Ridha Hambli

List of Publications by Year
in descending order

77 papers	1,942 citations	201385 27 h-index	276539 41 g-index
77 all docs	77 docs citations	77 times ranked	1506 citing authors

#	Article	IF	Citations
1	Fracture criteria identification using an inverse technique method and blanking experiment. International Journal of Mechanical Sciences, 2002, 44, 1349-1361.	3.6	118
2	Micro-CT finite element model and experimental validation of trabecular bone damage and fracture. Bone, 2013, 56, 363-374.	1.4	104
3	Multiscale methodology for bone remodelling simulation using coupled finite element and neural network computation. Biomechanics and Modeling in Mechanobiology, 2011, 10, 133-145.	1.4	93
4	Comparison between Lemaitre and Gurson damage models in crack growth simulation during blanking process. International Journal of Mechanical Sciences, 2001, 43, 2769-2790.	3.6	81
5	Real-time deformation of structure using finite element and neural networks in virtual reality applications. Finite Elements in Analysis and Design, 2006, 42, 985-991.	1.7	71
6	Finite element modeling of sheet-metal blanking operations with experimental verification. Journal of Materials Processing Technology, 2000, 102, 257-265.	3.1	64
7	A quasi-brittle continuum damage finite element model of the human proximal femur based on element deletion. Medical and Biological Engineering and Computing, 2013, 51, 219-231.	1.6	64
8	A Robust 3D Finite Element Simulation of Human Proximal Femur Progressive Fracture Under Stance Load with Experimental Validation. Annals of Biomedical Engineering, 2013, 41, 2515-2527.	1.3	61
9	Finite element model fracture prediction during sheet-metal blanking processes. Engineering Fracture Mechanics, 2001, 68, 365-378.	2.0	60
10	Finite element prediction of proximal femur fracture pattern based on orthotropic behaviour law coupled to quasi-brittle damage. Medical Engineering and Physics, 2012, 34, 202-210.	0.8	59
11	Parameter identification of an elasto-plastic behaviour using artificial neural networks–genetic algorithm method. Materials & Design, 2011, 32, 48-53.	5.1	58
12	Connecting Mechanics and Bone Cell Activities in the Bone Remodeling Process: An Integrated Finite Element Modeling. Frontiers in Bioengineering and Biotechnology, 2014, 2, 6.	2.0	58
13	Apparent damage accumulation in cancellous bone using neural networks. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 868-878.	1.5	56
14	Blanking tool wear modeling using the finite element method. International Journal of Machine Tools and Manufacture, 2001, 41, 1815-1829.	6.2	51
15	Physically based 3D finite element model of a single mineralized collagen microfibril. Journal of Theoretical Biology, 2012, 301, 28-41.	0.8	45
16	Numerical procedure for multiscale bone adaptation prediction based on neural networks and finite element simulation. Finite Elements in Analysis and Design, 2011, 47, 835-842.	1.7	41
17	Finite element simulation of fine blanking processes using a pressure-dependent damage model. Journal of Materials Processing Technology, 2001, 116, 252-264.	3.1	39
18	Finite element prediction with experimental validation of damage distribution in single trabeculae during three-point bending tests. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 27, 94-106.	1.5	38

