

Marcos E Orchard

List of Publications by Year in descending order

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107
papers

3,361
citations

201575

27
h-index

161767

54
g-index

112
all docs

112
docs citations

112
times ranked

2786
citing authors

#	ARTICLE	IF	CITATIONS
1	Cost-Benefit Analysis of Maintenance Plans: Case Study of the Power System of a Large Industrial Facility. IEEE Transactions on Power Systems, 2023, 38, 2046-2057.	4.6	1
2	Adaptive passivity-based control extended for unknown control direction. ISA Transactions, 2022, 122, 398-408.	3.1	2
3	Data-Driven Representations for Testing Independence: Modeling, Analysis and Connection With Mutual Information Estimation. IEEE Transactions on Signal Processing, 2022, 70, 158-173.	3.2	5
4	New Condition-Based Monitoring and Fusion Approaches With a Bounded Uncertainty for Bearing Lifetime Prediction. IEEE Sensors Journal, 2022, 22, 9078-9086.	2.4	9
5	A Bayesian approach for fatigue damage diagnosis and prognosis of wind turbine blades. Mechanical Systems and Signal Processing, 2022, 174, 109067.	4.4	18
6	Bayesian Inference in Single-line Spectroscopic Binaries with a Visual Orbit. Astronomical Journal, 2022, 163, 220.	1.9	8
7	A Comprehensive Review on Small Satellite Microgrids. IEEE Transactions on Power Electronics, 2022, 37, 12741-12762.	5.4	22
8	Unifying Criteria for Calculating the Levelized Cost of Driving in Electro-Mobility Applications. World Electric Vehicle Journal, 2022, 13, 119.	1.6	2
9	Online joint estimation and prediction for system-level prognostics under component interactions and mission profile effects. ISA Transactions, 2021, 113, 52-63.	3.1	7
10	Degradation Modeling and Uncertainty Quantification for System-Level Prognostics. IEEE Systems Journal, 2021, 15, 1628-1639.	2.9	7
11	Improved Remaining Useful Life Estimation of Wind Turbine Drivetrain Bearings Under Varying Operating Conditions. IEEE Transactions on Industrial Informatics, 2021, 17, 1742-1752.	7.2	40
12	Computation of time probability distributions for the occurrence of uncertain future events. Mechanical Systems and Signal Processing, 2021, 150, 107332.	4.4	7
13	Failure Prognosis and Applications – A Survey of Recent Literature. IEEE Transactions on Reliability, 2021, 70, 728-748.	3.5	176
14	Multi-Objective Finite-Time Control for the Interlinking Converter on Hybrid AC/DC Microgrids. IEEE Access, 2021, 9, 116183-116193.	2.6	3
15	Simultaneous inference of Lithium-Ion battery polarising impedance surface and capacity degradation using a Hybrid Neural Adaptive State Space Model. Journal of Energy Storage, 2021, 36, 102370.	3.9	2
16	Extending the integrate-and-fire model to account for metabolic dependencies. European Journal of Neuroscience, 2021, 54, 5249-5260.	1.2	5
17	Bayes-based Orbital Elements Estimation in Triple Hierarchical Stellar Systems* –. Publications of the Astronomical Society of the Pacific, 2021, 133, 074501.	1.0	3
18	Lithium-ion battery State-of-Latent-Energy (SoLE): A fresh new look to the problem of energy autonomy prognostics in storage systems. Journal of Energy Storage, 2021, 40, 102735.	3.9	7

