Rajesh Dhakal

List of Publications by Year
in descending order

143 papers	3,156 citations	126907 33 h-index	206112 48 g-index
149 all docs	149 docs citations	149 times ranked	1680 citing authors

#	Article	IF	Citations
1	Cyclic Behaviour of Two-Story Low-Damage Rocking Precast Concrete Cladding Panel System. Journal of Earthquake Engineering, 2023, 27, 1414-1439.	2.5	1
2	Low-Damage Rocking Precast Concrete Cladding Panels: Design Approach and Experimental Validation. Journal of Earthquake Engineering, 2022, 26, 4387-4420.	2.5	11
3	Experimental Seismic Performance of Partly-Sliding Partition Walls. Journal of Earthquake Engineering, 2022, 26, 1630-1655.	2.5	15
4	Lateral Stability Limits for RC Wall Boundary Zones Based on Axial Response of Idealized Prisms. Journal of Earthquake Engineering, 2022, 26, 5617-5646.	2.5	2
5	Out-of-Plane Response of In-Plane-Loaded Ductile Structural Walls: State-of-the-Art and Classification of the Observed Mechanisms. Journal of Earthquake Engineering, 2022, 26, 1325-1346.	2.5	10
6	Strong axis low-damage performance of rocking column-base joints with asymmetric friction connections. Journal of Constructional Steel Research, 2022, 191, 107175.	3.9	12
7	Structural and durability properties for magnesia alumina silicate concrete. Construction and Building Materials, 2022, 340, 127725.	7.2	3
8	Outâ€ofâ€plane shearâ€axial failure in slender rectangular reinforced concrete walls. Earthquake Engineering and Structural Dynamics, 2022, 51, 2426-2448.	4.4	2
9	Demountable shear wall with rocking boundary columns for precast concrete buildings in high seismic regions. Structures, 2022, 41, 1454-1474.	3.6	7
10	Experimental study on the effects of biâ€directional loading pattern on rectangular reinforced concrete walls. Earthquake Engineering and Structural Dynamics, 2021, 50, 2010-2030.	4.4	7
11	Development of a MgO-metakaolin binder system. Construction and Building Materials, 2021, 284, 122736.	7.2	16
12	Designing and detailing transverse reinforcement to control bar buckling in rectangular RC walls. Bulletin of the New Zealand Society for Earthquake Engineering, 2021, 54, 228-242.	0.5	5
13	Design recommendations to prevent global out-of-plane instability of rectangular reinforced concrete ductile walls. Bulletin of the New Zealand Society for Earthquake Engineering, 2021, 54, 211-227.	0.5	3
14	Seismic design of acceleration-sensitive non-structural elements in New Zealand: State-of-practice and recommended changes. Bulletin of the New Zealand Society for Earthquake Engineering, 2021, 54, 243-262.	0.5	6
15	Hybrid posttensioned rocking (HPR) frame buildings: Low-damage vs low-loss paradox. Bulletin of the New Zealand Society for Earthquake Engineering, 2021, 54, i-viii.	0.5	2
16	Theoretical and experimental evaluation of timber-framed partitions under lateral drift. Bulletin of the New Zealand Society for Earthquake Engineering, 2021, 54, 263-281.	0.5	5
17	Multi-objective loss-based optimization of viscous dampers for seismic retrofitting of irregular structures. Soil Dynamics and Earthquake Engineering, 2020, 129, 105765.	3.8	13
18	Probabilistic structural fire engineering using incremental fire analysis and cloud analysis. Proceedings of the Institution of Civil Engineers: Engineering and Computational Mechanics, 2020, 173, 47-58.	0.4	1

#	Article	IF	Citations
19	Numerical simulation and damage analysis of RC bridge piers reinforced with varying yield strength steel reinforcement. Soil Dynamics and Earthquake Engineering, 2020, 130, 106007.	3.8	22
20	Numerical evaluations of a novel membrane element in response history analysis of reinforced concrete shear walls. Engineering Structures, 2020, 220, 110760.	5.3	6
21	Nonlinear cyclic behaviour of high-strength ductile RC walls: Experimental and numerical investigations. Engineering Structures, 2020, 222, 111116.	5.3	13
