Enrico Meli

List of Publications by Year
in descending order

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Version: 2024-02-01

101	2,037	218677	289244
papers	citations	26 h-index	40 g-index

104	104	104	1419
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A novel measuring system for high-speed railway vehicles hunting monitoring able to predict wheelset motion and wheel/rail contact characteristics. Vehicle System Dynamics, 2023, 61, 1621-1643.	3.7	7
2	Innovative Design, Structural Optimization, and Additive Manufacturing of New-Generation Turbine Blades. Journal of Turbomachinery, 2022, 144, .	1.7	5
3	Solving Nonlinear Systems of Equations Via Spectral Residual Methods: Stepsize Selection and Applications. Journal of Scientific Computing, 2022, 90, 1.	2.3	6
4	Efficient Flexible Multibody Models for Tilting Pad Journal Bearings. Machines, 2022, 10, 223.	2.2	1
5	A railway local degraded adhesion model including variable friction, energy dissipation and adhesion recovery. Vehicle System Dynamics, 2021, 59, 1697-1718.	3.7	7
6	Model-based mechanical design of a passive lower-limb exoskeleton for assisting workers in shotcrete projection. Meccanica, 2021, 56, 195-210.	2.0	14
7	Experimental evaluation of tramway track wear by means of 3D metrological optical scanners. Tribology - Materials, Surfaces and Interfaces, 2021, 15, 150-158.	1.4	5
8	Experimental study on wear properties of wheel and rail materials with different hardness values. Wear, 2021, 477, 203831.	3.1	27
9	Development and validation of a wear prediction model for railway applications including track flexibility. Wear, 2021, 486-487, 204092.	3.1	3
10	Study on the Influence of Sand Erosion Process on the Wear and Damage of Heat-Treated U75V Rail Steel. Journal of Tribology, 2021, 143, .	1.9	5
11	Modeling and experimental study of power losses in a rolling bearing. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2020, 234, 1332-1351.	1.8	3
12	Effect of spherical and ballast dents on rolling contact fatigue of rail materials. Wear, 2020, 450-451, 203254.	3.1	7
13	New Instrumented Trolleys and A Procedure for Automatic 3D Optical Inspection of Railways. Sensors, 2020, 20, 2927.	3.8	10
14	A General Framework for Designing 3D Impellers Using Topology Optimization and Additive Manufacturing. IEEE Access, 2020, 8, 60259-60269.	4.2	12
15	On the microstructure evolution and nanocrystalline formation of pearlitic wheel material in a rolling-sliding contact. Materials Characterization, 2020, 164, 110333.	4.4	24
16	Validation of a Finite Element Multibody System Model for Vehicle-Slab Track Application. Lecture Notes in Mechanical Engineering, 2020, , 407-414.	0.4	3
17	A Novel Point-in-Polygon-Based sEMG Classifier for Hand Exoskeleton Systems. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 3158-3166.	4.9	13
18	UKF-Based Navigation System for AUVs: Online Experimental Validation. IEEE Journal of Oceanic Engineering, 2019, 44, 633-641.	3.8	37

