Reginald Desroches

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/11310523/publications.pdf

Version: 2024-02-01

115 papers	8,200 citations	57681 46 h-index	54771 88 g-index
115 all docs	115 docs citations	115 times ranked	3586 citing authors

#	Article	IF	Citations
1	Seismic design and numerical assessment of shape memory alloy-restrained rocking precast concrete bridge columns. Advances in Structural Engineering, 2022, 25, 2803-2829.	1.2	3
2	Influence of abutment straight backwall fracture on the seismic response of bridges. Earthquake Engineering and Structural Dynamics, 2021, 50, 1824-1844.	2.5	8
3	Numerical evaluation of SMA-based multi-ring self-centering damping devices. Smart Materials and Structures, 2021, 30, 105012.	1.8	5
4	Probabilistic Seismic Response and Capacity Models of Piles for Statewide Bridges in California. Journal of Structural Engineering, 2021, 147, .	1.7	6
5	The promise of implementing machine learning in earthquake engineering: A state-of-the-art review. Earthquake Spectra, 2020, 36, 1769-1801.	1.6	228
6	Seismic fragility analyses of steel building frames installed with superelastic shape memory alloy dampers: Comparison with yielding dampers. Journal of Intelligent Material Systems and Structures, 2019, 30, 2670-2687.	1.4	17
7	Seismic fragilities of singleâ€column highway bridges with rocking columnâ€footing. Earthquake Engineering and Structural Dynamics, 2019, 48, 843-864.	2.5	50
8	Impact of corrosion on risk assessment of shear-critical and short lap-spliced bridges. Engineering Structures, 2019, 189, 260-271.	2.6	21
9	Sensitivity of seismic demands and fragility estimates of a typical California highway bridge to uncertainties in its soil-structure interaction modeling. Engineering Structures, 2019, 189, 605-617.	2.6	44
10	Probabilistic models of abutment backfills for regional seismic assessment of highway bridges in California. Engineering Structures, 2019, 180, 452-467.	2.6	37
11	Parameterized Seismic Fragility Curves for Curved Multi-frame Concrete Box-Girder Bridges Using Bayesian Parameter Estimation. Journal of Earthquake Engineering, 2019, 23, 954-979.	1.4	57
12	An effective simplified model of composite compression struts for partially-restrained steel frame with reinforced concrete infill walls. Earthquake Engineering and Engineering Vibration, 2018, 17, 403-415.	1.1	1
13	Critical uncertainty parameters influencing seismic performance of bridges using Lasso regression. Earthquake Engineering and Structural Dynamics, 2018, 47, 784-801.	2.5	111
14	Impact of Spatial Variability Parameters on Seismic Fragilities of a Cable-Stayed Bridge Subjected to Differential Support Motions. Journal of Bridge Engineering, 2017, 22, .	1.4	63
15	Performanceâ€based grouping methods of bridge classes for regional seismic risk assessment: Application of <scp>ANOVA</scp>, <scp>ANCOVA</scp>, and nonâ€parametric approaches. Earthquake Engineering and Structural Dynamics, 2017, 46, 2587-2602.	2.5	27
16	Identification of the significant uncertain parameters in the seismic response of irregular bridges. Engineering Structures, 2017, 141, 356-372.	2.6	51
17	Investigation of an articulated quadrilateral bracing system utilizing shape memory alloys. Journal of Constructional Steel Research, 2017, 130, 65-78.	1.7	33
18	Seismic Resilience of Concrete Bridges with Flared Columns. Procedia Engineering, 2017, 199, 3065-3070.	1.2	3

