Dan M Frangopol

List of Publications by Year in descending order

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DAN M ERANCOROL

#	Article	IF	CITATIONS
1	Maintenance and management of civil infrastructure based on condition, safety, optimization, and life-cycle costâ^—. Structure and Infrastructure Engineering, 2007, 3, 29-41.	3.7	364
2	Life-Cycle Cost Design of Deteriorating Structures. Journal of Structural Engineering, 1997, 123, 1390-1401.	3.4	363
3	Life-cycle performance, management, and optimisation of structural systems under uncertainty: accomplishments and challenges ¹ . Structure and Infrastructure Engineering, 2011, 7, 389-413.	3.7	363
4	Resilience and Sustainability of Civil Infrastructure: Toward a Unified Approach. Journal of Infrastructure Systems, 2014, 20, .	1.8	340
5	Reliability-Based Life-Cycle Management of Highway Bridges. Journal of Computing in Civil Engineering, 2001, 15, 27-34.	4.7	325
6	Structural health monitoring and reliability estimation: Long span truss bridge application with environmental monitoring data. Engineering Structures, 2008, 30, 2347-2359.	5.3	310
7	Probabilistic models for life-cycle performance of deteriorating structures: review and future directions. Structural Control and Health Monitoring, 2004, 6, 197-212.	0.7	284
8	Probabilistic analysis of resistance degradation of reinforced concrete bridge beams under corrosion. Engineering Structures, 1998, 20, 960-971.	5.3	277
9	Bridge Reliability Assessment Based on Monitoring. Journal of Bridge Engineering, 2008, 13, 258-270.	2.9	255
10	Effects of Damage and Redundancy on Structural Reliability. Journal of Structural Engineering, 1987, 113, 1533-1549.	3.4	250
11	Reliability-based design of MEMS mechanisms by topology optimization. Computers and Structures, 2003, 81, 813-824.	4.4	231
12	Life-cycle of structural systems: recent achievements and future directions. Structure and Infrastructure Engineering, 2016, 12, 1-20.	3.7	200
13	Life-Cycle Reliability-Based Maintenance Cost Optimization of Deteriorating Structures with Emphasis on Bridges. Journal of Structural Engineering, 2003, 129, 818-828.	3.4	190
14	Life-Cycle Performance of Deteriorating Structural Systems under Uncertainty: Review. Journal of Structural Engineering, 2016, 142, .	3.4	190
15	Repair Optimization of Highway Bridges Using System Reliability Approach. Journal of Structural Engineering, 1999, 125, 766-775.	3.4	189
16	A probabilistic approach for the prediction of seismic resilience of bridges. Earthquake Engineering and Structural Dynamics, 2013, 42, 1469-1487.	4.4	185
17	Bridge life-cycle performance and cost: analysis, prediction, optimisation and decision-making. Structure and Infrastructure Engineering, 2017, 13, 1239-1257.	3.7	183
18	Bridge fatigue reliability assessment using probability density functions of equivalent stress range based on field monitoring data. International Journal of Fatigue, 2010, 32, 1221-1232.	5.7	182

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19	Reliability of Reinforced Concrete Girders under Corrosion Attack. Journal of Structural Engineering, 1997, 123, 286-297.	3.4	181
20	Risk and resilience assessment of bridges under mainshock and aftershocks incorporating uncertainties. Engineering Structures, 2015, 83, 198-208.	5.3	179
21	Life-cycle reliability-based optimization of civil and aerospace structures. Computers and Structures, 2003, 81, 397-410.	4.4	177
22	Service-Life Prediction of Deteriorating Concrete Bridges. Journal of Structural Engineering, 1998, 124, 309-317.	3.4	164
23	Timeâ€variant sustainability assessment of seismically vulnerable bridges subjected to multiple hazards. Earthquake Engineering and Structural Dynamics, 2013, 42, 1451-1467.	4.4	162
24	Restoration of Bridge Networks after an Earthquake: Multicriteria Intervention Optimization. Earthquake Spectra, 2012, 28, 427-455.	3.1	157
