Zohar Yosibash

List of Publications by Year
in descending order

103 papers	2,590 citations	236925 25 h-index	214800 47 g-index
112 all docs	112 docs citations	112 times ranked	1479 citing authors

#	Article	IF	Citations
1	Failure criteria for brittle elastic materials. International Journal of Fracture, 2004, 125, 307-333.	2.2	258
2	Reliable simulations of the human proximal femur by high-order finite element analysis validated by experimental observations. Journal of Biomechanics, 2007, 40, 3688-3699.	2.1	149
3	A failure criterion for brittle elastic materials under mixed-mode loading. International Journal of Fracture, 2006, 141, 291-312.	2.2	132
4	A CT-Based High-Order Finite Element Analysis of the Human Proximal Femur Compared to In-vitro Experiments. Journal of Biomechanical Engineering, 2007, 129, 297-309.	1.3	123
5	Crack onset at a v-notch. Influence of the notch tip radius. International Journal of Fracture, 2003, 122, 1-21.	2.2	114
6	Patient-specific finite element analysis of the human femurâ€"A double-blinded biomechanical validation. Journal of Biomechanics, 2011, 44, 1666-1672.	2.1	106
7	The finite cell method for bone simulations: verification and validation. Biomechanics and Modeling in Mechanobiology, 2012, 11, 425-437.	2.8	99
8	Validation of subject-specific automated p-FE analysis of the proximal femur. Journal of Biomechanics, 2009, 42, 234-241.	2.1	80
9	Predicting the yield of the proximal femur using high-order finite-element analysis with inhomogeneous orthotropic material properties. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 2707-2723.	3.4	73
10	Numerical analysis of singularities in two-dimensions part 1: Computation of eigenpairs. International Journal for Numerical Methods in Engineering, 1995, 38, 2055-2082.	2.8	71
11	Pathological fracture risk assessment in patients with femoral metastases using CT-based finite element methods. A retrospective clinical study. Bone, 2018, 110, 215-220.	2.9	70
12	Failure initiation at a blunt V-notch tip under mixed mode loading. International Journal of Fracture, 2008, 149, 143-173.	2.2	56
13	On volumetric locking-free behaviour of p-version finite elements under finite deformations. Communications in Numerical Methods in Engineering, 2007, 24, 1019-1032.	1.3	55
14	Predicting the stiffness and strength of human femurs with real metastatic tumors. Bone, 2014, 69, 180-190.	2.9	54
15	On the Path Independency of the Point-wise J Integral in Three-dimensions. International Journal of Fracture, 2005, 136, 1-36.	2.2	49
16	Patient-Specific Finite-Element Analyses of the Proximal Femur with Orthotropic Material Properties Validated by Experiments. Journal of Biomechanical Engineering, 2011, 133, 061001.	1.3	47
17	A Quasi-Dual Function Method for Extracting Edge Stress Intensity Functions. SIAM Journal on Mathematical Analysis, 2004, 35, 1177-1202.	1.9	46
18	Mixed mode failure criteria for brittle elastic V-notched structures. International Journal of Fracture, 2007, 144, 247-265.	2.2	40