#	Article	IF	Citations
19	Cyclic Tests of Steel Frames with Concealed Vertical Slits in Reinforced Concrete Infill Walls. Journal of Structural Engineering, 2017, 143, .	1.7	11
20	A comparative analytical study on the fragility assessment of box-girder bridges with various column shapes. Engineering Structures, 2017, 153, 460-478.	2.6	27
21	Geometric parameters affecting seismic fragilities of curved multi-frame concrete box-girder bridges with integral abutments. Engineering Structures, 2016, 122, 121-143.	2.6	53
22	An innovative seismic bracing system based on a superelastic shape memory alloy ring. Smart Materials and Structures, 2016, 25, 055030.	1.8	51
23	Postâ€repair effect of column jackets on aftershock fragilities of damaged RC bridges subjected to successive earthquakes. Earthquake Engineering and Structural Dynamics, 2016, 45, 1149-1168.	2.5	31
24	ANCOVA-based grouping of bridge classes for seismic fragility assessment. Engineering Structures, 2016, 123, 379-394.	2.6	66
25	Seismic fragility assessment of long-span cable-stayed bridges in China. Advances in Structural Engineering, 2016, 19, 1797-1812.	1.2	32
26	Finite Element Modeling of a Reinforced Concrete Frame with Masonry Infill and Mesh Reinforced Mortar Subjected to Earthquake Loading. Earthquake Spectra, 2016, 32, 393-414.	1.6	10
27	Seismic fragility of lightly reinforced concrete frames with masonry infills. Earthquake Engineering and Structural Dynamics, 2015, 44, 1783-1803.	2.5	58
28	Framework of aftershock fragility assessmentâ€“case studies: older California reinforced concrete building frames. Earthquake Engineering and Structural Dynamics, 2015, 44, 2617-2636.	2.5	91
29	Bridges with Innovative Buckling Restrained SMA Expansion Joints Having a High Symmetrical Tension/Compression Capacity. , 2015, , .		2
30	Damage assessment of older highway bridges subjected to three-dimensional ground motions: Characterization of shearâ€“axial force interaction on seismic fragilities. Engineering Structures, 2015, 87, 47-57.	2.6	49
31	Temporal evolution of seismic fragility curves for concrete box-girder bridges in California. Engineering Structures, 2015, 97, 29-46.	2.6	105
32	Seismic fragility analysis of skewed bridges in the central southeastern United States. Engineering Structures, 2015, 83, 116-128.	2.6	48
33	Automated Damage Index Estimation of Reinforced Concrete Columns for Post-Earthquake Evaluations. Journal of Structural Engineering, 2015, 141, .	1.7	64
34	Seismic response prediction and modeling considerations for curved and skewed concrete box-girder bridges. Earthquake and Structures, 2015, 9, 1153-1179.	1.0	12
35	Development of an Experimentally Validated Analytical Model for Modular Bridge Expansion Joint Behavior. Journal of Bridge Engineering, 2014, 19, 235-244.	1.4	20
36	Structural transformations in NiTi shape memory alloy nanowires. Journal of Applied Physics, 2014, 115, .	1.1	54

