

# Shirley J Dyke

## List of Publications by Year in descending order

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89  
papers

3,273  
citations

218677

26  
h-index

155660

55  
g-index

91  
all docs

91  
docs citations

91  
times ranked

2064  
citing authors

#	ARTICLE	IF	CITATIONS
1	Semiactive Control Strategies for MR Dampers: Comparative Study. Journal of Engineering Mechanics - ASCE, 2000, 126, 795-803.	2.9	534
2	Vision-Based Automated Crack Detection for Bridge Inspection. Computer-Aided Civil and Infrastructure Engineering, 2015, 30, 759-770.	9.8	347
3	Natural Excitation Technique and Eigensystem Realization Algorithm for Phase I of the IASC-ASCE Benchmark Problem: Simulated Data. Journal of Engineering Mechanics - ASCE, 2004, 130, 49-60.	2.9	212
4	Experimental Verification of Multiinput Seismic Control Strategies for Smart Dampers. Journal of Engineering Mechanics - ASCE, 2001, 127, 1152-1164.	2.9	172
5	Seismic Control of a Nonlinear Benchmark Building Using Smart Dampers. Journal of Engineering Mechanics - ASCE, 2004, 130, 386-392.	2.9	158
6	Real time hybrid simulation: from dynamic system, motion control to experimental error. Earthquake Engineering and Structural Dynamics, 2013, 42, 815-832.	4.4	92
7	Visual data classification in post-event building reconnaissance. Engineering Structures, 2018, 155, 16-24.	5.3	87
8	Structural parameters and dynamic loading identification from incomplete measurements: Approach and validation. Mechanical Systems and Signal Processing, 2012, 28, 244-257.	8.0	79
9	Modal Identification through Ambient Vibration: Comparative Study. Journal of Engineering Mechanics - ASCE, 2009, 135, 759-770.	2.9	76
10	Modeling and identification of a shear mode magnetorheological damper. Smart Materials and Structures, 2007, 16, 605-616.	3.5	71
11	Robust integrated actuator control: experimental verification and real-time hybrid simulation implementation. Earthquake Engineering and Structural Dynamics, 2015, 44, 441-460.	4.4	69
12	Response Control of Full-Scale Irregular Buildings Using Magnetorheological Dampers. Journal of Structural Engineering, 2005, 131, 734-742.	3.4	65
13	Damage Detection Accommodating Varying Environmental Conditions. Structural Health Monitoring, 2006, 5, 155-172.	7.5	63
14	Benchmark control problem for real-time hybrid simulation. Mechanical Systems and Signal Processing, 2020, 135, 106381.	8.0	60
15	Automated region-of-interest localization and classification for vision-based visual assessment of civil infrastructure. Structural Health Monitoring, 2019, 18, 675-689.	7.5	58
16	Comparative Studies of Semiactive Control Strategies for MR Dampers: Pure Simulation and Real-Time Hybrid Tests. Journal of Structural Engineering, 2013, 139, 1237-1248.	3.4	57
17	Large-Scale Real-Time Hybrid Simulation for Evaluation of Advanced Damping System Performance. Journal of Structural Engineering, 2015, 141, .	3.4	51
18	Experimental verification of torsional response control of asymmetric buildings using MR dampers. Earthquake Engineering and Structural Dynamics, 2003, 32, 2085-2105.	4.4	46

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19	Integrated Device Placement and Control Design in Civil Structures Using Genetic Algorithms. Journal of Structural Engineering, 2005, 131, 1489-1496.	3.4	40
20	Parametric identification of a servo-hydraulic actuator for real-time hybrid simulation. Mechanical Systems and Signal Processing, 2014, 48, 260-273.	8.0	40
21	Establishing a predictive performance indicator for real-time hybrid simulation. Earthquake Engineering and Structural Dynamics, 2014, 43, 2299-2318.	4.4	39
22	A holistic approach to decentralized structural damage localization using wireless sensor networks. Computer Communications, 2012, 36, 29-41.	5.1	38
23	Realistic case studies of wireless structural control. , 2013, , .		38
24	Servo-hydraulic actuator in controllable canonical form: Identification and experimental validation. Mechanical Systems and Signal Processing, 2018, 100, 398-414.	8.0	32
25	Computer-Aided Approach for Rapid Post-Event Visual Evaluation of a Building Façade. Sensors, 2018, 18, 3017.	3.8	31
26	Establishing a stability switch criterion for effective implementation of real-time hybrid simulation. Smart Structures and Systems, 2014, 14, 1221-1245.	1.9	31
27	Real time hybrid simulation with online model updating: An analysis of accuracy. Mechanical Systems and Signal Processing, 2017, 84, 223-240.	8.0	30
28	Safety and Stability of Light-Rail Train Running on Multispan Bridges with Deformation. Journal of Bridge Engineering, 2016, 21, .	2.9	26
29	Performance Validations of Semiactive Controllers on Large-Scale Moment-Resisting Frame Equipped with 200-kN MR Damper Using Real-Time Hybrid Simulations. Journal of Structural Engineering, 2014, 140, .	3.4	25
30	Postevent Reconnaissance Image Documentation Using Automated Classification. Journal of Performance of Constructed Facilities, 2019, 33, .	2.0	25
31	Lunar lava tubes: Morphology to structural stability. Icarus, 2020, 338, 113442.	2.5	25
32	Seismic Response of Multiple Span Steel Bridges in Central and Southeastern United States. I: As Built. Journal of Bridge Engineering, 2004, 9, 464-472.	2.9	24
33	A parameter subset selection method using residual force vector for detecting multiple damage locations. Structural Control and Health Monitoring, 2010, 17, 48-67.	4.0	23
34	Experimental validation of structural health monitoring for flexible bridge structures. Structural Control and Health Monitoring, 2005, 12, 425-443.	4.0	22
35	Benchmark problem in active structural control with wireless sensor network. Structural Control and Health Monitoring, 2016, 23, 20-34.	4.0	22
36	Computational Tool for Real-Time Hybrid Simulation of Seismically Excited Steel Frame Structures. Journal of Computing in Civil Engineering, 2015, 29, .	4.7	21

