Ian Burgess

List of Publications by Year
in descending order

125 papers	3,325 citations	117571 34 h-index	175177 52 g-index
126 all docs	126 docs citations	126 times ranked	1073 citing authors

#	Article	IF	Citations
1	A theoretical approach to the deformation of honeycomb based composite materials. Composites, 1979, 10, 209-214.	0.9	166
2	Progressive collapse analysis of steel structures under fire conditions. Engineering Structures, 2012, 34, 400-413.	2.6	130
3	A comparison of some simple constitutive relations for slightly compressible rubber-like materials. International Journal of Mechanical Sciences, 1971, 13, 563-572.	3.6	111
4	Experimental investigation of the behaviour of fin plate connections in fire. Journal of Constructional Steel Research, 2009, 65, 723-736.	1.7	109
5	Modeling Membrane Action of Concrete Slabs in Composite Buildings in Fire. I: Theoretical Development. Journal of Structural Engineering, 2003, 129, 1093-1102.	1.7	99
6	A nonlinear analysis for three-dimensional steel frames in fire conditions. Engineering Structures, 1996, 18, 77-89.	2.6	92
7	Numerical simulation of bolted steel connections in fire using explicit dynamic analysis. Journal of Constructional Steel Research, 2008, 64, 515-525.	1.7	91
8	Analyses of the effects of cooling and fire spread on steel-framed buildings. Fire Safety Journal, 1996, 26, 273-293.	1.4	90
9	Modeling Membrane Action of Concrete Slabs in Composite Buildings in Fire. II: Validations. Journal of Structural Engineering, 2003, 129, 1103-1112.	1.7	84
10	Finite element modelling of steel fin plate connections in fire. Fire Safety Journal, 2007, 42, 408-415.	1.4	81
11	Experimental behaviour of concrete floor slabs at large displacements. Engineering Structures, 2004, 26, 1231-1247.	2.6	79
12	The collapse behaviour of braced steel frames exposed to fire. Journal of Constructional Steel Research, 2012, 72, 130-142.	1.7	78
13	Momentâ€“rotationâ€“temperature curves for semi-rigid joints. Journal of Constructional Steel Research, 2005, 61, 281-303.	1.7	66
14	Performance of beam-to-column joints in fireâ€”A review. Fire Safety Journal, 2008, 43, 50-62.	1.4	60
15	Tying capacity of web cleat connections in fire, Part 1: Test and finite element simulation. Engineering Structures, 2009, 31, 651-663.	2.6	58
16	The effect of axial restraint on the fire resistance of steel columns. Journal of Constructional Steel Research, 1998, 46, 305-306.	1.7	56
17	Experimental and analytical investigation of the â€˜tension zoneâ€™ components within a steel joint at elevated temperatures. Journal of Constructional Steel Research, 2004, 60, 867-896.	1.7	56
18	Thermal and structural behaviour of a full-scale composite building subject to a severe compartment fire. Fire Safety Journal, 2007, 42, 183-199.	1.4	55