#	Article	IF	Citations
37	Smart hybrid rotary damper. Proceedings of SPIE, 2014, , .	0.8	0
38	Statistical models for shear strength of RC beamâ€column joints using machineâ€learning techniques. Earthquake Engineering and Structural Dynamics, 2014, 43, 2075-2095.	2.5	83
39	Age-Dependent Fragility Models of Utility Wood Poles in Power Distribution Networks Against Extreme Wind Hazards. IEEE Transactions on Power Delivery, 2014, 29, 131-139.	2.9	114
40	A probabilistic framework for correlated seismic downtime and repair cost estimation of geoâ€structures. Earthquake Engineering and Structural Dynamics, 2014, 43, 739-757.	2.5	15
41	The influence of design parameters on the response of bridges seismically isolated with the Friction Pendulum System (FPS). Engineering Structures, 2013, 56, 585-599.	2.6	37
42	Three-Dimensional Wharf Response to Far-Field and Impulsive Near-Field Ground Motions in Liquefiable Soils. Journal of Structural Engineering, 2013, 139, 1395-1407.	1.7	33
43	A Comparative Assessment of Sliding and Elastomeric Seismic Isolation in a Typical Multi-Span Bridge. Journal of Earthquake Engineering, 2013, 17, 637-657.	1.4	14
44	Seismic protection of lap-spliced RC columns using SMA wire jackets. Magazine of Concrete Research, 2012, 64, 239-252.	0.9	34
45	Quasi-Static and Dynamic Tests of a Smart Hybrid Brace. , 2012, , .		1
46	Numerical Fragility Analysis of Vertical-Pile-Supported Wharves in the Western United States. Journal of Earthquake Engineering, 2012, 16, 579-594.	1.4	29
47	Seismic Performance of Pile-Supported Wharf Structures considering Soil-Structure Interaction in Liquefied Soil. Earthquake Spectra, 2012, 28, 729-757.	1.6	41
48	A comparison of pre- and post-seismic design considerations in moderate seismic zones through the fragility assessment of multispan bridge classes. Engineering Structures, 2012, 45, 559-573.	2.6	82
49	Fractional order intensity measures for probabilistic seismic demand modeling applied to highway bridges. Earthquake Engineering and Structural Dynamics, 2012, 41, 391-409.	2.5	79
50	Overview of the 2010 Haiti Earthquake. Earthquake Spectra, 2011, 27, 1-21.	1.6	128
51	Crowdsourcing for Rapid Damage Assessment: The Global Earth Observation Catastrophe Assessment Network (GEO-CAN). Earthquake Spectra, 2011, 27, 179-198.	1.6	76
52	Bridge Seismic Retrofitting Practices in the Central and Southeastern United States. Journal of Bridge Engineering, 2011, 16, 82-92.	1.4	39
53	Water, energy, land use, transportation and socioeconomic nexus: A blue print for more sustainable urban systems. , 2011, , .		4
54	Seismic Behavior of a Jumbo Container Crane Including Uplift. Earthquake Spectra, 2011, 27, 745-773.	1.6	22

#	Article	IF	Citations
55	A semi-analytic analysis of shape memory alloy thick-walled cylinders under internal pressure. Archive of Applied Mechanics, 2011, 81, 1093-1116.	1.2	26
56	Analysis of the rate-dependent coupled thermo-mechanical response of shape memory alloy bars and wires in tension. Continuum Mechanics and Thermodynamics, 2011, 23, 363-385.	1.4	44
57	Experimental results of a NiTi shape memory alloy (SMA)-based recentering beam-column connection. Engineering Structures, 2011, 33, 2448-2457.	2.6	169
58	Efficient Longitudinal Seismic Fragility Assessment of a Multispan Continuous Steel Bridge on Liquefiable Soils. Journal of Bridge Engineering, 2011, 16, 93-107.	1.4	73
59	Is the Stress Distribution Uniform in the Cross Section of SMA Bars Subjected to Uniaxial Loading? Is it Related to Rate Dependency?. , 2011, , .		0
60	Design and analysis of braced frames with shape memory alloy and energy-absorbing hybrid devices. Engineering Structures, 2010, 32, 498-507.	2.6	154
61	Seismic Performance Assessment of Steel Frames with Shape Memory Alloy Connections, Part II â€“ Probabilistic Seismic Demand Assessment. Journal of Earthquake Engineering, 2010, 14, 631-645.	1.4	20
62	Cyclic Behavior of Zipper-Braced Frames. Earthquake Spectra, 2010, 26, 561-582.	1.6	8
63	Regional Seismic Risk Assessment of Bridge Network in Charleston, South Carolina. Journal of Earthquake Engineering, 2010, 14, 918-933.	1.4	57
64	Seismic Performance Assessment of Steel Frames with Shape Memory Alloy Connections. Part I â€” Analysis and Seismic Demands. Journal of Earthquake Engineering, 2010, 14, 471-486.	1.4	72
65	Analytical Fragility Curves for Multispan Continuous Steel Girder Bridges in Moderate Seismic Zones. Transportation Research Record, 2010, 2202, 173-182.	1.0	69
66	Seismic Vulnerability of Bridges Susceptible to Spatially Distributed Soil Liquefaction Hazards. , 2009, , .		4
67	Analytical Fragility Models for Box Girder Bridges with and without Protective Systems. , 2009, , .		6
68	Shape Memory Alloy Tension/Compression Device for Seismic Retrofit of Buildings. Journal of Materials Engineering and Performance, 2009, 18, 746-753.	1.2	85
69	Experimental response modification of a four-span bridge retrofit with shape memory alloys. Structural Control and Health Monitoring, 2009, 17, n/a-n/a.	1.9	19
70	Retrofitted Bridge Fragility Analysis for Typical Classes of Multispan Bridges. Earthquake Spectra, 2009, 25, 117-141.	1.6	85
71	Selection of optimal intensity measures in probabilistic seismic demand models of highway bridge portfolios. Earthquake Engineering and Structural Dynamics, 2008, 37, 711-725.	2.5	494
72	Methodology for the development of analytical fragility curves for retrofitted bridges. Earthquake Engineering and Structural Dynamics, 2008, 37, 1157-1174.	2.5	329

