Gregory MacRae

List of Publications by Year
in descending order

92 papers	2,696 citations	218381 26 h-index	189595 50 g-index
96 all docs	96 docs citations	96 times ranked	1363 citing authors

#	Article	IF	Citations
1	Replaceable Rotational Viscoelastic Dampers for Improving Structural Damping and Resilience of Steel Frames. Journal of Earthquake Engineering, 2023, 27, 787-809.	1.4	6
2	Asymmetric Friction Connection Bolt Lever Arm Effects on Hysteretic Behaviour. Journal of Earthquake Engineering, 2022, 26, 1543-1564.	1.4	4
3	Strong axis low-damage performance of rocking column-base joints with asymmetric friction connections. Journal of Constructional Steel Research, 2022, 191, 107175.	1.7	12
4	Seismic resilient steel structures: A review of research, practice, challenges and opportunities. Journal of Constructional Steel Research, 2022, 191, 107172.	1.7	123
5	Displacement Estimation of Elastic Structures with Unbalanced Stiffness Using Energy Approach. Journal of Earthquake Engineering, 2021, 25, 1112-1130.	1.4	2
6	Lessons for loss assessment from the Canterbury earthquakes: a 22-storey building. Bulletin of Earthquake Engineering, 2021, 19, 2081-2104.	2.3	10
7	BRB system stability considering frame out-of-plane loading and deformation zone. Bulletin of the New Zealand Society for Earthquake Engineering, 2021, 54, 31-39.	0.2	3
8	Bidirectional loading performance of gusset plates in buckling restrained braced frames. Engineering Structures, 2021, 242, 112521.	2.6	0
9	Design and Testing of Ratcheting, Tension-Only Devices for Seismic Energy Dissipation Systems. Journal of Earthquake Engineering, 2020, 24, 328-349.	1.4	20
10	Seismic behaviour of symmetric friction connections for steel buildings. Engineering Structures, 2020, 224, 111200.	2.6	8
11	Experimental testing of full-scale glulam frames with buckling restrained braces. Engineering Structures, 2020, 222, 111081.	2.6	25
12	Proposed Simplified Approach for the Seismic Analysis of Multi-Storey Moment Resisting Framed Buildings Incorporating Friction Sliders. Buildings, 2019, 9, 130.	1.4	15
13	Structural straightening with tension braces using aftershocks â€“ Shaking table study. Soil Dynamics and Earthquake Engineering, 2019, 123, 399-412.	1.9	7
14	Experimental studies on Belleville springs use in the sliding hinge joint connection. Journal of Constructional Steel Research, 2019, 159, 81-94.	1.7	39
15	Asymmetric Friction Connection (AFC) design for seismic energy dissipation. Journal of Constructional Steel Research, 2019, 157, 70-81.	1.7	15
16	Steel Building Friction Connection Seismic Performance â€“ Corrosion Effects. Structures, 2019, 19, 96-109.	1.7	4
17	Seismic response of torsionally irregular single story structures. Bulletin of the New Zealand Society for Earthquake Engineering, 2019, 52, 44-53.	0.2	0
18	Diaphragm axial capacity for external diaphragm connections (EDCs) in square CFST column structures. Bulletin of the New Zealand Society for Earthquake Engineering, 2019, 52, 134-140.	0.2	0