22	Axial response of rectangular RC prisms representing the boundary elements of ductile concrete walls. Bulletin of Earthquake Engineering, 2020, 18, 4387-4420.	4.1	13
23	A parametric study on out-of-plane instability of doubly reinforced structural walls. Part II: Experimental investigation. Bulletin of Earthquake Engineering, 2020, 18, 5193-5220.	4.1	6
24	Mechanical and durability properties of magnesium silicate hydrate binder concrete. Magazine of Concrete Research, 2020, 72, 693-702.	2.0	11
25	Experimental investigation of â€œdryâ€•jointed precast concrete frame sub-assemblies with steel angle and tube connections. Bulletin of Earthquake Engineering, 2020, 18, 3659-3681.	4.1	18
26	A parametric study on out-of-plane instability of doubly reinforced structural walls. Part I: FEM predictions. Bulletin of Earthquake Engineering, 2020, 18, 3747-3780.	4.1	12
27	Performance group weighting factors for rapid seismic loss estimation of buildings of different usage. Earthquake Spectra, 2020, 36, 1141-1165.	3.1	15
28	RESEARCH PROGRAMME ON SEISMIC PERFORMANCE OF REINFORCED CONCRETE WALLS: KEY RECOMMENDATIONS. Bulletin of the New Zealand Society for Earthquake Engineering, 2020, 53, 54-69.	0.5	7
29	Experimental study of the seismic performance of plasterboard partition walls with seismic gaps. Bulletin of the New Zealand Society for Earthquake Engineering, 2020, 53, 175-188.	0.5	10
30	Seismic performance of non-structural elements (SPONSE) and Learning from earthquakes (LFE). Bulletin of the New Zealand Society for Earthquake Engineering, 2020, 53, 113-115.	0.5	2
31	Experimental investigation into the seismic fragility of a commercial glazing system. Bulletin of the New Zealand Society for Earthquake Engineering, 2020, 53, 144-149.	0.5	8
32	The September 19th, 2017 Puebla, Mexico earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2020, 53, 150-172.	0.5	4
33	Analytical and numerical investigation of â€œdryâ€•jointed precast concrete frame sub-assemblies with steel angle and tube connections. Bulletin of Earthquake Engineering, 2019, 17, 4961-4985.	4.1	15
34	Bar buckling in ductile RC walls with different boundary zone detailing: Experimental investigation. Engineering Structures, 2019, 198, 109544.	5.3	21
35	Numerical evaluations of a novel membrane element in simulations of reinforced concrete shear walls. Engineering Structures, 2019, 199, 109592.	5.3	9
36	State-of-the-art of probabilistic performance based structural fire engineering. Journal of Structural Fire Engineering, 2019, 10, 175-192.	0.8	16

#	Article	IF	Citations
37	State-of-the-art in nonlinear finite element modeling of isolated planar reinforced concrete walls. Engineering Structures, 2019, 194, 46-65.	5.3	45
38	A new drilling quadrilateral membrane element with high coarseâ€mesh accuracy using a modified Huâ€Washizu principle. International Journal for Numerical Methods in Engineering, 2019, 119, 639-660.	2.8	6
39	A parametric investigation on applicability of the curved shell finite element model to nonlinear response prediction of planar RC walls. Bulletin of Earthquake Engineering, 2019, 17, 6515-6546.	4.1	21
40	Severity Measures and Stripe Analysis for Probabilistic Structural Fire Engineering. Fire Technology, 2019, 55, 1147-1173.	3.0	14
41	Development of cladding contribution functions for seismic loss estimation. Bulletin of the New Zealand Society for Earthquake Engineering, 2019, 52, 23-43.	0.5	11
42	DYNAMIC ANALYSIS OF A REINFORCED CONCRETE SHEAR WALL BUILDING USING A NOVEL FINITE ELEMENT. , 2019, , .		0
43	Nonlinear Cyclic Behaviour of Precast Concrete Frame Sub-Assemblies With â€œDryâ€•End Plate Connection. Structures, 2018, 14, 124-136.	3.6	39
44	Validation of a Numerical Model for Prediction of Out-of-Plane Instability in Ductile Structural Walls under Concentric In-Plane Cyclic Loading. Journal of Structural Engineering, 2018, 144, .	3.4	25
45	Design of transverse reinforcement to avoid premature buckling of main bars. Earthquake Engineering and Structural Dynamics, 2018, 47, 147-168.	4.4	37
