Jamie Ellen Padgett

List of Publications by Year in descending order

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145 papers 6,363 citations

43 h-index 76900 74 g-index

148 all docs

148 docs citations

148 times ranked 2648 citing authors

#	Article	IF	Citations
1	Selection of optimal intensity measures in probabilistic seismic demand models of highway bridge portfolios. Earthquake Engineering and Structural Dynamics, 2008, 37, 711-725.	4.4	494
2	Methodology for the development of analytical fragility curves for retrofitted bridges. Earthquake Engineering and Structural Dynamics, 2008, 37, 1157-1174.	4.4	329
3	Aging Considerations in the Development of Time-Dependent Seismic Fragility Curves. Journal of Structural Engineering, 2010, 136, 1497-1511.	3.4	290
4	The promise of implementing machine learning in earthquake engineering: A state-of-the-art review. Earthquake Spectra, 2020, 36, 1769-1801.	3.1	228
5	DesignSafe: New Cyberinfrastructure for Natural Hazards Engineering. Natural Hazards Review, 2017, 18, .	1.5	195
6	Bridge Damage and Repair Costs from Hurricane Katrina. Journal of Bridge Engineering, 2008, 13, 6-14.	2.9	182
7	Multi-hazard risk assessment of highway bridges subjected to earthquake and hurricane hazards. Engineering Structures, 2014, 78, 154-166.	5.3	165
8	Sensitivity of Seismic Response and Fragility to Parameter Uncertainty. Journal of Structural Engineering, 2007, 133, 1710-1718.	3.4	156
9	Risk-based seismic life-cycle cost–benefit (LCC-B) analysis for bridge retrofit assessment. Structural Safety, 2010, 32, 165-173.	5.3	154
10	Bridge Functionality Relationships for Improved Seismic Risk Assessment of Transportation Networks. Earthquake Spectra, 2007, 23, 115-130.	3.1	147
11	Multiple-Hazard Fragility and Restoration Models of Highway Bridges for Regional Risk and Resilience Assessment in the United States: State-of-the-Art Review. Journal of Structural Engineering, 2017, 143, .	3.4	129
12	Surrogate modeling and failure surface visualization for efficient seismic vulnerability assessment of highway bridges. Probabilistic Engineering Mechanics, 2013, 34, 189-199.	2.7	126
13	Fragility curves of typical as-built highway bridges in eastern Canada. Engineering Structures, 2012, 40, 107-118.	5.3	106
14	Temporal evolution of seismic fragility curves for concrete box-girder bridges in California. Engineering Structures, 2015, 97, 29-46.	5. 3	105
15	Influence of scour effects on the seismic response of reinforced concrete bridges. Engineering Structures, 2014, 76, 202-214.	5. 3	94
16	Large scale testing of nitinol shape memory alloy devices for retrofitting of bridges. Smart Materials and Structures, 2008, 17, 035018.	3.5	89
17	Retrofitted Bridge Fragility Analysis for Typical Classes of Multispan Bridges. Earthquake Spectra, 2009, 25, 117-141.	3.1	85
18	Sustainability of Natural Hazard Risk Mitigation: Life Cycle Analysis of Environmental Indicators for Bridge Infrastructure. Journal of Infrastructure Systems, 2013, 19, 395-408.	1.8	83

