James G Berryman

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/11601804/publications.pdf

Version: 2024-02-01

142 papers	8,724 citations	53794 45 h-index	45317 90 g-index
142 all docs	142 docs citations	142 times ranked	4057 citing authors

#	Article	IF	Citations
1	Modeling nonlinear response of fractured rocks and reservoirs. International Journal for Numerical and Analytical Methods in Geomechanics, 2017, 41, 771-780.	3.3	2
2	Changes in geophysical properties caused by fluid injection into porous rocks: analytical models. Geophysical Prospecting, 2017, 65, 766-790.	1.9	16
3	Role of fluid injection in the evolution of fractured reservoirs. International Journal of Engineering Science, 2016, 103, 45-58.	5.0	7
4	Elastic behavior of random polycrystals composed of anisotropic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si84.gif" overflow="scroll"><mml:mrow><mml:mi>Î±</mml:mi></mml:mrow></mml:math>-quartz (SiO2) under pressure. International Journal of Engineering Science, 2015, 89, 121-132.	5.0	1
5	Poroelasticity of carbonates with fractured grains and fluidâ€saturated pores. International Journal for Numerical and Analytical Methods in Geomechanics, 2015, 39, 1527-1546.	3.3	0
6	Hybrid effective medium approximations for random elastic composites. Mechanics of Materials, 2014, 70, 115-135.	3.2	3
7	Influence of crack density on geomechanical behavior of granular composites with porous grains and fluidâ€saturated pores. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 1381-1396.	3.3	1
8	Computing elastic constants for random polycrystals of orthotropic MgSiO3, related polymorphs, and CaIrO3 analogs. Journal of Computational Physics, 2014, 271, 379-396.	3.8	2
9	Combining analysis of random elastic polycrystals with poroelasticity for granular composites having orthotropic porous grains and fluid-filled pores. International Journal of Engineering Science, 2013, 72, 11-21.	5.0	4
10	Poroelasticity Generalized for Polycrystalline Composites. , 2013, , .		0
11	Modelling electrical conductivity for earth media with macroscopic fluidâ€filled fractures. Geophysical Prospecting, 2013, 61, 471-493.	1.9	31
12	Bounds and self-consistent estimates for elastic constants of polycrystals of hcp solid He<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>4</mml:mn></mml:msup></mml:math>. Physical Review B, 2012, 85, .	3.2	1
13	Evaluating bounds and estimators for constants of random polycrystals composed of orthotropic elastic materials. International Journal of Engineering Science, 2012, 58, 11-20.	5.0	3
14	Poroelastic Response of Orthotropic Fractured Porous Media. Transport in Porous Media, 2012, 93, 293-307.	2.6	17
15	Mechanics of layered anisotropic poroelastic media with applications to effective stress for fluid permeability. International Journal of Engineering Science, 2011, 49, 122-139.	5.0	15
16	Bounds and self-consistent estimates for elastic constants of polycrystals composed of orthorhombics or crystals with higher symmetries. Physical Review E, 2011, 83, 046130.	2.1	25
17	Pore-fluid effects on seismic waves in vertically fractured earth with orthotropic symmetry. Geophysics, 2010, 75, T185-T200.	2.6	2
18	Analysis of the growth of strike-slip faults using effective medium theory. Journal of Structural Geology, 2010, 32, 1629-1642.	2.3	50

