Peter Grassl

List of Publications by Year in descending order

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46 papers	2,305 citations	279798 23 h-index	315739 38 g-index
53 all docs	53 docs citations	53 times ranked	1432 citing authors

#	Article	IF	Citations
1	Damage-plastic model for concrete failure. International Journal of Solids and Structures, 2006, 43, 7166-7196.	2.7	412
2	Meso-scale approach to modelling the fracture process zone of concrete subjected to uniaxial tension. International Journal of Solids and Structures, 2010, 47, 957-968.	2.7	197
3	CDPM2: A damage-plasticity approach to modelling the failure of concrete. International Journal of Solids and Structures, 2013, 50, 3805-3816.	2.7	191
4	Influence of aggregate size and volume fraction on shrinkage induced micro-cracking of concrete and mortar. Cement and Concrete Research, 2010, 40, 85-93.	11.0	158
5	Meso-scale modelling of the size effect on the fracture process zone of concrete. International Journal of Solids and Structures, 2012, 49, 1818-1827.	2.7	149
6	Concrete in compression: a plasticity theory with a novel hardening law. International Journal of Solids and Structures, 2002, 39, 5205-5223.	2.7	142
7	Plastic model with non-local damage applied to concrete. International Journal for Numerical and Analytical Methods in Geomechanics, 2006, 30, 71-90.	3.3	111
8	Evaluation of directional mesh bias in concrete fracture simulations using continuum damage models. Engineering Fracture Mechanics, 2008, 75, 1921-1943.	4.3	94
9	A lattice approach to model flow in cracked concrete. Cement and Concrete Composites, 2009, 31, 454-460.	10.7	92
10	On a 2D hydro-mechanical lattice approach for modelling hydraulic fracture. Journal of the Mechanics and Physics of Solids, 2015, 75, 104-118.	4.8	80
11	Size effect on fracture energy induced by non-locality. International Journal for Numerical and Analytical Methods in Geomechanics, 2004, 28, 653-670.	3.3	75
12	Random Lattice-Particle Simulation of Statistical Size Effect in Quasi-Brittle Structures Failing at Crack Initiation. Journal of Engineering Mechanics - ASCE, 2009, 135, 85-92.	2.9	75
13	A damage-plasticity interface approach to the meso-scale modelling of concrete subjected to cyclic compressive loading. Engineering Fracture Mechanics, 2008, 75, 4804-4818.	4.3	65
14	Mesoscale analysis of failure in quasi-brittle materials: comparison between lattice model and acoustic emission data. International Journal for Numerical and Analytical Methods in Geomechanics, 2015, 39, 1639-1664.	3.3	45
15	Three-Dimensional Network Model for Coupling of Fracture and Mass Transport in Quasi-Brittle Geomaterials. Materials, 2016, 9, 782.	2.9	38
16	Lattice modelling of corrosion induced cracking and bond in reinforced concrete. Cement and Concrete Composites, 2011, 33, 918-924.	10.7	36
17	Evaluation of nonlocal approaches for modelling fracture near nonconvex boundaries. International Journal of Solids and Structures, 2014, 51, 3239-3251.	2.7	35
18	Analysis of size effect on strength of quasi-brittle materials using integral-type nonlocal models. Engineering Fracture Mechanics, 2016, 157, 72-85.	4.3	34

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19	Modelling of dilation of concrete and its effect in triaxial compression. Finite Elements in Analysis and Design, 2004, 40, 1021-1033.	3.2	30
20	Mesoscale Approach to Modeling Concrete Subjected to Thermomechanical Loading. Journal of Engineering Mechanics - ASCE, 2010, 136, 322-328.	2.9	30
21	Corrosion induced cracking modelled by a coupled transport-structural approach. Cement and Concrete Research, 2017, 94, 24-35.	11.0	30
22	Calibration of nonlocal models for tensile fracture in quasi-brittle heterogeneous materials. Journal of the Mechanics and Physics of Solids, 2015, 82, 48-60.	4.8	28
23	Modelling the failure of reinforced concrete with nonlocal and crack band approaches using the damage-plasticity model CDPM2. Finite Elements in Analysis and Design, 2016, 117-118, 11-20.	3.2	25
24	On the numerical modelling of bond for the failure analysis of reinforced concrete. Engineering Fracture Mechanics, 2018, 189, 13-26.	4.3	22
25	Size Effect of Cohesive Delamination Fracture Triggered by Sandwich Skin Wrinkling. Journal of Applied Mechanics, Transactions ASME, 2007, 74, 1134-1141.	2.2	17
26	Influence of volumetricâ€“deviatoric coupling on crack prediction in concrete fracture tests. Engineering Fracture Mechanics, 2007, 74, 1683-1693.	4.3	16
27	A micromechanics-enhanced finite element formulation for modelling heterogeneous materials. Computer Methods in Applied Mechanics and Engineering, 2012, 201-204, 53-64.	6.6	14
28	3D network modelling of fracture processes in fibre-reinforced geomaterials. International Journal of Solids and Structures, 2019, 156-157, 234-242.	2.7	10
29	Hydro-mechanical network modelling of particulate composites. International Journal of Solids and Structures, 2018, 130-131, 49-60.	2.7	7
30	On the dynamic response of reinforced concrete beams subjected to drop weight impact. Finite Elements in Analysis and Design, 2020, 180, 103438.	3.2	7
31	Effect of creep on corrosion-induced cracking. Engineering Fracture Mechanics, 2022, 264, 108310.	4.3	7
32	On a damageâ€“plasticity approach to model concrete failure. Proceedings of the Institution of Civil Engineers: Engineering and Computational Mechanics, 2009, 162, 221-231.	0.4	6
33	Size and Boundary Effects During Failure in Quasi-brittle Materials: Experimental and Numerical Investigations. , 2014, 3, 1269-1278.		6
34	A parametric study of the meso-scale modelling of concrete subjected to cyclic compression. Computers and Concrete, 2008, 5, 359-373.	0.7	6
35	Upscaling of three-dimensional reinforced concrete representative volume elements to effective beam and plate models. International Journal of Solids and Structures, 2020, 202, 835-853.	2.7	5
36	On the choice of stressâ€“strain variables for unsaturated soils and its effect on plastic flow. Geomechanics for Energy and the Environment, 2018, 15, 3-9.	2.5	3

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37	Initiation of fluid-induced fracture in a thick-walled hollow permeable sphere. European Journal of Mechanics, A/Solids, 2019, 76, 123-134.	3.7	2
38	Nonlocal plastic models for cohesive-frictional materials. , 2004, , 323-337.		2
39	3D Modelling of the Influence of Microcracking on Mass Transport in Concrete. , 2015, , .		1
40	Network Modelling of the Influence of Swelling on the Transport Behaviour of Bentonite. Geosciences (Switzerland), 2016, 6, 55.	2.2	1
41	Modelling the Time Dependence of Transport Properties of Porous Materials. , 2015, , .		0
42	Network modelling of fluid retention behaviour in unsaturated soils. E3S Web of Conferences, 2016, 9, 11016.	0.5	0
43	Modeling Nonlinear Creep of Steel Fiber Reinforced Concrete by Means of Hydro-Mechanical Coupling. , 2017, , .		0
44	Transport-Structural Modeling of Corrosion Induced Cracking. , 0, , .		0
45	Modelling of the Fracture Process Zone of Concrete. , 0, , .		0
46	On the Modelling of Temperature Loading of Concrete using a Discrete Approach. , 0, , .		0