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37	Parametric model of servo-hydraulic actuator coupled with a nonlinear system: Experimental validation. <i>Mechanical Systems and Signal Processing</i> , 2018, 104, 663-672.	8.0	20
38	Towards fully automated post-event data collection and analysis: Pre-event and post-event information fusion. <i>Engineering Structures</i> , 2020, 208, 109884.	5.3	20
39	A novel integrated compensation method for actuator dynamics in real-time hybrid structural testing. <i>Structural Control and Health Monitoring</i> , 2013, 20, 1057-1080.	4.0	19
40	A Modified Fractional-Order Derivative Zener Model for Rubber-Like Devices for Structural Control. <i>Journal of Engineering Mechanics - ASCE</i> , 2022, 148, .	2.9	19
41	Seismic Fragility Relationships of a Cable-Stayed Bridge Equipped with Response Modification Systems. <i>Journal of Bridge Engineering</i> , 2014, 19, .	2.9	18
42	Structural damage detection robust against time synchronization errors. <i>Smart Materials and Structures</i> , 2010, 19, 065001.	3.5	16
43	Experimental validation of a damage detection approach on a full-scale highway sign support truss. <i>Mechanical Systems and Signal Processing</i> , 2012, 28, 195-211.	8.0	16
44	Experimental Validation of a Generalized Procedure for MDOF Real-Time Hybrid Simulation. <i>Journal of Engineering Mechanics - ASCE</i> , 2014, 140, .	2.9	16
45	Model-free nonlinear restoring force identification for SMA dampers with double Chebyshev polynomials: approach and validation. <i>Nonlinear Dynamics</i> , 2015, 82, 1507-1522.	5.2	16
46	Sliding mode control design for the benchmark problem in real-time hybrid simulation. <i>Mechanical Systems and Signal Processing</i> , 2021, 151, 107364.	8.0	16
47	Experimental implementation of predictive indicators for configuring a real-time hybrid simulation. <i>Engineering Structures</i> , 2015, 101, 427-438.	5.3	15
48	Development and Verification of Distributed Real-Time Hybrid Simulation Methods. <i>Journal of Computing in Civil Engineering</i> , 2017, 31, .	4.7	14
49	Enabling role of hybrid simulation across NEES in advancing earthquake engineering. <i>Smart Structures and Systems</i> , 2015, 15, 913-929.	1.9	14
50	Control-oriented system identification using ERA. <i>Structural Control and Health Monitoring</i> , 2004, 11, 311-326.	4.0	13
51	Fractional Differential Equation Bearing Models for Base-Isolated Buildings: Framework Development. <i>Journal of Structural Engineering</i> , 2020, 146, .	3.4	12
52	Adaptive multi-rate interface: development and experimental verification for real-time hybrid simulation. <i>Earthquake Engineering and Structural Dynamics</i> , 2016, 45, 1411-1425.	4.4	11
53	A Self-tuning Robust Control System for nonlinear real-time hybrid simulation. <i>Earthquake Engineering and Structural Dynamics</i> , 2020, 49, 695-715.	4.4	11
54	Evaluation of Energy and Power Flow in a Nonlinear Energy Sink Attached to a Linear Primary Oscillator. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2019, 141, .	1.6	11

