

# 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	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
2	Hydraulic losses of a gearbox: CFD analysis and experiments. Tribology International, 2013, 66, 337-344.	5.9	62
3	A Review of the Selective Laser Melting Lattice Structures and Their Numerical Models. Advanced Engineering Materials, 2020, 22, 2000611.	3.5	62
4	Numerical modeling of the churning power losses in planetary gearboxes: An innovative cell-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
5	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
6	Compressive behavior assessment of a newly developed circular cell-based lattice structure. Materials and Design, 2021, 205, 109716.	7.0	47
7	CFD Simulations of Splash Losses of a Gearbox. Advances in Tribology, 2012, 2012, 1-10.	2.1	45
8	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
9	Numerical and experimental assessment of the mechanical properties of 3D printed 18-Ni300 steel trabecular structures produced by Selective Laser Melting – a lean design approach. Virtual and Physical Prototyping, 2019, 14, 267-276.	10.4	39
10	Oil distribution and churning losses of gearboxes: Experimental and numerical analysis. Tribology International, 2020, 151, 106496.	5.9	37
11	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
12	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
13	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
14	Pressure distribution in small hydrodynamic journal bearings considering cavitation: a numerical approach based on the open-source CFD code OpenFOAM®. Lubrication Science, 2016, 28, 329-347.	2.1	34
15	Austempered Ductile Iron (ADI) for gears: Contact and bending fatigue behavior. Procedia Structural Integrity, 2018, 8, 14-23.	0.8	32
16	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
17	Low-loss gears precision planetary gearboxes: reduction of the load dependent power losses and efficiency estimation through a hybrid analytical-numerical optimization tool. Forschung Im Ingenieurwesen/Engineering Research, 2017, 81, 395-407.	1.6	29
18	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

#	ARTICLE	IF	CITATIONS
19	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
20	Bending fatigue behaviour of 17-4 PH gears produced via selective laser melting. Procedia Structural Integrity, 2019, 24, 764-774.	0.8	26
21	Innovative Meshing Strategies for Bearing Lubrication Simulations. Lubricants, 2020, 8, 46.	2.9	26
22	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
23	Ductile damage assessment of Ti6Al4V, 17-4PH and AlSi10Mg for additive manufacturing. Engineering Fracture Mechanics, 2021, 241, 107395.	4.3	24
24	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
25	LUBRICATION OF GEARBOXES: CFD ANALYSIS OF A CYCLOIDAL GEAR SET. WIT Transactions on Engineering Sciences, 2019, , .	0.0	23
26	Computational and experimental analysis of the churning power losses in an industrial planetary speed reducer. , 2012, , .		21
27	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
28	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
29	Oil squeezing power losses in gears: a CFD analysis. WIT Transactions on Engineering Sciences, 2012, , .	0.0	20
30	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
31	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
32	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
33	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
34	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
35	Bending Fatigue Strength of Innovative Gear Materials for Wind Turbines Gearboxes: Effect of Surface Coatings. , 2012, , .		14
36	Bending Fatigue Behavior of 17-4 PH Gears Produced by Additive Manufacturing. Applied Sciences (Switzerland), 2021, 11, 3019.	2.5	13