#	Article	IF	Citations
73	Design and behavior of zipper-braced frames. Engineering Structures, 2008, 30, 1092-1100.	2.6	43
74	Pushover Response of a Braced Frame with Suspended Zipper Struts. Journal of Structural Engineering, 2008, 134, 1619-1626.	1.7	27
75	Large scale testing of nitinol shape memory alloy devices for retrofitting of bridges. Smart Materials and Structures, 2008, 17, 035018.	1.8	89
76	Sensitivity of Seismic Applications to Different Shape Memory Alloy Models. Journal of Engineering Mechanics - ASCE, 2008, 134, 173-183.	1.6	26
77	Rate-dependent Thermo-mechanical Modelling of Superelastic Shape-memory Alloys for Seismic Applications. Journal of Intelligent Material Systems and Structures, 2008, 19, 47-61.	1.4	52
78	Bridge Damage and Repair Costs from Hurricane Katrina. Journal of Bridge Engineering, 2008, 13, 6-14.	1.4	182
79	Analytical Study of SDOF Systems with Superelastic Shape Memory Alloy Properties. , 2008, , .		3
80	Seismic Performance Assessment of a Passive Control Technology for Bridges Using Shape Memory Alloys. , 2008, , .		2
81	Which Ground Motion Intensity Measure Is Most Appropriate for Conditioning Demand Models for Bridge Portfolios?. , 2008, , .		0
82	Structural Engineering with NiTi. I: Basic Materials Characterization. Journal of Engineering Mechanics - ASCE, 2007, 133, 1009-1018.	1.6	38
83	Analytical Seismic Fragility Curves for Typical Bridges in the Central and Southeastern United States. Earthquake Spectra, 2007, 23, 615-633.	1.6	358
84	A 1D rate-dependent viscous constitutive model for superelastic shape-memory alloys: formulation and comparison with experimental data. Smart Materials and Structures, 2007, 16, S39-S50.	1.8	21
85	Seismic Performance Assessment of Simply Supported and Continuous Multispan Concrete Girder Highway Bridges. Journal of Bridge Engineering, 2007, 12, 611-620.	1.4	31
86	Bridge Functionality Relationships for Improved Seismic Risk Assessment of Transportation Networks. Earthquake Spectra, 2007, 23, 115-130.	1.6	147
87	Comparison between Shape Memory Alloy Seismic Restrainers and Other Bridge Retrofit Devices. Journal of Bridge Engineering, 2007, 12, 700-709.	1.4	89
88	Seismic Assessment of Concentrically Braced Steel Frames with Shape Memory Alloy Braces. Journal of Structural Engineering, 2007, 133, 862-870.	1.7	122
89	Testing of Superelastic Recentering Pre-Strained Braces for Seismic Resistant Design. Journal of Earthquake Engineering, 2007, 11, 383-399.	1.4	25
90	Sensitivity of Seismic Response and Fragility to Parameter Uncertainty. Journal of Structural Engineering, 2007, 133, 1710-1718.	1.7	156

