

Lutz DÃ¼rselen

List of Publications by Year in descending order

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123
papers

3,912
citations

136950

32
h-index

149698

56
g-index

131
all docs

131
docs citations

131
times ranked

4665
citing authors

#	ARTICLE	IF	CITATIONS
1	Musculo-skeletal loading conditions at the hip during walking and stair climbing. <i>Journal of Biomechanics</i> , 2001, 34, 883-893.	2.1	389
2	Decellularized Cartilage Matrix as a Novel Biomatrix for Cartilage Tissue-Engineering Applications. <i>Tissue Engineering - Part A</i> , 2012, 18, 2195-2209.	3.1	205
3	TSG-6 Released from Intradermally Injected Mesenchymal Stem Cells Accelerates Wound Healing and Reduces Tissue Fibrosis in Murine Full-Thickness Skin Wounds. <i>Journal of Investigative Dermatology</i> , 2014, 134, 526-537.	0.7	195
4	The Influence of Muscle Forces and External Loads on Cruciate Ligament Strain. <i>American Journal of Sports Medicine</i> , 1995, 23, 129-136.	4.2	180
5	Finite element modeling of soft tissues: Material models, tissue interaction and challenges. <i>Clinical Biomechanics</i> , 2014, 29, 363-372.	1.2	126
6	Primary stability and strain distribution of cementless hip stems as a function of implant design. <i>Clinical Biomechanics</i> , 2012, 27, 158-164.	1.2	113
7	Fabrication, mechanical and in vivo performance of polycaprolactone/tricalcium phosphate composite scaffolds. <i>Acta Biomaterialia</i> , 2012, 8, 3446-3456.	8.3	93
8	Strain hardening of fascia: Static stretching of dense fibrous connective tissues can induce a temporary stiffness increase accompanied by enhanced matrix hydration. <i>Journal of Bodywork and Movement Therapies</i> , 2012, 16, 94-100.	1.2	87
9	Effect of partial meniscectomy at the medial posterior horn on tibiofemoral contact mechanics and meniscal hoop strains in human knees. <i>Journal of Orthopaedic Research</i> , 2012, 30, 934-942.	2.3	82
10	Biomechanics of a short stem: In vitro primary stability and stress shielding of a conservative cementless hip stem. <i>Journal of Orthopaedic Research</i> , 2013, 31, 1180-1186.	2.3	79
11	A new metaphyseal bone defect model in osteoporotic rats to study biomaterials for the enhancement of bone healing in osteoporotic fractures. <i>Acta Biomaterialia</i> , 2013, 9, 7035-7042.	8.3	76
12	Processed xenogenic cartilage as innovative biomatrix for cartilage tissue engineering: effects on chondrocyte differentiation and function. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2015, 9, E239-E251.	2.7	72
13	Resorbable polymer fibers for ligament augmentation. <i>Journal of Biomedical Materials Research Part B</i> , 2001, 58, 666-672.	3.1	67
14	Stress-relaxation response of human menisci under confined compression conditions. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 26, 68-80.	3.1	66
15	Finite helical axes of motion are a useful tool to describe the three-dimensional in vitro kinematics of the intact, injured and stabilised spine. <i>European Spine Journal</i> , 2004, 13, 553-559.	2.2	58
16	Sagittal curvature of total knee replacements predicts in vivo kinematics. <i>Clinical Biomechanics</i> , 2007, 22, 52-58.	1.2	57
17	Ligament balancing in TKA: Evaluation of a force-sensing device and the influence of patellar eversion and ligament release. <i>Journal of Biomechanics</i> , 2007, 40, 1709-1715.	2.1	53
18	The effects of femoral external derotational osteotomy on frontal plane alignment. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2014, 22, 2740-2746.	4.2	53