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19	Fresh new look for system-level prognostics. International Journal of Prognostics and Health Management, 2021, 12, .	0.6	1
20	Solving in real-time the dynamic and stochastic shortest path problem for electric vehicles by a prognostic decision making strategy. Expert Systems With Applications, 2021, 184, 115489.	4.4	12
21	A method for the reduction of the computational cost associated with the implementation of particle-filter-based failure prognostic algorithms. Mechanical Systems and Signal Processing, 2020, 135, 106421.	4.4	9
22	Fractional order controllers for throughput and product quality control in a grinding mill circuit. European Journal of Control, 2020, 51, 122-134.	1.6	4
23	Critical Wind Turbine Components Prognostics: A Comprehensive Review. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 9306-9328.	2.4	96
24	Thermal Modeling Approaches for a LiCoO ₂ Lithium-ion Battery—A Comparative Study with Experimental Validation. Batteries, 2020, 6, 40.	2.1	27
25	Particle-Filtering-Based Prognostics for the State of Maximum Power Available in Lithium-Ion Batteries at Electromobility Applications. IEEE Transactions on Vehicular Technology, 2020, 69, 7187-7200.	3.9	12
26	Comparison of different models of future operating condition in Particle-Filter-based Prognostic Algorithms. IFAC-PapersOnLine, 2020, 53, 10336-10341.	0.5	2
27	Time-of-Failure Probability Mass Function Computation Using the First-Passage-Time Method Applied to Particle Filter-based Prognostics. Proceedings of the Annual Conference of the Prognostics and Health Management Society Prognostics and Health Management Society Conference, 2020, 12, 11.	0.2	2
28	Remaining Useful Life of Lithium-ion Batteries as a Function of the Joule Effect. , 2020, , .		0
29	Battery health management for small-size rotary-wing electric unmanned aerial vehicles: An efficient approach for constrained computing platforms. Reliability Engineering and System Safety, 2019, 182, 166-178.	5.1	34
30	A Modular Fault Diagnosis and Prognosis Method for Hydro-Control Valve System Based on Redundancy in Multisensor Data Information. IEEE Transactions on Reliability, 2019, 68, 330-341.	3.5	33
31	Sleep Time Adjustment through Performance Indicators of a Lithium-Ion Battery. , 2019, , .		2
32	Harvest Stage Recognition and Potential Fruit Damage Indicator for Berries Based on Hidden Markov Models and the Viterbi Algorithm. Sensors, 2019, 19, 4421.	2.1	3
33	Theoretical Advances in Lebesgue-Sampling-Based Prognostic Algorithms. , 2019, , .		0
34	Uncertainty Quantification in System-level Prognostics: Application to Tennessee Eastman Process. , 2019, , .		3
35	Visual Binary Stars with Partially Missing Data: Introducing Multiple Imputation in Astrometric Analysis. Publications of the Astronomical Society of the Pacific, 2019, 131, 084502.	1.0	6
36	On Prognostic Algorithm Design and Fundamental Precision Limits in Long-Term Prediction. , 2019, , 355-379.		1

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37	An Optimized Impedance Model for the Estimation of the State-of-Charge of a Li-Ion Cell: The Case of a LiFePO ₄ (ANR26650). <i>Energies</i> , 2019, 12, 681.	1.6	9
38	Improvements of Energy-Efficient Techniques in WSNs: A MAC-Protocol Approach. <i>IEEE Communications Surveys and Tutorials</i> , 2019, 21, 1188-1208.	24.8	39
39	Advanced strategies to improve nitrification process in sequencing batch reactors - A review. <i>Journal of Environmental Management</i> , 2018, 218, 154-164.	3.8	60
40	Conditional predictive Bayesian Cram�r-Rao Lower Bounds for prognostic algorithms design. <i>Applied Soft Computing Journal</i> , 2018, 72, 647-665.	4.1	7
41	Improving battery voltage prediction in an electric bicycle using altitude measurements and kernel adaptive filters. <i>Pattern Recognition Letters</i> , 2018, 105, 200-206.	2.6	15
42	On-line estimation of the aerobic phase length for partial nitrification processes in SBR based on features extraction and SVM classification. <i>Chemical Engineering Journal</i> , 2018, 331, 114-123.	6.6	26
43	Lithium-ion Battery Degradation Assessment in Microgrids. , 2018, , .		5
44	Residual-based scheme for detection and characterization of faults in lithium-ion batteries. <i>IFAC-PapersOnLine</i> , 2018, 51, 200-207.	0.5	4
45	The Impact of Lithium-Ion Battery Polarising Impedance Modelling on End-of-Discharge Prognosis Accuracy. <i>IFAC-PapersOnLine</i> , 2018, 51, 214-220.	0.5	6
46	Optimality of the maximum likelihood estimator in astrometry. <i>Astronomy and Astrophysics</i> , 2018, 616, A95.	2.1	5
47	Characterization of the degradation process of lithium-ion batteries when discharged at different current rates. <i>Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering</i> , 2018, 232, 1075-1089.	0.7	12
48	Performance assessment of sequential Bayesian processors based on probably approximately correct computation and information theory. <i>Electronics Letters</i> , 2018, 54, 357-359.	0.5	0
49	Theoretically Rigorous Approach to Failure Prognosis. <i>Proceedings of the Annual Conference of the Prognostics and Health Management Society Prognostics and Health Management Society Conference</i> , 2018, 10, .	0.2	9
50	Chi-squared smoothed adaptive particle-filtering based prognosis. <i>Mechanical Systems and Signal Processing</i> , 2017, 82, 148-165.	4.4	8
51	SoC control for improved battery life and throughput performance under VST�DMA. <i>Electronics Letters</i> , 2017, 53, 183-185.	0.5	8
52	Control of a grinding mill circuit using fractional order controllers. <i>Journal of Process Control</i> , 2017, 53, 80-94.	1.7	21
53	Metrics for Evaluating Feature-Based Mapping Performance. <i>IEEE Transactions on Robotics</i> , 2017, 33, 198-213.	7.3	15
54	State-of-charge estimation to improve energy conservation and extend battery life of wireless sensor network nodes. , 2017, , .		8