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19	The influence of shear connectors on the behaviour of composite steel-framed buildings in fire. Journal of Constructional Steel Research, 1999, 51, 219-237.	1.7	49
20	Three-Dimensional Analysis of Composite Steel-Framed Buildings in Fire. Journal of Structural Engineering, 2000, 126, 389-397.	1.7	49
21	A generalised steel/reinforced concrete beam-column element model for fire conditions. Engineering Structures, 2003, 25, 817-833.	2.6	49
22	Three-Dimensional Analysis of Reinforced Concrete Beam-Column Structures in Fire. Journal of Structural Engineering, 2009, 135, 1201-1212.	1.7	49
23	Experimental and Numerical Investigations of the Behavior of Flush End Plate Connections at Elevated Temperatures. Journal of Structural Engineering, 2011, 137, 80-87.	1.7	49
24	ELEVATED-TEMPERATURE MOMENT-ROTATION TESTS ON STEELWORK CONNECTIONS.. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 1997, 122, 410-419.	0.4	47
25	Effective stiffness modelling of composite concrete slabs in fire. Engineering Structures, 2000, 22, 1133-1144.	2.6	47
26	Tying capacity of web cleat connections in fire, Part 2: Development of component-based model. Engineering Structures, 2009, 31, 697-708.	2.6	47
27	An analytical model for the analysis of composite beams with partial interaction. Computers and Structures, 1997, 62, 493-504.	2.4	44
28	The treatment of strain reversal in structural members during the cooling phase of a fire. Journal of Constructional Steel Research, 1996, 37, 115-135.	1.7	43
29	On the buckling of axially restrained steel columns in fire. Engineering Structures, 2011, 33, 2832-2838.	2.6	42
30	Experimental and analytical investigation of the â€˜compression zoneâ€™ component within a steel joint at elevated temperatures. Journal of Constructional Steel Research, 2004, 60, 841-865.	1.7	41
31	The lateral-torsional buckling of unrestrained steel beams in fire. Journal of Constructional Steel Research, 1996, 36, 101-119.	1.7	40
32	Failure of steel columns in fire. Fire Safety Journal, 1992, 18, 183-201.	1.4	37
33	The development of a component-based connection element for endplate connections in fire. Fire Safety Journal, 2007, 42, 498-506.	1.4	37
34	Yield-line plasticity and tensile membrane action in lightly-reinforced rectangular concrete slabs. Engineering Structures, 2017, 138, 195-214.	2.6	37
35	Progressive failure modelling and ductility demand of steel beam-to-column connections in fire. Engineering Structures, 2015, 89, 66-78.	2.6	35
36	Component modelling of flexible end-plate connections in fire. International Journal of Steel Structures, 2009, 9, 1-15.	0.6	32

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37	Spring-stiffness model for flexible end-plate bare-steel joints in fire. Journal of Constructional Steel Research, 2005, 61, 1672-1691.	1.7	31
38	The instability of slightly compressible rectangular rubberlike solids under biaxial loadings. International Journal of Solids and Structures, 1972, 8, 133-148.	1.3	30
39	A secant stiffness approach to the fire analysis of steel beams. Journal of Constructional Steel Research, 1988, 11, 105-120.	1.7	28
40	Development of a yield-line model for endplate connections in fire. Journal of Constructional Steel Research, 2009, 65, 1279-1289.	1.7	27
41	The Role of Connections in the Response of Steel Frames to Fire. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2012, 22, 449-461.	0.5	26
42	Behaviour of composite slab-beam systems at elevated temperatures: Experimental and numerical investigation. Engineering Structures, 2015, 82, 199-213.	2.6	26
43	The influence of connection stiffness on the behaviour of steel beams in fire. Journal of Constructional Steel Research, 1997, 43, 1-15.	1.7	25
44	Non-linear structural modelling of a fire test subject to high restraint. Fire Safety Journal, 2001, 36, 795-814.	1.4	25
45	Experimental Analysis of the Behaviour of Aluminium Alloy EN 6082AW T6 at High Temperature. Metals, 2017, 7, 126.	1.0	25
46	Analysis of beams with non-uniform temperature profile due to fire exposure. Journal of Constructional Steel Research, 1990, 16, 169-192.	1.7	24
47	Effects of Recycled Steel and Polymer Fibres on Explosive Fire Spalling of Concrete. Fire Technology, 2019, 55, 1495-1516.	1.5	24
48	Behavior of Steel Beam-to-Column Joints at Elevated Temperature: Experimental Investigation. Journal of Structural Engineering, 2008, 134, 713-726.	1.7	23
49	THREE-DIMENSIONAL MODELLING OF TWO FULL-SCALE,FIRE TESTS ON A COMPOSITE BUILDING.. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 1999, 134, 243-255.	0.4	22
50	Studies of the behaviour of steel beams in fire. Journal of Constructional Steel Research, 1991, 19, 285-312.	1.7	21
51	Prediction of the degradation of connection characteristics at elevated temperature. Journal of Constructional Steel Research, 2004, 60, 771-781.	1.7	21
52	Studies of the Behaviour of Steel Subframes with Semi-rigid Connections in Fire. Journal of Constructional Steel Research, 1999, 49, 83-98.	1.7	20
53	Fire resistance of composite floors subject to compartment fires. Journal of Constructional Steel Research, 2004, 60, 339-360.	1.7	20
54	Experimental and analytical studies of steel joint components at elevated temperatures. Fire and Materials, 2004, 28, 83-94.	0.9	19