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19	In vivo performance of a novel silk fibroin scaffold for partial meniscal replacement in a sheep model. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2015, 23, 2218-2229.	4.2	53
20	Quantification of the 3D relative movement of external marker sets vs. bones based on magnetic resonance imaging. <i>Clinical Biomechanics</i> , 2006, 21, 984-991.	1.2	52
21	Delayed bone healing following high tibial osteotomy related to increased implant stiffness in locked plating. <i>Injury</i> , 2014, 45, 1648-1652.	1.7	52
22	Subchondral bone influences chondrogenic differentiation and collagen production of human bone marrow-derived mesenchymal stem cells and articular chondrocytes. <i>Arthritis Research and Therapy</i> , 2014, 16, 453.	3.5	49
23	Comparative animal study of three ligament prostheses for the replacement of the anterior cruciate and medial collateral ligament. <i>Biomaterials</i> , 1996, 17, 977-982.	11.4	46
24	Anterior cruciate ligament rupture translates the axes of motion within the knee. <i>Clinical Biomechanics</i> , 2004, 19, 130-135.	1.2	44
25	Material Models and Properties in the Finite Element Analysis of Knee Ligaments: A Literature Review. <i>Frontiers in Bioengineering and Biotechnology</i> , 2014, 2, 54.	4.1	44
26	Correction of axis misalignment in the analysis of knee rotations. <i>Human Movement Science</i> , 2003, 22, 285-296.	1.4	42
27	Differences of bone healing in metaphyseal defect fractures between osteoporotic and physiological bone in rats. <i>Injury</i> , 2014, 45, 487-493.	1.7	42
28	Newly Defined ATP-Binding Cassette Subfamily B Member 5 Positive Dermal Mesenchymal Stem Cells Promote Healing of Chronic Iron-Overload Wounds via Secretion of Interleukin-1 Receptor Antagonist. <i>Stem Cells</i> , 2019, 37, 1057-1074.	3.2	41
29	Medial meniscal displacement and strain in three dimensions under compressive loads: MR assessment. <i>Journal of Magnetic Resonance Imaging</i> , 2014, 40, 1181-1188.	3.4	40
30	Accurate Determination of a Joint Rotation Center Based on the Minimal Amplitude Point Method. <i>Computer Aided Surgery</i> , 2003, 8, 30-34.	1.8	36
31	Effect of a Simple Collagen Type I Sponge for Achilles Tendon Repair in a Rat Model. <i>American Journal of Sports Medicine</i> , 2016, 44, 1998-2004.	4.2	36
32	The role of lesser trochanter fragment in unstable petrochanteric A2 proximal femur fractures - is refixation of the lesser trochanter worth the effort?. <i>Clinical Biomechanics</i> , 2017, 42, 31-37.	1.2	36
33	Effects of Multi-Deficiencies-Diet on Bone Parameters of Peripheral Bone in Ovariectomized Mature Rat. <i>PLoS ONE</i> , 2013, 8, e71665.	2.5	36
34	Effects of mechanical strain on human mesenchymal stem cells and ligament fibroblasts in a textured poly(L-lactide) scaffold for ligament tissue engineering. <i>Journal of Materials Science: Materials in Medicine</i> , 2012, 23, 2575-2582.	3.6	35
35	Implications of combined ovariectomy and glucocorticoid (dexamethasone) treatment on mineral, microarchitectural, biomechanical and matrix properties of rat bone. <i>International Journal of Experimental Pathology</i> , 2013, 94, 387-398.	1.3	31
36	Osteoarthritic cartilage explants affect extracellular matrix production and composition in cocultured bone marrow-derived mesenchymal stem cells and articular chondrocytes. <i>Stem Cell Research and Therapy</i> , 2014, 5, 77.	5.5	31

