

Christian M Puttlitz

List of Publications by Year in descending order

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Version: 2024-02-01

71
papers

1,621
citations

279798

23
h-index

315739

38
g-index

72
all docs

72
docs citations

72
times ranked

1805
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced bone formation in locally-optimised, low-stiffness additive manufactured titanium implants: An in silico and in vivo tibial advancement study. <i>Acta Biomaterialia</i> , 2023, 156, 202-213.	8.3	8
2	Rotator cuff repair using a bioresorbable nanofiber interposition scaffold: a biomechanical and histologic analysis in sheep. <i>Journal of Shoulder and Elbow Surgery</i> , 2022, 31, 402-412.	2.6	20
3	Vivaldi Antennas for Contactless Sensing of Implant Deflections and Stiffness for Orthopaedic Applications. <i>IEEE Access</i> , 2022, 10, 1151-1161.	4.2	4
4	A Large Animal Model for Orthopedic Foot and Ankle Research. <i>Frontiers in Veterinary Science</i> , 2022, 9, 816529.	2.2	1
5	Multiscale Contrasts Between the Right and Left Ventricle Biomechanics in Healthy Adult Sheep and Translational Implications. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 857638.	4.1	4
6	Relationship Between Glottic View and Intubation Force During Macintosh and Airtraq Laryngoscopy and Intubation. <i>Anesthesia and Analgesia</i> , 2022, 135, 815-819.	2.2	1
7	Adult ovine connective tissue cells resemble mesenchymal stromal cells in their propensity for extensive ex vivo expansion. <i>Connective Tissue Research</i> , 2021, 62, 671-680.	2.3	2
8	Osteoinductive 3D printed scaffold healed 5 cm segmental bone defects in the ovine metatarsus. <i>Scientific Reports</i> , 2021, 11, 6704.	3.3	16
9	Mechanical characterization and viscoelastic model of the ovine temporomandibular joint Disc in indentation, uniaxial tension, and biaxial tension. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 116, 104300.	3.1	10
10	Computational modeling to predict the micromechanical environment in tissue engineering scaffolds. <i>Journal of Biomechanics</i> , 2021, 120, 110355.	2.1	3
11	High throughput computational evaluation of how scaffold architecture, material selection, and loading modality influence the cellular micromechanical environment in tissue engineering strategies. <i>JOR Spine</i> , 2021, 4, e1152.	3.2	2
12	Investigation of a Prevascularized Bone Graft for Large Defects in the Ovine Tibia. <i>Tissue Engineering - Part A</i> , 2021, 27, 1458-1469.	3.1	6
13	Evaluation of lumbar spinal fusion utilizing recombinant human platelet derived growth factor β chain homodimer ($\text{rhPDGF}\beta$) combined with a bovine collagen/ β -tricalcium phosphate (β -TCP) matrix in an ovine model. <i>JOR Spine</i> , 2021, 4, e1166.	3.2	5
14	Diagnostic prediction of ovine fracture healing outcomes via a novel multi-location direct electromagnetic coupling antenna. <i>Annals of Translational Medicine</i> , 2021, 9, 1223-1223.	1.7	7
15	Different Passive Viscoelastic Properties Between the Left and Right Ventricles in Healthy Adult Ovine. <i>Journal of Biomechanical Engineering</i> , 2021, 143, .	1.3	10
16	Intubation Biomechanics: Clinical Implications of Computational Modeling of Intervertebral Motion and Spinal Cord Strain during Tracheal Intubation in an Intact Cervical Spine. <i>Anesthesiology</i> , 2021, 135, 1055-1065.	2.5	6
17	A prospective study comparing tendon-to-bone interface healing using an interposition bioresorbable scaffold with a vented anchor for primary rotator cuff repair in sheep. <i>Journal of Shoulder and Elbow Surgery</i> , 2020, 29, 157-166.	2.6	24
18	Biomechanical and Histological Assessment of a Polyethylene Terephthalate Screw Retention Technology in an Ovine Metatarsal Fracture Model. <i>Veterinary and Comparative Orthopaedics and Traumatology</i> , 2020, 33, 153-160.	0.5	1