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19	Braced Frame Symmetrical and Asymmetrical Friction Connection Performance. Key Engineering Materials, 2018, 763, 216-223.	0.4	7
20	Residual Capacity and Permeability-Based Damage Assessment of Concrete in Damaged RC Columns. Journal of Materials in Civil Engineering, 2018, 30, .	1.3	2
21	Dynamic Friction Coefficient and Performance of Asymmetric Friction Connections. Structures, 2018, 14, 416-423.	1.7	4
22	Short-term behaviour of reinforced and steel fibreâ€“reinforced concrete composite slabs with steel decking under negative bending moment. Advances in Structural Engineering, 2018, 21, 1288-1301.	1.2	3
23	Hysteretic Behaviour of Asymmetrical Friction Connections Using Brake Pads of D3923. Structures, 2018, 16, 164-175.	1.7	7
24	Asymmetrical friction connections post-heating behaviour. Journal of Constructional Steel Research, 2018, 149, 119-129.	1.7	3
25	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.	0.2	5
26	Wall building stiffness and strength effect on content sliding in Wellington seismic conditions. Earthquake Engineering and Structural Dynamics, 2017, 46, 1023-1042.	2.5	1
27	Effect of ground motion selection methods on seismic collapse fragility of RC frame buildings. Earthquake Engineering and Structural Dynamics, 2017, 46, 1875-1892.	2.5	20
28	Post-event damage assessment of concrete using the fluorescent microscopy technique. Cement and Concrete Research, 2017, 102, 203-211.	4.6	11
29	Stiffness-based approach for Belleville springs use in friction sliding structural connections. Journal of Constructional Steel Research, 2017, 138, 340-356.	1.7	49
30	Fully Floating Suspended Ceiling System: Experimental Evaluation of Structural Feasibility and Challenges. Earthquake Spectra, 2017, 33, 1627-1654.	1.6	31
31	Seismic performance of non-structural components and contents in buildings: an overview of NZ research. Earthquake Engineering and Engineering Vibration, 2016, 15, 1-17.	1.1	35
32	An experimental study on strength and serviceability of reinforced and steel fibre reinforced concrete (SFRC) continuous composite slabs. Engineering Structures, 2016, 114, 171-180.	2.6	46
33	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.	0.2	18
34	Analytical investigation on the seismic performance of slabs in RC frame joints. Magazine of Concrete Research, 2015, 67, 1179-1189.	0.9	0
35	Seismic design of yielding structures on flexible foundations. Earthquake Engineering and Structural Dynamics, 2015, 44, 1805-1821.	2.5	13
36	Seismic behavior of steel buildings with outâ€ofâ€plumb. Earthquake Engineering and Structural Dynamics, 2015, 44, 2575-2588.	2.5	7

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37	Proposed design models for the asymmetric friction connection. Earthquake Engineering and Structural Dynamics, 2015, 44, 1309-1324.	2.5	61
38	Building contents sliding demands in elastically responding structures. Engineering Structures, 2015, 86, 182-191.	2.6	19
39	Author's reply to discussion on: probabilistic risk analysis of structural impact in seismic events for linear and nonlinear systems. Earthquake Engineering and Structural Dynamics, 2015, 44, 495-498.	2.5	0
40	Linear and Nonlinear Seismic Structural Impact Response Spectral Analyses. Advances in Structural Engineering, 2015, 18, 555-569.	1.2	4
41	Analytical simulation of seismic collapse of RC frame buildings. Bulletin of the New Zealand Society for Earthquake Engineering, 2015, 48, 157-169.	0.2	4
42	Suitability of CFT columns for New Zealand moment frames. Bulletin of the New Zealand Society for Earthquake Engineering, 2015, 48, 63-79.	0.2	1
43	Probabilistic risk analysis of structural impact in seismic events for linear and nonlinear systems. Earthquake Engineering and Structural Dynamics, 2014, 43, 1565-1580.	2.5	14
44	Generalised nonlinear modeling of unstable stick-slip force reduction effects in friction energy dissipation devices. Bulletin of the New Zealand Society for Earthquake Engineering, 2014, 47, 217-223.	0.2	3
45	Experimental investigation of CFT column to steel beam connections under cyclic loading. Journal of Constructional Steel Research, 2013, 86, 167-182.	1.7	62
46	Experimental Study of Full-Scale Self-Centering Sliding Hinge Joint Connections with Friction Ring Springs. Journal of Earthquake Engineering, 2013, 17, 972-997.	1.4	76
47	Dynamic Stability and Design of C-Bent Columns. Journal of Earthquake Engineering, 2013, 17, 750-768.	1.4	7
48	Behaviour of the bottom and top flange plates in the Sliding Hinge Joint. Bulletin of the New Zealand Society for Earthquake Engineering, 2013, 46, 1-10.	0.2	6
49	Development of the self-centering Sliding Hinge Joint with friction ring springs. Journal of Constructional Steel Research, 2012, 78, 201-211.	1.7	102
50	Performance Analysis of Energy Dissipators and Isolators Placed in Bridges to Prevent Structural Damage in Columns. Journal of Earthquake Engineering, 2012, 16, 1113-1131.	1.4	3
51	Quantifying the seismic response of structures with flexible diaphragms. Earthquake Engineering and Structural Dynamics, 2012, 41, 1365-1389.	2.5	27
52	Nonlinear design and sizing of semi-active resetable dampers for seismic performance. Engineering Structures, 2012, 39, 139-147.	2.6	3
53	Development and spectral analysis of an advanced diamond shaped resetable device control law. Engineering Structures, 2012, 40, 1-8.	2.6	2
54	Influence of steel shim hardness on the Sliding Hinge Joint performance. Journal of Constructional Steel Research, 2012, 72, 119-129.	1.7	81