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19	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.	5.3	82
20	Maintenance and Operation of Infrastructure Systems: Review. Journal of Structural Engineering, 2016, 142, .	3.4	81
21	Review of Methods to Assess, Design for, and Mitigate Multiple Hazards. Journal of Performance of Constructed Facilities, 2012, 26, 104-117.	2.0	80
22	Fractional order intensity measures for probabilistic seismic demand modeling applied to highway bridges. Earthquake Engineering and Structural Dynamics, 2012, 41, 391-409.	4.4	79
23	Efficient Longitudinal Seismic Fragility Assessment of a Multispan Continuous Steel Bridge on Liquefiable Soils. Journal of Bridge Engineering, 2011, 16, 93-107.	2.9	73
24	Bridge retrofit prioritisation for ageing transportation networks subject to seismic hazards. Structure and Infrastructure Engineering, 2013, 9, 1050-1066.	3.7	71
25	Analytical Fragility Curves for Multispan Continuous Steel Girder Bridges in Moderate Seismic Zones. Transportation Research Record, 2010, 2202, 173-182.	1.9	69
26	Probabilistic seismic loss assessment of aging bridges using a componentâ€level cost estimation approach. Earthquake Engineering and Structural Dynamics, 2011, 40, 1743-1761.	4.4	66
27	ANCOVA-based grouping of bridge classes for seismic fragility assessment. Engineering Structures, 2016, 123, 379-394.	5.3	66
28	Seismic Damage Accumulation in Highway Bridges in Earthquake-Prone Regions. Earthquake Spectra, 2015, 31, 115-135.	3.1	62
29	Probabilistic Modeling of Bridge Deck Unseating during Hurricane Events. Journal of Bridge Engineering, 2013, 18, 275-286.	2.9	59
30	Impact of 2008 Hurricane lke on Bridge Infrastructure in the Houston/Galveston Region. Journal of Performance of Constructed Facilities, 2012, 26, 441-452.	2.0	58
31	Regional Seismic Risk Assessment of Bridge Network in Charleston, South Carolina. Journal of Earthquake Engineering, 2010, 14, 918-933.	2.5	57
32	Seismic response of a bridge–soil–foundation system under the combined effect of vertical and horizontal ground motions. Earthquake Engineering and Structural Dynamics, 2013, 42, 545-564.	4.4	55
33	Fragility curves for isolated bridges in eastern Canada using experimental results. Engineering Structures, 2014, 74, 311-324.	5.3	54
34	Risk-consistent calibration of load factors for the design of reinforced concrete bridges under the combined effects of earthquake and scour hazards. Engineering Structures, 2014, 79, 86-95.	5.3	53
35	Fragility Analysis of Skewed Single-Frame Concrete Box-Girder Bridges. Journal of Performance of Constructed Facilities, 2014, 28, 571-582.	2.0	52
36	Identification of the significant uncertain parameters in the seismic response of irregular bridges. Engineering Structures, 2017, 141, 356-372.	5. 3	51

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37	Seismic fragilities of singleâ€column highway bridges with rocking columnâ€footing. Earthquake Engineering and Structural Dynamics, 2019, 48, 843-864.	4.4	50
38	Seismic Fragility of Concrete Gravity Dams with Spatial Variation of Angle of Friction: Case Study. Journal of Structural Engineering, 2016, 142, .	3.4	49
39	Probabilistic seismic demand modeling of local level response parameters of an RC frame. Bulletin of Earthquake Engineering, 2017, 15, 1-23.	4.1	48
40	Seismic life-cycle cost analysis of ageing highway bridges under chloride exposure conditions: modelling and recommendations. Structure and Infrastructure Engineering, 2018, 14, 941-966.	3.7	48
41	Investigation of multivariate seismic surrogate demand modeling for multi-response structural systems. Engineering Structures, 2020, 207, 110210.	5.3	47
42	Storm surge fragility assessment of above ground storage tanks. Structural Safety, 2018, 70, 48-58.	5.3	46
43	Fragility and risk assessment of aboveground storage tanks subjected to concurrent surge, wave, and wind loads. Reliability Engineering and System Safety, 2019, 191, 106571.	8.9	46
44	Seismic Reliability Assessment of Aging Highway Bridge Networks with Field Instrumentation Data and Correlated Failures, II: <i>Application</i> . Earthquake Spectra, 2014, 30, 819-843.	3.1	45
45	Seismic Reliability Assessment of Aging Highway Bridge Networks with Field Instrumentation Data and Correlated Failures, I: Methodology. Earthquake Spectra, 2014, 30, 795-817.	3.1	45
46	Three-dimensional nonlinear seismic performance evaluation of retrofit measures for typical steel girder bridges. Engineering Structures, 2008, 30, 1869-1878.	5.3	44
47	Statistical analysis of coastal bridge vulnerability based on empirical evidence from Hurricane Katrina. Structure and Infrastructure Engineering, 2012, 8, 595-605.	3.7	44
48	Accessibility and Recovery Assessment of Houston's Roadway Network due to Fluvial Flooding during Hurricane Harvey. Natural Hazards Review, 2020, 21, .	1.5	40
49	Metamodel-Based Seismic Fragility Analysis of Concrete Gravity Dams. Journal of Structural Engineering, 2020, 146, .	3.4	40
50	Bridge Seismic Retrofitting Practices in the Central and Southeastern United States. Journal of Bridge Engineering, 2011, 16, 82-92.	2.9	39
51	Response Sensitivity for Probabilistic Damage Assessment of Coastal Bridges under Surge and Wave Loading. Transportation Research Record, 2010, 2202, 93-101.	1.9	38
52	Influence of Vertical Ground Motions on the Seismic Fragility Modeling of a Bridge-Soil-Foundation System. Earthquake Spectra, 2013, 29, 937-962.	3.1	37
53	State of the Art of Multihazard Design. Journal of Structural Engineering, 2017, 143, .	3.4	37
54	Impacts of Hurricane Storm Surge on Infrastructure Vulnerability for an Evolving Coastal Landscape. Natural Hazards Review, 2018, 19, .	1.5	37