25	Lifeâ€cycle reliability of RC bridge piers under seismic and airborne chloride hazards. Earthquake Engineering and Structural Dynamics, 2011, 40, 1671-1687.	4.4	153
26	Resilience assessment framework for critical infrastructure in a multi-hazard environment: Case study on transport assets. Science of the Total Environment, 2020, 714, 136854.	8.0	153
27	Optimal Resilience- and Cost-Based Postdisaster Intervention Prioritization for Bridges along a Highway Segment. Journal of Bridge Engineering, 2012, 17, 117-129.	2.9	152
28	Risk assessment of highway bridges under multiple hazards. Journal of Risk Research, 2011, 14, 1057-1089.	2.6	147
29	Condition Prediction of Deteriorating Concrete Bridges Using Bayesian Updating. Journal of Structural Engineering, 1999, 125, 1118-1125.	3.4	143
30	Two probabilistic life-cycle maintenance models for deteriorating civil infrastructures. Probabilistic Engineering Mechanics, 2004, 19, 345-359.	2.7	143
31	Lifetime-oriented multi-objective optimization of structural maintenance considering system reliability, redundancy and life-cycle cost using GA. Structural Safety, 2009, 31, 460-474.	5.3	140
32	Fatigue reliability assessment of steel bridge details integrating weigh-in-motion data and probabilistic finite element analysis. Computers and Structures, 2012, 112-113, 245-257.	4.4	130
33	Nonlinear Analysis of Composite Beams with Deformable Shear Connectors. Journal of Structural Engineering, 1998, 124, 1148-1158.	3.4	126
34	Toward life-cycle reliability-, risk- and resilience-based design and assessment of bridges and bridge networks under independent and interacting hazards: emphasis on earthquake, tsunami and corrosion. Structure and Infrastructure Engineering, 2020, 16, 26-50.	3.7	122
35	Optimal bridge maintenance planning based on probabilistic performance prediction. Engineering Structures, 2004, 26, 991-1002.	5.3	120
36	Time-dependent reliability analysis of existing RC structures in a marine environment using hazard associated with airborne chlorides. Engineering Structures, 2010, 32, 3768-3779.	5.3	119

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37	Probabilistic Time-Dependent Multihazard Life-Cycle Assessment and Resilience of Bridges Considering Climate Change. Journal of Performance of Constructed Facilities, 2016, 30, .	2.0	119
38	Cellular Automata Approach to Durability Analysis of Concrete Structures in Aggressive Environments. Journal of Structural Engineering, 2004, 130, 1724-1737.	3.4	114
39	Generalized Probabilistic Framework for Optimum Inspection and Maintenance Planning. Journal of Structural Engineering, 2013, 139, 435-447.	3.4	112
40	Updating Bridge Reliability Based on Bridge Management Systems Visual Inspection Results. Journal of Bridge Engineering, 2003, 8, 374-382.	2.9	111
41	Optimizing Bridge Network Maintenance Management under Uncertainty with Conflicting Criteria: Life-Cycle Maintenance, Failure, and User Costs. Journal of Structural Engineering, 2006, 132, 1835-1845.	3.4	111
42	Multiobjective Maintenance Planning Optimization for Deteriorating Bridges Considering Condition, Safety, and Life-Cycle Cost. Journal of Structural Engineering, 2005, 131, 833-842.	3.4	107
43	Use of monitoring extreme data for the performance prediction of structures: General approach. Engineering Structures, 2008, 30, 3644-3653.	5.3	105
44	Use of monitoring extreme data for the performance prediction of structures: Bayesian updating. Engineering Structures, 2008, 30, 3654-3666.	5.3	101
45	Bridge System Performance Assessment from Structural Health Monitoring: A Case Study. Journal of Structural Engineering, 2009, 135, 733-742.	3.4	98
46	Probabilistic Service Life Assessment and Maintenance Planning of Concrete Structures. Journal of Structural Engineering, 2006, 132, 810-825.	3.4	97
47	Life-cycle maintenance of deteriorating structures by multi-objective optimization involving reliability, risk, availability, hazard and cost. Structural Safety, 2014, 48, 40-50.	5.3	97