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19	Osteoporosis drug effects on cortical and trabecular bone microstructure: a review of HR-pQCT analyses. BoneKEy Reports, 2016, 5, 836.	2.7	33
20	Damage and fracture simulation during the extrusion processes. Computer Methods in Applied Mechanics and Engineering, 2000, 186, 109-120.	3.4	32
21	Application of a neural network for optimum clearance prediction in sheet metal blanking processes. Finite Elements in Analysis and Design, 2003, 39, 1039-1052.	1.7	32
22	Application of Neural Networks and Finite Element Computation for Multiscale Simulation of Bone Remodeling. Journal of Biomechanical Engineering, 2010, 132, 114502.	0.6	32
23	Multiscale approach including microfibril scale to assess elastic constants of cortical bone based on neural network computation and homogenization method. International Journal for Numerical Methods in Biomedical Engineering, 2014, 30, 318-338.	1.0	32
24	Optimisation of springback in bending processes using FEM simulation and response surface method. International Journal of Advanced Manufacturing Technology, 2005, 27, 40-47.	1.5	31
25	A new procedure using the microhardness technique for sheet material damage characterisation. Journal of Materials Processing Technology, 2006, 178, 111-118.	3.1	31
26	Multiscale prediction of crack density and crack length accumulation in trabecular bone based on neural networks and finite element simulation. International Journal for Numerical Methods in Biomedical Engineering, 2011, 27, 461-475.	1.0	30
27	Statistical damage analysis of extrusion processes using finite element method and neural networks simulation. Finite Elements in Analysis and Design, 2009, 45, 640-649.	1.7	27
28	Integrated remodeling-to-fracture finite element model of human proximal femur behavior. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 17, 89-106.	1.5	26
29	Age and gender effects on bone mass density variation: finite elements simulation. Biomechanics and Modeling in Mechanobiology, 2017, 16, 521-535.	1.4	26
30	BLANKSOFT: a code for sheet metal blanking processes optimization. Journal of Materials Processing Technology, 2003, 141, 234-242.	3.1	25
31	Prediction of denosumab effects on bone remodeling: A combined pharmacokinetics and finite element modeling. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 60, 492-504.	1.5	25
32	Failure of Mineralized Collagen Microfibrils Using Finite Element Simulation Coupled to Mechanical Quasi-brittle Damage. Procedia Engineering, 2011, 10, 3185-3190.	1.2	24
33	Nanomechanical properties of mineralised collagen microfibrils based on finite elements method: biomechanical role of cross-links. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 1590-1601.	0.9	24
34	Strain–damage coupled algorithm for cancellous bone mechano-regulation with spatial function influence. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 2673-2682.	3.4	22
35	Optimization of springback in L-bending process using a coupled Abaqus/Python algorithm. International Journal of Advanced Manufacturing Technology, 2009, 44, 61-67.	1.5	20
36	Physiologically based mathematical model of transduction of mechanobiological signals by osteocytes. Biomechanics and Modeling in Mechanobiology, 2012, 11, 83-93.	1.4	19

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37	A multiscale modelling of bone ultrastructure elastic proprieties using finite elements simulation and neural network method. Computer Methods and Programs in Biomedicine, 2016, 134, 69-78.	2.6	19
38	Neural network and Monte Carlo simulation approach to investigate variability of copper concentration in phytoremediated contaminated soils. Journal of Environmental Management, 2013, 129, 134-142.	3.8	18
39	Finite element prediction of blanking tool cost caused by wear. International Journal of Advanced Manufacturing Technology, 2009, 44, 648-656.	1.5	17
40	An optimization strategy based on a metamodel applied for the prediction of the initial blank shape in a deep drawing process. International Journal of Advanced Manufacturing Technology, 2010, 50, 93-100.	1.5	17
41	A theory for internal bone remodeling based on interstitial fluid velocity stimulus function. Applied Mathematical Modelling, 2015, 39, 3525-3534.	2.2	17
42	Modeling of biological doses and mechanical effects on bone transduction. Journal of Theoretical Biology, 2011, 274, 36-42.	0.8	16
43	Numerical pressure prediction algorithm of superplastic forming processes using 2D and 3D models. Journal of Materials Processing Technology, 2001, 112, 83-90.	3.1	15
44	Effect of material and structural factors on fracture behaviour of mineralised collagen microfibril using finite element simulation. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1181-1190.	0.9	15
45	Comparison between Gurson and Lemaitre damage models in wiping die bending processes. International Journal of Advanced Manufacturing Technology, 2004, 23, 451-461.	1.5	13
46	Application of neural network model for the prediction of chromium concentration in phytoremediated contaminated soils. Journal of Geochemical Exploration, 2013, 128, 25-34.	1.5	13
47	Finite element damage modeling in bending processes. Journal of Materials Processing Technology, 2004, 147, 302-310.	3.1	12
48	Using visual image measurements to validate a novel finite element model of crack propagation and fracture patterns of proximal femur. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2017, 5, 251-262.	1.3	11
49	Finite element 3D modeling of mechanical behavior of mineralized collagen microfibrils. Journal of Applied Biomaterials and Biomechanics, 2011, 9, 199-205.	0.4	11
50	Comparison between 2D and 3D numerical modeling of superplastic forming processes. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 4871-4880.	3.4	10
51	3D finite element simulation of human proximal femoral fracture under quasi-static load. Advances in Biomechanics and Applications, 2014, 1, 1-14.	0.2	9
52	A theory for bone resorption based on the local rupture of osteocytes cells connections: A finite element study. Mathematical Biosciences, 2015, 262, 46-55.	0.9	8
53	On dynamic behavior of bone: Experimental and numerical study of porcine ribs subjected to impact loads in dynamic three-point bending tests. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 98, 336-347.	1.5	8
54	Finite element prediction of fatigue damage growth in cancellous bone. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 563-570.	0.9	7