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55	Probabilistic models of abutment backfills for regional seismic assessment of highway bridges in California. Engineering Structures, 2019, 180, 452-467.	5.3	37
56	Impact of multiple component deterioration and exposure conditions on seismic vulnerability of concrete bridges. Earthquake and Structures, 2012, 3, 649-673.	1.0	36
57	Fragility surrogate models for coastal bridges in hurricane prone zones. Engineering Structures, 2015, 103, 203-213.	5. 3	35
58	Fragility Analysis of Pile-Supported Wharves and Piers Exposed to Storm Surge and Waves. Journal of Waterway, Port, Coastal and Ocean Engineering, 2018, 144, .	1.2	35
59	Response and fragility assessment of bridge columns subjected to barge-bridge collision and scour. Engineering Structures, 2018, 168, 308-319.	5. 3	35
60	Parameterized fragility models for multi-bridge classes subjected to hurricane loads. Engineering Structures, 2020, 208, 110213.	5. 3	33
61	Evolution of Social Vulnerability and Risks of Chemical Spills during Storm Surge along the Houston Ship Channel. Natural Hazards Review, 2017, 18, .	1.5	30
62	Risk-based seismic performance assessment of Yielding Shear Panel Device. Engineering Structures, 2013, 56, 1570-1579.	5. 3	29
63	Nonlinear dynamic analysis and seismic fragility assessment of a corrosion damaged integral bridge. International Journal of Structural Integrity, 2016, 7, .	3.3	29
64	Fragility and Resilience Indicators for Portfolio of Oil Storage Tanks Subjected to Hurricanes. Journal of Infrastructure Systems, 2018, 24, .	1.8	29
65	Limit state capacities for global performance assessment of bridges exposed to hurricane surge and wave. Structural Safety, 2013, 41, 73-81.	5. 3	28
66	Multi-objective optimisation of bridge retrofit and post-event repair selection to enhance sustainability. Structure and Infrastructure Engineering, 2016, 12, 93-107.	3.7	28
67	Risk-Based Assessment of Sustainability and Hazard Resistance of Structural Design. Journal of Performance of Constructed Facilities, 2016, 30, .	2.0	27
68	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.	4.4	27
69	Probabilistic seismic analysis of concrete dry cask structures. Structural Safety, 2018, 73, 87-98.	5.3	25
70	Influential fluid–structure interaction modelling parameters on the response of bridges vulnerable to coastal storms. Structure and Infrastructure Engineering, 2015, 11, 321-333.	3.7	22
71	Comparison between the Seismic Performance of Integral and Jointed Concrete Bridges. Journal of Earthquake Engineering, 2015, 19, 172-191.	2.5	22
72	Seismic Fragility of Railway Bridge Classes: Methods, Models, and Comparison with the State of the Art. Journal of Bridge Engineering, 2019, 24, .	2.9	22