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19	Partial Infraspinatus Tendon Transection as a Means for the Development of a Translational Ovine Chronic Rotator Cuff Disease Model. <i>Veterinary and Comparative Orthopaedics and Traumatology</i> , 2020, 33, 212-219.	0.5	5
20	Comparison of cross-sectional geometrical properties and bone density of the proximal radius between Saint Bernard and other giant breed dogs. <i>Veterinary Surgery</i> , 2019, 48, 947-955.	1.0	4
21	Biaxial mechanics of 3D fiber deposited ply-laminate scaffolds for soft tissue engineering part I: Experimental evaluation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 98, 317-326.	3.1	9
22	Biaxial mechanics of 3D fiber deposited ply-laminate scaffolds for soft tissue engineering part II: Finite element analyses. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 100, 103395.	3.1	7
23	Ex vivo evaluation of a novel surgical guide on the accuracy of closing wedge osteotomies. <i>Veterinary Surgery</i> , 2019, 48, 1429-1436.	1.0	5
24	Utilizing Multiple BioMEMS Sensors to Monitor Orthopaedic Strain and Predict Bone Fracture Healing. <i>Journal of Orthopaedic Research</i> , 2019, 37, 1873-1880.	2.3	25
25	Direct electromagnetic coupling for non-invasive measurements of stability in simulated fracture healing. <i>Journal of Orthopaedic Research</i> , 2019, 37, 1164-1171.	2.3	10
26	Comparing Predictive Accuracy and Computational Costs for Viscoelastic Modeling of Spinal Cord Tissues. <i>Journal of Biomechanical Engineering</i> , 2019, 141, .	1.3	6
27	C1-C2 Motion During C-MAC D-Blade Videolaryngoscopy and Endotracheal Intubation in 2 Patients With Type II Odontoid Fractures. <i>A&A Practice</i> , 2019, 13, 121-123.	0.4	2
28	An investigation of shock wave therapy and low-intensity pulsed ultrasound on fracture healing under reduced loading conditions in an ovine model. <i>Journal of Orthopaedic Research</i> , 2018, 36, 921-929.	2.3	8
29	Bony ingrowth potential of 3D-printed porous titanium alloy: a direct comparison of interbody cage materials in an in vivo ovine lumbar fusion model. <i>Spine Journal</i> , 2018, 18, 1250-1260.	1.3	161
30	Comparison of in vivo and ex vivo viscoelastic behavior of the spinal cord. <i>Acta Biomaterialia</i> , 2018, 68, 78-89.	8.3	19
31	Intubation biomechanics: validation of a finite element model of cervical spine motion during endotracheal intubation in intact and injured conditions. <i>Journal of Neurosurgery: Spine</i> , 2018, 28, 10-22.	1.7	5
32	A Coaxial Dipole Antenna for Passively Sensing Object Displacement and Deflection for Orthopaedic Applications. <i>IEEE Access</i> , 2018, 6, 68184-68194.	4.2	9
33	Viscoelasticity of spinal cord and meningeal tissues. <i>Acta Biomaterialia</i> , 2018, 75, 253-262.	8.3	28
34	Biomechanical and histologic assessment of a novel screw retention technology in an ovine lumbar fusion model. <i>Spine Journal</i> , 2018, 18, 2302-2315.	1.3	8
35	The development and validation of a numerical integration method for non-linear viscoelastic modeling. <i>PLoS ONE</i> , 2018, 13, e0190137.	2.5	14
36	A Constitutive Model of Ovine Left and Right Ventricles Biaxial Mechanical Properties. <i>FASEB Journal</i> , 2018, 32, .	0.5	0

