

James R Rice

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

138
papers

25,280
citations

68
h-index

141
g-index

141
ext. papers

27,114
ext. citations

4.3
avg, IF

7.2
L-index

#	Paper	IF	Citations
138	Effect of Permeability Evolution in Fault Damage Zones on Earthquake Recurrence. <i>Journal of Geophysical Research: Solid Earth</i> , 2021 , 126, e2021JB021787	3.6	2
137	Influence of Fluid-Assisted Healing on Fault Permeability Structure. <i>Journal of Geophysical Research: Solid Earth</i> , 2020 , 125, e2020JB020553	3.6	5
136	A Model for the Downstream Evolution of Temperate Ice and Subglacial Hydrology Along Ice Stream Shear Margins. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018 , 123, 1682-1698	3.8	16
135	Effect of Fault Architecture and Permeability Evolution on Response to Fluid Injection. <i>Journal of Geophysical Research: Solid Earth</i> , 2018 , 123, 9982-9997	3.6	24
134	The Path-Independent M Integral Implies the Creep Closure of Englacial and Subglacial Channels. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2017 , 84,	2.7	6
133	Heating, weakening and shear localization in earthquake rupture. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017 , 375,	3	15
132	Path independent integrals in equilibrium electro-chemo-elasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 107, 525-541	5	13
131	Effects of ice deformation on R�hlisberger channels and implications for transitions in subglacial hydrology. <i>Journal of Glaciology</i> , 2016 , 62, 750-762	3.4	31
130	Determining conditions that allow a shear margin to coincide with a R�hlisberger channel. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016 , 121, 1273-1294	3.8	8
129	Shear heating and weakening of the margins of West Antarctic ice streams. <i>Geophysical Research Letters</i> , 2015 , 42, 3406-3413	4.9	26
128	Strain localization driven by thermal decomposition during seismic shear. <i>Journal of Geophysical Research: Solid Earth</i> , 2015 , 120, 4405-4433	3.6	23
127	Subglacial hydrology and ice stream margin locations. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015 , 120, 1352-1368	3.8	41
126	Time Scale for Rapid Draining of a Surficial Lake Into the Greenland Ice Sheet. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015 , 82,	2.7	4
125	Stability and localization of rapid shear in fluid-saturated fault gouge: 1. Linearized stability analysis. <i>Journal of Geophysical Research: Solid Earth</i> , 2014 , 119, 4311-4333	3.6	55
124	Deformation-induced melting in the margins of the West Antarctic ice streams. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014 , 119, 1004-1025	3.8	56
123	Stability and localization of rapid shear in fluid-saturated fault gouge: 2. Localized zone width and strength evolution. <i>Journal of Geophysical Research: Solid Earth</i> , 2014 , 119, 4334-4359	3.6	65
122	James R. Rice Receives 2012 Walter H. Bucher Medal: Response. <i>Eos</i> , 2013 , 94, 8-8	1.5	

121	Nucleation of slip-weakening rupture instability in landslides by localized increase of pore pressure. <i>Journal of Geophysical Research</i> , 2012 , 117,		62
120	Tsunami Wave Analysis and Possibility of Splay Fault Rupture During the 2004 Indian Ocean Earthquake. <i>Pure and Applied Geophysics</i> , 2012 , 169, 1707-1735	2.2	16
119	Modeling Turbulent Hydraulic Fracture Near a Free Surface. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2012 , 79,	2.7	22
118	Influence of material contrast on fault branching behavior. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	14
117	How pore fluid pressurization influences crack tip processes during dynamic rupture. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	8
116	Influence of plastic deformation on bimaterial fault rupture directivity. <i>Journal of Geophysical Research</i> , 2011 , 116,		14
115	Elastic reciprocity and symmetry constraints on the stress field due to a surface-parallel distribution of dislocations. <i>Journal of the Mechanics and Physics of Solids</i> , 2011 , 59, 753-757	5	4
114	EARTHQUAKE SEQUENCE CALCULATIONS WITH DYNAMIC WEAKENING MECHANISMS. <i>Springer Series in Geomechanics and Geoengineering</i> , 2011 , 149-152	0.1	6
113	A model for turbulent hydraulic fracture and application to crack propagation at glacier beds. <i>Journal of Geophysical Research</i> , 2010 , 115,		99
112	Dilatant strengthening as a mechanism for slow slip events. <i>Journal of Geophysical Research</i> , 2010 , 115,		232
111	Rupture nucleation on an interface with a power-law relation between stress and displacement discontinuity. <i>International Journal of Fracture</i> , 2010 , 163, 1-13	2.3	9
110	Rupture nucleation on an interface with a power-law relation between stress and displacement discontinuity. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 255-267	0.3	
109	Slow slip predictions based on granite and gabbro friction data compared to GPS measurements in northern Cascadia. <i>Journal of Geophysical Research</i> , 2009 , 114,		58
108	Earthquake ruptures with thermal weakening and the operation of major faults at low overall stress levels. <i>Journal of Geophysical Research</i> , 2009 , 114,		168
107	Finite element simulations of dynamic shear rupture experiments and dynamic path selection along kinked and branched faults. <i>Journal of Geophysical Research</i> , 2009 , 114,		15
106	Earthquake slip between dissimilar poroelastic materials. <i>Journal of Geophysical Research</i> , 2008 , 113,		35
105	Off-fault plasticity and earthquake rupture dynamics: 1. Dry materials or neglect of fluid pressure changes. <i>Journal of Geophysical Research</i> , 2008 , 113,		99
104	Off-fault plasticity and earthquake rupture dynamics: 2. Effects of fluid saturation. <i>Journal of Geophysical Research</i> , 2008 , 113,		51