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55	Seismic response of structures with coupled vertical stiffnessâ€“strength irregularities. Earthquake Engineering and Structural Dynamics, 2012, 41, 119-138.	2.5	17
56	Viscous and hysteretic damping. Bulletin of the New Zealand Society for Earthquake Engineering, 2012, 45, 23-30.	0.2	3
57	HF2V dissipator effects on the performance of a 3 story moment frame. Journal of Constructional Steel Research, 2011, 67, 1843-1849.	1.7	19
58	Effects of coupled vertical stiffness-strength irregularity due to modified interstorey height. Bulletin of the New Zealand Society for Earthquake Engineering, 2011, 44, 31-44.	0.2	2
59	Prediction of spatially distributed seismic demands in specific structures: Ground motion and structural response. Earthquake Engineering and Structural Dynamics, 2010, 39, 501-520.	2.5	27
60	Prediction of spatially distributed seismic demands in specific structures: Structural response to loss estimation. Earthquake Engineering and Structural Dynamics, 2010, 39, 591-613.	2.5	9
61	Probabilistic seismic performance and loss assessment of a bridgeâ€“foundationâ€“soil system. Soil Dynamics and Earthquake Engineering, 2010, 30, 395-411.	1.9	43
62	The sliding hinge joint moment connection. Bulletin of the New Zealand Society for Earthquake Engineering, 2010, 43, 202-212.	0.2	61
63	Plastic hinge locations in steel columns. Bulletin of the New Zealand Society for Earthquake Engineering, 2010, 43, 7-12.	0.2	1
64	Intensity measures for the seismic response of pile foundations. Soil Dynamics and Earthquake Engineering, 2009, 29, 1046-1058.	1.9	71
65	Damage Avoidance Design Steel Beam-Column Moment Connection Using High-Force-to-Volume Dissipators. Journal of Structural Engineering, 2009, 135, 1390-1397.	1.7	64
66	Seismic loss estimation for efficient decision making. Bulletin of the New Zealand Society for Earthquake Engineering, 2009, 42, 96-110.	0.2	53
67	Comparison of New Zealand standards used for seismic design of concrete buildings. Bulletin of the New Zealand Society for Earthquake Engineering, 2009, 42, 187-203.	0.2	11
68	Axial shortening of steel columns in buildings subjected to earthquakes. Bulletin of the New Zealand Society for Earthquake Engineering, 2009, 42, 275-287.	0.2	25
69	Determination of structural irregularity limits. Bulletin of the New Zealand Society for Earthquake Engineering, 2009, 42, 288-301.	0.2	16
70	Probabilistic evaluation of seismic performance of 3â€story 3D oneâ€and twoâ€way steel momentâ€frame structures. Earthquake Engineering and Structural Dynamics, 2008, 37, 681-696.	2.5	25
71	Structural Health Monitoring using Adaptive LMS Filters. , 2008, , .		0
72	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.	0.2	2