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55	Metal flow prediction during sheet-metal punching process using the finite element method. International Journal of Advanced Manufacturing Technology, 2007, 33, 1106-1113.	1.5	6
56	New three-dimensional model based on finite element method of bone nanostructure: single TC molecule scale level. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 617-625.	0.9	6
57	Application of response surface method for FEM bending analysis. International Journal of Vehicle Design, 2005, 39, 1.	0.1	5
58	Mechanical assessment of trabecular bone stiffness using hybrid skeleton and finite element analysis. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2016, 4, 352-359.	1.3	5
59	Bayesian Estimation of Degradation Model Defined by a Wiener Process. , 2010, , 345-357.		4
60	Application of Neural Network and Finite Element Method for Multiscale Prediction of Bone Fatigue Crack Growth in Cancellous Bone. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2013, , 3-30.	0.7	4
61	Explicit analysis of superplastic forming by the FEM including a pressure cycle control algorithm. International Journal of Materials and Product Technology, 2005, 22, 299.	0.1	3
62	A NEW RESPONSE SURFACE METHOD FOR MANUFACTURING PROCESS OPTIMIZATION USING INTERVAL COMPUTATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 253-258.	0.4	3
63	Parametric investigation of the effects of load level on fatigue crack growth in trabecular bone based on artificial neural network computation. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2020, 234, 784-793.	1.0	3
64	Numerical modeling of the effects hydration and number of hydrogen bonds on the mechanical properties of the tropocollagen molecule. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2020, 234, 299-306.	1.0	3
65	Fracture prediction of sheet-metal blanking process. Studies in Applied Mechanics, 1997, 45, 125-134.	0.4	2
66	Tool Life Prediction in Metal Forming Processes Using Numerical Analysis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 287-291.	0.4	2
67	Lifetime Distribution Estimation of Boot Seals in Automotive Applications by Bayesian Method. Journal of Mechanical Design, Transactions of the ASME, 2007, 129, 275-282.	1.7	2
68	Bayesian method approach for fatigue life distribution estimation of rubber components. International Journal of Product Development, 2009, 7, 199.	0.2	2
69	Prediction of proximal femur fracture risk from DXA images based on novel fracture indexes. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2021, 9, 205-216.	1.3	2
70	Using 3D digital image correlation to visualise the progress of failure of human proximal femur. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2017, 5, 233-240.	1.3	1
71	Multiscale approach incorporating tropocollagen scale to assess the effect of molecular age-related modifications on elastic constants of cortical bone based on finite element and homogenization methods. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 128, 105130.	1.5	1
72	Prediction of optimum clearance in blanking processes using neural network simulation. International Journal of Materials and Product Technology, 2004, 20, 150.	0.1	0

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73	Ductile damage variation analysis during metal extrusion process using design of experiment technique. International Journal of Vehicle Design, 2005, 39, 51.	0.1	0
74	Estimation de durÃ©es de vie de systÃ¨mes mÃ©caniques complexes par essais accÃ©lÃ©rÃ©s. Mecanique Et Industries, 2008, 9, 497-505.	0.2	0
75	The use of dual-energy X-ray absorptiometry images to evaluate the risk of bone fracture. , 2015, , .		0
76	Meshâ€independent damage model for trabecular bone fracture simulation and experimental validation. International Journal for Numerical Methods in Biomedical Engineering, 2021, 37, e3468.	1.0	0
77	ChaÃ®ne multimodÃ¨le : lien entre paramÃ¨tres matÃ©riaux/procÃ©dÃ©s et performances de structures composites Ã renfort tissÃ©. Revue Des Composites Et Des Materiaux Avances, 2011, 21, 79-91.	0.2	0