48	Fatigue reliability assessment of retrofitted steel bridges integrating monitored data. Structural Safety, 2010, 32, 77-89.	5.3	96
49	A stochastic computational framework for the joint transportation network fragility analysis and traffic flow distribution under extreme events. Probabilistic Engineering Mechanics, 2011, 26, 182-193.	2.7	95
50	Reinforced concrete bridge deck reliability model incorporating temporal and spatial variations of probabilistic corrosion rate sensor data. Reliability Engineering and System Safety, 2008, 93, 394-409.	8.9	94
51	RELSYS: A computer program for structural system reliability. Structural Engineering and Mechanics, 1998, 6, 901-919.	1.0	94
52	Assessment of the structural performance of corrosion-affected RC members based on experimental study and probabilistic modeling. Engineering Structures, 2016, 127, 189-205.	5.3	93
53	Bridge Lifetime System Reliability under Multiple Limit States. Journal of Bridge Engineering, 2001, 6, 523-528.	2.9	92
54	A probabilistic computational framework for bridge network optimal maintenance scheduling. Reliability Engineering and System Safety, 2011, 96, 332-349.	8.9	92

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55	Sustainability of Highway Bridge Networks Under Seismic Hazard. Journal of Earthquake Engineering, 2014, 18, 41-66.	2.5	92
56	System reliability and redundancy in structural design and evaluation. Structural Safety, 1994, 16, 47-71.	5.3	91
57	Sustainability-informed maintenance optimization of highway bridges considering multi-attribute utility and risk attitude. Engineering Structures, 2015, 102, 310-321.	5.3	91
58	Integration of the effects of airborne chlorides into reliability-based durability design of reinforced concrete structures in a marine environment. Structure and Infrastructure Engineering, 2012, 8, 125-134.	3.7	90
59	Structural Optimization Using Reliability Concepts. Journal of Structural Engineering, 1985, 111, 2288-2301.	3.4	89
60	Reliability analysis of chloride penetration in saturated concrete. Probabilistic Engineering Mechanics, 2002, 17, 305-315.	2.7	89
61	Reliability, risk and lifetime distributions as performance indicators for life-cycle maintenance of deteriorating structures. Reliability Engineering and System Safety, 2014, 123, 21-37.	8.9	86
62	Balancing weight, system reliability and redundancy in a multiobjective optimization framework. Structural Safety, 1990, 7, 165-175.	5.3	83
63	Maintenance, management, life-cycle design and performance of structures and infrastructures: a brief review. Structure and Infrastructure Engineering, 2012, 8, 1-25.	3.7	83
64	Probabilistic Lifetime-Oriented Multiobjective Optimization of Bridge Maintenance: Combination of Maintenance Types. Journal of Structural Engineering, 2006, 132, 1821-1834.	3.4	82
65	Condition, safety and cost profiles for deteriorating structures with emphasis on bridges. Reliability Engineering and System Safety, 2005, 89, 185-198.	8.9	81
66	Performanceâ€based seismic assessment of conventional and baseâ€isolated steel buildings including environmental impact and resilience. Earthquake Engineering and Structural Dynamics, 2016, 45, 739-756.	4.4	81
67	Maintenance and Operation of Infrastructure Systems: Review. Journal of Structural Engineering, 2016, 142, .	3.4	81
68	Risk-informed life-cycle optimum inspection and maintenance of ship structures considering corrosion and fatigue. Ocean Engineering, 2015, 101, 161-171.	4.3	80
69	Reliability-Based Performance Indicators for Structural Members. Journal of Structural Engineering, 2016, 142, .	3.4	80
70	Bridge network performance, maintenance and optimisation under uncertainty: accomplishments and challenges. Structure and Infrastructure Engineering, 2012, 8, 341-356.	3.7	78
71	Life-Cycle Risk Assessment of Spatially Distributed Aging Bridges under Seismic and Traffic Hazards. Earthquake Spectra, 2013, 29, 127-153.	3.1	78
