Krishnaswamy Ravi-Chandar

List of Publications by Year
in descending order

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64	2,414	218592	206029
papers	citations	26 h-index	48 g-index

67	67	67	1671
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An experimental investigation into dynamic fracture: II. Microstructural aspects. International Journal of Fracture, 1984, 26, 65-80.	1.1	354
2	Ductile failure under combined shear and tension. International Journal of Solids and Structures, 2013, 50, 1507-1522.	1.3	145
3	The Sandia Fracture Challenge: blind round robin predictions of ductile tearing. International Journal of Fracture, 2014, 186, 5-68.	1.1	115
4	On the dynamics of necking and fragmentation â€“ I. Real-time and post-mortem observations in Al 6061-O. International Journal of Fracture, 2007, 142, 183-217.	1.1	109
5	Criterion for initiation of cracks under mixed-mode I + III loading. International Journal of Fracture, 2010, 165, 175-188.	1.1	108
6	Helicoidal Composites. Mechanics of Advanced Materials and Structures, 2006, 13, 61-76.	1.5	97
7	Ductile failure behavior of polycrystalline Al 6061-T6. International Journal of Fracture, 2012, 174, 177-202.	1.1	95
8	Experimental validation of a phase-field model for fracture. International Journal of Fracture, 2017, 205, 83-101.	1.1	91
9	On the dynamics of necking and fragmentationâ€”II. Effect of material properties, geometrical constraints and absolute size. International Journal of Fracture, 2008, 150, 3-36.	1.1	81
10	Ductile failure behavior of polycrystalline Al 6061-T6 under shear dominant loading. International Journal of Fracture, 2013, 180, 23-39.	1.1	77
11	The second Sandia Fracture Challenge: predictions of ductile failure under quasi-static and moderate-rate dynamic loading. International Journal of Fracture, 2016, 198, 5-100.	1.1	73
12	Cavitation in rubber: an elastic instability or a fracture phenomenon?. International Journal of Fracture, 2015, 192, 1-23.	1.1	64
13	Damage in elastomers: nucleation and growth of cavities, micro-cracks, and macro-cracks. International Journal of Fracture, 2017, 205, 1-21.	1.1	64
14	The third Sandia fracture challenge: predictions of ductile fracture in additively manufactured metal. International Journal of Fracture, 2019, 218, 5-61.	1.1	62
15	Nanoscale damage during fracture in silica glass. International Journal of Fracture, 2006, 140, 3-14.	1.1	56
16	On the dynamics of localization and fragmentation-IV. Expansion of Al 6061-O tubes. International Journal of Fracture, 2010, 163, 41-65.	1.1	55
17	Viscoelastic Characterization of Polymers Under Multiaxial Compression. Mechanics of Time-Dependent Materials, 2004, 8, 193-214.	2.3	45
18	Further examination of the criterion for crack initiation under mixed-mode I+III loading. International Journal of Fracture, 2014, 189, 121-138.	1.1	41

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19	Ductile failure in polycrystalline OFHC copper. International Journal of Solids and Structures, 2011, 48, 3299-3311.	1.3	36
20	The formation and growth of echelon cracks in brittle materials. International Journal of Fracture, 2017, 206, 229-244.	1.1	35
21	3D surface imaging of the human female torso in upright to supine positions. Medical Engineering and Physics, 2015, 37, 375-383.	0.8	33
22	On the dynamics of localization and fragmentationâ€”III. Effect of cladding with a polymer. International Journal of Fracture, 2009, 155, 101-118.	1.1	32
23	Dynamic crack response to a localized shear pulse perturbation in brittle amorphous materials: on crack surface roughening. International Journal of Fracture, 2005, 134, 1-22.	1.1	31
24	On the growth of cracks under mixed-mode IÂ+ÂIII loading. International Journal of Fracture, 2016, 199, 105-134.	1.1	31
25	Characterization of Multiaxial Constitutive Properties of Rubbery Polymers. Journal of Engineering Materials and Technology, Transactions of the ASME, 2006, 128, 489-494.	0.8	29
26	On the response of rubbers at high strain ratesâ€”I. Simple waves. Journal of the Mechanics and Physics of Solids, 2011, 59, 423-441.	2.3	27
27	A computational framework for dynamic dataâ€driven material damage control, based on Bayesian inference and model selection. International Journal for Numerical Methods in Engineering, 2015, 102, 379-403.	1.5	27
28	Mechanical response of human female breast skin under uniaxial stretching. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 74, 164-175.	1.5	27
29	Melting and crack growth in electrical conductors subjected to short-duration current pulses. International Journal of Fracture, 2011, 167, 183-193.	1.1	26
30	Mechanical Response of a Metallic Aortic Stentâ€”Part II: A Beam-on-Elastic Foundation Model. Journal of Applied Mechanics, Transactions ASME, 2004, 71, 706-712.	1.1	23
31	On the response of rubbers at high strain ratesâ€”III. Effect of hysteresis. Journal of the Mechanics and Physics of Solids, 2011, 59, 457-472.	2.3	21
32	Dynamic tensile characterization of pig skin. Acta Mechanica Sinica/Lixue Xuebao, 2014, 30, 125-132.	1.5	21
33	Damage in elastomers: healing of internally nucleated cavities and micro-cracks. Soft Matter, 2018, 14, 4633-4640.	1.2	20
34	On the response of rubbers at high strain ratesâ€”II. Shock waves. Journal of the Mechanics and Physics of Solids, 2011, 59, 442-456.	2.3	17
35	On the Extraction of Elasticâ€“Plastic Constitutive Properties From Three-Dimensional Deformation Measurements. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .	1.1	17
36	On the deformation and failure of Al 6061-T6 at low triaxiality evaluated through in situ microscopy. International Journal of Fracture, 2016, 200, 185-208.	1.1	17

