Nitin P Daphalapurkar

List of Publications by Year
in descending order

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28 papers	953 citations	471509 17 h-index	526287 27 g-index
30 all docs	30 docs citations	30 times ranked	999 citing authors

#	Article	IF	Citations
1	Simulation of harmonic shear waves in the human brain and comparison with measurements from magnetic resonance elastography. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 118, 104449.	3.1	2
2	An anisotropic damage model based on dislocation-mediated nucleation of cracks under high-rate compression. Journal of the Mechanics and Physics of Solids, 2020, 137, 103818.	4.8	2
3	The Biomechanics of Indirect Traumatic Optic Neuropathy Using a Computational Head Model With a Biofidelic Orbit. Frontiers in Neurology, 2020, 11, 346.	2.4	13
4	A 3D Computational Head Model Under Dynamic Head Rotation and Head Extension Validated Using Live Human Brain Data, Including the Falx and the Tentorium. Annals of Biomedical Engineering, 2019, 47, 1923-1940.	2.5	44
5	Effect of bulk modulus on deformation of the brain under rotational accelerations. Shock Waves, 2018, 28, 127-139.	1.9	23
6	A micro-mechanical modeling approach for dynamic fragmentation in brittle multi-phase materials. International Journal of Solids and Structures, 2018, 134, 116-129.	2.7	4
7	A crystal plasticity model for body-centered cubic molybdenum: Experiments and simulations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 738, 283-294.	5.6	13
8	Quantitative In Situ Studies of Dynamic Fracture in Brittle Solids Using Dynamic X-ray Phase Contrast Imaging. Experimental Mechanics, 2018, 58, 1423-1437.	2.0	20
9	The effective compliance of spatially evolving planar wing-cracks. Journal of the Mechanics and Physics of Solids, 2018, 111, 503-529.	4.8	14
10	A Three-Dimensional Computational Human Head Model That Captures Live Human Brain Dynamics. Journal of Neurotrauma, 2017, 34, 2154-2166.	3.4	99
11	Modeling dynamic fragmentation of heterogeneous brittle materials. International Journal of Impact Engineering, 2017, 99, 85-101.	5.0	10
12	On Compressive Brittle Fragmentation. Journal of the American Ceramic Society, 2016, 99, 2159-2169.	3.8	37
13	Indirect traumatic optic neuropathy. Military Medical Research, 2016, 3, 2.	3.4	60
14	Data integration for materials research. Integrating Materials and Manufacturing Innovation, 2016, 5, 143-153.	2.6	6
15	The Importance of Structural Anisotropy in Computational Models of Traumatic Brain Injury. Frontiers in Neurology, 2015, 6, 28.	2.4	34
16	Ultra-high-strain-rate shearing and deformation twinning in nanocrystalline aluminum. Meccanica, 2015, 50, 561-574.	2.0	9
17	Stability of ideal fcc twin boundaries. Journal of the Mechanics and Physics of Solids, 2014, 73, 228-241.	4.8	4
18	Kinetics of a fast moving twin boundary in nickel. Acta Materialia, 2014, 68, 82-92.	7.9	33

#	Article	IF	Citations
19	A scaling law for the dynamic strength of brittle solids. Acta Materialia, 2013, 61, 3509-3521.	7.9	95
20	Designer materials for a secure future. , 2012, , .		0
21	Orientation dependence of the nucleation and growth of partial dislocations and possible twinning mechanisms in aluminum. Journal of the Mechanics and Physics of Solids, 2012, 60, 277-294.	4.8	23
22	Determination of Mechanical Properties of Sand Grains by Nanoindentation. Experimental Mechanics, 2011, 51, 719-728.	2.0	85
23	Predicting variability in the dynamic failure strength of brittle materials considering pre-existing flaws. Journal of the Mechanics and Physics of Solids, 2011, 59, 297-319.	4.8	66
24	Characterization of the linearly viscoelastic behavior of human tympanic membrane by nanoindentation. Journal of the Mechanical Behavior of Biomedical Materials, 2009, 2, 82-92.	3.1	61
25	A Method for Measuring Linearly Viscoelastic Properties of Human Tympanic Membrane Using Nanoindentation. Journal of Biomechanical Engineering, 2008, 130, 014501.	1.3	40
26	Tomography and Simulation of Microstructure Evolution of a Closed-Cell Polymer Foam in Compression. Mechanics of Advanced Materials and Structures, 2008, 15, 594-611.	2.6	56
27	Simulation of dynamic crack growth using the generalized interpolation material point (GIMP) method. International Journal of Fracture, 2007, 143, 79-102.	2.2	64
28	Multiscale simulation from atomistic to continuum â€“ coupling molecular dynamics (MD) with the material point method (MPM). Philosophical Magazine, 2006, 86, 2971-2994.	1.6	35