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73	Fractional order optimal intensity measures for probabilistic seismic demand modeling of extended pile-shaft-supported bridges in liquefiable and laterally spreading ground. Soil Dynamics and Earthquake Engineering, 2019, 120, 301-315.	3.8	22
74	Decision tree based bridge restoration models for extreme event performance assessment of regional road networks. Structure and Infrastructure Engineering, 2020, 16, 431-451.	3.7	22
75	Characterizing and Predicting Seismic Repair Costs for Bridges. Journal of Bridge Engineering, 2017, 22,	2.9	21
76	Effect of vehicle bridge interaction on seismic response and fragility of bridges. Earthquake Engineering and Structural Dynamics, 2018, 47, 697-713.	4.4	21
77	Probabilistic Risk Assessment of Coupled Natural-Physical-Social Systems: Cascading Impact of Hurricane-Induced Damages to Civil Infrastructure in Galveston, Texas. Natural Hazards Review, 2021, 22, .	1.5	21
78	Seismic Reliability Assessment of Bridges with User-Defined System Failure Events. Journal of Engineering Mechanics - ASCE, 2011, 137, 680-690.	2.9	20
79	Development of an Experimentally Validated Analytical Model for Modular Bridge Expansion Joint Behavior. Journal of Bridge Engineering, 2014, 19, 235-244.	2.9	20
80	A posteriori optimal intensity measures for probabilistic seismic demand modeling. Bulletin of Earthquake Engineering, 2019, 17, 681-706.	4.1	20
81	Experimental response modification of a four-span bridge retrofit with shape memory alloys. Structural Control and Health Monitoring, 2009, 17, n/a-n/a.	4.0	19
82	Influence of Traffic Loading on the Seismic Reliability Assessment of Highway Bridge Structures. Journal of Bridge Engineering, 2014, 19 , .	2.9	19
83	Influence of Soil-Structure Interaction and Liquefaction on the Isolation Efficiency of a Typical Multispan Continuous Steel Girder Bridge. Journal of Bridge Engineering, 2014, 19, .	2.9	19
84	Influence of intensity measure selection on simulation-based regional seismic risk assessment. Earthquake Spectra, 2020, 36, 647-672.	3.1	19
85	Impact of Coastal Hazards on Residents' Spatial Accessibility to Health Services. Journal of Infrastructure Systems, 2019, 25, .	1.8	18
86	An expert opinion survey on post-hazard restoration of roadways and bridges: Data and key insights. Earthquake Spectra, 2020, 36, 983-1004.	3.1	18
87	Fragility Assessment for Seismically Retrofitted Skewed Reinforced Concrete Box Girder Bridges. Journal of Performance of Constructed Facilities, 2015, 29, .	2.0	17
88	Assessing the accessibility of petrochemical facilities during storm surge events. Reliability Engineering and System Safety, 2019, 188, 155-167.	8.9	17
89	Performance evaluation of natural rubber seismic isolators as a retrofit measure for typical multi-span concrete bridges in eastern Canada. Engineering Structures, 2014, 74, 300-310.	5.3	16
90	A Markov chain-based model for structural vulnerability assessmentof corrosion-damaged reinforced concrete bridges. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200290.	3.4	16