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19	Development and validation of wear models by using innovative three-dimensional laser scanners. Advances in Mechanical Engineering, 2019, 11, 168781401987040.	1.6	5
20	Toward the integration of lattice structure-based topology optimization and additive manufacturing for the design of turbomachinery components. Advances in Mechanical Engineering, 2019, 11, 168781401985978.	1.6	14
21	A local degraded adhesion model for creep forces evaluation: An approximate approach to the tangential contact problem. Wear, 2019, 440-441, 203084.	3.1	7
22	Design and Production of Innovative Turbomachinery Components via Topology Optimization and Additive Manufacturing. International Journal of Rotating Machinery, 2019, 2019, 1-12.	0.8	12
23	An innovative model for the prediction of wheel - Rail wear and rolling contact fatigue. Wear, 2019, 436-437, 203025.	3.1	13
24	Development and Experimental Validation of Auxiliary Rolling Bearing Models for Active Magnetic Bearings (AMBs) Applications. International Journal of Rotating Machinery, 2019, 2019, 1-19.	0.8	5
25	A novel application of a surface ElectroMyoGraphy-based control strategy for a hand exoskeleton system: A single-case study. International Journal of Advanced Robotic Systems, 2019, 16, 172988141982819.	2.1	24
26	Design of a Series Elastic Transmission for hand exoskeletons. Mechatronics, 2018, 51, 8-18.	3.3	34
27	Energy storage systems to exploit regenerative braking in DC railway systems: Different approaches to improve efficiency of modern high-speed trains. Journal of Energy Storage, 2018, 16, 269-279.	8.1	48
28	Efficient Wheel-Rail Contact Model for the On-Line Estimation of Contact Forces. , 2018, , .		0
29	A New Wear Model Considering Wheel-Rail Conformal Contact. , 2018, , .		1
30	Optimization-based scaling procedure for the design of fully portable hand exoskeletons. Meccanica, 2018, 53, 3157-3175.	2.0	16
31	Effect of spherical dents on microstructure evolution and rolling contact fatigue of wheel/rail materials. Tribology International, 2018, 127, 520-532.	5.9	37
32	Kinematic synthesis and testing of a new portable hand exoskeleton. Meccanica, 2017, 52, 2873-2897.	2.0	28
33	Development, design and validation of an assistive device for hand disabilities based on an innovative mechanism. Robotica, 2017, 35, 892-906.	1.9	19
34	A low cost autonomous underwater vehicle for patrolling and monitoring. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2017, 231, 740-749.	0.5	27
35	An Efficient Iterative Approach for the Analysis of Thermal Instabilities in Rotating Machines. Journal of Vibration and Acoustics, Transactions of the ASME, 2017, 139, .	1.6	2
36	A free floating manipulation strategy for Autonomous Underwater Vehicles. Robotics and Autonomous Systems, 2017, 87, 133-146.	5.1	12

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37	Optimization of potential field method parameters through networks for swarm cooperative manipulation tasks. International Journal of Advanced Robotic Systems, 2016, 13, 172988141665793.	2.1	10
38	Static and Modal Topology Optimization of Turbomachinery Components. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	1.1	10
39	An extended library of models of railway vehicles for fast simulation and optimization of regenerative braking and energy management. , 2016, , .		1
40	Intervention-Autonomous Underwater Vehicle Multibody Models for Dynamic Manipulation Tasks. Computational Methods in Applied Sciences (Springer), 2016, , 193-211.	0.3	0
41	A novel kinematic architecture for portable hand exoskeletons. Mechatronics, 2016, 35, 192-207.	3.3	44
42	A full-scale roller-rig for railway vehicles: multibody modelling and Hardware In the Loop architecture. Multibody System Dynamics, 2016, 37, 69-93.	2.7	7
43	Development and Online Validation of an UKF-based Navigation Algorithm for AUVs. IFAC-PapersOnLine, 2016, 49, 69-74.	0.9	14
44	An efficient quasi-3D rotordynamic and fluid dynamic model of Tilting Pad Journal Bearing. Tribology International, 2016, 103, 449-464.	5.9	10
45	Generic Path Planning Algorithm for Mobile Robots Based on BÃ©zier Curves. IFAC-PapersOnLine, 2016, 49, 145-150.	0.9	12
46	Energetic optimization of regenerative braking for high speed railway systems. Energy Conversion and Management, 2016, 129, 200-215.	9.2	48
47	An unscented Kalman filter based navigation algorithm for autonomous underwater vehicles. Mechatronics, 2016, 39, 185-195.	3.3	70
48	Development of a dynamical weigh in motion system for railway applications. Meccanica, 2016, 51, 2509-2533.	2.0	10
49	Efficient Models of Three-Dimensional Tilting Pad Journal Bearings for the Study of the Interactions Between Rotor and Lubricant Supply Plant. Journal of Computational and Nonlinear Dynamics, 2016, 11, .	1.2	13
50	A new AUV navigation system exploiting unscented Kalman filter. Ocean Engineering, 2016, 113, 121-132.	4.3	177
51	An Innovative Navigation Strategy for Autonomous Underwater Vehicles: An Unscented Kalman Filter Based Approach. , 2015, , .		1
52	An Innovative Procedure for High Speed Weighing in Motion of Railway Vehicles. , 2015, , .		0
53	Energy and wear optimisation of train longitudinal dynamics and of traction and braking systems. Vehicle System Dynamics, 2015, 53, 651-671.	3.7	28
54	Development of a Navigation Algorithm for Autonomous Underwater Vehicles. IFAC-PapersOnLine, 2015, 48, 64-69.	0.9	12