103	Possible mechanisms for glacial earthquakes. <i>Journal of Geophysical Research</i> , 2008 , 113,		43
102	Off-fault damage patterns due to supershear ruptures with application to the 2001 Mw 8.1 Kokoxili (Kunlun) Tibet earthquake. <i>Journal of Geophysical Research</i> , 2007 , 112,		64
101	Spontaneous and triggered aseismic deformation transients in a subduction fault model. <i>Journal of Geophysical Research</i> , 2007 , 112,		293
100	Role of fault branches in earthquake rupture dynamics. <i>Journal of Geophysical Research</i> , 2007 , 112,		49
99	Seismicity variations associated with aseismic transients in Guerrero, Mexico, 1995–2006. <i>Earth and Planetary Science Letters</i> , 2007 , 262, 493-504	5:3	21
98	Heating and weakening of faults during earthquake slip. <i>Journal of Geophysical Research</i> , 2006 , 111, n/a-n/a		782
97	Does shear heating of pore fluid contribute to earthquake nucleation?. <i>Journal of Geophysical Research</i> , 2006 , 111,		76
96	Thermal pressurization and onset of melting in fault zones. <i>Journal of Geophysical Research</i> , 2006 , 111,		106
95	Effective normal stress alteration due to pore pressure changes induced by dynamic slip propagation on a plane between dissimilar materials. <i>Journal of Geophysical Research</i> , 2006 , 111,		45
94	Fault branching and rupture directivity. <i>Journal of Geophysical Research</i> , 2005 , 110,		49
93	Aseismic slip transients emerge spontaneously in three-dimensional rate and state modeling of subduction earthquake sequences. <i>Journal of Geophysical Research</i> , 2005 , 110,		228
92	Can observations of earthquake scaling constrain slip weakening?. <i>Geophysical Journal International</i> , 2005 , 162, 406-424	2.6	281
91	Off-Fault Secondary Failure Induced by a Dynamic Slip Pulse. <i>Bulletin of the Seismological Society of America</i> , 2005 , 95, 109-134	2.3	190
90	Laboratory earthquakes along inhomogeneous faults: directionality and supershear. <i>Science</i> , 2005 , 308, 681-4	33:3	116
89	Cristallisation par onde acoustique : le cas de l'hélium. <i>Comptes Rendus - Mécanique</i> , 2003 , 331, 601-607	2.1	2
88	Nucleation and early seismic propagation of small and large events in a crustal earthquake model. <i>Journal of Geophysical Research</i> , 2003 , 108,		242
87	Universal nucleation length for slip-weakening rupture instability under nonuniform fault loading. <i>Journal of Geophysical Research</i> , 2003 , 108,		141
86	Effects of prestress state and rupture velocity on dynamic fault branching. <i>Journal of Geophysical Research</i> , 2003 , 108,		146