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55	Particle-filtering-based failure prognosis via sigma-points: Application to Lithium-Ion battery State-of-Charge monitoring. Mechanical Systems and Signal Processing, 2017, 85, 827-848.	4.4	52
56	Consumption modeling based on Markov chains and Bayesian networks for a demand side management design of isolated microgrids. International Journal of Energy Research, 2017, 41, 365-376.	2.2	8
57	Modelling the degradation process of lithium-ion batteries when operating at erratic state-of-charge swing ranges. , 2017, , .		13
58	Crime prediction using patterns and context. , 2017, , .		14
59	Lithium-ion battery pack arrays for lifespan enhancement. , 2017, , .		5
60	Prognostic Algorithms Design Based on Predictive Bayesian Cram�r-Rao Lower Bounds * *This work has been partially supported by FONDECYT Chile Grant Nr. 1170044, CONICYT PIA Project ACT1405, and the Advanced Center for Electrical and Electronic Engineering, Basal Project FB0008.. IFAC-PapersOnLine, 2017, 50, 4719-4726.	0.5	2
61	Orbits for 18 Visual Binaries and Two Double-line Spectroscopic Binaries Observed with HRCAM on the CTIO SOAR 4 m Telescope, Using a New Bayesian Orbit Code Based on Markov Chain Monte Carlo[*]. Astronomical Journal, 2017, 154, 187.	1.9	24
62	Analysis of the Bayesian Cram�r-Rao lower bound in astrometry. Astronomy and Astrophysics, 2016, 594, A111.	2.1	2
63	Damage Location by Maximum Entropy Method on a Civil Structure. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 105-115.	0.3	0
64	Effect of Battery Degradation on Multi-Service Portfolios of Energy Storage. IEEE Transactions on Sustainable Energy, 2016, 7, 1718-1729.	5.9	90
65	New opportunities offered by Cubesats for space research in Latin America: The SUCHAI project case. Advances in Space Research, 2016, 58, 2134-2147.	1.2	15
66	Early online detection of high volatility clusters using Particle Filters. Expert Systems With Applications, 2016, 54, 228-240.	4.4	1
67	A fractal time thermal model for predicting the surface temperature of air-cooled cylindrical Li-ion cells based on experimental measurements. Journal of Power Sources, 2016, 306, 636-645.	4.0	58
68	Particle-filtering-based estimation of maximum available power state in Lithium-Ion batteries. Applied Energy, 2016, 161, 349-363.	5.1	96
69	Inequality Indices Based on the Notion of Shannon-Entropy for the Assessments of Industrial Fleets. Lecture Notes in Mechanical Engineering, 2016, , 189-196.	0.3	1
70	Sentiment analysis and prediction of events in TWITTER. , 2015, , .		3
71	Particle-Filtering-Based Discharge Time Prognosis for Lithium-Ion Batteries With a Statistical Characterization of Use Profiles. IEEE Transactions on Reliability, 2015, 64, 710-720.	3.5	84
72	Information-Theoretic Measures and Sequential Monte Carlo Methods for Detection of Regeneration Phenomena in the Degradation of Lithium-Ion Battery Cells. IEEE Transactions on Reliability, 2015, 64, 701-709.	3.5	31