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55	Weigh in Motion systems for railway vehicles: Performance and robustness analysis. , 2015, , .		0
56	Development and experimental testing of a portable hand exoskeleton. , 2015, , .		16
57	An Efficient Quasi-Three-Dimensional Model of Tilting Pad Journal Bearing for Turbomachinery Applications. Journal of Vibration and Acoustics, Transactions of the ASME, 2015, 137, .	1.6	8
58	Development of efficient models of Magnetic Braking Systems of railway vehicles. International Journal of Rail Transportation, 2015, 3, 97-118.	2.7	12
59	An innovative decentralized strategy for I-AUVs cooperative manipulation tasks. Robotics and Autonomous Systems, 2015, 72, 261-276.	5.1	40
60	An innovative algorithm for train detection. , 2015, , .		5
61	A New Strategy for Dynamic Weighing in Motion of Railway Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 3520-3533.	8.0	19
62	Development of a new time domain-based algorithm for train detection and axle counting. Vehicle System Dynamics, 2015, 53, 1850-1875.	3.7	15
63	A comparison between EKF-based and UKF-based navigation algorithms for AUVs localization. , 2015, , .		34
64	TTH library: A new tool for diagnostic assessment of Oil&Gas applications. , 2015, , .		0
65	Development of new HIL architecture to study high speed trains dynamics on full-scale test-rigs. , 2015, , .		1
66	An innovative wheelâ€“rail contact model for railway vehicles under degraded adhesion conditions. Multibody System Dynamics, 2015, 33, 285-313.	2.7	32
67	Modeling and Control of a Full-Scale Roller-Rig for the Analysis of Railway Braking Under Degraded Adhesion Conditions. IEEE Transactions on Control Systems Technology, 2015, 23, 186-196.	5.2	16
68	Development and Preliminary Validation of a New Strategy to Model the Interaction Between Rotating Machines and Elastic Supporting Structure. Mechanisms and Machine Science, 2015, , 2137-2148.	0.5	1
69	Development and Validation of a Model to Describe the Bearings Interaction in Rotating Machines Due to Elastic Supporting Structures. Mechanisms and Machine Science, 2015, , 2111-2122.	0.5	0
70	An Innovative Rotordynamical Model for Coupled Flexural-Torsional Vibrations in Rotating Machines. Mechanisms and Machine Science, 2015, , 1581-1591.	0.5	1
71	Prediction of wheel and rail profile wear on complex railway networks. International Journal of Rail Transportation, 2014, 2, 111-145.	2.7	9
72	An innovative high speed Weigh in Motion system for railway vehicles. , 2014, , .		1