#	Article	IF	Citations
91	Structural Engineering with NiTi. II: Mechanical Behavior and Scaling. Journal of Engineering Mechanics - ASCE, 2007, 133, 1019-1029.	1.6	78
92	Seismic fragility methodology for highway bridges using a component level approach. Earthquake Engineering and Structural Dynamics, 2007, 36, 823-839.	2.5	436
93	Effect of hysteretic properties of superelastic shape memory alloys on the seismic performance of structures. Structural Control and Health Monitoring, 2007, 14, 301-320.	1.9	41
94	Effect of ambient temperature on the hinge opening in bridges with shape memory alloy seismic restrainers. Engineering Structures, 2007, 29, 2294-2301.	2.6	36
95	EARTHQUAKE PERFORMANCE OF STEEL FRAMES WITH NITINOL BRACES. Journal of Earthquake Engineering, 2006, 10, 45-66.	1.4	44
96	The Effect of Training, Pre-Straining, and Loading History on the Properties of NiTi Shape Memory Alloys for Protective Systems in Civil Structures. , 2006, , 1.		8
97	Influence of modeling assumptions on the seismic response of multi-span simply supported steel girder bridges in moderate seismic zones. Engineering Structures, 2006, 28, 1083-1092.	2.6	71
98	A Hertz contact model with non-linear damping for pounding simulation. Earthquake Engineering and Structural Dynamics, 2006, 35, 811-828.	2.5	383
99	Seismic Vibration Control Using Superelastic Shape Memory Alloys. Journal of Engineering Materials and Technology, Transactions of the ASME, 2006, 128, 294-301.	0.8	78
100	Numerical and Experimental Evaluation of the Damping Properties of Shape-Memory Alloys. Journal of Engineering Materials and Technology, Transactions of the ASME, 2006, 128, 312-319.	0.8	24
101	Seismic Fragility Methodology for Highway Bridges. , 2006, , 1.		6
102	Retrofitted Bridge Fragility Curves for Assessing the Impact of Retrofit on Bridge System Performance. , 2006, , 1.		1
103	Effect of Frame-Restoring Force Characteristics on the Pounding Response of Multiple-Frame Bridges. Earthquake Spectra, 2005, 21, 1113-1135.	1.6	11
104	Unseating prevention for multiple frame bridges using superelastic devices. Smart Materials and Structures, 2005, 14, S60-S67.	1.8	104
105	Effect of mechanical training on the properties of superelastic shape memory alloys for seismic applications. , 2005, , .		19
106	Seismic Response of Multiple Span Steel Bridges in Central and Southeastern United States. II: Retrofitted. Journal of Bridge Engineering, 2004, 9, 473-479.	1.4	13
107	Implications of seismic pounding on the longitudinal response of multi-span bridgesâ€"an analytical perspective. Earthquake Engineering and Engineering Vibration, 2004, 3, 57-65.	1.1	10
108	Seismic fragility of typical bridges in moderate seismic zones. Engineering Structures, 2004, 26, 187-199.	2.6	493

#	Article	IF	Citations
109	Effect of cyclic modeling parameters on the behavior of shape memory alloys for seismic applications. , 2004, 5390, 324.		7
110	Cyclic Properties of Superelastic Shape Memory Alloy Wires and Bars. Journal of Structural Engineering, 2004, 130, 38-46.	1.7	476
111	Steel Beam-Column Connections Using Shape Memory Alloys. Journal of Structural Engineering, 2004, 130, 732-740.	1.7	181
112	Effect of Pounding and Restrainers on Seismic Response of Multiple-Frame Bridges. Journal of Structural Engineering, 2002, 128, 860-869.	1.7	113
113	Simplified Restrainer Design Procedure for Multiple-Frame Bridges. Earthquake Spectra, 2001, 17, 551-567.	1.6	20
114	Design of Seismic Cable Hinge Restrainers for Bridges. Journal of Structural Engineering, 2000, 126, 500-509.	1.7	41
115	Age-Dependent Fragility Models of Utility Wood Poles in Power Distribution Networks Against Extreme Wind Hazards. , 0, .		1