#	Article	IF	Citations
19	Quasiâ€static analysis of elastic behavior for some systems having higher fracture densities. International Journal for Numerical and Analytical Methods in Geomechanics, 2010, 34, 1687-1724.	3.3	4
20	Poroelastic measurement schemes resulting in complete data sets for granular and other anisotropic porous media. International Journal of Engineering Science, 2010, 48, 446-459.	5.0	14
21	Inverse problem in anisotropic poroelasticity: Drained constants from undrained ultrasound measurements. Journal of the Acoustical Society of America, 2010, 127, 720-729.	1.1	10
22	Goddard rattler-jamming mechanism for quantifying pressure dependence of elastic moduli of grain packs. Acta Mechanica, 2009, 205, 185-196.	2.1	15
23	Aligned vertical fractures, HTI reservoir symmetry and Thomsen seismic anisotropy parameters for polar media. Geophysical Prospecting, 2009, 57, 193-208.	1.9	5
24	On the relationship between stress and elastic strain for porous and fractured rock. International Journal of Rock Mechanics and Minings Sciences, 2009, 46, 289-296.	5.8	189
25	Frequency dependent thermal expansion in binary viscoelastic composites. Mechanics of Materials, 2009, 41, 463-480.	3.2	3
26	Schoenberg's angle on fractures and anisotropy: A study in orthotropy. , 2009, , .		0
27	Elastic and transport properties in polycrystals of cracked grains: Cross-property relations and microstructure. International Journal of Engineering Science, 2008, 46, 500-512.	5.0	5
28	Exact seismic velocities for transversely isotropic media and extended Thomsen formulas for stronger anisotropies. Geophysics, 2008, 73, D1-D10.	2.6	55
29	Seismic anisotropy for polar media and an extended Thomsen formulation for longer offsets. , 2008, , .		0
30	Seismic waves in rocks with fluids and fractures. Geophysical Journal International, 2007, 171, 954-974.	2.4	56
31	Random polycrystals of grains containing cracks: Model of quasistatic elastic behavior for fractured systems. Journal of Applied Physics, 2006, 100, 113527.	2.5	19
32	Effective Medium Theories for Multicomponent Poroelastic Composites. Journal of Engineering Mechanics - ASCE, 2006, 132, 519-531.	2.9	44
33	Measures of microstructure to improve estimates and bounds on elastic constants and transport coefficients in heterogeneous media. Mechanics of Materials, 2006, 38, 732-747.	3.2	11
34	Geomechanical analysis with rigorous error estimates for a double-porosity reservoir model. International Journal for Numerical and Analytical Methods in Geomechanics, 2006, 30, 441-453.	3.3	2
35	Estimates and Rigorous Bounds on Pore-fluid Enhanced Shear Modulus in Poroelastic Media with Hard and Soft Anisotropy. International Journal of Damage Mechanics, 2006, 15, 133-167.	4.2	22
36	Fluid effects on shear waves in finely layered porous media. Geophysics, 2005, 70, N1-N15.	2.6	17

#	Article	IF	Citations
37	Bounds and self-consistent estimates for elastic constants of random polycrystals with hexagonal, trigonal, and tetragonal symmetries. Journal of the Mechanics and Physics of Solids, 2005, 53, 2141-2173.	4.8	106
38	Bounds and estimates for elastic constants of random polycrystals of laminates. International Journal of Solids and Structures, 2005, 42, 3730-3743.	2.7	8
39	Poroelastic fluid effects on shear for rocks with soft anisotropy. Geophysical Journal International, 2005, 161, 881-890.	2.4	9
40	Dispersion of waves in porous cylinders with patchy saturation: Formulation and torsional waves. Journal of the Acoustical Society of America, 2005, 117, 1785-1795.	1.1	8
41	Thermal conductivity of porous media. Applied Physics Letters, 2005, 86, 032905.	3.3	41
42	Comparison of Upscaling Methods in Poroelasticity and Its Generalizations. Journal of Engineering Mechanics - ASCE, 2005, 131, 928-936.	2.9	36
43	Pore fluid effects on shear modulus in a model of heterogeneous rocks, reservoirs, and granular media. Journal of Geophysical Research, 2005, 110, .	3.3	8
44	Bounds and estimates for transport coefficients of random and porous media with high contrasts. Journal of Applied Physics, 2005, 97, 063504.	2.5	28
45	Time-Reversal Analysis for Scatterer Characterization. Physical Review Letters, 2004, 92, 023902.	7.8	31
46	Poroelastic shear modulus dependence on pore-fluid properties arising in a model of thin isotropic layers. Geophysical Journal International, 2004, 157, 415-425.	2.4	30
47	Bounds on elastic constants for random polycrystals of laminates. Journal of Applied Physics, 2004, 96, 4281-4287.	2.5	16
48	Statistical Stability and Time-Reversal Imaging in Random Media. The IMA Volumes in Mathematics and Its Applications, 2004, , 15-24.	0.5	1
49	Modeling High-Frequency Acoustic Velocities in Patchy and Partially Saturated Porous Rock using Differential Effective Medium Theory. International Journal for Multiscale Computational Engineering, 2004, 2, 17.	1.2	7
50	Field relations among coseismic ground motion, water level change and liquefaction for the 1999 Chi-Chi (Mw= 7.5) earthquake, Taiwan. Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	48
51	Permeability dependence of seismic amplitudes. The Leading Edge, 2003, 22, 518-525.	0.7	92
52	Linear dynamics of double-porosity dual-permeability materials. II. Fluid transport equations. Physical Review E, 2003, 68, 036604.	2.1	156
53	Linear dynamics of double-porosity dual-permeability materials. I. Governing equations and acoustic attenuation. Physical Review E, 2003, 68, 036603.	2.1	242
54	Statistically stable ultrasonic imaging in random media. Journal of the Acoustical Society of America, 2002, 112, 1509-1522.	1.1	58