85	Dynamic shear rupture interactions with fault bends and off-axis secondary faulting. <i>Journal of Geophysical Research</i> , 2002 , 107, ESE 6-1-ESE 6-18		192
84	Triggering of the 1999 MW 7.1 Hector Mine earthquake by aftershocks of the 1992 MW 7.3 Landers earthquake. <i>Journal of Geophysical Research</i> , 2002 , 107, ESE 6-1-ESE 6-13		133
83	Exact results with the J-integral applied to free-boundary flows. <i>Journal of Fluid Mechanics</i> , 2002 , 461, 321-341	3.7	11
82	Pore pressure and poroelasticity effects in Coulomb stress analysis of earthquake interactions. <i>Journal of Geophysical Research</i> , 2002 , 107, ESE 2-1		195
81	Repeating Earthquakes as Low-Stress-Drop Events at a Border between Locked and Creeping Fault Patches. <i>Bulletin of the Seismological Society of America</i> , 2001 , 91, 532-537	2.3	73
80	Rate and state dependent friction and the stability of sliding between elastically deformable solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2001 , 49, 1865-1898	5	434
79	New Perspectives on Crack and Fault Dynamics 2001 , 1-24		5
78	Frictional response induced by time-dependent fluctuations of the normal loading. <i>Journal of Geophysical Research</i> , 2001 , 106, 13455-13472		65
77	Some Studies of Crack Dynamics 2001 , 3-11		1
76	Perturbative simulations of crack front waves. <i>Journal of the Mechanics and Physics of Solids</i> , 2000 , 48, 1229-1251	5	45
75	Existence of continuum complexity in the elastodynamics of repeated fault ruptures. <i>Journal of Geophysical Research</i> , 2000 , 105, 23791-23810		54
74	Elastodynamic analysis for slow tectonic loading with spontaneous rupture episodes on faults with rate- and state-dependent friction. <i>Journal of Geophysical Research</i> , 2000 , 105, 23765-23789		358
73	Crack front waves. <i>Journal of the Mechanics and Physics of Solids</i> , 1998 , 46, 467-487	5	95
72	Dynamic simulations of slip on a smooth fault in an elastic solid. <i>Journal of Geophysical Research</i> , 1997 , 102, 17771-17784		164
71	A spectral method for numerical elastodynamic fracture analysis without spatial replication of the rupture event. <i>Journal of the Mechanics and Physics of Solids</i> , 1997 , 45, 1393-1418	5	39
70	Slip complexity in earthquake fault models. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1996 , 93, 3811-8	11.5	171
69	Self-healing slip pulse on a frictional surface. <i>Journal of the Mechanics and Physics of Solids</i> , 1995 , 43, 1461-1495	5	206
68	A spectral method for three-dimensional elastodynamic fracture problems. <i>Journal of the Mechanics and Physics of Solids</i> , 1995 , 43, 1791-1824	5	149

67	Slip patterns and earthquake populations along different classes of faults in elastic solids. <i>Journal of Geophysical Research</i> , 1995 , 100, 12959-12983		157
66	Dilatancy, compaction, and slip instability of a fluid-infiltrated fault. <i>Journal of Geophysical Research</i> , 1995 , 100, 22155-22171		357
65	The activation energy for dislocation nucleation at a crack. <i>Journal of the Mechanics and Physics of Solids</i> , 1994 , 42, 333-360	5	227
64	Three-dimensional perturbation solution for a dynamic planar crack moving unsteadily in a model elastic solid. <i>Journal of the Mechanics and Physics of Solids</i> , 1994 , 42, 813-843	5	92
63	Disordering of a dynamic planar crack front in a model elastic medium of randomly variable toughness. <i>Journal of the Mechanics and Physics of Solids</i> , 1994 , 42, 1047-1064	5	60
62	Interaction of the San Andreas Fault Creeping Segment with Adjacent great rupture zones and earthquake recurrence at Parkfield. <i>Journal of Geophysical Research</i> , 1993 , 98, 2135		74
61	Spatio-temporal complexity of slip on a fault. <i>Journal of Geophysical Research</i> , 1993 , 98, 9885		682
60	Earthquake failure sequences along a cellular fault zone in a three-dimensional elastic solid containing asperity and nonasperity regions. <i>Journal of Geophysical Research</i> , 1993 , 98, 14109-14131		187
59	Estimates from atomic models of tension-shear coupling in dislocation nucleation from a crack tip. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993 , 170, 67-85	5.3	127
58	Chapter 20 Fault Stress States, Pore Pressure Distributions, and the Weakness of the San Andreas Fault. <i>International Geophysics</i> , 1992 , 475-503		433
57	Dislocation nucleation from a crack tip: An analysis based on the Peierls concept. <i>Journal of the Mechanics and Physics of Solids</i> , 1992 , 40, 239-271	5	1203
56	Penetration of a quasi-statically slipping crack into a seismogenic zone of heterogeneous fracture resistance. <i>Journal of Geophysical Research</i> , 1991 , 96, 21535-21548		15
55	Dislocation Nucleation Versus Cleavage in Ni ₃ Al and Ni. <i>Materials Research Society Symposia Proceedings</i> , 1990 , 213, 243		8
54	MECHANICS AND THERMODYNAMICS OF BRITTLE INTERFACIAL FAILURE IN BIMATERIAL SYSTEMS 1990 , 269-294		53
53	A First-Order Perturbation Analysis of Crack Trapping by Arrays of Obstacles. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1989 , 56, 828-836	2.7	231
52	Embrittlement of interfaces by solute segregation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1989 , 107, 23-40	5.3	597
51	Crack tip singular fields in ductile crystals with Taylor power-law hardening. <i>Journal of the Mechanics and Physics of Solids</i> , 1989 , 37, 673-691	5	50
50	Two general integrals of singular crack tip deformation fields. <i>Journal of Elasticity</i> , 1988 , 20, 131-142	1.5	5