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73	Development of a wear model for the analysis of complex railway networks. Wear, 2014, 309, 174-191.	3.1	49
74	Development of a model for the simultaneous analysis of wheel and rail wear in railway systems. Multibody System Dynamics, 2014, 31, 191-240.	2.7	56
75	An innovative degraded adhesion model for railway vehicles: development and experimental validation. Meccanica, 2014, 49, 919-937.	2.0	10
76	Performance and robustness analysis of a Hardware In the Loop full-scale roller-rig for railway braking and traction testing. Meccanica, 2014, 49, 615-644.	2.0	4
77	An innovative degraded adhesion model for multibody applications in the railway field. Multibody System Dynamics, 2014, 32, 133-157.	2.7	33
78	A numerical procedure for the wheel profile optimisation on railway vehicles. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 206-222.	1.8	10
79	Development of an innovative wheelâ€“rail contact model for the analysis of degraded adhesion in railway systems. Tribology International, 2014, 69, 128-140.	5.9	47
80	Development of a full-scale roller-rig to test high speed trains under degraded adhesion conditions. , 2014, , .		3
81	Cooperative localization of a team of AUVs by a tetrahedral configuration. Robotics and Autonomous Systems, 2014, 62, 1228-1237.	5.1	51
82	An innovative hardware in the loop architecture for the analysis of railway braking under degraded adhesion conditions through roller-rigs. Mechatronics, 2014, 24, 139-150.	3.3	21
83	Preliminary development, simulation and validation of a weigh in motion system for railway vehicles. Meccanica, 2013, 48, 2541-2565.	2.0	31
84	Development of a model for the analysis of wheel wear in railway vehicles. Meccanica, 2013, 48, 681-697.	2.0	14
85	An integrated approach for the optimization of wheelâ€“rail contact force measurement systems. Journal of Modern Transportation, 2013, 21, 95-102.	2.5	7
86	Wheel profile optimization on railway vehicles from the wear viewpoint. International Journal of Non-Linear Mechanics, 2013, 53, 41-54.	2.6	24
87	Development of a wear model for the wheel profile optimisation on railway vehicles. Vehicle System Dynamics, 2013, 51, 1363-1402.	3.7	25
88	Development of a HIL railway roller rig model for the traction and braking testing activities under degraded adhesion conditions. International Journal of Non-Linear Mechanics, 2013, 57, 50-64.	2.6	12
89	Railway Vehicle Dynamics under Degraded Adhesion Conditions: An Innovative HIL Architecture for Braking Tests on Full-Scale Roller-Rigs. International Journal of Railway Technology, 2013, 2, 21-53.	0.3	8
90	Development of a Model for the Prediction of Wheel and Rail Wear in the Railway Field. Journal of Computational and Nonlinear Dynamics, 2012, 7, .	1.2	10

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91	Development and validation of a wear model for the analysis of the wheel profile evolution in railway vehicles. Vehicle System Dynamics, 2012, 50, 1707-1734.	3.7	35
92	A numerical model of a HIL scaled roller rig for simulation of wheelâ€“rail degraded adhesion condition. Vehicle System Dynamics, 2012, 50, 775-804.	3.7	12
93	Development of a wear model for the prediction of wheel and rail profile evolution in railway systems. Wear, 2012, 284-285, 1-17.	3.1	85
94	An innovative wheelâ€“rail contact model for multibody applications. Wear, 2011, 271, 462-471.	3.1	35
95	Multibody modeling of railway vehicles: Innovative algorithms for the detection of wheelâ€“rail contact points. Wear, 2011, 271, 453-461.	3.1	62
96	Development and implementation of a differential elastic wheelâ€“rail contact model for multibody applications. Vehicle System Dynamics, 2011, 49, 969-1001.	3.7	20
97	Dynamic simulation of railway vehicles: wheel/rail contact analysis. Vehicle System Dynamics, 2009, 47, 867-899.	3.7	42
98	Determination of wheelâ€“rail contact points: comparison between classical and neural network based procedures. Meccanica, 2009, 44, 661-686.	2.0	29
99	Determination of wheel/rail contact points in the simulation of railway vehicle dynamics. WIT Transactions on Engineering Sciences, 2009, , .	0.0	4
100	Determination of wheelâ€“rail contact points withÂsemianalytic methods. Multibody System Dynamics, 2008, 20, 327-358.	2.7	82
101	A railway vehicle multibody model for real-time applications. Vehicle System Dynamics, 2008, 46, 1083-1105.	3.7	43