Ridha Hambli

List of Publications by Citations

75 papers	1,591 citations	24 h-index	37 g-index
77 ext. papers	1,756 ext. citations	3.3 avg, IF	5.38 L-index

#	Paper	IF	Citations
75	Fracture criteria identification using an inverse technique method and blanking experiment. *International Journal of Mechanical Sciences*, **2002**, 44, 1349-1361	5.5	104
74	Micro-CT finite element model and experimental validation of trabecular bone damage and fracture. *Bone*, **2013**, 56, 363-74	4.7	87
73	Multiscale methodology for bone remodelling simulation using coupled finite element and neural network computation. *Biomechanics and Modeling in Mechanobiology*, **2011**, 10, 133-45	3.8	73
72	Comparison between Lemaitre and Gurson damage models in crack growth simulation during blanking process. *International Journal of Mechanical Sciences*, **2001**, 43, 2769-2790	5.5	66
71	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	2.2	57
70	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, 219-31	3.1	55
69	Apparent damage accumulation in cancellous bone using neural networks. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 868-78	4.1	52
68	Finite element prediction of proximal femur fracture pattern based on orthotropic behaviour law coupled to quasi-brittle damage. *Medical Engineering and Physics*, **2012**, 34, 202-10	2.4	50
67	Finite element model fracture prediction during sheet-metal blanking processes. *Engineering Fracture Mechanics*, **2001**, 68, 365-378	4.2	50
66	Finite element modeling of sheet-metal blanking operations with experimental verification. *Journal of Materials Processing Technology*, **2000**, 102, 257-265	5.3	49
65	A robust 3D finite element simulation of human proximal femur progressive fracture under stance load with experimental validation. *Annals of Biomedical Engineering*, **2013**, 41, 2515-27	4.7	46
64	Blanking tool wear modeling using the finite element method. *International Journal of Machine Tools and Manufacture*, **2001**, 41, 1815-1829	9.4	43
63	Parameter identification of an elasto-plastic behaviour using artificial neural networks genetic algorithm method. *Materials & Design*, **2011**, 32, 48-53		42
62	Physically based 3D finite element model of a single mineralized collagen microfibril. *Journal of Theoretical Biology*, **2012**, 301, 28-41	2.3	40
61	Connecting mechanics and bone cell activities in the bone remodeling process: an integrated finite element modeling. *Frontiers in Bioengineering and Biotechnology*, **2014**, 2, 6	5.8	39
60	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	4.1	35
59	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	2.2	35

58	Finite element simulation of fine blanking processes using a pressure-dependent damage model. *Journal of Materials Processing Technology*, **2001**, 116, 252-264	5.3	35
57	A new procedure using the microhardness technique for sheet material damage characterisation. *Journal of Materials Processing Technology*, **2006**, 178, 111-118	5.3	29
56	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, 318-38	2.6	27
55	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	2.6	27
54	Application of neural networks and finite element computation for multiscale simulation of bone remodeling. *Journal of Biomechanical Engineering*, **2010**, 132, 114502	2.1	27
53	Statistical damage analysis of extrusion processes using finite element method and neural networks simulation. *Finite Elements in Analysis and Design*, **2009**, 45, 640-649	2.2	25
52	Osteoporosis drug effects on cortical and trabecular bone microstructure: a review of HR-pQCT analyses. *BoneKEy Reports*, **2016**, 5, 836		25
51	Optimisation of springback in bending processes using FEM simulation and response surface method. *International Journal of Advanced Manufacturing Technology*, **2005**, 27, 40-47	3.2	24
50	Damage and fracture simulation during the extrusion processes. *Computer Methods in Applied Mechanics and Engineering*, **2000**, 186, 109-120	5.7	24
49	Failure of Mineralized Collagen Microfibrils Using Finite Element Simulation Coupled to Mechanical Quasi-brittle Damage. *Procedia Engineering*, **2011**, 10, 3185-3190		23
48	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, 1590-601	2.1	22
47	Integrated remodeling-to-fracture finite element model of human proximal femur behavior. *Journal of the Mechanical Behavior of Biomedical Materials*, **2013**, 17, 89-106	4.1	22
46	Application of a neural network for optimum clearance prediction in sheet metal blanking processes. *Finite Elements in Analysis and Design*, **2003**, 39, 1039-1052	2.2	22
45	Strain□damage coupled algorithm for cancellous bone mechano-regulation with spatial function influence. *Computer Methods in Applied Mechanics and Engineering*, **2009**, 198, 2673-2682	5.7	21
44	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	4.1	19
43	Physiologically based mathematical model of transduction of mechanobiological signals by osteocytes. *Biomechanics and Modeling in Mechanobiology*, **2012**, 11, 83-93	3.8	18
42	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	3.2	17
41	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	2.1	15