72	Novel Approach for Multicriteria Optimization of Life-Cycle Preventive and Essential Maintenance of Deteriorating Structures. Journal of Structural Engineering, 2010, 136, 1009-1022.	3.4	77

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73	Performance Indicators for Structural Systems and Infrastructure Networks. Journal of Structural Engineering, 2016, 142, .	3.4	77
74	Probabilistic Lifetime-Oriented Multiobjective Optimization of Bridge Maintenance: Single Maintenance Type. Journal of Structural Engineering, 2006, 132, 991-1005.	3.4	76
75	Redundancy and robustness of highway bridge superstructures and substructures. Structure and Infrastructure Engineering, 2010, 6, 257-278.	3.7	74
76	Optimization of bridge maintenance strategies based on structural health monitoring information. Structural Safety, 2011, 33, 26-41.	5.3	74
77	Bridge Annual Maintenance Prioritization under Uncertainty by Multiobjective Combinatorial Optimization. Computer-Aided Civil and Infrastructure Engineering, 2005, 20, 343-353.	9.8	73
78	Risk-Based Approach for Optimum Maintenance of Bridges under Traffic and Earthquake Loads. Journal of Structural Engineering, 2013, 139, 422-434.	3.4	73
79	Reliability-based analysis and design optimization of electrostatically actuated MEMS. Computers and Structures, 2004, 82, 1007-1020.	4.4	71
80	Reliability of fiber-reinforced composite laminate plates. Probabilistic Engineering Mechanics, 2003, 18, 119-137.	2.7	69
81	Optimization of lifetime maintenance strategies for deteriorating structures considering probabilities of violating safety, condition, and cost thresholds. Probabilistic Engineering Mechanics, 2006, 21, 1-8.	2.7	69
82	Time-Dependent Reliability of PSC Box-Girder Bridge Considering Creep, Shrinkage, and Corrosion. Journal of Bridge Engineering, 2011, 16, 29-43.	2.9	69
83	Digital technologies can enhance climate resilience of critical infrastructure. Climate Risk Management, 2022, 35, 100387.	3.2	69
84	Cost–Reliability Interaction in Life-Cycle Cost Optimization of Deteriorating Structures. Journal of Structural Engineering, 2004, 130, 1704-1712.	3.4	68
85	Long-term resilience and loss assessment of highway bridges under multiple natural hazards. Structure and Infrastructure Engineering, 2020, 16, 626-641.	3.7	67
86	Optimum maintenance strategy for deteriorating bridge structures based on lifetime functions. Engineering Structures, 2006, 28, 196-206.	5.3	66
87	Bridge Safety Evaluation Based on Monitored Live Load Effects. Journal of Bridge Engineering, 2009, 14, 257-269.	2.9	66
88	Reliability estimation of corroded RC structures based on spatial variability using experimental evidence, probabilistic analysis and finite element method. Engineering Structures, 2019, 192, 30-52.	5.3	66
89	Evaluation of Expected Life-Cycle Maintenance Cost of Deteriorating Structures. Journal of Structural Engineering, 2003, 129, 682-691.	3.4	63
90	Rating and Reliability of Existing Bridges in a Network. Journal of Bridge Engineering, 2003, 8, 383-393.	2.9	63

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91	Probability-Based Bridge Network Performance Evaluation. Journal of Bridge Engineering, 2006, 11, 633-641.	2.9	63
92	Optimum inspection planning for minimizing fatigue damage detection delay of ship hull structures. International Journal of Fatigue, 2011, 33, 448-459.	5.7	63
93	Lifetime Bridge Maintenance Strategies Based on System Reliability. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 1997, 7, 193-198.	0.8	61
94	Probabilistic limit analysis and lifetime prediction of concrete structures. Structure and Infrastructure Engineering, 2008, 4, 399-412.	3.7	60
95	Pre-Earthquake Multi-Objective Probabilistic Retrofit Optimization of Bridge Networks Based on Sustainability. Journal of Bridge Engineering, 2014, 19, .	2.9	60
96	Life-cycle management of deteriorating civil infrastructure considering resilience to lifetime hazards: A general approach based on renewal-reward processes. Reliability Engineering and System Safety, 2019, 183, 197-212.	8.9	60