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55	Experiments on reverse-channel connections at elevated temperatures. Engineering Structures, 2013, 49, 973-982.	2.6	19
56	A simple approach to the behaviour of steel columns in fire. Journal of Constructional Steel Research, 1994, 31, 115-134.	1.7	18
57	Principles of a component-based connection element for the analysis of steel frames in fire. Engineering Structures, 2013, 49, 1059-1067.	2.6	18
58	A new mode renumbering algorithm for bandwidth reduction. International Journal for Numerical Methods in Engineering, 1986, 23, 1693-1704.	1.5	17
59	The analysis of semi-rigid frames in fireâ€"a secant approach. Journal of Constructional Steel Research, 1995, 33, 125-146.	1.7	17
60	Numerical and analytical investigations of steel beam-to-column joints at elevated temperatures. Journal of Constructional Steel Research, 2009, 65, 1043-1054.	1.7	17
61	Tensile Membrane Action of Lightly-reinforced Rectangular Composite Slabs in Fire. Structures, 2018, 16, 176-197.	1.7	17
62	Development and Validation of 3D Composite Structural Elements at Elevated Temperatures. Journal of Structural Engineering, 2010, 136, 275-284.	1.7	16
63	The post-flutter oscillations of discrete symmetric structural systems with circulatory loading. International Journal of Mechanical Sciences, 1972, 14, 471-488.	3.6	15
64	Modelling of plane composite frames in unpropped construction. Engineering Structures, 2000, 22, 287-303.	2.6	15
65	Fire Protection of Concrete Tunnel Linings with Waste Tyre Fibres. Procedia Engineering, 2017, 210, 472-478.	1.2	15
66	Investigation of a steel connection to accommodate ductility demand of beams in fire. Journal of Constructional Steel Research, 2019, 157, 182-197.	1.7	15
67	The buckling of a radially constrained imperfect circular ring. International Journal of Mechanical Sciences, 1971, 13, 741-753.	3.6	13
68	Nonlinear analysis of orthotropic composite slabs in fire. Engineering Structures, 2008, 30, 67-80.	2.6	13
69	Behaviour of composite cellular steel â€" Concrete beams at elevated temperatures. International Journal of Steel Structures, 2009, 9, 29-37.	0.6	13
70	Tensile Behaviour of Galvanised Grade 8.8 Bolt Assemblies in Fire. Journal of Structural Fire Engineering, 2015, 6, 197-212.	0.4	11
71	On the equilibrium and stability of discrete one-way structural systems. International Journal of Solids and Structures, 1971, 7, 667-683.	1.3	10
72	Modelling of asymmetric cross-section members for fire conditions. Journal of Constructional Steel Research, 2002, 58, 389-412.	1.7	10