49	Crack tip singular fields in ductile crystals with taylor power-law hardening. I: Anti-plane shear. <i>Journal of the Mechanics and Physics of Solids</i> , 1988 , 36, 189-214	5	20
48	Dynamic growth of anti-plane shear cracks in ideally plastic crystals. <i>Mechanics of Materials</i> , 1988 , 7, 163-173	3	8
47	Stress transfer and seismic phenomena in coupled subduction zones during the earthquake cycle. <i>Journal of Geophysical Research</i> , 1988 , 93, 7869		119
46	Dislocation Pinning Effect of Grain Boundary Segregated Solute Atoms at a Crack Tip. <i>Materials Research Society Symposia Proceedings</i> , 1988 , 122, 361		1
45	Nearly Circular Connections of Elastic Half Spaces. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1987 , 54, 627-634	2.7	39
44	Crustal deformation in Great California earthquake cycles. <i>Journal of Geophysical Research</i> , 1987 , 92, 11533-11551		120
43	Tensile crack tip fields in elastic-ideally plastic crystals. <i>Mechanics of Materials</i> , 1987 , 6, 317-335	3.3	272
42	Somewhat circular tensile cracks. <i>International Journal of Fracture</i> , 1987 , 33, 155-174	2.3	108
41	The stress field and energy of a three-dimensional dislocation loop at a crack tip. <i>Journal of the Mechanics and Physics of Solids</i> , 1987 , 35, 743-769	5	24
40	Mechanics of Brittle Cracking of Crystal Lattices and Interfaces 1987 , 23-43		5
39	Shear Stress Intensity Factors for a Planar Crack With Slightly Curved Front. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1986 , 53, 774-778	2.7	91
38	Dynamic motion of a single degree of freedom system following a rate and state dependent friction law. <i>Journal of Geophysical Research</i> , 1986 , 91, 521		197
37	Crustal earthquake instability in relation to the depth variation of frictional slip properties. <i>Journal of Geophysical Research</i> , 1986 , 91, 9452		687
36	Anti-plane shear cracks in ideally plastic crystals. <i>Journal of the Mechanics and Physics of Solids</i> , 1985 , 33, 595-622	5	53
35	Three-dimensional elastic crack tip interactions with transformation strains and dislocations. <i>International Journal of Solids and Structures</i> , 1985 , 21, 781-791	3.1	72
34	Slip motion and stability of a single degree of freedom elastic system with rate and state dependent friction. <i>Journal of the Mechanics and Physics of Solids</i> , 1984 , 32, 167-196	5	398
33	On the theory of perfectly plastic anti-plane straining. <i>Mechanics of Materials</i> , 1984 , 3, 55-80	3.3	15
32	Rate sensitivity of plastic flow and implications for yield-surface vertices. <i>International Journal of Solids and Structures</i> , 1983 , 19, 973-987	3.1	244