46	Blind prediction of in-plane and out-of-plane responses for a thin singly reinforced concrete flanged wall specimen. Bulletin of Earthquake Engineering, 2018, 16, 427-458.	4.1	19
47	Application of local elasticity continuum damping models in nonlinear dynamic analysis. Bulletin of Earthquake Engineering, 2018, 16, 6365-6391.	4.1	1
48	Low-cycle fatigue behaviour of reinforcing bars including the effect of inelastic buckling. Construction and Building Materials, 2018, 190, 1226-1235.	7.2	41
49	Evolution of outâ€ofâ€plane deformation and subsequent instability in rectangular RC walls under inâ€plane cyclic loading: Experimental observation. Earthquake Engineering and Structural Dynamics, 2018, 47, 2944-2964.	4.4	28
50	Application of nonlocal elasticity continuum damping models in nonlinear dynamic analysis. Bulletin of Earthquake Engineering, 2018, 16, 6269-6297.	4.1	4
51	Cyclic response analysis of high-strength self-compacting concrete beam-column joints. Bulletin of the New Zealand Society for Earthquake Engineering, 2018, 51, 23-33.	0.5	2
52	Validating the sliding mechanics of office-type furniture using shake-table experiments. Bulletin of the New Zealand Society for Earthquake Engineering, 2018, 51, 1-11.	0.5	5
53	Numerical Modeling of Rectangular Reinforced Concrete Structural Walls. Journal of Structural Engineering, 2017, 143, .	3.4	51
54	Prediction of lateral stiffness and fundamental period of concentrically braced frame buildings. Bulletin of Earthquake Engineering, 2017, 15, 3053-3082.	4.1	5

#	Article	IF	Citations
55	Fiber-based damage analysis of reinforced concrete bridge piers. Soil Dynamics and Earthquake Engineering, 2017, 96, 13-34.	3.8	44
56	Wall building stiffness and strength effect on content sliding in Wellington seismic conditions. Earthquake Engineering and Structural Dynamics, 2017, 46, 1023-1042.	4.4	1
57	Effect of ground motion selection methods on seismic collapse fragility of RC frame buildings. Earthquake Engineering and Structural Dynamics, 2017, 46, 1875-1892.	4.4	20
58	Fully Floating Suspended Ceiling System: Experimental Evaluation of Structural Feasibility and Challenges. Earthquake Spectra, 2017, 33, 1627-1654.	3.1	31
59	Demountable Precast Concrete Frameâ€"Building System for Seismic Regions: Conceptual Development. Journal of Architectural Engineering, 2017, 23, .	1.6	36
60	Seismic performance of RC bridge piers reinforced with varying yield strength steel. Earthquake and Structures, 2017, 12, 201-211.	1.0	16
61	Performance of reinforced concrete buildings in the 2016 Kumamoto earthquakes and seismic design in Japan. Bulletin of the New Zealand Society for Earthquake Engineering, 2017, 50, 394-435.	0.5	13
62	Tests on slender ductile structural walls designed according to New Zealand Standard. Bulletin of the New Zealand Society for Earthquake Engineering, 2017, 50, 504-516.	0.5	20
63	Elemental damping formulation: an alternative modelling of inherent damping in nonlinear dynamic analysis. Bulletin of Earthquake Engineering, 2016, 14, 2405-2434.	4.1	31
64	Seismic performance of non-structural components and contents in buildings: an overview of NZ research. Earthquake Engineering and Engineering Vibration, 2016, 15, 1-17.	2.3	35
65	Predicting the Maximum Total Sliding Displacement of Contents in Earthquakes. Journal of Architectural Engineering, 2016, 22, .	1.6	4
66	Seismic risk assessment of low rise RC frame structure. Structures, 2016, 5, 13-22.	3.6	19
67	Beyond Ductility: Parametric Testing of a Jointed Rocking Beam-Column Connection Designed for Damage Avoidance. Journal of Structural Engineering, 2016, 142, .	3.4	27
68	Seismic fragility of suspended ceiling systems used in NZ based on component tests. Bulletin of the New Zealand Society for Earthquake Engineering, 2016, 49, 45-63.	0.5	18