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19	Edge Stress Intensity Functions in Polyhedral Domains and their Extraction by a Quasidual Function Method. International Journal of Fracture, 2005, 136, 37-73.	2.2	35
20	Phaseâ€field boundary conditions for the voxel finite cell method: Surfaceâ€free stress analysis of CTâ€based bone structures. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, e2880.	2.1	33
21	Prediction of the mechanical response of the femur with uncertain elastic properties. Journal of Biomechanics, 2012, 45, 1140-1148.	2.1	31
22	Stochastic simulation of riser-sections with uncertain measured pressure loads and/or uncertain material properties. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 4250-4271.	6.6	29
23	Experimental evidence of the compressibility of arteries. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 39, 339-354.	3.1	29
24	Axisymmetric pressure boundary loading for finite deformation analysis using p-FEM. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1261-1277.	6.6	28
25	Patient-specific finite element analysis of femurs with cemented hip implants. Clinical Biomechanics, 2018, 58, 74-89.	1.2	27
26	Edge flux intensity functions in polyhedral domains and their extraction by a quasidual function method. International Journal of Fracture, 2004, 129, 97-130.	2.2	26
27	New insights on the proximal femur biomechanics using Digital Image Correlation. Journal of Biomechanics, 2020, 101, 109599.	2.1	25
28	Subject-Specific p-FE Analysis of the Proximal Femur Utilizing Micromechanics-Based Material Properties. International Journal for Multiscale Computational Engineering, 2008, 6, 483-498.	1.2	25
29	Vasoreactivity and histology of the radial artery: comparison of open versus endoscopic approaches. European Journal of Cardio-thoracic Surgery, 2008, 34, 845-849.	1.4	23
30	Patient-specific FE analyses of metatarsal bones with inhomogeneous isotropic material properties. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 29, 177-189.	3.1	23
31	Verified and validated finite element analyses of humeri. Journal of Biomechanics, 2016, 49, 1094-1102.	2.1	23
32	p-FEM for finite deformation powder compaction. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 727-740.	6.6	21
33	A note on numerically computed eigenfunctions and generalized stress intensity factors associated with singular points. Engineering Fracture Mechanics, 1996, 54, 593-595.	4.3	20
34	A 3-D failure initiation criterion from a sharp V-notch edge in elastic brittle structures. European Journal of Mechanics, A/Solids, 2016, 60, 70-94.	3.7	19
35	A novel phase field method for modeling the fracture of long bones. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3211.	2.1	18
36	Edge singularities in 3-D elastic anisotropic and multi-material domains. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 959-978.	6.6	17

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37	Toward verified and validated FE simulations of a femur with a cemented hip prosthesis. Medical Engineering and Physics, 2013, 35, 978-987.	1.7	17
38	<i>p</i> -FEMs for hyperelastic anisotropic nearly incompressible materials under finite deformations with applications to arteries simulation. International Journal for Numerical Methods in Engineering, 2011, 88, 1152-1174.	2.8	16
39	p-FEMs in biomechanics: Bones and arteries. Computer Methods in Applied Mechanics and Engineering, 2012, 249-252, 169-184.	6.6	15
40	Artery active mechanical response: High order finite element implementation and investigation. Computer Methods in Applied Mechanics and Engineering, 2012, 237-240, 51-66.	6.6	15
41	Further experimental evidence of the compressibility of arteries. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 65, 177-189.	3.1	15
42	Generalized stress intensity factors in linear elastostatics. International Journal of Fracture, 1995, 72, 223-240.	2.2	14
43	Computing edge singularities in elastic anisotropic three-dimensional domains. International Journal of Fracture, 1997, 86, 221-245.	2.2	14
44	Thermal generalized stress intensity factors in 2-D domains. Computer Methods in Applied Mechanics and Engineering, 1998, 157, 365-385.	6.6	14
45	Finite element analyses for predicting anatomical neck fractures in the proximal humerus. Clinical Biomechanics, 2019, 68, 114-121.	1.2	14
46	Superelements for the finite element solution of two-dimensional elliptic problems with boundary singularities. Finite Elements in Analysis and Design, 1997, 26, 315-335.	3.2	13
47	Extracting edge flux intensity functions for the Laplacian. International Journal for Numerical Methods in Engineering, 2002, 53, 225-242.	2.8	13
48	Computing edge stress intensity functions (ESIFs) along circular 3-D edges. Engineering Fracture Mechanics, 2014, 117, 127-151.	4.3	13
49	Autonomous FEs (AFE) - A stride toward personalized medicine. Computers and Mathematics With Applications, 2020, 80, 2417-2432.	2.7	13
50	Numerical analysis of edge singularities in three-dimensional elasticity. International Journal for Numerical Methods in Engineering, 1997, 40, 4611-4632.	2.8	12
51	Numerical methods for extracting edge stress intensity functions in anisotropic three-dimensional domains. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 3624-3649.	6.6	12
52	Uncertainty quantification for personalized analyses of human proximal femurs. Journal of Biomechanics, 2016, 49, 520-527.	2.1	12
53	Scanner influence on the mechanical response of QCT-based finite element analysis of long bones. Journal of Biomechanics, 2019, 86, 149-159.	2.1	12
54	Towards stable coupling methods for high-order discretization of fluidâ€“structure interaction: Algorithms and observations. Journal of Computational Physics, 2007, 223, 489-518.	3.8	11

