Pascal R Buenzli

List of Publications by Year
in descending order

39	1,030	471371 17	454834 30
papers	citations	h-index	g-index

49	49	49	967
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quantifying the osteocyte network in the human skeleton. Bone, 2015, 75, 144-150.	1.4	226
2	The influence of bone surface availability in bone remodellingâ€"A mathematical model including coupled geometrical and biomechanical regulations of bone cells. Engineering Structures, 2013, 47, 134-147.	2.6	63
3	Cell proliferation and migration explain pore bridging dynamics in 3D printed scaffolds of different pore size. Acta Biomaterialia, 2020, 114, 285-295.	4.1	61
4	Spatio-temporal structure of cell distribution in cortical Bone Multicellular Units: A mathematical model. Bone, 2011, 48, 918-926.	1.4	54
5	A multiscale mechanobiological model of bone remodelling predicts site-specific bone loss in the femur during osteoporosis and mechanical disuse. Biomechanics and Modeling in Mechanobiology, 2016, 15, 43-67.	1.4	48
6	The Casimir force at high temperature. Europhysics Letters, 2005, 72, 42-48.	0.7	45
7	Modelling the anabolic response of bone using a cell population model. Journal of Theoretical Biology, 2012, 307, 42-52.	0.8	43
8	Modeling the Effect of Curvature on the Collective Behavior of Cells Growing New Tissue. Biophysical Journal, 2017, 112, 193-204.	0.2	39
9	Computational Modeling of Interactions between Multiple Myeloma and the Bone Microenvironment. PLoS ONE, 2011, 6, e27494.	1.1	37
10	The relationship between porosity and specific surface in human cortical bone is subject specific. Bone, 2015, 72, 109-117.	1.4	34
11	Endocortical bone loss in osteoporosis: the role of bone surface availability. International Journal for Numerical Methods in Biomedical Engineering, 2013, 29, 1307-1322.	1.0	27
12	Violation of the action-reaction principle and self-forces induced by nonequilibrium fluctuations. Physical Review E, 2008, 78, 020102.	0.8	25
13	A one-dimensional individual-based mechanical model of cell movement in heterogeneous tissues and its coarse-grained approximation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20180838.	1.0	25
14	Investigation of bone resorption within a cortical basic multicellular unit using a lattice-based computational model. Bone, 2012, 50, 378-389.	1.4	24
15	Bone refilling in cortical basic multicellular units: insights into tetracycline double labelling from a computational model. Biomechanics and Modeling in Mechanobiology, 2014, 13, 185-203.	1.4	24
16	Osteocytes as a record of bone formation dynamics: A mathematical model of osteocyte generation in bone matrix. Journal of Theoretical Biology, 2015, 364, 418-427.	0.8	24
17	Model-based data analysis of tissue growth in thin 3D printed scaffolds. Journal of Theoretical Biology, 2021, 528, 110852.	0.8	23
18	Osteoblasts infill irregular pores under curvature and porosity controls: a hypothesis-testing analysis of cell behaviours. Biomechanics and Modeling in Mechanobiology, 2018, 17, 1357-1371.	1.4	22

#	Article	IF	Citations
19	Towards a cell-based mechanostat theory of bone: the need to account for osteocyte desensitisation and osteocyte replacement. Journal of Biomechanics, 2016, 49, 2600-2606.	0.9	17
20	Mechanical Cell Competition in Heterogeneous Epithelial Tissues. Bulletin of Mathematical Biology, 2020, 82, 130.	0.9	15
21	Governing Equations of Tissue Modelling and Remodelling: A Unified Generalised Description of Surface and Bulk Balance. PLoS ONE, 2016, 11, e0152582.	1.1	13
22	Differing Effects of Parathyroid Hormone, Alendronate, and Odanacatib on Bone Formation and on the Mineralization Process in Intracortical and Endocortical Bone of Ovariectomized Rabbits. Calcified Tissue International, 2018, 103, 625-637.	1.5	13
23	A levelâ€set method for the evolution of cells and tissue during curvatureâ€controlled growth. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3279.	1.0	13
24	A Systems Approach to Understanding Bone Cell Interactions in Health and Disease. , 2012, , .		11
25	Travelling waves in a free boundary mechanobiological model of an epithelial tissue. Applied Mathematics Letters, 2021, 111, 106636.	1.5	10
26	Mineral density differences between femoral cortical bone and trabecular bone are not explained by turnover rate alone. Bone Reports, 2020, 13, 100731.	0.2	9
27	The role of mechanical interactions in EMT. Physical Biology, 2021, 18, 046001.	0.8	9
28	Modelling cell guidance and curvature control in evolving biological tissues. Journal of Theoretical Biology, 2021, 520, 110658.	0.8	9
29	Microscopic Origin of Universality in Casimir Forces. Journal of Statistical Physics, 2005, 119, 273-307.	0.5	8
30	Late stages of mineralization and their signature on the bone mineral density distribution. Connective Tissue Research, 2018, 59, 74-80.	1.1	8
31	A quantitative analysis of cell bridging kinetics on a scaffold using computer vision algorithms. Acta Biomaterialia, 2021, 136, 429-440.	4.1	8
32	A free boundary mechanobiological model of epithelial tissues. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200528.	1.0	8
33	Equilibrium correlations in charged fluids coupled to the radiation field. Physical Review E, 2006, 73, 036113.	0.8	7
34	Interpreting how nonlinear diffusion affects the fate of bistable populations using a discrete modelling framework. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	1.0	6
35	Thermal quantum electrodynamics of nonrelativistic charged fluids. Physical Review E, 2007, 75, 041125.	0.8	5
36	Fluctuation-induced self-force and violation of action-reaction in a nonequilibrium steady state fluid. Journal of Physics: Conference Series, 2009, 161, 012036.	0.3	4

#	Article	IF	Citations
37	Modeling Osteocyte Network Formation: Healthy and Cancerous Environments. Frontiers in Bioengineering and Biotechnology, 2020, 8, 757.	2.0	4
38	Response to â€œLetter to the Editor: On osteocyte density in the human bodyâ€• Bone, 2016, 88, 73.	1.4	0
39	Mathematical Modelling of Basic Multicellular Units: The Functional Units of Bone Remodeling. , 2015, , 45-74.		0