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37	Improved tendon healing using bFGF, BMP-12 and TGFÎ²1 in a rat model. , 2018, 35, 318-334.		28
38	Gapping phenomenon of longitudinal meniscal tears. Clinical Biomechanics, 2003, 18, 505-510.	1.2	26
39	Establishment of a Knee-Joint Coordinate System From Helical Axes Analysisâ€”A Kinematic Approach Without Anatomical Referencing. IEEE Transactions on Biomedical Engineering, 2004, 51, 1341-1347.	4.2	26
40	Function and strain of the anterolateral ligament part I: biomechanical analysis. Knee Surgery, Sports Traumatology, Arthroscopy, 2017, 25, 1132-1139.	4.2	26
41	Degeneration alters the biomechanical properties and structural composition of lateral human menisci. Osteoarthritis and Cartilage, 2020, 28, 1482-1491.	1.3	26
42	Anterior Knee Laxity Increases Gapping of Posterior Horn Medial Meniscal Tears. American Journal of Sports Medicine, 2011, 39, 1749-1756.	4.2	25
43	Quantitative analyses of bone composition in acetylcholine receptor M3R and alpha7 knockout mice. Life Sciences, 2012, 91, 997-1002.	4.3	25
44	Cyclic joint loading can affect the initial stability of meniscal fixation implants. Clinical Biomechanics, 2003, 18, 44-49.	1.2	24
45	A novel method for lateral callus distraction and its importance for the mechano-biology of bone formation. Bone, 2010, 47, 712-717.	2.9	24
46	Increasing posterior tibial slope does not raise anterior cruciate ligament strain but decreases tibial rotation ability. Clinical Biomechanics, 2013, 28, 285-290.	1.2	24
47	Bone Matrix, Cellularity, and Structural Changes in a Rat Model with High-Turnover Osteoporosis Induced by Combined Ovariectomy and a Multiple-Deficient Diet. American Journal of Pathology, 2014, 184, 765-777.	3.8	24
48	Biomechanical, structural and biological characterisation of a new silk fibroin scaffold for meniscal repair. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 86, 314-324.	3.1	24
49	Material properties of individual menisci and their attachments obtained through inverse FE-analysis. Journal of Biomechanics, 2015, 48, 1343-1349.	2.1	22
50	Friction properties of a new silk fibroin scaffold for meniscal replacement. Tribology International, 2017, 109, 586-592.	5.9	22
51	Articular cartilage and meniscus reveal higher friction in swing phase than in stance phase under dynamic gait conditions. Scientific Reports, 2019, 9, 5785.	3.3	21
52	Release of the medial collateral ligament is mandatory in medial open-wedge high tibial osteotomy. Knee Surgery, Sports Traumatology, Arthroscopy, 2019, 27, 2917-2926.	4.2	21
53	Identification and distribution of synthetic ligament wear particles in sheep. , 1996, 31, 319-328.		20
54	Single impact trauma in human early-stage osteoarthritic cartilage: Implication of prostaglandin D2 but no additive effect of IL-1Î² on cell survival. International Journal of Molecular Medicine, 2011, 28, 271-7.	4.0	20

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55	Improved Anchorage of Ti6Al4V Orthopaedic Bone Implants through Oligonucleotide Mediated Immobilization of BMP-2 in Osteoporotic Rats. PLoS ONE, 2014, 9, e86151.	2.5	20
56	Effects of macroporous, strontium loaded xerogel-scaffolds on new bone formation in critical-size metaphyseal fracture defects in ovariectomized rats. Injury, 2016, 47, S52-S61.	1.7	20
57	Diet-Induced Obesity Affects Muscle Regeneration After Murine Blunt Muscle Traumaâ€”A Broad Spectrum Analysis. Frontiers in Physiology, 2018, 9, 674.	2.8	20
58	Augmentation of a ruptured posterior cruciate ligament provides normal knee joint stability during ligament healing. Clinical Biomechanics, 2001, 16, 222-228.	1.2	19
59	Forces acting on the anterior meniscotibial ligaments. Knee Surgery, Sports Traumatology, Arthroscopy, 2012, 20, 1488-1495.	4.2	19
60	Osteoarthritis-Related Degeneration Alters the Biomechanical Properties of Human Menisci Before the Articular Cartilage. Frontiers in Bioengineering and Biotechnology, 2021, 9, 659989.	4.1	19
61	Mechanical properties and morphological analysis of the transitional zone between meniscal body and ligamentous meniscal attachments. Journal of Biomechanics, 2015, 48, 1350-1355.	2.1	18
62	Functional and Molecular Characterization of a Novel Traumatic Peripheral Nerveâ€”Muscle Injury Model. NeuroMolecular Medicine, 2017, 19, 357-374.	3.4	18
63	Influence of Menisci on Tibiofemoral Contact Mechanics in Human Knees: A Systematic Review. Frontiers in Bioengineering and Biotechnology, 2021, 9, 765596.	4.1	18
64	Biological response to ligament wear particles. Journal of Applied Biomaterials: an Official Journal of the Society for Biomaterials, 1995, 6, 35-41.	1.2	17
65	Impaired extracellular matrix structure resulting from malnutrition in ovariectomized mature rats. Histochemistry and Cell Biology, 2015, 144, 491-507.	1.7	17
66	Biomechanics of a cemented short stem: Standard vs. line-to-line cementation techniques. A biomechanical in-vitro study involving six osteoporotic pairs of human cadaver femurs. Clinical Biomechanics, 2018, 52, 86-94.	1.2	17
67	Biomechanical considerations are crucial for the success of tendon and meniscus allograft integrationâ€”a systematic review. Knee Surgery, Sports Traumatology, Arthroscopy, 2019, 27, 1708-1716.	4.2	17
68	Short-term glucocorticoid treatment causes spinal osteoporosis in ovariectomized rats. European Spine Journal, 2014, 23, 2437-2448.	2.2	16
69	Meniscal Replacement With a Silk Fibroin Scaffold Reduces Contact Stresses in the Human Knee. Journal of Orthopaedic Research, 2019, 37, 2583-2592.	2.3	16
70	Automatic segmentation of knee menisci â€” A systematic review. Artificial Intelligence in Medicine, 2020, 105, 101849.	6.5	16
71	Small changes in bone structure of female $\hat{\pm}7$ nicotinic acetylcholine receptor knockout mice. BMC Musculoskeletal Disorders, 2015, 16, 5.	1.9	15
72	Influence of partial meniscectomy on attachment forces, superficial strain and contact mechanics in porcine knee joints. Knee Surgery, Sports Traumatology, Arthroscopy, 2015, 23, 74-82.	4.2	15

