

# Vincent Lanfranchi

## List of Publications by Year in descending order

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68  
papers

1,040  
citations

623734

14  
h-index

477307

29  
g-index

70  
all docs

70  
docs citations

70  
times ranked

618  
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization and Reduction of Audible Magnetic Noise Due to PWM Supply in Induction Machines. IEEE Transactions on Industrial Electronics, 2010, 57, 1288-1295.	7.9	131
2	Prediction of Audible Magnetic Noise Radiated by Adjustable-Speed Drive Induction Machines. IEEE Transactions on Industry Applications, 2010, 46, 1367-1373.	4.9	68
3	Coupled Numerical Simulation Between Electromagnetic and Structural Models. Influence of the Supply Harmonics for Synchronous Machine Vibrations. IEEE Transactions on Magnetics, 2012, 48, 983-986.	2.1	67
4	Multiobjective Optimization of Induction Machines Including Mixed Variables and Noise Minimization. IEEE Transactions on Magnetics, 2008, 44, 1102-1105.	2.1	66
5	Optimal Slot Numbers for Magnetic Noise Reduction in Variable-Speed Induction Motors. IEEE Transactions on Magnetics, 2009, 45, 3131-3136.	2.1	62
6	Multiphysics Modeling: Electro-Vibro-Acoustics and Heat Transfer of PWM-Fed Induction Machines. IEEE Transactions on Industrial Electronics, 2010, 57, 1279-1287.	7.9	61
7	Optimal Slot Opening Width for Magnetic Noise Reduction in Induction Motors. IEEE Transactions on Energy Conversion, 2009, 24, 869-874.	5.2	48
8	Design and Magnetic Noise Reduction of the Surface Permanent Magnet Synchronous Machine Using Complex Air-Gap Permeance. IEEE Transactions on Magnetics, 2015, 51, 1-9.	2.1	46
9	Characterization and Reduction of Magnetic Noise Due to Saturation in Induction Machines. IEEE Transactions on Magnetics, 2009, 45, 2003-2008.	2.1	36
10	Characterisation of radial vibration force and vibration behaviour of a pulse-width modulation-fed fractional-slot induction machine. IET Electric Power Applications, 2009, 3, 197.	1.8	36
11	Acoustic noise of electromagnetic origin in a fractional-slot induction machine. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2008, 27, 1033-1052.	0.9	34
12	Noise and vibration of a power transformer under an electrical excitation. Applied Acoustics, 2017, 128, 64-70.	3.3	33
13	Active reduction of electrical machines magnetic noise by the control of low frequency current harmonics. , 2012, , .		31
14	Rotor and stator shape optimization of a synchronous machine to reduce iron losses and acoustic noise. , 2012, , .		30
15	Vibro-Acoustic Simulation and Optimization of a Claw-Pole Alternator. IEEE Transactions on Industry Applications, 2016, 52, 3878-3885.	4.9	22
16	Modal stability procedure applied to variability in vibration from electromagnetic origin for an electric motor. Finite Elements in Analysis and Design, 2016, 122, 61-74.	3.2	15
17	A Novel and Simple Torque Ripple Minimization Method of Synchronous Reluctance Machine Based on Torque Function Method. IEEE Transactions on Industrial Electronics, 2021, 68, 92-102.	7.9	15
18	Multiphysics modeling: electro-vibro-acoustics and heat transfer of induction machines. , 2008, , .		14

#	ARTICLE	IF	CITATIONS
19	Influence of temperature on the vibro-acoustic behavior of claw-pole alternators. , 2014, , .		12
20	Multi-objective optimization of the induction machine with minimization of audible electromagnetic noise. EPJ Applied Physics, 2007, 39, 101-107.	0.7	11
21	An Anisotropic Model for Magnetostriction and Magnetization Computing for Noise Generation in Electric Devices. Sensors, 2016, 16, 553.	3.8	11
22	Characterization of the audible magnetic noise emitted by traction motors in railway rolling stock. Noise Control Engineering Journal, 2009, 57, 391.	0.3	10
23	Wavelet-based non-stationary near-field acoustical holography. Applied Acoustics, 2013, 74, 1226-1233.	3.3	9
24	Influence of the load angle on the magnetic pressure harmonic content of a WRSM. , 2010, , .		8
25	Macroscopic modeling of anisotropic magnetostriction and magnetization in soft ferromagnetic materials. Journal of Magnetism and Magnetic Materials, 2016, 404, 74-78.	2.3	8
26	Prediction of audible magnetic noise radiated by adjustable speed drive induction machines. , 2009, , .		7
27	Investigation on Mechanical Resonance Induced by Magnetostriction in a Structure Based on Si-Fe Sheets. IEEE Transactions on Magnetics, 2018, 54, 1-12.	2.1	7
28	Effect of mechanical stress on magnetization and magnetostriction strain behavior of non-oriented Si-Fe steels at different directions and under pseudo-DC conditions. International Journal of Applied Electromagnetics and Mechanics, 2019, 60, 299-312.	0.6	7
29	Spread spectrum strategies study for induction motor vibratory and acoustic behavior. Industrial Electronics Society (IECON ), Annual Conference of IEEE, 2006, , .	0.0	6
30	Mixed-variable optimal design of induction motors including efficiency, noise and thermal criteria. Optimization and Engineering, 2011, 12, 55-72.	2.4	6
31	Numerical simulations of rotor dynamic eccentricity effects on synchronous machine vibrations for full run up. , 2012, , .		6
32	Vibro-acoustic simulation and optimization of a claw-pole alternator. , 2015, , .		6
33	A hybrid electromagnetic model for acoustic optimization of claw-pole alternators. International Journal of Applied Electromagnetics and Mechanics, 2016, 51, S3-S11.	0.6	6
34	Preliminary Thermal Evaluation of Actuator for Steer-by-Wire Vehicle. IEEE Transactions on Vehicular Technology, 2018, 67, 11468-11474.	6.3	6
35	Analysis of torque ripple reduction in a segmented-rotor synchronous reluctance machine by optimal currents. Mathematics and Computers in Simulation, 2019, 158, 130-147.	4.4	6
36	Characterisation of radial vibration force and electromagnetic noise behaviour of a PWM-fed permanent magnet synchronous machine. , 2012, , .		5

