approaches for different goals. Forschung Im Ingenieurwesen/Engineering Research, 2016, 80, 85-99.	1.6	51
54	Thermal and efficiency characterization of a low-backlash planetary gearbox: An integrated numerical-analytical prediction model and its experimental validation. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2016, 230, 996-1005.	1.8	30

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55	Churning power losses of ordinary gears: a new approach based on the internal fluid dynamics simulations. Lubrication Science, 2015, 27, 313-326.	2.1	40
56	Windage Power Losses of Ordinary Gears: Different CFD Approaches Aimed to the Reduction of the Computational Effort. Lubricants, 2014, 2, 162-176.	2.9	36
57	Analysis of the power losses in geared transmissions - measurements and CFD calculations based on open source codes. , 2014, , 1131-1140.		4
58	Analysis of power losses in an industrial planetary speed reducer: Measurements and computational fluid dynamics calculations. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 11-21.	1.8	27
59	A CFD analysis of the oil squeezing power losses of a gear pair. International Journal of Computational Methods and Experimental Measurements, 2014, 2, 157-167.	0.2	16
60	Hydraulic losses of a gearbox: CFD analysis and experiments. Tribology International, 2013, 66, 337-344.	5.9	62
61	Influence of lubricant temperature, lubricant level and rotational speed on the churning power loss in an industrial planetary speed reducer: computational and experimental study. International Journal of Computational Methods and Experimental Measurements, 2013, 1, 353-366.	0.2	21
62	CFD Simulations of Splash Losses of a Gearbox. Advances in Tribology, 2012, 2012, 1-10.	2.1	45
63	Bending Fatigue Strength of Innovative Gear Materials for Wind Turbines Gearboxes: Effect of Surface Coatings. , 2012, , .		14
64	Analysis of the Oil Squeezing Power Losses of a Spur Gear Pair by Mean of CFD Simulations. , 2012, , .		12
65	Oil squeezing power losses in gears: a CFD analysis. WIT Transactions on Engineering Sciences, 2012, , .	0.0	20
66	Computational and experimental analysis of the churning power losses in an industrial planetary speed reducer. , 2012, , .		21
67	High-Cycle-Fatigue Characterization of an Additive Manufacturing 17-4 PH Stainless Steel. Key Engineering Materials, 0, 877, 49-54.	0.4	7
68	Low-Cycle-Fatigue Properties of a 17-4 PH Stainless Steel Manufactured via Selective Laser Melting. Key Engineering Materials, 0, 877, 55-60.	0.4	3