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91	Explicit Timeâ€Dependent Multiâ€Hazard Cost Analysis Based on Parameterized Demand Models for the Optimum Design of Bridge Structures. Computer-Aided Civil and Infrastructure Engineering, 2015, 30, 541-554.	9.8	15
92	Parameterized Fragility Assessment of Bridges Subjected to Pier Scour and Vehicular Loads. Journal of Bridge Engineering, 2018, 23, .	2.9	15
93	Disaster Risk Management Through the DesignSafe Cyberinfrastructure. International Journal of Disaster Risk Science, 2020, 11, 719-734.	2.9	15
94	A new mutually reinforcing network node and link ranking algorithm. Scientific Reports, 2015, 5, 15141.	3.3	13
95	Multivariate return periodâ€based ground motion selection for improved hazard consistency over a vector of intensity measures. Earthquake Engineering and Structural Dynamics, 2021, 50, 415-435.	4.4	13
96	Entropyâ€based intensity measure selection for siteâ€specific probabilistic seismic risk assessment. Earthquake Engineering and Structural Dynamics, 2021, 50, 560-579.	4.4	13
97	FOSID: a fractional order spectrum intensity for probabilistic seismic demand modeling of extended pile-shaft-supported highway bridges under liquefaction and transverse spreading. Bulletin of Earthquake Engineering, 2021, 19, 2531-2559.	4.1	12
98	Seismic response prediction and modeling considerations for curved and skewed concrete box-girder bridges. Earthquake and Structures, 2015, 9, 1153-1179.	1.0	12
99	Sustainable Infrastructure Subjected to Multiple Threats. , 2009, , .		11
100	Life Cycle Performance Metrics for Aging and Seismically Vulnerable Bridges., 2011,,.		11
101	Probabilistic analysis of vertical concrete dry casks subjected to tip-over and aging effects. Nuclear Engineering and Design, 2019, 343, 232-247.	1.7	11
102	Hurricane Risk Assessment of Petroleum Infrastructure in a Changing Climate. Frontiers in Built Environment, 2020, 6, .	2.3	11
103	Seismic fragility of bridges: An approach coupling multiple-stripe analysis and Gaussian mixture for multicomponent structures. Earthquake Spectra, 2022, 38, 254-282.	3.1	11
104	Parametrized Wind–Surge–Wave Fragility Functions for Wood Utility Poles. Journal of Structural Engineering, 2022, 148, .	3.4	11
105	Mitigation Strategies to Protect Petrochemical Infrastructure and Nearby Communities during Storm Surge. Natural Hazards Review, 2018, 19, 04018019.	1.5	10
106	Fragility Analysis of Coastal Roadways and Performance Assessment of Coastal Transportation Systems Subjected to Storm Hazards. Journal of Performance of Constructed Facilities, 2021, 35, .	2.0	10
107	Effects of liquefiable soil and bridge modelling parameters on the seismic reliability of critical structural components. Structure and Infrastructure Engineering, 0 , $1-19$.	3.7	9
108	A Seismic Reliability Assessment of Reinforced Concrete Integral Bridges Subject to Corrosion. Key Engineering Materials, 0, 569-570, 366-373.	0.4	9

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109	Interaction of life-cycle phases in a probabilistic life-cycle framework for civil infrastructure system sustainability. Sustainable and Resilient Infrastructure, 2020, 5, 289-310.	2.8	9
110	Toward confident regional seismic risk assessment of spatially distributed structural portfolios via entropy-based intensity measure selection. Bulletin of Earthquake Engineering, 2020, 18, 6283-6311.	4.1	9
111	Parameterized coastal fragilities and their application to aging port structures subjected to surge and wave. Engineering Structures, 2021, 237, 112235.	5.3	9
112	Road transportation network hazard sustainability and resilience: correlations and comparisons. Structure and Infrastructure Engineering, 2023, 19, 345-365.	3.7	9
113	Optimal Intensity Measures for Probabilistic Seismic Response Analysis of Bridges on Liquefiable and Non-Liquefiable Soils., 2012,,.		8
114	A ground motion prediction equation for novel peak ground fractional order response intensity measures. Bulletin of Earthquake Engineering, 2017, 15, 3437-3461.	4.1	8
115	Influence of abutment straight backwall fracture on the seismic response of bridges. Earthquake Engineering and Structural Dynamics, 2021, 50, 1824-1844.	4.4	8
116	Accounting for Uncertainties in the Safety Assessment of Concrete Gravity Dams: A Probabilistic Approach with Sample Optimization. Water (Switzerland), 2021, 13, 855.	2.7	8
117	Refined multivariate return period-based ground motion selection and implications for seismic risk assessment. Structural Safety, 2021, 91, 102079.	5.3	8
118	Examining the Integration of Sustainability and Natural Hazard Risk Mitigation into Life Cycle Analyses of Structures. , 2012 , , .		7
119	Probabilistic fragility and resilience assessment and sensitivity analysis of bridges incorporating aftershock effects. Sustainable and Resilient Infrastructure, 2022, 7, 17-39.	2.8	7
120	Performance-Based Coastal Engineering Framework. Frontiers in Built Environment, 2021, 7, .	2.3	7
121	Analytical Fragility Models for Box Girder Bridges with and without Protective Systems. , 2009, , .		6
122	Supporting Life Cycle Management of Bridges Through Multi-Hazard Reliability and Risk Assessment. , 2016, , 41-58.		6
123	Probabilistic Seismic Response and Capacity Models of Piles for Statewide Bridges in California. Journal of Structural Engineering, 2021, 147, .	3.4	6
124	Surrogate modelling to enable structural assessment of collision between vertical concrete dry casks. Structure and Infrastructure Engineering, 2019, 15, 1137-1150.	3.7	5
125	Stiffening Ring Design for Prevention of Storm-Surge Buckling in Aboveground Storage Tanks. Journal of Structural Engineering, 2019, 145, .	3.4	5
126	Seismic Performance Assessment of a Retrofitted Bridge with Natural Rubber Isolators in Cold Weather Environments Using Fragility Surfaces. Journal of Bridge Engineering, 2022, 27, .	2.9	5