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55	Circular edge singularities for the Laplace equation and the elasticity system in 3-D domains. International Journal of Fracture, 2011, 168, 31-52.	2.2	11
56	High-order FEMs for thermo-hyperelasticity at finite strains. Computers and Mathematics With Applications, 2014, 67, 477-496.	2.7	11
57	The physiologic and histologic properties of the distal internal thoracic artery and its subdivisions. Journal of Thoracic and Cardiovascular Surgery, 2015, 149, 1042-1050.	0.8	11
58	Numerical thermo-elastic analysis of singularities in two-dimensions. International Journal of Fracture, 1996, 74, 341-361.	2.2	10
59	On solutions of two-dimensional linear elastostatic and heat-transfer problems in the vicinity of singular points. International Journal of Solids and Structures, 1997, 34, 243-274.	2.7	10
60	Computing singular solutions of elliptic boundary value problems in polyhedral domains using the p-FEM. Applied Numerical Mathematics, 2000, 33, 71-93.	2.1	10
61	Energy release rate cannot predict crack initiation orientation in domains with a sharp V-notch under mode III loading. Engineering Fracture Mechanics, 2015, 141, 230-241.	4.3	10
62	Superconvergent extraction of flux intensity factors and first derivatives from finite element solutions. Computer Methods in Applied Mechanics and Engineering, 1996, 129, 349-370.	6.6	9
63	Extracting generalized edge flux intensity functions with the quasidual function method along circular 3-D edges. International Journal of Fracture, 2013, 181, 25-50.	2.2	9
64	Stochastic description of the peak hip contact force during walking free and going upstairs. Journal of Biomechanics, 2015, 48, 1015-1022.	2.1	9
65	Convergence of stress maxima in finite element computations. Communications in Numerical Methods in Engineering, 1994, 10, 683-697.	1.3	8
66	Asymptotic analysis of the potential energy difference because of a crack at a V-notch edge in a 3D domain. Engineering Fracture Mechanics, 2014, 131, 232-256.	4.3	8
67	The solution of axisymmetric problems near singular points and computation of stress intensity factors. Finite Elements in Analysis and Design, 1995, 19, 115-129.	3.2	7
68	Eigen-frequencies in thin elastic 3-D domains and Reissner-Mindlin plate models. Mathematical Methods in the Applied Sciences, 2002, 25, 21-48.	2.3	7
69	The T-stress along a 3-D straight crack. Engineering Fracture Mechanics, 2018, 202, 214-241.	4.3	6
70	Image-based mesh generation of tubular geometries under circular motion in refractive environments. Machine Vision and Applications, 2018, 29, 719-733.	2.7	6
71	Simulating the temporal change of the active response of arteries by finite elements with high-order time-integrators. Computational Mechanics, 2019, 64, 1669-1684.	4.0	6
72	Assessing hip fracture risk in type-2 diabetic patients using CT-based autonomous finite element methods. Bone and Joint Journal, 2021, 103-B, 1497-1504.	4.4	5