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73	High-temperature tests on joints to steel and partially-encased H-section columns. Journal of Constructional Steel Research, 2013, 80, 243-251.	1.7	10
74	A unified rheological model for modelling steel behaviour in fire conditions. Journal of Constructional Steel Research, 2016, 127, 221-230.	1.7	10
75	Creep-free fire analysis of steel structures with Eurocode 3 material model. Journal of Structural Fire Engineering, 2016, 7, 234-248.	0.4	10
76	Comparison of BRE simple design method for composite floor slabs in fire with non-linear FE modelling. Fire and Materials, 2004, 28, 127-138.	0.9	9
77	Tensile Membrane Action of Thin Slabs Exposed to Thermal Gradients. Journal of Engineering Mechanics - ASCE, 2013, 139, 1497-1507.	1.6	9
78	Development of a General Component-Based Connection Element for Structural Fire Engineering Analysis. Journal of Structural Fire Engineering, 2015, 6, 247-254.	0.4	9
79	An integrated yield-line approach to tensile and compressive membrane actions in thin lightly-reinforced concrete slabs. Engineering Structures, 2020, 208, 110321.	2.6	9
80	Performance of a novel ductile connection in steel-framed structures under fire conditions. Journal of Constructional Steel Research, 2020, 169, 106034.	1.7	9
81	Effect of transient strain on strength of concrete and CFT columns in fire â€" Part 2: Simplified and numerical modelling. Engineering Structures, 2012, 44, 389-399.	2.6	8
82	Component-based model of buckling panels of steel beams at elevated temperatures. Journal of Constructional Steel Research, 2016, 118, 91-104.	1.7	8
83	Development of a high temperature material model for grade s275jr steel. Journal of Constructional Steel Research, 2017, 137, 161-168.	1.7	8
84	A Component-Based Model for Fin-Plate Connections in Fire. Journal of Structural Fire Engineering, 2013, 4, 113-122.	0.4	7
85	An analytical approach to modelling shear panels in steel beams at elevated temperatures. Engineering Structures, 2015, 85, 73-82.	2.6	7
86	Development of a creepâ€free stressâ€strain law for fire analysis of steel structures. Fire and Materials, 2016, 40, 896-912.	0.9	7
87	Fire performance of axially ductile connections in composite construction. Fire Safety Journal, 2021, 121, 103311.	1.4	7
88	The stability of slender piles during driving. Geotechnique, 1976, 26, 281-292.	2.2	6
89	Composite beam behaviour in braced frames. Journal of Constructional Steel Research, 1999, 49, 271-289.	1.7	6
90	Effect of transient strain on strength of concrete and CFT columns in fire â€" Part 1: Elevated-temperature analysis on a Shanley-like column model. Engineering Structures, 2012, 44, 379-388.	2.6	6

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91	Component-based modelling of a novel ductile steel connection. Engineering Structures, 2020, 208, 110320.	2.6	6
92	A note on the directional stability of driven piles. Geotechnique, 1975, 25, 413-416.	2.2	5
93	Stability of installation of marine caisson anchors in clay. Canadian Geotechnical Journal, 1983, 20, 385-393.	1.4	5
94	The Influence of Tensile Membrane Action on Fire-exposed Composite Concrete Floor-steel Beams with Web-openings. Procedia Engineering, 2013, 62, 710-716.	1.2	5
95	Deformation-reversal in component-based connection elements for analysis of steel frames in fire. Journal of Constructional Steel Research, 2013, 86, 54-65.	1.7	5
96	The behaviour and effects of beam-end buckling in fire using a component-based method. Engineering Structures, 2017, 139, 15-30.	2.6	5
97	Collapse Mechanisms of Composite Slab Panels in Fire. Journal of Structural Fire Engineering, 2011, 2, 205-216.	0.4	4
98	Behaviour of Steel Grade S275JR Columns under the Influence of High-Temperature Creep. Metals, 2018, 8, 874.	1.0	4
99	Development of a rheological model for creep strain evolution in steel and aluminium at high temperature. Fire and Materials, 2018, 42, 879-888.	0.9	4
100	The effect of high-temperature creep on buckling behaviour of aluminium grade EN6082AW T6 columns. Fire Safety Journal, 2020, 112, 102971.	1.4	4
101	Performance in fire of long-span composite truss systems. Engineering Structures, 2008, 30, 683-694.	2.6	3
102	The mechanics of inelastic buckling using a Shanley-like model. Proceedings of the Institution of Civil Engineers: Engineering and Computational Mechanics, 2011, 164, 103-119.	0.4	3
103	Behaviour of Frame Columns in Localised Fires. Journal of Structural Fire Engineering, 2013, 4, 175-186.	0.4	3
104	REUSED TYRE POLYMER FIBRE FOR FIRE-SPALLING MITIGATION. Applications of Structural Fire Engineering, 0, , .	0.3	3
105	An analytical and numerical prediction for ductility demand on steel beam-to-column connections in fire. Engineering Structures, 2016, 115, 55-66.	2.6	3
106	A numerical study on the structural performance of a ductile connection under fire conditions. Ce/Papers, 2021, 4, 1196-1202.	0.1	3
107	Behaviour of lightweight composite trusses in fire - A case study. Steel and Composite Structures, 2007, 7, 105-118.	1.3	3
108	Ritz method in non-conservative instability problems: A simple example. International Journal of Mechanical Sciences, 1974, 16, 651-659.	3.6	2