97	Sensitivity of Reliabilityâ€Based Optimum Design. Journal of Structural Engineering, 1985, 111, 1703-1721.	3.4	59
98	A new look at reliability of reinforced concrete columns. Structural Safety, 1996, 18, 123-150.	5.3	59
99	Multiscale Modeling of Interactive Diffusion Processes in Concrete. Journal of Engineering Mechanics - ASCE, 2000, 126, 258-265.	2.9	58
100	Multi-objective design of post-tensioned concrete road bridges using artificial neural networks. Structural and Multidisciplinary Optimization, 2017, 56, 139-150.	3.5	58
101	Maintenance Planning for Deteriorating Concrete Bridges. Journal of Structural Engineering, 1999, 125, 1407-1414.	3.4	57
102	Bridge Rating and Reliability Correlation: Comprehensive Study for Different Bridge Types. Journal of Structural Engineering, 2004, 130, 1063-1074.	3.4	57
103	An efficient time-dependent reliability method. Structural Safety, 2019, 81, 101864.	5.3	57
104	Experimental investigation of the spatial variability of the steel weight loss and corrosion cracking of reinforced concrete members: novel X-ray and digital image processing techniques. Structure and Infrastructure Engineering, 2017, 13, 118-134.	3.7	56
105	Reliability assessment of ship structures using Bayesian updating. Engineering Structures, 2013, 56, 1836-1847.	5.3	55
106	Efficient, accurate, and simple Markov chain model for the life-cycle analysis of bridge groups. Structural Safety, 2013, 40, 51-64.	5.3	55
107	Long-term seismic performance of RC structures in an aggressive environment: emphasis on bridge piers. Structure and Infrastructure Engineering, 2014, 10, 865-879.	3.7	55
108	Improved assessment of mass concrete dams using acoustic travel time tomography. Part I — theory. Construction and Building Materials, 2000, 14, 133-146.	7.2	54

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109	Risk Matrix Integrating Risk Attitudes Based on Utility Theory. Risk Analysis, 2015, 35, 1437-1447.	2.7	54
110	Lifetime reliability-based optimization of post-tensioned box-girder bridges. Engineering Structures, 2017, 145, 381-391.	5.3	54
111	Reliability-based inspection optimization of complex structures: a brief retrospective. Computers and Structures, 2002, 80, 1133-1144.	4.4	53
112	A probabilistic approach for optimizing inspection, monitoring, and maintenance actions against fatigue of critical ship details. Structural Safety, 2016, 60, 91-101.	5.3	53
113	Reliability-Based Optimum Structural Design. , 1995, , 352-387.		52
114	Minimum expected cost-oriented optimal maintenance planning for deteriorating structures: application to concrete bridge decks. Reliability Engineering and System Safety, 2001, 73, 281-291.	8.9	52
115	Computational Platform for Predicting Lifetime System Reliability Profiles for Different Structure Types in a Network. Journal of Computing in Civil Engineering, 2004, 18, 92-104.	4.7	52
116	Balancing Connectivity of Deteriorating Bridge Networks and Long-Term Maintenance Cost through Optimization. Journal of Bridge Engineering, 2005, 10, 468-481.	2.9	52
117	Optimal bridge maintenance planning using improved multi-objective genetic algorithm. Structure and Infrastructure Engineering, 2006, 2, 33-41.	3.7	52
118	Optimization of Life-Cycle Maintenance of Deteriorating Bridges with Respect to Expected Annual System Failure Rate and Expected Cumulative Cost. Journal of Structural Engineering, 2014, 140, .	3.4	52
119	Reliability-based condition assessment of deteriorating concrete bridges considering load redistribution. Structural Safety, 1999, 21, 159-195.	5.3	51
120	Improved assessment of mass concrete dams using acoustic travel time tomography. Part II — application. Construction and Building Materials, 2000, 14, 147-156.	7.2	51
121	Time-variant redundancy of structural systems. Structure and Infrastructure Engineering, 2010, 6, 279-301.	3.7	51