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37	Distinct Biaxial Mechanical Properties between Right and Left Ventricles in Healthy Adult Sheep. <i>FASEB Journal</i> , 2018, 32, 848.6.	0.5	0
38	Cervical facet force analysis after disc replacement versus fusion. <i>Clinical Biomechanics</i> , 2017, 44, 52-58.	1.2	29
39	Evaluation of a polyetheretherketone (PEEK) titanium composite interbody spacer in an ovine lumbar interbody fusion model: biomechanical, microcomputed tomographic, and histologic analyses. <i>Spine Journal</i> , 2017, 17, 1907-1916.	1.3	59
40	Computational characterization of fracture healing under reduced gravity loading conditions. <i>Journal of Orthopaedic Research</i> , 2016, 34, 1206-1215.	2.3	7
41	An anisotropic hyperelastic constitutive model of brain white matter in biaxial tension and structuralâ€”mechanical relationships. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 62, 195-208.	3.1	41
42	Optical Coherence Tomographic Elastography Reveals Mesoscale Shear Strain Inhomogeneities in the Annulus Fibrosus. <i>Spine</i> , 2016, 41, E770-E777.	2.0	11
43	Intubation biomechanics: laryngoscope force and cervical spine motion during intubation in cadaversâ€”effect of severe distractive-flexion injury on C3â€”4 motion. <i>Journal of Neurosurgery: Spine</i> , 2016, 25, 545-555.	1.7	9
44	Characterization of the L4â€”L5â€”S1 motion segment using the stepwise reduction method. <i>Journal of Biomechanics</i> , 2016, 49, 1248-1254.	2.1	14
45	Cortical bone facet spacers for cervical spine decompression: effects on intervertebral kinetics and foraminal area. <i>Journal of Neurosurgery: Spine</i> , 2016, 24, 69-76.	1.7	13
46	Addition of lateral bending range of motion measurement to standard sagittal measurement to improve diagnosis sensitivity of ligamentous injury in the human lower cervical spine. <i>European Spine Journal</i> , 2016, 25, 122-126.	2.2	3
47	Implantable microelectromechanical sensors for diagnostic monitoring and postâ€”surgical prediction of bone fracture healing. <i>Journal of Orthopaedic Research</i> , 2015, 33, 1439-1446.	2.3	54
48	Modulating tibiofemoral contact force in the sheep hind limb via treadmill walking: Predictions from an opensim musculoskeletal model. <i>Journal of Orthopaedic Research</i> , 2015, 33, 1128-1133.	2.3	18
49	Matrix Metalloproteinase 9 (MMP-9) Regulates Vein Wall Biomechanics in Murine Thrombus Resolution. <i>PLoS ONE</i> , 2015, 10, e0139145.	2.5	22
50	Nonlinear viscoelastic characterization of the porcine spinal cord. <i>Acta Biomaterialia</i> , 2014, 10, 792-797.	8.3	32
51	Partial gravity unloading inhibits bone healing responses in a large animal model. <i>Journal of Biomechanics</i> , 2014, 47, 2836-2842.	2.1	21
52	Allogeneic mesenchymal progenitor cells for posterolateral lumbar spine fusion in sheep. <i>Spine Journal</i> , 2014, 14, 435-444.	1.3	25
53	Biaxial response of ovine spinal cord dura mater. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 34, 146-153.	3.1	25
54	Modeling Degenerative Disk Disease in the Lumbar Spine: A Combined Experimental, Constitutive, and Computational Approach. <i>Journal of Biomechanical Engineering</i> , 2012, 134, 101003.	1.3	21

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55	Experimental Characterization and Finite Element Implementation of Soft Tissue Nonlinear Viscoelasticity. <i>Journal of Biomechanical Engineering</i> , 2012, 134, 114501.	1.3	29
56	Nonlinear viscoelasticity plays an essential role in the functional behavior of spinal ligaments. <i>Journal of Biomechanics</i> , 2012, 45, 684-691.	2.1	38
57	The effects of ligamentous injury in the human lower cervical spine. <i>Journal of Biomechanics</i> , 2012, 45, 2668-2672.	2.1	18
58	Viscoelastic effects during loading play an integral role in soft tissue mechanics. <i>Acta Biomaterialia</i> , 2012, 8, 234-243.	8.3	57
59	Finite Element Modeling of Kinematic and Load Transmission Alterations due to Cervical Intervertebral Disc Replacement. <i>Spine</i> , 2011, 36, E1126-E1133.	2.0	59
60	Human cervical spine ligaments exhibit fully nonlinear viscoelastic behavior. <i>Acta Biomaterialia</i> , 2011, 7, 700-709.	8.3	59
61	RF-MEMS load sensors with enhanced Q-factor and sensitivity in a suspended architecture. <i>Microelectronic Engineering</i> , 2011, 88, 247-253.	2.4	7
62	Finite element modeling of kinematic and load transmission alterations due to cervical intervertebral disc replacement. <i>Spine</i> , 2011, , 1.	2.0	4
63	Nested Metamaterials for Wireless Strain Sensing. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2010, 16, 450-458.	2.9	93
64	A biomechanical analysis of venous tissue in its normal and post-phlebotic conditions. <i>Journal of Biomechanics</i> , 2010, 43, 2941-2947.	2.1	25
65	Metamaterial-based wireless strain sensors. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	144
66	Flexible metamaterials for wireless strain sensing. <i>Applied Physics Letters</i> , 2009, 95, 181105.	3.3	94
67	Bio-implantable passive on-chip RF-MEMS strain sensing resonators for orthopaedic applications. <i>Journal of Micromechanics and Microengineering</i> , 2008, 18, 115017.	2.6	42
68	A biomechanical analysis of C2 corpectomy constructs. <i>Spine Journal</i> , 2007, 7, 210-215.	1.3	14
69	Effects of delayed stabilization on fracture healing. <i>Journal of Orthopaedic Research</i> , 2007, 25, 1552-1558.	2.3	52
70	Nerve biomechanics and features of gait are altered in rats after mild crush injury to the sciatic nerve. <i>FASEB Journal</i> , 2006, 20, A443.	0.5	0
71	Cervical Spine Arthroplasty Biomechanics. <i>Neurosurgery Clinics of North America</i> , 2005, 16, 589-594.	1.7	27