Juan ChiachÃ-o

List of Publications by Year
in descending order

39 papers	916 citations	471509 17 h-index	477307 29 g-index
40 all docs	40 docs citations	40 times ranked	679 citing authors

#	Article	IF	Citations
1	Reliability in composites â€“ A selective review and survey of current development. Composites Part B: Engineering, 2012, 43, 902-913.	12.0	133
2	Approximate Bayesian Computation by Subset Simulation. SIAM Journal of Scientific Computing, 2014, 36, A1339-A1358.	2.8	71
3	A robust Bayesian methodology for damage localization in plate-like structures using ultrasonic guided-waves. Mechanical Systems and Signal Processing, 2019, 122, 192-205.	8.0	64
4	Condition-based prediction of time-dependent reliability in composites. Reliability Engineering and System Safety, 2015, 142, 134-147.	8.9	57
5	Bayesian model selection and parameter estimation for fatigue damage progression models in composites. International Journal of Fatigue, 2015, 70, 361-373.	5.7	49
6	Deep learning in automated ultrasonic NDE â€“ Developments, axioms and opportunities. NDT and E International, 2022, 131, 102703.	3.7	43
7	Bayesian inference for damage identification based on analytical probabilistic model of scattering coefficient estimators and ultrafast wave scattering simulation scheme. Journal of Sound and Vibration, 2020, 468, 115083.	3.9	38
8	A Markov chains prognostics framework for complex degradation processes. Reliability Engineering and System Safety, 2020, 195, 106621.	8.9	37
9	Predicting fatigue damage in composites: A Bayesian framework. Structural Safety, 2014, 51, 57-68.	5.3	33
10	A multilevel Bayesian method for ultrasound-based damage identification in composite laminates. Mechanical Systems and Signal Processing, 2017, 88, 462-477.	8.0	31
11	Optimal sensor configuration for ultrasonic guided-wave inspection based on value of information. Mechanical Systems and Signal Processing, 2020, 135, 106377.	8.0	31
12	Optimal sensor and actuator placement for structural health monitoring via an efficient convex cost-benefit optimization. Mechanical Systems and Signal Processing, 2020, 144, 106901.	8.0	30
13	Structural digital twin framework: Formulation and technology integration. Automation in Construction, 2022, 140, 104333.	9.8	27
14	Uncertainty quantification in Neural Networks by Approximate Bayesian Computation: Application to fatigue in composite materials. Engineering Applications of Artificial Intelligence, 2022, 107, 104511.	8.1	25
15	A knowledge-based prognostics framework for railway track geometry degradation. Reliability Engineering and System Safety, 2019, 181, 127-141.	8.9	21
16	A fast Bayesian inference scheme for identification of local structural properties of layered composites based on wave and finite element-assisted metamodeling strategy and ultrasound measurements. Mechanical Systems and Signal Processing, 2020, 143, 106802.	8.0	21
17	Structural Health Monitoring Using Ultrasonic Guided-Waves and the Degree of Health Index. Sensors, 2021, 21, 993.	3.8	19
18	Bayesian damage localization and identification based on a transient wave propagation model for composite beam structures. Composite Structures, 2021, 267, 113849.	5.8	19

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19	A deep learning based methodology for artefact identification and suppression with application to ultrasonic images. NDT and E International, 2022, 126, 102575.	3.7	19
20	Logical inference for inverse problems. Inverse Problems in Science and Engineering, 2016, 24, 448-464.	1.2	17
21	A new paradigm for uncertain knowledge representation by Plausible Petri nets. Information Sciences, 2018, 453, 323-345.	6.9	17
22	Probabilistic identification of surface recession patterns in heritage buildings based on digital photogrammetry. Journal of Building Engineering, 2021, 34, 101922.	3.4	16
23	A new algorithm for prognostics using Subset Simulation. Reliability Engineering and System Safety, 2017, 168, 189-199.	8.9	15
24	A Bayesian approach for damage assessment in welded structures using Lamb-wave surrogate models and minimal sensing. NDT and E International, 2022, 128, 102626.	3.7	14
25	Plausible Petri nets as selfâ€adaptive expert systems: A tool for infrastructure asset monitoring. Computer-Aided Civil and Infrastructure Engineering, 2019, 34, 281-298.	9.8	10
26	An Empirical Study on Transmission Beamforming for Ultrasonic Guided-Wave Based Structural Health Monitoring. Sensors, 2020, 20, 1445.	3.8	10
27	Ordering Artificial Intelligence Based Recommendations to Tackle the SDGs with a Decision-Making Model Based on Surveys. Sustainability, 2021, 13, 6038.	3.2	9
28	Adaptive approximate Bayesian computation by subset simulation for structural model calibration. Computer-Aided Civil and Infrastructure Engineering, 2022, 37, 726-745.	9.8	8
29	Reduction of Petri net maintenance modeling complexity via Approximate Bayesian Computation. Reliability Engineering and System Safety, 2022, 222, 108365.	8.9	8
30	A Bayesian Assessment of an Approximate Model for Unconfined Water Flow in Sloping Layered Porous Media. Transport in Porous Media, 2019, 126, 177-197.	2.6	4
31	Robust optimised design of 3D printed elastic metastructures: A trade-off between complexity and vibration attenuation. Journal of Sound and Vibration, 2022, 529, 116896.	3.9	4
32	A cross-sectoral review of the current and potential maintenance strategies for composite structures. SN Applied Sciences, 2022, 4, .	2.9	4
33	Model-based damage evaluation of layered CFRP structures. , 2015, , .		3
34	An information theoretic approach for knowledge representation using Petri nets. , 2016, , .		3
35	Prognostics Design for Structural Health Management. Advances in Civil and Industrial Engineering Book Series, 2015, , 234-273.	0.2	3
36	An Inverse-Problem Based Stochastic Approach to Model the Cumulative Damage Evolution of Composites. Procedia Engineering, 2011, 14, 1557-1563.	1.2	1

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37	An energy-based prognostic framework to predict evolution of damage in composite materials. , 2016, , 447-477.		1
38	OptiSensâ€”Convex optimization of sensor and actuator placement for ultrasonic guided-wave based structural health monitoring. SoftwareX, 2021, 13, 100643.	2.6	1
39	Reliability-Based Design Optimization of a CFRP Bridge. IABSE Symposium Report, 2014, , .	0.0	0