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73	High Frequency Oscillations of First Eigenmodes in Axisymmetric Shells as the Thickness Tends to Zero. Operator Theory: Advances and Applications, 2017, , 89-110.	0.2	5
74	Accurate stress extraction for nearly incompressible materials by the displacement formulation of the p-version FEM. Communications in Numerical Methods in Engineering, 1996, 12, 807-826.	1.3	4
75	Edge stress intensity functions in 3-D anisotropic composites. Composites Science and Technology, 2008, 68, 1216-1224.	7.8	4
76	A Parallel High-Order Fictitious Domain Approach for Biomechanical Applications. , 2012, , .		4
77	Singular asymptotic solution along an elliptical edge for the Laplace equation in 3-D. Engineering Fracture Mechanics, 2015, 134, 174-181.	4.3	4
78	Extracting stochastic stress intensity factors using generalized polynomial chaos. Engineering Fracture Mechanics, 2019, 206, 375-391.	4.3	4
79	Patient-specific computed tomography-based finite element analysis: a new tool to assess fracture risk in benign bone lesions of the femur. Clinical Biomechanics, 2020, 80, 105155.	1.2	4
80	Can neck fractures in proximal humeri be predicted by CT-based FEA?. Journal of Biomechanics, 2022, 136, 111039.	2.1	4
81	Edge singularities and structure of the 3-D Williams expansion. Comptes Rendus - Mecanique, 2008, 336, 629-635.	2.1	3
82	Reliable Patient-Specific Simulations of the Femur. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2011, , 3-26.	1.0	3
83	Problems in parameter identification of the passive response in human arteries. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 83-84.	0.2	3
84	Free vibrations of axisymmetric shells: Parabolic and elliptic cases. Asymptotic Analysis, 2017, 104, 1-47.	0.5	3
85	Strain shielding for cemented hip implants. Clinical Biomechanics, 2020, 77, 105027.	1.2	3
86	Edge stress intensity functions along elliptic and part-elliptic 3D cracks. Engineering Fracture Mechanics, 2021, 245, 107477.	4.3	3
87	Atypical viscous fracture of human femurs. Advances in Biomechanics and Applications, 2014, 1, 77-83.	0.2	3
88	Mechanical Response and Fracture of Pultruded Carbon Fiber/Epoxy in Various Modes of Loading. Crystals, 2022, 12, 850.	2.2	3
89	FINITE ELEMENT STRESS EXTRACTION BY THE COMPLEMENTARY ENERGY PRINCIPLE. International Journal for Numerical Methods in Engineering, 1997, 40, 1335-1354.	2.8	2
90	Higher-order responses of three-dimensional elastic plate structures and their numerical illustration byp-FEM. International Journal for Numerical Methods in Engineering, 2002, 53, 1353-1376.	2.8	2

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91	Application of the Finite Cell Method to patient-specific femur simulations. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 117-118.	0.2	2
92	Uncertainty quantification for a 1D thermo-hyperelastic coupled problem using polynomial chaos projection and p-FEMs. Computers and Mathematics With Applications, 2015, 70, 1701-1720.	2.7	2
93	A revised failure criterion for brittle elastic materials under mixed-mode loading in 2-D. Theoretical and Applied Fracture Mechanics, 2016, 84, 149-156.	4.7	2
94	Singular asymptotic expansion of the elastic solution along an edge around which material properties depend on the angular coordinate. Mathematics and Mechanics of Solids, 2017, 22, 2288-2308.	2.4	2
95	Extracting edge flux intensity functions along an elliptical 3-D singular edge by the quasidual function method. Engineering Fracture Mechanics, 2020, 228, 106812.	4.3	2
96	Can the finite fracture mechanics coupled criterion be applied to V-notch tips of a quasi-brittle steel alloy?. Engineering Fracture Mechanics, 2022, 269, 108513.	4.3	2
97	The Poisson equation with local nonregular similarities. Numerical Methods for Partial Differential Equations, 2001, 17, 336-346.	3.6	1
98	Extracting edge flux intensity functions along part-elliptical 3-D cracks by the quasidual function method. Engineering Fracture Mechanics, 2020, 226, 106815.	4.3	1
99	Structural risk assessment in the Israel Air Force for fleet management. Journal of Aircraft, 1992, 29, 540-544.	2.4	0
100	The Laplace equation in 3D domains with cracks: dual singularities with log terms and extraction of corresponding edge flux intensity functions. Mathematical Methods in the Applied Sciences, 2016, 39, 4951-4963.	2.3	0
101	Numerical modeling of active response of arteries. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 189-190.	0.2	0
102	Asymptotic solution of the elasticity equations in the vicinity of an elliptical crack front. Engineering Fracture Mechanics, 2020, 223, 106774.	4.3	0
103	Patient-Specific Simulation of the Proximal Femurâ€™s Mechanical Response Validated by Experimental Observations. IFMBE Proceedings, 2009, , 2019-2022.	0.3	0