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37	In-vivo quantification of human breast deformation associated with the position change from supine to upright. Medical Engineering and Physics, 2015, 37, 13-22.	0.8	16
38	The configurational-forces view of the nucleation and propagation of fracture and healing in elastomers as a phase transition. International Journal of Fracture, 2018, 213, 1-16.	1.1	16
39	Influence of Surface Residual Stress State on Crack Path Evolution in Polycrystalline Alumina. Journal of the American Ceramic Society, 2002, 85, 1783-1787.	1.9	13
40	Prediction of ductile failure using a local strain-to-failure criterion. International Journal of Fracture, 2014, 186, 69-91.	1.1	13
41	On the Development of a Mesoscale Friction Tester. Experimental Mechanics, 2007, 47, 123-131.	1.1	12
42	Modeling the nonlinear viscoelastic behavior of polyurea using a distortion modified free volume approach. Mechanics of Time-Dependent Materials, 2012, 16, 181-203.	2.3	12
43	Characterization of human female breast and abdominal skin elasticity using a bulge test.. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103604.	1.5	11
44	Nonlinear poroviscoelastic behavior of gelatin-based hydrogel. Journal of the Mechanics and Physics of Solids, 2022, 158, 104650.	2.3	11
45	The revisited phase-field approach to brittle fracture: application to indentation and notch problems. International Journal of Fracture, 2022, 237, 83-100.	1.1	11
46	Dynamic Measurement of Two Dimensional Stress Components in Birefringent Materials. Experimental Mechanics, 2009, 49, 403-416.	1.1	10
47	The mechanical behavior of conductors exposed to short-duration thermal loading. IEEE Transactions on Magnetics, 2005, 41, 256-261.	1.2	9
48	Crack nucleation from a notch in a ductile material under shear dominant loading. International Journal of Fracture, 2013, 184, 253-266.	1.1	8
49	Dynamic strain localization in magnesium alloy AZ31B-O. Mechanics of Materials, 2018, 116, 189-201.	1.7	8
50	Linear and nonlinear poroelastic analysis of swelling and drying behavior of gelatin-based hydrogels. International Journal of Solids and Structures, 2020, 195, 43-56.	1.3	8
51	On the dynamics of localization and fragmentation: V. Response of polymer coated Al 6061-O tubes. International Journal of Fracture, 2011, 172, 161-185.	1.1	7
52	Characterization of the Transient Response of Polyurea. Experimental Mechanics, 2013, 53, 113-122.	1.1	7
53	On the Evaluation of the Elastic Modulus of Soft Materials Using Beams with Unknown Initial Curvature. Strain, 2013, 49, 420-430.	1.4	6
54	On the deformation and failure of Al 6061-T6 in plane strain tension evaluated through in situ microscopy. International Journal of Fracture, 2017, 208, 27-52.	1.1	6

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55	Photomechanics in Dynamic Fracture and Friction Studies. Strain, 2007, 43, 151-165.	1.4	5
56	Prediction of ductile failure in Tiâ€“6Alâ€“4V using a local strain-to-failure criterion. International Journal of Fracture, 2016, 198, 221-245.	1.1	5
57	Strain Evolution in Metal Conductors Subjected to Short-Duration Current Pulses. IEEE Transactions on Magnetics, 2007, 43, 338-342.	1.2	4
58	Role of experiments in mechanics. Experimental Mechanics, 2005, 45, 478-492.	1.1	3
59	Forty years of International Journal of Fracture. International Journal of Fracture, 2006, 141, 1-2.	1.1	3
60	On hysteretic response and stationary phase fronts in rubber. Continuum Mechanics and Thermodynamics, 2010, 22, 469-484.	1.4	3
61	The mechanical behavior of conductors exposed to short-duration thermal loading. , 0, , .		2
62	Melting and Cavity Growth in the Vicinity of Crack Tips Subjected to Short-Duration Current Pulses. , 2008, , .		1
63	Dynamic Crushing of Unidirectionally Reinforced Metal Matrix Composite. Strain, 2014, 50, 517-526.	1.4	1
64	50Âyears of the International Journal of Fracture. International Journal of Fracture, 2015, 191, 1-7.	1.1	0