122	Bridge fatigue assessment and management using reliability-based crack growth and probability of detection models. Probabilistic Engineering Mechanics, 2011, 26, 471-480.	2.7	51
123	Reliability, redundancy and risk as performance indicators of structural systems during their life-cycle. Engineering Structures, 2012, 41, 34-49.	5.3	51
124	Inspection and monitoring planning for RC structures based on minimization of expected damage detection delay. Probabilistic Engineering Mechanics, 2011, 26, 308-320.	2.7	50
125	Reliability-based optimum design of reinforced concrete girders. Structural Safety, 1996, 18, 239-258.	5.3	49
126	Service life prediction of structural systems using lifetime functions with emphasis on bridges. Reliability Engineering and System Safety, 2004, 86, 39-51.	8.9	49

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127	Time-Dependent Bridge Network Reliability: Novel Approach. Journal of Structural Engineering, 2005, 131, 329-337.	3.4	49
128	Bridge stress calculation based on the dynamic response of coupled train–bridge system. Engineering Structures, 2015, 99, 334-345.	5.3	49
129	Monte Carlo simulation of rock slope reliability. Computers and Structures, 1989, 33, 1495-1505.	4.4	48
130	Lifetime reliability-based optimization of reinforced concrete cross-sections under corrosion. Structural Safety, 2009, 31, 483-489.	5.3	48
131	Optimization of bridge maintenance strategies based on multiple limit states and monitoring. Engineering Structures, 2010, 32, 627-640.	5.3	48
132	Time-variant reliability analysis of widened deteriorating prestressed concrete bridges considering shrinkage and creep. Engineering Structures, 2017, 153, 1-16.	5.3	48
133	Lifetime Performance Analysis of Existing Steel Girder Bridge Superstructures. Journal of Structural Engineering, 2004, 130, 1875-1888.	3.4	47
134	Automated finite element updating using strain data for the lifetime reliability assessment of bridges. Reliability Engineering and System Safety, 2012, 99, 139-150.	8.9	47
135	Hyperspace Division Method for Structural Reliability. Journal of Engineering Mechanics - ASCE, 1994, 120, 2405-2427.	2.9	46
136	Redundancy of structural systems with and without maintenance: An approach based on lifetime functions. Reliability Engineering and System Safety, 2010, 95, 520-533.	8.9	46
137	Resilience As Optimization Criterion for the Rehabilitation of Bridges Belonging to a Transportation Network Subject to Earthquake. , 2011, , .		46
138	Optimizing Bridge Network Retrofit Planning Based on Cost-Benefit Evaluation and Multi-Attribute Utility Associated with Sustainability. Earthquake Spectra, 2015, 31, 2255-2280.	3.1	46
139	Probabilistic Optimization of Aging Structures Considering Maintenance and Failure Costs. Journal of Structural Engineering, 2005, 131, 600-616.	3.4	45
140	The use of lifetime functions in the optimization of interventions on existing bridges considering maintenance and failure costs. Reliability Engineering and System Safety, 2006, 91, 698-705.	8.9	45
141	On Structural Robustness, Redundancy, and Static Indeterminacy. , 2008, , .		45
142	Generalized bridge network performance analysis with correlation and time-variant reliability. Structural Safety, 2011, 33, 155-164.	5.3	45
143	Life-Cycle Cost Evaluation of Conventional and Corrosion-Resistant Steel for Bridges. Journal of Bridge Engineering, 2015, 20, .	2.9	45
144	Geometrically nonlinear finite element reliability analysis of structural systems. I: theory. Computers and Structures, 2000, 77, 677-691.	4.4	44

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145	Probabilistic optimum inspection planning of steel bridges with multiple fatigue sensitive details. Engineering Structures, 2013, 49, 996-1006.	5.3	44
146	Probabilistic optimization framework for inspection/repair planning of fatigue-critical details using dynamic Bayesian networks. Computers and Structures, 2018, 198, 40-50.	4.4	44