#	Article	IF	Citations
55	Extension of Poroelastic Analysis to Double-Porosity Materials: New Technique in Microgeomechanics. Journal of Engineering Mechanics - ASCE, 2002, 128, 840-847.	2.9	80
56	Estimating rock porosity and fluid saturation using only seismic velocities. Geophysics, 2002, 67, 391-404.	2.6	65
57	Biot slowâ€wave effects in stratified rock. Geophysics, 2002, 67, 271-281.	2.6	55
58	Models for computing geomechanical constants of double-porosity materials from the constituents' properties. Journal of Geophysical Research, 2002, 107, ECV 2-1.	3.3	45
59	A differential scheme for elastic properties of rocks with dry or saturated cracks. Geophysical Journal International, 2002, 151, 597-611.	2.4	124
60	Iterative resolution estimation in least-squares Kirchhoff migration. Geophysical Prospecting, 2002, 50, 577-588.	1.9	34
61	FDFD: A 3D Finite-Difference Frequency-Domain Code for Electromagnetic Induction Tomography. Journal of Computational Physics, 2001, 170, 830-848.	3.8	48
62	Dispersion in poroelastic systems. Physical Review E, 2001, 64, 011303.	2.1	34
63	Analysis of Approximate Inverses in Tomography I. Resolution Analysis of Common Inverses. Optimization and Engineering, 2000, 1, 87-115.	2.4	27
64	Analysis of Approximate Inverses in Tomography II. Iterative Inverses. Optimization and Engineering, 2000, 1, 437-473.	2.4	27
65	Transformation of seismic velocity data to extract porosity and saturation values for rocks. Journal of the Acoustical Society of America, 2000, 107, 3018-3027.	1.1	26
66	Seismic velocity decrement ratios for regions of partial melt in the lower mantle. Geophysical Research Letters, 2000, 27, 421-424.	4.0	73
67	Matching pursuit for imaging high-contrast conductivity. Inverse Problems, 1999, 15, 811-849.	2.0	32
68	Analysis of Thomsen parameters for finely layered VTI media. Geophysical Prospecting, 1999, 47, 959-978.	1.9	64
69	Origin of Gassmannâ€™s equations. Geophysics, 1999, 64, 1627-1629.	2.6	166
70	On the effective viscoelastic moduli of twoâ€“phase media. III. Rigorous bounds on the complex shear modulus in two dimensions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 1999, 455, 2117-2149.	2.1	30
71	An Electromagnetic Induction Tomography Field Experiment at Lost Hills, CA. , 1999, , .		3
72	Volume averaging, effective stress rules, and inversion for microstructural response of multicomponent porous media. International Journal of Solids and Structures, 1998, 35, 4811-4843.	2.7	23

#	Article	IF	Citations
73	Connecting theory to experiment in poroelasticity. Journal of the Mechanics and Physics of Solids, 1998, 46, 719-747.	4.8	61
74	Planar spatial correlations, anisotropy, and specific surface area of stationary random porous media. Journal of Applied Physics, 1998, 83, 1685-1693.	2.5	12
75	‹title›Double-porosity modeling in elastic wave propagation for reservoir characterization‹/title›. , 1998, , .		5
76	Transversely Isotropic Poroelasticity Arising from Thin Isotropic Layers. The IMA Volumes in Mathematics and Its Applications, 1998, , 37-50.	0.5	12
77	Generalization of Eshelby's Formula for a Single Ellipsoidal Elastic Inclusion to Poroelasticity and Thermoelasticity. Physical Review Letters, 1997, 79, 1142-1145.	7.8	35
78	Reply [to â€œComment on â€œUsing two-point correlation functions to characterize microgeometry and estimate permeabilities of sandstones and porous glassâ€•by Stephen C. Blair, Patricia A. Berge and James G. Berrymanâ€]. Journal of Geophysical Research, 1997, 102, 24813-24813.	3.3	2
79	Variational Structure of Inverse Problems in Wave Propagation and Vibration. The IMA Volumes in Mathematics and Its Applications, 1997, , 13-44.	0.5	1
80	On Constitutive Equations and Effective Stress Principles for Deformable, Double-Porosity Media. Water Resources Research, 1996, 32, 3621-3622.	4.2	15
81	Using two-point correlation functions to characterize microgeometry and estimate permeabilities of sandstones and porous glass. Journal of Geophysical Research, 1996, 101, 20359-20375.	3.3	118
82	Critique of two explicit schemes for estimating elastic properties of multiphase composites. Mechanics of Materials, 1996, 22, 149-164.	3.2	135
83	High-contrast impedance tomography. Inverse Problems, 1996, 12, 835-858.	2.0	43
84	The elastic coefficients of double-porosity models for fluid transport in jointed rock. Journal of Geophysical Research, 1995, 100, 24611-24627.	3.3	219
85	Ultrasonic velocityâ€porosity relationships for sandstone analogs made from fused glass beads. Geophysics, 1995, 60, 108-119.	2.6	73
86	Stressâ€induced transverse isotropy in rocks. , 1994, , .		11
87	Influence of microstructure on rock elastic properties. Geophysical Research Letters, 1993, 20, 2619-2622.	4.0	92
88	Exact results in linear thermomechanics of fluidâ€saturated porous media. Applied Physics Letters, 1992, 61, 2030-2032.	3.3	11
89	Exact effective-stress rules in rock mechanics. Physical Review A, 1992, 46, 3307-3311.	2.5	19
90	Chapter 7 Permeability and Relative Permeability in Rocks. International Geophysics, 1992, 51, 169-186.	0.6	2