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73	EVALUATION OF SEISMIC RESPONSE OF MULTI-STORY STRUCTURES USING DYNAMIC STABILITY COEFFICIENTS : Continuous column effects in steel moment frames in perspective of dynamic stability Part 1. Journal of Structural and Construction Engineering, 2007, 72, 57-64.	0.2	7
74	SEISMIC RELIABILITY OF 3D 1-WAY AND 2-WAY STEEL MOMENT FRAME STRUCTURES EVALUATED BY PROBABILISTIC APPROACH. Journal of Structural and Construction Engineering, 2007, 72, 65-72.	0.2	1
75	EVALUATION OF SIMPLIFICATION OF 2D MOMENT FRAME TO 1D MDOF COUPLED SHEAR-FLEXURAL-BEAM MODEL. Journal of Structural and Construction Engineering, 2006, 71, 41-48.	0.2	6
76	HYSTERESIS LOOP EFFECTS ON STABILITY AND MAXIMUM DRIFT OF STRUCTURES. Journal of Structural and Construction Engineering, 2006, 71, 137-144.	0.2	1
77	Extending the Fatigue Life of Riveted Coped Stringer Connections. Journal of Bridge Engineering, 2005, 10, 69-76.	1.4	16
78	Effect of Beam Growth on Reinforced Concrete Frames. Journal of Structural Engineering, 2004, 130, 1333-1342.	1.7	39
79	Effect of Column Stiffness on Braced Frame Seismic Behavior. Journal of Structural Engineering, 2004, 130, 381-391.	1.7	199
80	Brace-Beam-Column Connections for Concentrically Braced Frames with Concrete Filled Tube Columns. Journal of Structural Engineering, 2004, 130, 233-243.	1.7	23
81	Near-Fault Ground Motion Effects on Simple Structures. Journal of Structural Engineering, 2001, 127, 996-1004.	1.7	72
82	Seismic Behavior of 3D Steel Moment Frame with Biaxial Columns. Journal of Structural Engineering, 2001, 127, 490-497.	1.7	16
83	Seismic Behavior of Hollow Stiffened Steel Bridge Columns. Journal of Bridge Engineering, 2001, 6, 110-119.	1.4	14
84	Dynamic Response and Fatigue of Steel Tied-Arch Bridge. Journal of Bridge Engineering, 2000, 5, 14-21.	1.4	35
85	Three-Dimensional Steel Building Response to Near-Fault Motions. Journal of Structural Engineering, 2000, 126, 117-126.	1.7	53
86	Residual Displacement Response Spectrum. Journal of Structural Engineering, 1998, 124, 523-530.	1.7	250
87	Seismic Tests of Precast Beam-to-Column Joint Subassemblages With Unbonded Tendons. PCI Journal, 1996, 41, 64-81.	0.4	187
88	Displacement-based design of RC bridge columns in seismic regions. Earthquake Engineering and Structural Dynamics, 1995, 24, 1623-1643.	2.5	165
89	P-Î” Effects on Single-Degree-of-Freedom Structures in Earthquakes. Earthquake Spectra, 1994, 10, 539-568.	1.6	105
90	New Zealand Research Applications of, and Developments in, Low Damage Technology for Steel Structures. Key Engineering Materials, 0, 763, 3-10.	0.4	7

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91	The Sliding Hinge Joint: Final Steps towards an Optimum Low Damage Seismic-Resistant Steel System. Key Engineering Materials, 0, 763, 751-760.	0.4	10
92	Numerical Study of Asymmetric Friction Connections (AFC) with Large Grip Length Bolts. Key Engineering Materials, 0, 763, 600-608.	0.4	0