147	Hierarchical life-cycle design of reinforced concrete structures incorporating durability, economic efficiency and green objectives. Engineering Structures, 2018, 157, 119-131.	5.3	44
148	Reliability of material and geometrically non-linear reinforced and prestressed concrete structures. Computers and Structures, 2004, 82, 1021-1031.	4.4	43
149	Time-dependent performance indicators of damaged bridge superstructures. Engineering Structures, 2011, 33, 2458-2471.	5.3	43
150	Probabilistic Fatigue Life Estimation of Steel Bridges by Using a Bilinear S-N Approach. Journal of Bridge Engineering, 2012, 17, 58-70.	2.9	43
151	Updating the Seismic Reliability of Existing RC Structures in a Marine Environment by Incorporating the Spatial Steel Corrosion Distribution: Application to Bridge Piers. Journal of Bridge Engineering, 2016, 21, .	2.9	43
152	Life cycle utility-informed maintenance planning based on lifetime functions: optimum balancing of cost, failure consequences and performance benefit. Structure and Infrastructure Engineering, 2016, 12, 830-847.	3.7	43
153	Lifetime Performance Analysis of Existing Prestressed Concrete Bridge Superstructures. Journal of Structural Engineering, 2004, 130, 1889-1903.	3.4	42
154	Integration of structural health monitoring in life-cycle performance assessment of ship structures under uncertainty. Marine Structures, 2010, 23, 303-321.	3.8	42
155	Probabilistic life-cycle optimization of durability-enhancing maintenance actions: Application to FRP strengthening planning. Engineering Structures, 2019, 188, 340-349.	5.3	42
156	Assessment of Risk Using Bridge Element Condition Ratings. Journal of Infrastructure Systems, 2013, 19, 252-265.	1.8	41
157	Connectivity-Based Optimal Scheduling for Maintenance of Bridge Networks. Journal of Engineering Mechanics - ASCE, 2013, 139, 760-769.	2.9	41
158	Probabilistic Optimum Inspection/Repair Planning to Extend Lifetime of Deteriorating Structures. Journal of Performance of Constructed Facilities, 2011, 25, 534-544.	2.0	40
159	Optimal planning of retrofitting interventions on bridges in a highway network. Engineering Structures, 1998, 20, 933-939.	5.3	39
160	Time-dependent interaction between load rating and reliability of deteriorating bridges. Engineering Structures, 2004, 26, 1751-1765.	5.3	39
161	Updating reliability of steel miter gates on locks and dams using visual inspection results. Engineering Structures, 2004, 26, 319-333.	5.3	39
162	Life-Cycle Management of Fatigue-Sensitive Structures Integrating Inspection Information. Journal of Infrastructure Systems, 2014, 20, .	1.8	39

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163	Incorporation of risk and updating in inspection of fatigue-sensitive details of ship structures. International Journal of Fatigue, 2016, 82, 676-688.	5.7	39
164	Probabilistic assessment of an interdependent healthcare–bridge network system under seismic hazard. Structure and Infrastructure Engineering, 2017, 13, 160-170.	3.7	39
165	Risk-Informed Bridge Ranking at Project and Network Levels. Journal of Infrastructure Systems, 2018, 24, .	1.8	39
166	Seismic fragility assessment of large-scale pile-supported wharf structures considering soil-pile interaction. Engineering Structures, 2019, 186, 270-281.	5.3	39
167	Probabilistic estimation of flexural loading capacity of existing RC structures based on observational corrosion-induced crack width distribution using machine learning. Structural Safety, 2021, 91, 102098.	5.3	39
168	Bridge Network Maintenance Optimization Using Stochastic Dynamic Programming. Journal of Structural Engineering, 2007, 133, 1772-1782.	3.4	38
169	Optimizing Lifetime Condition and Reliability of Deteriorating Structures with Emphasis on Bridges. Journal of Structural Engineering, 2008, 134, 544-552.	3.4	38
170	Cost-Based Optimum Scheduling of Inspection and Monitoring for Fatigue-Sensitive Structures under Uncertainty. Journal of Structural Engineering, 2011, 137, 1319-1331.	3.4	38