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127	Seismic Vulnerability of Bridges Susceptible to Spatially Distributed Soil Liquefaction Hazards. , 2009, , .		4
128	Estimating Extreme Event Resilience of Rail–Truck Intermodal Freight Networks: Methods, Models, and Case Study Application. Journal of Infrastructure Systems, 2022, 28, .	1.8	4
129	Recent Advances in Assessment and Mitigation of Multiple Hazards. Journal of Structural Engineering, 2017, 143, 02017001.	3.4	3
130	Fragility Assessment of Floating Roof Storage Tanks during Severe Rainfall Events. Journal of Performance of Constructed Facilities, 2020, 34, 04020101.	2.0	3
131	Laboratory Experiments of Vertical Cylinders Representative of Aboveground Storage Tanks Subjected to Waves. Journal of Structural Engineering, 2020, 146, .	3.4	3
132	Expected seismic performance of gravity dams using machine learning techniques. Bulletin of the New Zealand Society for Earthquake Engineering, 2021, 54, 58-68.	0.5	3
133	Risk-based bridge component importance measures under seismic loads. Earthquake Spectra, 2022, 38, 1683-1704.	3.1	3
134	Seismic Performance Assessment of a Passive Control Technology for Bridges Using Shape Memory Alloys. , 2008, , .		2
135	The Effects of Deteriorating Bridges on Bridges on the Bridge Network Connectivity. , $2011, \ldots$		2
136	PROBABILISTIC MODELING OF ABOVEGROUND STORAGE TANKS UNDER SURGE AND WAVE LOADS. Coastal Engineering Proceedings, 2018, , 4.	0.1	2
137	Destructive and non-destructive evaluation of reinforced concrete dry casks affected by alkali-silica reactivity damage. Structure and Infrastructure Engineering, 2019, 15, 1404-1418.	3.7	2
138	Performance Assessment of Oil Supply Chain Infrastructure Subjected to Hurricanes. Journal of Infrastructure Systems, 2021, 27, .	1.8	2
139	Considering Time-Varying Factors and Social Vulnerabilities in Performance-Based Assessment of Coastal Communities Exposed to Hurricanes. Journal of Structural Engineering, 2022, 148, .	3.4	2
140	Post-Earthquake Restoration Modelling of a Railway Bridge Network., 2017,,.		1
141	Augmented System Level Failure Events for Bridges under Earthquake Hazards. , 2010, , .		0
142	Closure to "Review of Methods to Assess, Design for, and Mitigate Multiple Hazards―by Yue Li, Aakash Ahuja, and Jamie E. Padgett. Journal of Performance of Constructed Facilities, 2013, 27, 216-216.	2.0	0
143	Effectiveness Evaluation of Seismic Protection Devices for Bridges in the PBEE Framework. , 2014, , .		0
144	Structural Upgrade Selection via Shortest-Path Algorithm Based on Life-Cycle Sustainability Metrics. , 2014, , .		0

ARTICLE IF CITATIONS

145 Infrastructure impacts and vulnerability to coastal flood events., 2022,, 151-165.