31	Preseismic rupture progression and great earthquake instabilities at plate boundaries. <i>Journal of Geophysical Research</i> , 1983 , 88, 4231-4246		63
30	NON-EQUILIBRIUM MODELS FOR DIFFUSIVE CAVITATION OF GRAIN INTERFACES 1983 , 87-106		
29	Earthquake aftereffects and triggered seismic phenomena. <i>Pure and Applied Geophysics</i> , 1983 , 121, 187-219		132
28	Constitutive relations for fault slip and earthquake instabilities. <i>Pure and Applied Geophysics</i> , 1983 , 121, 443-475	2.2	234
27	Constitutive Relations for Fault Slip and Earthquake Instabilities 1983 , 443-475		7
26	Energy Variations in Diffusive Cavity Growth. <i>Journal of the American Ceramic Society</i> , 1981 , 64, 46-53	3.8	112
25	A note on some features of the theory of localization of deformation. <i>International Journal of Solids and Structures</i> , 1980 , 16, 597-605	3.1	216
24	Recent finite element studies in plasticity and fracture mechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1979 , 17-18, 411-442	5.7	49
23	Earthquake precursory effects due to pore fluid stabilization of a weakening fault zone. <i>Journal of Geophysical Research</i> , 1979 , 84, 2177		83
22	Overview no. 2. <i>Acta Metallurgica</i> , 1979 , 27, 265-284		351
21	Some basic stress diffusion solutions for fluid-saturated elastic porous media with compressible constituents. <i>Reviews of Geophysics</i> , 1976 , 14, 227	23.1	1449
20	The stabilization of spreading shear faults by coupled deformation-diffusion effects in fluid-infiltrated porous materials. <i>Journal of Geophysical Research</i> , 1976 , 81, 5322-5334		107
19	Elementary Engineering Fracture Mechanics. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1975 , 42, 751-752	2.7	12
18	Finite-element formulations for problems of large elastic-plastic deformation. <i>International Journal of Solids and Structures</i> , 1975 , 11, 601-616	3.1	609
17	Conditions for the localization of deformation in pressure-sensitive dilatant materials. <i>Journal of the Mechanics and Physics of Solids</i> , 1975 , 23, 371-394	5	2014
16	Localized necking in thin sheets. <i>Journal of the Mechanics and Physics of Solids</i> , 1975 , 23, 421-441	5	752
15	On the stability of dilatant hardening for saturated rock masses. <i>Journal of Geophysical Research</i> , 1975 , 80, 1531-1536		208
14	On numerically accurate finite element solutions in the fully plastic range. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1974 , 4, 153-177	5.7	772

13	Limitations to the small scale yielding approximation for crack tip plasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 1974 , 22, 17-26	5	505
12	Ductile versus brittle behaviour of crystals. <i>Philosophical Magazine and Journal</i> , 1974 , 29, 73-97		1330
11	The shape of intergranular creep cracks growing by surface diffusion. <i>Acta Metallurgica</i> , 1973 , 21, 1625-1628		209
10	Elastic-plastic fracture mechanics. <i>Engineering Fracture Mechanics</i> , 1973 , 5, 1019-1022	4.2	6
9	On the Calculation of Changes in the Earth's Inertia Tensor Due to Faulting. <i>Geophysical Journal International</i> , 1973 , 35, 373-373	2.6	
8	Continuum Plasticity in Relation to Microscale Deformation Mechanisms 1973 , 93-106		2
7	Some remarks on elastic crack-tip stress fields. <i>International Journal of Solids and Structures</i> , 1972 , 8, 751-758	3.1	781
6	Inelastic constitutive relations for solids: An internal-variable theory and its application to metal plasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 1971 , 19, 433-455	5	1311
5	A finite element formulation for problems of large strain and large displacement. <i>International Journal of Solids and Structures</i> , 1970 , 6, 1069-1086	3.1	250
4	The elastic-plastic mechanics of crack extension. <i>International Journal of Fracture Mechanics</i> , 1968 , 4, 41		18
3	Discussion: A Study of the Law of Crack Propagation (Yang, C. T., 1967, ASME J. Basic Eng., 89, pp. 487-493). <i>Journal of Basic Engineering</i> , 1967 , 89, 493-494		1
2	Contained plastic deformation near cracks and notches under longitudinal shear. <i>International Journal of Fracture Mechanics</i> , 1966 , 2, 426		69
1	First-Occurrence Time of High-Level Crossings in a Continuous Random Process. <i>Journal of the Acoustical Society of America</i> , 1966 , 39, 323-335	2.2	31