171	Risk-Based Maintenance Optimization of Deteriorating Bridges. Journal of Structural Engineering, 2015, 141, 04014120.	3.4	38
172	Bridge Adaptation and Management under Climate Change Uncertainties: A Review. Natural Hazards Review, 2018, 19, .	1.5	38
173	Network-Level Risk-Based Framework for Optimal Bridge Adaptation Management Considering Scour and Climate Change. Journal of Infrastructure Systems, 2020, 26, .	1.8	38
174	Life-cycle management of deteriorating bridge networks with network-level risk bounds and system reliability analysis. Structural Safety, 2020, 83, 101911.	5.3	38
175	Optimal Network-Level Bridge Maintenance Planning Based on Minimum Expected Cost. Transportation Research Record, 2000, 1696, 26-33.	1.9	37
176	Performance evaluation of concrete slabs of existing bridges using neural networks. Engineering Structures, 2003, 25, 1455-1477.	5.3	37
177	Time-dependent risk associated with deterioration of highway bridge networks. Engineering Structures, 2013, 54, 221-233.	5.3	37
178	Influence line- model correction approach for the assessment of engineering structures using novel monitoring techniques. Smart Structures and Systems, 2012, 9, 1-20.	1.9	37
179	Lifetime Performance Analysis of Existing Reinforced Concrete Bridges. I: Theory. Journal of Infrastructure Systems, 2005, 11, 122-128.	1.8	36
180	Life-cycle cost of civil infrastructure with emphasis on balancing structural performance and seismic risk of road network. Structure and Infrastructure Engineering, 2011, 7, 65-74.	3.7	36

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181	Survey and Evaluation of Damaged Concrete Bridges. Journal of Bridge Engineering, 2000, 5, 31-38.	2.9	35
182	Reliability-based importance assessment of structural members with applications to complex structures. Computers and Structures, 2002, 80, 1113-1131.	4.4	35
183	Probabilistic ship collision risk and sustainability assessment considering risk attitudes. Structural Safety, 2015, 53, 75-84.	5.3	35
184	Reliabilityâ€Based Vector Optimization of Structural Systems. Journal of Structural Engineering, 1990, 116, 2143-2161.	3.4	34
185	Reliability-Based Assessment of Suspension Bridges: Application to the Innoshima Bridge. Journal of Bridge Engineering, 2001, 6, 398-411.	2.9	34
186	Cross-entropy-based adaptive importance sampling for time-dependent reliability analysis of deteriorating structures. Structural Safety, 2017, 66, 38-50.	5.3	34
187	Optimal Risk-Based Management of Coastal Bridges Vulnerable to Hurricanes. Journal of Infrastructure Systems, 2017, 23, .	1.8	34
188	Reliability Bases for High-Strength Concrete Columns. Journal of Structural Engineering, 1997, 123, 1375-1381.	3.4	33
189	Life-cycle reliability assessment of reinforced concrete bridges under multiple hazards. Structure and Infrastructure Engineering, 2018, 14, 1011-1024.	3.7	33
190	Life-Cycle Performance of Civil Structure and Infrastructure Systems: Survey. Journal of Structural Engineering, 2018, 144, .	3.4	33
191	Sustainability-Informed Bridge Ranking under Scour Based on Transportation Network Performance and Multiattribute Utility. Journal of Bridge Engineering, 2018, 23, .	2.9	33
192	Physics-Based Assessment of Climate Change Impact on Long-Term Regional Bridge Scour Risk Using Hydrologic Modeling: Application to Lehigh River Watershed. Journal of Bridge Engineering, 2019, 24, .	2.9	33
193	Probabilistic FEM for Nonlinear Concrete Structures. I: Theory. Journal of Structural Engineering, 1991, 117, 2674-2689.	3.4	32
194	Multi-objective design optimization of electrostatically actuated microbeam resonators with and without parameter uncertainty. Reliability Engineering and System Safety, 2007, 92, 1333-1343.	8.9	32
195	Fatigue reliability and service life prediction of aluminum naval ship details based on monitoring data. Structural Health Monitoring, 2015, 14, 3-19.	7.5	32
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