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73	Fall Detection and Damage Reduction in Biped Humanoid Robots. International Journal of Humanoid Robotics, 2015, 12, 1550001.	0.6	6
74	Performance Analysis of the Least-Squares Estimator in Astrometry. Publications of the Astronomical Society of the Pacific, 2015, 127, 1166-1182.	1.0	6
75	Fuzzy modelling for the state-of-charge estimation of lead-acid batteries. Journal of Power Sources, 2015, 274, 355-366.	4.0	89
76	Estimation of financial indices volatility using a model with time-varying parameters. , 2014, , .		3
77	A verification framework with application to a propulsion system. Expert Systems With Applications, 2014, 41, 5669-5679.	4.4	12
78	Multi-objective optimal design of lithium-ion battery packs based on evolutionary algorithms. Journal of Power Sources, 2014, 267, 288-299.	4.0	71
79	Particle-Filtering-Based Prognosis Framework for Energy Storage Devices With a Statistical Characterization of State-of-Health Regeneration Phenomena. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 364-376.	2.4	170
80	Risk Measures for Particle-Filtering-Based State-of-Charge Prognosis in Lithium-Ion Batteries. IEEE Transactions on Industrial Electronics, 2013, 60, 5260-5269.	5.2	114
81	Enhancing throughput performance under an energy efficient multiplexing access scheme using time-of-failure prognosis. , 2013, , .		1
82	Volatility Estimation of Financial Returns Using Risk-Sensitive Particle Filters. Studies in Informatics and Control, 2013, 22, .	0.6	0
83	An integrated architecture for fault diagnosis and failure prognosis of complex engineering systems. Expert Systems With Applications, 2012, 39, 9031-9040.	4.4	41
84	Machine remaining useful life prediction: An integrated adaptive neuro-fuzzy and high-order particle filtering approach. Mechanical Systems and Signal Processing, 2012, 28, 597-607.	4.4	100
85	Study of Financial Systems Volatility Using Suboptimal Estimation Algorithms. Studies in Informatics and Control, 2012, 21, .	0.6	2
86	Novel metrics and methodologies for the verification and validation of prognostic algorithms. , 2011, , .		18
87	A Probabilistic Fault Detection Approach: Application to Bearing Fault Detection. IEEE Transactions on Industrial Electronics, 2011, 58, 2011-2018.	5.2	214
88	Machine Condition Prediction Based on Adaptive Neuro-Fuzzy and High-Order Particle Filtering. IEEE Transactions on Industrial Electronics, 2011, 58, 4353-4364.	5.2	211
89	Anomaly detection in power generation plants using similarity-based modeling and multivariate analysis. , 2011, , .		10
90	A novel blind deconvolution de-noising scheme in failure prognosis. Transactions of the Institute of Measurement and Control, 2010, 32, 3-30.	1.1	29

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91	Fault progression modeling: An application to bearing diagnosis and prognosis. , 2010, , .		2
92	A .NET framework for an integrated fault diagnosis and failure prognosis architecture. , 2010, , .		4
93	Risk-Sensitive Particle-Filtering-based Prognosis Framework for Estimation of Remaining Useful Life in Energy Storage Devices<, Studies in Informatics and Control, 2010, 19, .	0.6	35
94	Application of Blind Deconvolution Denoising in Failure Prognosis. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 303-310.	2.4	50
95	A particle-filtering approach for on-line fault diagnosis and failure prognosis. Transactions of the Institute of Measurement and Control, 2009, 31, 221-246.	1.1	390
96	Advances in Uncertainty Representation and Management for Particle Filtering Applied to Prognostics. , 2009, , 23-35.		3
97	Rolling element bearing feature extraction and anomaly detection based on vibration monitoring. , 2008, , .		37
98	Advances in uncertainty representation and management for particle filtering applied to prognostics. , 2008, , .		76
99	Anomaly detection: A robust approach to detection of unanticipated faults. , 2008, , .		20
100	Simulation-based Design and Validation of Automated Contingency Management for Propulsion Systems. , 2007, , .		2
101	A particle filtering-based framework for real-time fault diagnosis and failure prognosis in a turbine engine. , 2007, , .		59
102	An integrated approach to helicopter planetary gear fault diagnosis and failure prognosis. IEEE Autotestcon Proceedings, 2007, , .	0.0	25
103	An Intelligent Diagnostic/Prognostic Framework for Automotive Electrical Systems. Intelligent Vehicles Symposium, 2009 IEEE, 2007, , .	0.0	22
104	A Particle Filtering Approach for On-Line Failure Prognosis in a Planetary Carrier Plate. International Journal of Fuzzy Logic and Intelligent Systems, 2007, 7, 221-227.	0.6	69
105	A Particle Filtering Framework for Failure Prognosis. , 2005, , 883.		52
106	Local models for soft-sensors in a rougher flotation bank. Minerals Engineering, 2003, 16, 441-453.	1.8	27
107	A full compensating system for general loads, based on a combination of thyristor binary compensator, and a pwm-igbt active power filter. IEEE Transactions on Industrial Electronics, 2003, 50, 982-989.	5.2	60