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109	Analytical studies of pile wandering during installation. International Journal for Numerical and Analytical Methods in Geomechanics, 1979, 3, 49-62.	1.7	2
110	Project-based teaching software for structural design. Computers and Education, 1988, 12, 125-128.	5.1	2
111	Fire resistance of framed buildings*. Physics Education, 2002, 37, 390-399.	0.3	2
112	The effect of reinforcement ratios on composite slabs in fire. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2012, 165, 385-398.	0.4	2
113	A Structural Fire Engineering Prediction for the VeselÃ-Fire Tests, 2011. Journal of Structural Fire Engineering, 2013, 4, 1-8.	0.4	2
114	Slab panel vertical support and tensile membrane action in fire. Steel and Composite Structures, 2008, 8, 217-230.	1.3	2
115	Flutter instability in imperfect structural systems. International Journal of Non-Linear Mechanics, 1976, 11, 157-168.	1.4	1
116	PERFORMANCE OF DIFFERENT CREEP MODELS IN THE ANALYSIS OF FIRE EXPOSED STEEL MEMBERS. Applications of Structural Fire Engineering, 0, , .	0.3	1
117	A Component-based Approach to Modelling Beam Bottom Flange Buckling at Elevated Temperatures. Applications of Structural Fire Engineering, 0, , .	0.3	1
118	Ductile connection to improve the fire performance of bare-steel and composite frames. Journal of Structural Fire Engineering, 2021, ahead-of-print, .	0.4	1
119	Plastic design of steel portal frames using a microcomputer. Advances in Engineering Software (1978), 1985, 7, 110-114.	0.1	0
120	A message from the publisher. Current Opinion in Urology, 2009, 19, ix.	0.9	0
121	Briefing: Role of connections in preventing steel frame collapse in fire. Proceedings of the Institution of Civil Engineers: Engineering and Computational Mechanics, 2012, 165, 219-221.	0.4	0
122	A Note From the Guest Editor. Journal of Structural Fire Engineering, 2013, 4, i-ii.	0.4	0
123	THE MECHANICS OF TENSILE MEMBRANE ACTION IN COMPOSITE SLABS AT HIGH TEMPERATURES. Applications of Structural Fire Engineering, 2016, , .	0.3	0
124	PARAMETRIC STUDIES ON THE COMPONENT-BASED APPROACH TO MODELLING BEAM BOTTOM FLANGE BUCKLING AT ELEVATED TEMPERATURES. Acta Polytechnica, 2016, 56, 132.	0.3	0
125	DEVELOPMENNT OF A COMPOSITE SLAB BREAK-ELEMENT FOR THE ANALYSIS OF COMPOSITE FRAMES IN FIRE. Applications of Structural Fire Engineering, 2016, , .	0.3	0