#	Article	IF	Citations
91	Singleâ€scattering approximations for coefficients in Biotâ€™s equations of poroelasticity. Journal of the Acoustical Society of America, 1992, 91, 551-571.	1.1	287
92	Effective stress for transport properties of inhomogeneous porous rock. Journal of Geophysical Research, 1992, 97, 17409-17424.	3.3	286
93	Convexity properties of inverse problems with variational constraints. Journal of the Franklin Institute, 1991, 328, 1-13.	3.4	10
94	Exact results for generalized Gassmannâ€™s equations in composite porous media with two constituents. Geophysics, 1991, 56, 1950-1960.	2.6	189
95	Inverse scattering, seismic traveltime tomography, and neural networks. International Journal of Imaging Systems and Technology, 1990, 2, 112-118.	4.1	8
96	Variational constraints for electrical-impedance tomography. Physical Review Letters, 1990, 65, 325-328.	7.8	34
97	Fermatâ€™s principle and nonlinear traveltime tomography. Physical Review Letters, 1989, 62, 2953-2956.	7.8	53
98	Seismic wave attenuation in fluid-saturated porous media. Pure and Applied Geophysics, 1988, 128, 423-432.	1.9	40
99	Interpolating and integrating three-point correlation functions on a lattice. Journal of Computational Physics, 1988, 75, 86-102.	3.8	35
100	Bulk elastic wave propagation in partially saturated porous solids. Journal of the Acoustical Society of America, 1988, 84, 360-373.	1.1	137
101	Seismic Wave Attenuation in Fluid-Saturated Porous Media. , 1988, , 423-432.		10
102	Relationship between specific surface area and spatial correlation functions for anisotropic porous media. Journal of Mathematical Physics, 1987, 28, 244-245.	1.1	62
103	Extensions of Biotâ€™s theory of poroelasticity to complex porous media. AIP Conference Proceedings, 1987, , .	0.4	1
104	Kozenyâ€“Carman relations and image processing methods for estimating Darcyâ€™s constant. Journal of Applied Physics, 1987, 62, 2221-2228.	2.5	115
105	Use of digital image analysis to estimate fluid permeability of porous materials: Application of twoâ€point correlation functions. Journal of Applied Physics, 1986, 60, 1930-1938.	2.5	261
106	Elastic wave attenuation in rocks containing fluids. Applied Physics Letters, 1986, 49, 552-554.	3.3	26
107	Effective medium approximation for elastic constants of porous solids with microscopic heterogeneity. Journal of Applied Physics, 1986, 59, 1136-1140.	2.5	41
108	Variational Bounds on Darcyâ€™s Constant. The IMA Volumes in Mathematics and Its Applications, 1986, , 52-77.	0.5	1