69	Simplified seismic loss functions for suspended ceilings and drywall partitions. Bulletin of the New Zealand Society for Earthquake Engineering, 2016, 49, 64-78.	0.5	15
70	Prediction of fundamental period of regular frame buildings. Bulletin of the New Zealand Society for Earthquake Engineering, 2016, 49, 175-189.	0.5	7
71	Building typologies and failure modes observed in the 2015 Gorkha (Nepal) earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2016, 49, 211-232.	0.5	37
72	Corrections to â€œFloor diaphragms and a truss method for their analysisâ€•Bulletin of the NZSEE, Vol. 48, No. 1. Bulletin of the New Zealand Society for Earthquake Engineering, 2016, 49, 146.	0.5	0

#	Article	IF	Citations
73	Building contents sliding demands in elastically responding structures. Engineering Structures, 2015, 86, 182-191.	5.3	19
74	Analytical simulation of seismic collapse of RC frame buildings. Bulletin of the New Zealand Society for Earthquake Engineering, 2015, 48, 157-169.	0.5	4
75	SEISMIC LOSS OPTIMIZATION OF FRAME BUILDINGS USING VISCOUS DAMPERS. , 2015, , .		1
76	Corrections to â€œFloor diaphragms and a truss method for their analysisâ€•Bulletin of the NZSEE, Vol. 48, No. 1. Bulletin of the New Zealand Society for Earthquake Engineering, 2015, 48, 274.	0.5	0
77	Seismic Performance of High-Strength Self-Compacting Concrete in Reinforced Concrete Beam-Column Joints. Journal of Structural Engineering, 2014, 140, .	3.4	34
78	Comparative in-plane pushover response of a typical RC rectangular wall designed by different standards. Earthquake and Structures, 2014, 7, 667-689.	1.0	6
79	Evaluation of displacement-based vulnerability assessment methodology using observed damage data from Christchurch. Earthquake Engineering and Structural Dynamics, 2014, 43, 2319-2339.	4.4	6
80	A generic time domain implementation scheme for non-classical convolution damping models. Engineering Structures, 2014, 71, 88-98.	5.3	33
81	Cyclic Loading Test of Reinforced Concrete Frame with Precast-Prestressed Flooring System. ACI Structural Journal, 2014, 111, .	0.2	7
82	Mechanical and fresh properties of high-strength self-compacting concrete containing class C fly ash. Construction and Building Materials, 2013, 47, 1217-1224.	7.2	57
83	Post-yield bond behaviour of deformed bars in high-strength self-compacting concrete. Construction and Building Materials, 2013, 44, 236-248.	7.2	34
84	Cyclic beam bending test for assessment of bondâ€“slip behaviour. Engineering Structures, 2013, 56, 1684-1697.	5.3	24
85	Multispring Hinge Element for Reinforced Concrete Frame Analysis. Journal of Structural Engineering, 2013, 139, 595-606.	3.4	10
86	Analysis of Connections in Composite Construction Under Cyclic Loading. , 2013, , .		0
87	Seismic design spectra for different soil classes. Bulletin of the New Zealand Society for Earthquake Engineering, 2013, 46, 79-87.	0.5	16
88	Modelling the Fire Resistance of Prestressed Concrete Floors using Multi-Spring Connection Elements. Journal of Structural Fire Engineering, 2012, 3, 1-18.	0.8	2
89	Cyclic performance of beamâ€“column joints with extended column fixed at base. Part I: experimental investigation. Magazine of Concrete Research, 2012, 64, 807-825.	2.0	6
90	High-Force-to-Volume Seismic Dissipators Embedded in a Jointed Precast Concrete Frame. Journal of Structural Engineering, 2012, 138, 375-386.	3.4	69

#	Article	IF	Citations
91	Building pounding damage observed in the 2011 Christchurch earthquake. Earthquake Engineering and Structural Dynamics, 2012, 41, 893-913.	4.4	134
92	Elongation of Plastic Hinges in Ductile RC Members: Model Development. Journal of Advanced Concrete Technology, 2011, 9, 315-326.	1.8	14
93	Elongation of Plastic Hinges in Ductile RC Members: Model Verification. Journal of Advanced Concrete Technology, 2011, 9, 327-338.	1.8	8
94	Design of Timber-Concrete Composite Floors for Fire Resistance. Journal of Structural Fire Engineering, 2011, 2, 231-242.	0.8	17