40	Neural network and Monte Carlo simulation approach to investigate variability of copper concentration in phytoremediated contaminated soils. *Journal of Environmental Management*, **2013** , 129, 134-42	7.9	15
39	Modeling of biological doses and mechanical effects on bone transduction. *Journal of Theoretical Biology*, **2011**, 274, 36-42	2.3	15
38	BLANKSOFT: a code for sheet metal blanking processes optimization. *Journal of Materials Processing Technology*, **2003**, 141, 234-242	5.3	15
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	6.9	15
36	Optimization of springback in L-bending process using a coupled Abaqus/Python algorithm. *International Journal of Advanced Manufacturing Technology*, **2009**, 44, 61-67	3.2	14
35	Numerical pressure prediction algorithm of superplastic forming processes using 2D and 3D models. *Journal of Materials Processing Technology*, **2001**, 112, 83-90	5.3	14
34	Application of neural network model for the prediction of chromium concentration in phytoremediated contaminated soils. *Journal of Geochemical Exploration*, **2013**, 128, 25-34	3.8	13
33	Finite element prediction of blanking tool cost caused by wear. *International Journal of Advanced Manufacturing Technology*, **2009**, 44, 648-656	3.2	13
32	Comparison between Gurson and Lemaitre damage models in wiping die bending processes. *International Journal of Advanced Manufacturing Technology*, **2004**, 23, 451-461	3.2	12
31	A theory for internal bone remodeling based on interstitial fluid velocity stimulus function. *Applied Mathematical Modelling*, **2015**, 39, 3525-3534	4.5	11
30	Age and gender effects on bone mass density variation: finite elements simulation. *Biomechanics and Modeling in Mechanobiology*, **2017**, 16, 521-535	3.8	11
29	Finite element damage modeling in bending processes. *Journal of Materials Processing Technology*, **2004**, 147, 302-310	5.3	11
28	Finite element 3D modeling of mechanical behavior of mineralized collagen microfibrils. *Journal of Applied Biomaterials and Biomechanics*, **2011**, 9, 199-205		11
27	Comparison between 2D and 3D numerical modeling of superplastic forming processes. *Computer Methods in Applied Mechanics and Engineering*, **2001**, 190, 4871-4880	5.7	10
26	3D finite element simulation of human proximal femoral fracture under quasi-static load. *Advances in Biomechanics and Applications*, **2014**, 1, 1-14		8
25	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	0.9	7
24	Finite element prediction of fatigue damage growth in cancellous bone. *Computer Methods in Biomechanics and Biomedical Engineering*, **2016**, 19, 563-70	2.1	6
23	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	4.1	6

22	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	2.1	5
21	A theory for bone resorption based on the local rupture of osteocytes cells connections: A finite element study. *Mathematical Biosciences*, **2015**, 262, 46-55	3.9	5
20	Metal flow prediction during sheet-metal punching process using the finite element method. *International Journal of Advanced Manufacturing Technology*, **2007**, 33, 1106-1113	3.2	5
19	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	1.7	3
18	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	0.5	3
17	Bayesian Estimation of Degradation Model Defined by a Wiener Process **2010**, 345-357		3
16	Application of response surface method for FEM bending analysis. *International Journal of Vehicle Design*, **2005**, 39, 1	2.4	3
15	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	1.7	2
14	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	0.9	2
13	Lifetime Distribution Estimation of Boot Seals in Automotive Applications by Bayesian Method. *Journal of Mechanical Design, Transactions of the ASME*, **2007**, 129, 275-282	3	2
12	Tool Life Prediction in Metal Forming Processes Using Numerical Analysis. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2004**, 37, 287-291		2
11	Explicit analysis of superplastic forming by the FEM including a pressure cycle control algorithm. *International Journal of Materials and Product Technology*, **2005**, 22, 299	1	2
10	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	0.9	1
9	Bayesian method approach for fatigue life distribution estimation of rubber components. *International Journal of Product Development*, **2009**, 7, 199	0.7	1
8	Fracture prediction of sheet-metal blanking process. *Studies in Applied Mechanics*, **1997**, 45, 125-134		0
7	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
6	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	4.1	0
5	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	0.9	0

4	Estimation de durées de vie de systèmes mécaniques complexes par essais accélérés. *Mecanique Et Industries*, **2008**, 9, 497-505	
3	Prediction of optimum clearance in blanking processes using neural network simulation. *International Journal of Materials and Product Technology*, **2004**, 20, 150	1
2	Ductile damage variation analysis during metal extrusion process using design of experiment technique. *International Journal of Vehicle Design*, **2005**, 39, 51	2.4
1	Mesh-independent damage model for trabecular bone fracture simulation and experimental validation. *International Journal for Numerical Methods in Biomedical Engineering*, **2021**, 37, e3468	2.6