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37	CFD simulation of grease lubrication: Analysis of the power losses and lubricant flows inside a back-to-back test rig gearbox. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 297, 104652.	2.4	13
38	Early Crack Propagation in Single Tooth Bending Fatigue: Combination of Finite Element Analysis and Critical-Planes Fatigue Criteria. <i>Metals</i> , 2021, 11, 1871.	2.3	13
39	Analysis of the Oil Squeezing Power Losses of a Spur Gear Pair by Mean of CFD Simulations. , 2012, , .		12
40	CFD simulations of gearboxes: implementation of a mesh clustering algorithm for efficient simulations of complex system's architectures. <i>International Journal of Mechanical and Materials Engineering</i> , 2021, 16, .	2.2	12
41	High and low-cycle-fatigue properties of 17â€“4 PH manufactured via selective laser melting in as-built, machined and hiped conditions. <i>Progress in Additive Manufacturing</i> , 2022, 7, 99-109.	4.8	11
42	Cyclic behavior and fatigue resistance of AISI H11 and AISI H13 tool steels. <i>Engineering Failure Analysis</i> , 2021, 121, 105096.	4.0	10
43	RELIABLE GEAR DESIGN: TRANSLATION OF THE RESULTS OF SINGLE TOOTH BENDING FATIGUE TESTS THROUGH THE COMBINATION OF NUMERICAL SIMULATIONS AND FATIGUE CRITERIA. <i>WIT Transactions on Engineering Sciences</i> , 2021, , .	0.0	10
44	Introduction of Open-Source Engineering Tools for the Structural Modeling of a Multilayer Mountaineering Ski under Operation. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 5310.	2.5	8
45	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. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 2026.	2.5	8
46	A Multi Domain Modeling Approach for the CFD Simulation of Multi-Stage Gearboxes. <i>Energies</i> , 2022, 15, 837.	3.1	8
47	Effect of Gear Design Parameters on Stress Histories Induced by Different Tooth Bending Fatigue Tests: A Numerical-Statistical Investigation. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 3950.	2.5	8
48	High-Cycle-Fatigue Characterization of an Additive Manufacturing 17-4 PH Stainless Steel. <i>Key Engineering Materials</i> , 0, 877, 49-54.	0.4	7
49	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. <i>Computation</i> , 2021, 9, 38.	2.0	7
50	Tooth Root Bending Strength of Gears: Dimensional Effect for Small Gears Having a Module below 5 mm. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 2416.	2.5	7
51	CRITICAL PLANES CRITERIA APPLIED TO GEAR TEETH: WHICH ONE IS THE MOST APPROPRIATE TO CHARACTERIZE CRACK PROPAGATION?. <i>WIT Transactions on Engineering Sciences</i> , 2021, , .	0.0	6
52	Effect of the static pressure on the power dissipation of gearboxes. <i>Lubrication Science</i> , 2019, 31, 347-355.	2.1	5
53	Fracture locus of a CORTEN steel: Finite Element calibration based on experimental results. <i>Procedia Structural Integrity</i> , 2019, 24, 738-745.	0.8	5
54	Gear root bending strength: statistical treatment of Single Tooth Bending Fatigue tests results. <i>Forschung Im Ingenieurwesen/Engineering Research</i> , 2022, 86, 251-258.	1.6	5

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55	Analysis of the power losses in geared transmissions - measurements and CFD calculations based on open source codes. , 2014, , 1131-1140.		4
56	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
57	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
58	Power Losses of Spiral Bevel Gears: An Analysis Based on Computational Fluid Dynamics. Frontiers in Mechanical Engineering, 2021, 7, .	1.8	3
59	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
60	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
61	Impact of the LACKS of Fusion Induced by Additive Manufacturing on the Lubrication of a Gear Flank. Lubricants, 2021, 9, 83.	2.9	2
62	Experimental testing and Numerical modelling of a Kevlar woven “ epoxy matrix composite subjected to a punch test. Procedia Structural Integrity, 2019, 24, 3-10.	0.8	1
63	DEVELOPMENT OF A MESH CLUSTERING ALGORITHM AIMED AT REDUCING THE COMPUTATIONAL EFFORT OF GEARBOXES™ CFD SIMULATIONS. WIT Transactions on Engineering Sciences, 2021, , .	0.0	1
64	BENDING FATIGUE STRENGTH OF SMALL SIZE 2 MM MODULE GEARS. WIT Transactions on Engineering Sciences, 2021, , .	0.0	1
65	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
66	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
67	An Element Deletion Algorithm for an Open-Source Finite Element Software. Lecture Notes in Mechanical Engineering, 2022, , 137-144.	0.4	1
68	Structural modelling of multilayer skis with an open source FEM software. IOP Conference Series: Materials Science and Engineering, 2021, 1038, 012005.	0.6	0