95	An investigation of the effects of mass distribution on pounding structures. Earthquake Engineering and Structural Dynamics, 2011, 40, 641-659.	4.4	39
96	HF2V dissipator effects on the performance of a 3 story moment frame. Journal of Constructional Steel Research, 2011, 67, 1843-1849.	3.9	19
97	Experimentally validated FEA models of HF2V damage free steel connections for use in full structural analyses. Structural Engineering and Mechanics, 2011, 37, 385-399.	1.0	11
98	Building and bridge pounding damage observed in the 2011 Christchurch earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2011, 44, 334-341.	0.5	1
99	Performance of ceilings in the February 2011 Christchurch earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2011, 44, 377-387.	0.5	24
100	Seismic performance of an unreinforced masonry building: An experimental investigation. Earthquake Engineering and Structural Dynamics, 2010, 39, 45-68.	4.4	48
101	Prediction of spatially distributed seismic demands in specific structures: Ground motion and structural response. Earthquake Engineering and Structural Dynamics, 2010, 39, 501-520.	4.4	27
102	Prediction of spatially distributed seismic demands in specific structures: Structural response to loss estimation. Earthquake Engineering and Structural Dynamics, 2010, 39, 591-613.	4.4	9
103	Effect of Aspect Ratio on Fire Resistance of Hollow Core Concrete Floors. Fire Technology, 2010, 46, 201-216.	3.0	9
104	Probabilistic seismic performance and loss assessment of a bridgeâ€“foundationâ€“soil system. Soil Dynamics and Earthquake Engineering, 2010, 30, 395-411.	3.8	43
105	Seismic performance of reinforced concrete buildings in the September 2010 Darfield (Canterbury) earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2010, 43, 340-350.	0.5	41
106	Interbuilding pounding damage observed in the 2010 Darfield earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2010, 43, 382-386.	0.5	22
107	Damage to non-structural components and contents in 2010 Darfield earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2010, 43, 404-411.	0.5	88
108	Ground-Motion Prediction Equation for SI Based on Spectral Acceleration Equations. Bulletin of the Seismological Society of America, 2009, 99, 277-285.	2.3	50

#	Article	IF	Citations
109	Performance of a Damage-Protected Highway Bridge Pier Subjected to Bidirectional Earthquake Attack. Journal of Structural Engineering, 2009, 135, 469-478.	3.4	55
110	Intensity measures for the seismic response of pile foundations. Soil Dynamics and Earthquake Engineering, 2009, 29, 1046-1058.	3.8	71
111	Design of steel portal frame buildings for fire safety. Journal of Constructional Steel Research, 2009, 65, 1216-1224.	3.9	25
112	Damage Avoidance Design Steel Beam-Column Moment Connection Using High-Force-to-Volume Dissipators. Journal of Structural Engineering, 2009, 135, 1390-1397.	3.4	64
113	Seismic Performance of Reinforced Concrete Frames with Precast-Prestressed Flooring System. , 2009, , .		3
114	Assessment of material strain limits for defining plastic regions in concrete structures. Bulletin of the New Zealand Society for Earthquake Engineering, 2009, 42, 86-95.	0.5	8
115	Seismic loss estimation for efficient decision making. Bulletin of the New Zealand Society for Earthquake Engineering, 2009, 42, 96-110.	0.5	53
116	Effects of strain-ageing on New Zealand reinforcing steel bars. Bulletin of the New Zealand Society for Earthquake Engineering, 2009, 42, 179-186.	0.5	4
117	Experimental multiâ€level seismic performance assessment of 3D RC frame designed for damage avoidance. Earthquake Engineering and Structural Dynamics, 2008, 37, 1-20.	4.4	60
118	Computational and rapid expected annual loss estimation methodologies for structures. Earthquake Engineering and Structural Dynamics, 2008, 37, 81-101.	4.4	37
119	Spectral analysis and design approach for high force-to-volume extrusion damper-based structural energy dissipation. Earthquake Engineering and Structural Dynamics, 2008, 37, 207-223.	4.4	34