#	ARTICLE	IF	CITATIONS
37	Fault-tolerant control of six-phase induction machines using combined fuzzy logic and genetic algorithms. , 2013, , .		5
38	Influence of the Manufacturing Process of a Claw-Pole Alternator on Its Stator Shape and Acoustic Noise. IEEE Transactions on Industry Applications, 2017, 53, 4389-4395.	4.9	5
39	Comparison of radial and tangential forces effect on the radial vibrations of synchronous machines. , 2019, , .		5
40	Influence of the load angle on magnetic radial forces and torque ripple of a low power permanent magnet synchronous machine. Mathematics and Computers in Simulation, 2021, 184, 153-164.	4.4	5
41	Sensorless position control of six-phase induction machine using fuzzy-PI system. , 2011, , .		4
42	Intelligent sensorless speed control of six-phase induction machine. , 2011, , .		4
43	Simple lumped parameter thermal model with practical experimental fitting method for synchronous reluctance machine. , 2013, , .		4
44	Six-phase Axial Flux Permanent Magnet generator model: Simulation and experimental validation. , 2016, , .		4
45	A thermal study on small synchronous reluctance machine in automotive cycle. , 2016, , .		4
46	Influence of the manufacturing process of a claw-pole alternator on its stator shape and acoustic noise. , 2016, , .		4
47	Skew effect on the radial pressure of induction motor. , 2016, , .		4
48	Comparison of Torque Ripple Reductions and Copper Losses of Three Synchronous Reluctance Machines. , 2017, , .		4
49	Influence of the multi-component electrical feed of air-core industrial reactors on their sound radiation. Acta Acustica, 2020, 4, 14.	1.0	4
50	Comparison of optimization algorithms for the design of a brushless DC machine with travel-time minimization. , 2009, , .		3
51	Design and magnetic noise reduction of the surface permanent magnet synchronous machine. , 2014, , .		3
52	Thermal model of stator slot for small synchronous reluctance machine. , 2014, , .		3
53	Fast electro-mechanical performance evaluation tool for synchronous reluctance machine. International Journal of Precision Engineering and Manufacturing, 2017, 18, 1567-1573.	2.2	3
54	Multiphysics model for predicting the sound radiation of a single-layer air-core coil. Applied Acoustics, 2019, 146, 327-333.	3.3	3

#	ARTICLE	IF	CITATIONS
55	Inverter topology comparison for remedial solution in transistor faulty case. , 2007, , .		2
56	Noise radiated by a permanent magnet synchronous motor: Simulation methodology and influence of motor defects. , 2014, , .		2
57	Improved method to compute air-gap magnetic pressure of the Interior Permanent Magnet Synchronous Machine. , 2015, , .		2
58	Torque Ripple Analysis of Synchronous Reluctance Motor with Different Rotor Topologies for Application with Dimensional Constraint. Journal of Electrical Engineering and Technology, 2020, 15, 2167-2177.	2.0	2
59	Mitigation of induction motors constraints in ASD applications. , 0, , .		1
60	Vibratory and acoustic behavior of induction traction motors, machine design improvement. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2006, , .	0.0	1
61	Vibration and acoustic noise of industrial inductors associated to converters in the railway domain. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2016, 35, 1900-1909.	0.9	1
62	Macroscopic model of magnetostriction based on energy minimization. , 2016, , .		1
63	Axial claw pole motor: harmonic torque estimation using finite element method. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2020, 39, 1157-1167.	0.9	1
64	Design of silent electric motors: optimization under constraints and parameters uncertainties. , 2020, , .		1
65	A 3D Thermal Model of SynRM with Segmented Rotor Considering Anisotropic Conductivity. , 2021, , .		1
66	Two-level global sensitivity analysis of the excitation contributions leading to acoustic noise in an electric motor for the purpose of robust optimisation. IET Electric Power Applications, 0, , .	1.8	1
67	Impact of the load angle on magnetic radial pressure and torque ripple of a low power PMSM with trapezoidal control. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2020, 39, 1255-1270.	0.9	0
68	Simple Method to Reduce Computation Time in Planar Air-Gap 3-D FEM Non-Linear Problems. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	0