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55	Control of an elastic continuum when traversed by a moving oscillator. <i>Structural Control and Health Monitoring</i> , 2007, 14, 197-217.	4.0	10
56	Experimental Verification of a Substructure-Based Model to Describe Pedestrian-Bridge Interaction. <i>Journal of Bridge Engineering</i> , 2018, 23, .	2.9	10
57	A resilience-based method for prioritizing post-event building inspections. <i>Natural Hazards</i> , 2020, 100, 877-896.	3.4	10
58	Multi-rate Real Time Hybrid Simulation operated on a flexible LabVIEW real-time platform. <i>Engineering Structures</i> , 2021, 239, 112308.	5.3	10
59	Global sensitivity analysis for the design of nonlinear identification experiments. <i>Nonlinear Dynamics</i> , 2019, 98, 375-394.	5.2	9
60	Identification of an experimental nonlinear energy sink device using the unscented Kalman filter. <i>Mechanical Systems and Signal Processing</i> , 2020, 136, 106512.	8.0	9
61	CrowdLIM: Crowdsourcing to enable lifecycle infrastructure management. <i>Computers in Industry</i> , 2020, 115, 103185.	9.9	8
62	An adaptive sliding mode control system and its application to real-time hybrid simulation. <i>Structural Control and Health Monitoring</i> , 2022, 29, e2851.	4.0	8
63	Robust control of vortex-induced vibration in flexible bridges using an active tuned mass damper. <i>Structural Control and Health Monitoring</i> , 2022, 29, .	4.0	8
64	Experimental verification of an accessible geographically distributed real-time hybrid simulation platform. <i>Structural Control and Health Monitoring</i> , 2020, 27, e2483.	4.0	7
65	Investigating Coupled Train-Bridge-Bearing System Under Earthquake- and Train-Induced Excitations. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2021, 143, .	1.6	7
66	Modeling and identification of a class of MR fluid foam dampers. <i>Smart Structures and Systems</i> , 2010, 6, 101-113.	1.9	7
67	Evaluating the performance of distributed approaches for modal identification. , 2011, , .		6
68	Similarity learning to enable building searches in post-event image data. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2022, 37, 261-275.	9.8	6
69	Acceleration-Based Automated Vehicle Classification on Mobile Bridges. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2016, 31, 813-825.	9.8	5
70	Automated Recovery of Structural Drawing Images Collected from Postdisaster Reconnaissance. <i>Journal of Computing in Civil Engineering</i> , 2019, 33, .	4.7	5
71	Automated Indoor Image Localization to Support a Post-Event Building Assessment. <i>Sensors</i> , 2020, 20, 1610.	3.8	5
72	Various damper forces and dynamic excitation nonparametric identification with a double Chebyshev polynomial using limited fused measurements. <i>Measurement: Journal of the International Measurement Confederation</i> , 2022, 193, 110940.	5.0	5

#	ARTICLE	IF	CITATIONS
73	Modeling and identification of the hysteretic dynamics of an MR actuator for its application to semiactive control of flexible structures. , 2007, , .		4
74	Application of nonlinear observers in hysteretic model updating. Proceedings of SPIE, 2010, , .	0.8	4
75	Editorial: Special issue on the real-time hybrid simulation benchmark problem. Mechanical Systems and Signal Processing, 2020, 142, 106804.	8.0	3
76	Preliminary approach to assess the seismic hazard on a lunar site. Icarus, 2022, 383, 115056.	2.5	3
77	Experimental Identification of a Shear-Mode MR Damper and Numerical Evaluation of Hysteretic Models. , 2007, , 1469.		2
78	Investigation of uncertainties associated with actuation modeling error and sensor noise on real time hybrid simulation performance. , 2013, , .		2
79	A Reflective Framework for Performance Management (REFORM) of Real-Time Hybrid Simulation. Frontiers in Built Environment, 2020, 6, 159-171.	2.3	2
80	Efficient seismic fragility functions through sequential selection. Structural Safety, 2020, 87, 101977.	5.3	2
81	Database Enabled Rapid Seismic Vulnerability Assessment of Bridges. Transportation Research Record, 2021, 2675, 1106-1120.	1.9	2
82	Evaluaci3n del desempe±o de un amortiguador de masa sintonizado no lineal mediante simulaciones hÁbridadas en tiempo real. Inge Cuc, 2019, 15, 11-22.	0.2	2
83	Automated Graffiti Detection: A Novel Approach to Maintaining Historical Architecture in Communities. Applied Sciences (Switzerland), 2022, 12, 2983.	2.5	2
84	Automated image localization to support rapid building reconnaissance in a large-scale area. Computer-Aided Civil and Infrastructure Engineering, 2023, 38, 3-25.	9.8	2
85	A general numerical solution to optimal nonlinear stochastic structural control problem. , 2010, , .		1
86	A Comparative Study of the Base Isolation Benchmark Problem Using H2/LQG and Smart Dampers. , 2006, , 1.		0
87	Discrete-Time ARMAv Model-Based Optimal Sensor Placement. AIP Conference Proceedings, 2008, , .	0.4	0
88	Structural damage localization with tolerance to large time synchronization errors in WSNs. , 2009, , .		0
89	Application of pseudospectral method in stochastic optimal control of nonlinear structural systems. , 2011, , .		0