120	Performance of a damageâ€protected beamâ€“column subassembly utilizing external HF2V energy dissipation devices. Earthquake Engineering and Structural Dynamics, 2008, 37, 1549-1564.	4.4	72
121	Error estimation of closedâ€form solution for annual rate of structural collapse. Earthquake Engineering and Structural Dynamics, 2008, 37, 1721-1737.	4.4	60
122	Hollow-core concrete slabs exposed to fire. Fire and Materials, 2008, 32, 321-331.	2.0	16
123	Location of plastic hinges in axially loaded steel members. Journal of Constructional Steel Research, 2008, 64, 344-351.	3.9	4
124	The fire behaviour of multi-bay, two-way reinforced concrete slabs. Engineering Structures, 2008, 30, 3566-3573.	5.3	34
125	Performance-Based Seismic Response of Pile Foundations. , 2008, , .		3
126	Bidirectional Cyclic Loading Experiment on a 3D Beamâ€“Column Joint Designed for Damage Avoidance. Journal of Structural Engineering, 2008, 134, 1733-1742.	3.4	67

#	Article	IF	Citations
127	Plastic hinge location in columns of steel frames subjected to seismic actions. Bulletin of the New Zealand Society for Earthquake Engineering, 2008, 41, 1-9.	0.5	2
128	Bidirectional Pseudodynamic Tests of Bridge Piers Designed to Different Standards. Journal of Bridge Engineering, 2007, 12, 284-295.	2.9	10
129	Improved seismic hazard model with application to probabilistic seismic demand analysis. Earthquake Engineering and Structural Dynamics, 2007, 36, 2211-2225.	4.4	64
130	Incremental dynamic analysis applied to seismic financial risk assessment of bridges. Engineering Structures, 2007, 29, 2662-2672.	5.3	114
131	Effectiveness of earthquake selection and scaling method in New Zealand. Bulletin of the New Zealand Society for Earthquake Engineering, 2007, 40, 160-171.	0.5	14
132	Identification of critical ground motions for seismic performance assessment of structures. Earthquake Engineering and Structural Dynamics, 2006, 35, 989-1008.	4.4	47
133	Post-peak response analysis of SFRC columns including spalling and buckling. Structural Engineering and Mechanics, 2006, 22, 311-330.	1.0	14
134	Cyclic behavior of interior beam-column connections in non-seismic RC frames at different loading rates. Structural Engineering and Mechanics, 2006, 23, 129-145.	1.0	3
135	Financial risk assessment methodology for natural hazards. Bulletin of the New Zealand Society for Earthquake Engineering, 2006, 39, 91-105.	0.5	24
136	Economic payback of improved detailing for concrete buildings with precast hollow-core floors. Bulletin of the New Zealand Society for Earthquake Engineering, 2006, 39, 106-119.	0.5	2
137	Re. Paper by Dhakal, Khare and Mander â€œEconomic payback of improved detailing for concrete buildings with precast hollow-core floorsâ€•in NZSEE Bulletin Volume 39, No 2, June 2006, pp106-119.. Bulletin of the New Zealand Society for Earthquake Engineering, 2006, 39, 176-181.	0.5	0
138	Re. Paper by Dhakal, Khare and Mander â€œEconomic payback of improved detailing for concrete buildings with precast hollow-core floorsâ€•in NZSEE Bulletin Volume 39, No 2, June 2006, pp106-119.. Bulletin of the New Zealand Society for Earthquake Engineering, 2006, 39, 215-220.	0.5	0
139	Experimental study on the dynamic response of gravity-designed reinforced concrete connections. Engineering Structures, 2005, 27, 75-87.	5.3	51
140	Response characteristics of structures subjected to blasting-induced ground motion. International Journal of Impact Engineering, 2003, 28, 813-828.	5.0	33
141	Path-dependent cyclic stressâ€“strain relationship of reinforcing bar including buckling. Engineering Structures, 2002, 24, 1383-1396.	5.3	117
142	Optimal Passive Damper Positioning Techniques. , 0, , 85-111.		1
143	Seismic Performance of a Rocking Precast Concrete Cladding Panel System under Lateral Cyclic Displacement Demands. Journal of Earthquake Engineering, 0, , 1-30.	2.5	1