#	Article	IF	Citations
109	The First Boundary Value Problem for Nonlinear Diffusion. North-Holland Mathematics Studies, 1985, 110, 183-186.	0.2	0
110	Mechanics of porous elastic materials containing multiphase fluid. International Journal of Engineering Science, 1985, 23, 1203-1214.	5.0	30
111	Effective constants for wave propagation through partially saturated porous media. Applied Physics Letters, 1985, 46, 722-724.	3.3	20
112	Bounds on fluid permeability for viscous flow through porous media. Journal of Chemical Physics, 1985, 82, 1459-1467.	3.0	19
113	Scattering by a spherical inhomogeneity in a fluidâ€saturated porous medium. Journal of Mathematical Physics, 1985, 26, 1408-1419.	1.1	87
114	Exponential convergence for nonlinear diffusion problems with positive lateral boundary conditions. Journal of Mathematical Physics, 1985, 26, 660-663.	1.1	4
115	Measurement of spatial correlation functions using image processing techniques. Journal of Applied Physics, 1985, 57, 2374-2384.	2.5	232
116	Normalization constraint for variational bounds on fluid permeability. Journal of Chemical Physics, 1985, 83, 754-760.	3.0	78
117	Effective conductivity by fluid analogy for a porous insulator filled with a conductor. Physical Review B, 1983, 27, 7789-7792.	3.2	25
118	Computing variational bounds for flow through random aggregates of spheres. Journal of Computational Physics, 1983, 52, 142-162.	3.8	19
119	Random close packing of hard spheres and disks. Physical Review A, 1983, 27, 1053-1061.	2.5	580
120	Dispersion of extensional waves in fluidâ€saturated porous cylinders at ultrasonic frequencies. Journal of the Acoustical Society of America, 1983, 74, 1805-1812.	1.1	38
121	Stability analysis of Kamimuraâ€Dawson diffusion in a collisionless plasma. Journal of Applied Physics, 1983, 54, 425-426.	2.5	0
122	Asymptotic behavior of the nonlinear diffusion equation nt = (nâ^'1nx)x. Journal of Mathematical Physics, 1982, 23, 983-987.	1.1	51
123	Elastic waves in fluid-saturated porous media. , 1982, , 38-50.		9
124	Elastic wave propagation in fluidâ€saturated porous media. Journal of the Acoustical Society of America, 1981, 69, 416-424.	1.1	132
125	Stability of the separable solution for fast diffusion. Archive for Rational Mechanics and Analysis, 1980, 74, 379-388.	2.4	141
126	Longâ€wavelength propagation in composite elastic media I. Spherical inclusions. Journal of the Acoustical Society of America, 1980, 68, 1809-1819.	1.1	604

#	Article	IF	Citations
127	Longâ€wavelength propagation in composite elastic media II. Ellipsoidal inclusions. Journal of the Acoustical Society of America, 1980, 68, 1820-1831.	1.1	463
128	Confirmation of Biotâ€™s theory. Applied Physics Letters, 1980, 37, 382-384.	3.3	420
129	Evolution of a stable profile for a class of nonlinear diffusion equations. III. Slow diffusion on the line. Journal of Mathematical Physics, 1980, 21, 1326-1331.	1.1	55
130	Theory of elastic properties of composite materials. Applied Physics Letters, 1979, 35, 856-858.	3.3	53
131	Inverse methods for elastic waves in stratified media. Journal of Applied Physics, 1979, 50, 6742-6744.	2.5	12
132	Extinction time for fast diffusion. Physics Letters, Section A: General, Atomic and Solid State Physics, 1979, 72, 107-110.	2.1	2
133	Longâ€wave elastic anisotropy in transversely isotropic media. Geophysics, 1979, 44, 896-917.	2.6	187
134	Reply to comments by R. Van Dooren. Physics of Fluids, 1979, 22, 1588.	1.4	3
135	Discrete inverse scattering theory and the continuum limit. Physics Letters, Section A: General, Atomic and Solid State Physics, 1978, 65, 13-15.	2.1	7
136	Evolution of a stable profile for a class of nonlinear diffusion equations. II. Journal of Mathematical Physics, 1978, 19, 2476-2480.	1.1	15
137	Nonlinear Diffusion Problem Arising in Plasma Physics. Physical Review Letters, 1978, 40, 1720-1722.	7.8	88
138	Evolution of a stable profile for a class of nonlinear diffusion equations with fixed boundaries. Journal of Mathematical Physics, 1977, 18, 2108-2115.	1.1	58
139	Theory of nonlinear diffusion of plasma across the magnetic field of a toroidal multipole. Physics of Fluids, 1977, 20, 851.	1.4	14
140	Stability of solitary waves in shallow water. Physics of Fluids, 1976, 19, 771.	1.4	41
141	The frequency dependent electrical conductivity for disordered alloys: Application of an abstract Hilbert space generalization of Feenbergâ€™s perturbation theory. Journal of Mathematical Physics, 1976, 17, 2182-2191.	1.1	0
142	Mixture Theories for Rock Properties. AGU Reference Shelf, 0, , 205-228.	0.6	243