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73	The challenge of implant integration in partial meniscal replacement: an experimental study on a silk fibroin scaffold in sheep. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2019, 27, 369-380.	4.2	13
74	Primary stability of a shoulderless ZweymÄ1/4ller hip stem: a comparative in vitro micromotion study. <i>Journal of Orthopaedic Surgery and Research</i> , 2016, 11, 73.	2.3	12
75	The influence of the test setup on knee joint kinematics â€“ A meta-analysis of tibial rotation. <i>Journal of Biomechanics</i> , 2016, 49, 2982-2988.	2.1	12
76	Response of the Injured Tendon to Growth Factors in the Presence or Absence of the Paratenon. <i>American Journal of Sports Medicine</i> , 2019, 47, 462-467.	4.2	12
77	Biological response to a new composite polymer augmentation device used for cruciate ligament reconstruction. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2006, 76B, 265-272.	3.4	11
78	Bone status of acetylcholinesterase-knockout mice. <i>International Immunopharmacology</i> , 2015, 29, 222-230.	3.8	11
79	Impact of five different medial patellofemoral ligament-reconstruction strategies and three different graft pre-tensioning states on the mean patellofemoral contact pressure: a biomechanical study on human cadaver knees. <i>Journal of Experimental Orthopaedics</i> , 2018, 5, 25.	1.8	11
80	Deletion of nicotinic acetylcholine receptor alpha9 in mice resulted in altered bone structure. <i>Bone</i> , 2019, 120, 285-296.	2.9	11
81	Features of haptic and tactile feedback in TORS-a comparison of available surgical systems. <i>Journal of Robotic Surgery</i> , 2018, 12, 103-108.	1.8	11
82	Acutely repaired proximal anterior cruciate ligament ruptures in sheep - by augmentation improved stability and reduction of cartilage damage. <i>Journal of Materials Science: Materials in Medicine</i> , 1997, 8, 855-859.	3.6	10
83	Can a finite set of knee extension in supine position be used for a knee functional examination?. <i>Journal of Biomechanics</i> , 2006, 39, 359-363.	2.1	10
84	Maximum tensile force of different suture techniques in reconstruction of the renal remnant after nephron-sparing surgery. <i>Surgical Endoscopy and Other Interventional Techniques</i> , 2011, 25, 503-507.	2.4	10
85	Single impact cartilage trauma and TNF-Î±: Interactive effects do not increase early cell death and indicate the need for bi-/multidirectional therapeutic approaches. <i>International Journal of Molecular Medicine</i> , 2012, 30, 1225-1232.	4.0	10
86	Altered ultrastructure, density and cathepsin K expression in bone of female muscarinic acetylcholine receptor M3 knockout mice. <i>International Immunopharmacology</i> , 2015, 29, 201-207.	3.8	10
87	Differential Interactive Effects of Cartilage Traumatization and Blood Exposure In Vitro and In Vivo. <i>American Journal of Sports Medicine</i> , 2015, 43, 2822-2832.	4.2	10
88	Evaluation of a 3D object registration method for analysis of humeral kinematics. <i>Journal of Biomechanics</i> , 2007, 40, 511-518.	2.1	9
89	Development of a New Biomechanically Defined Single Impact Rabbit Cartilage Trauma Model for<i>In Vivo</i>-Studies. <i>Journal of Investigative Surgery</i> , 2012, 25, 235-241.	1.3	9
90	Control of material stiffness during degradation for constructs made of absorbable polymer fibers. , 2003, 67B, 697-701.		8

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91	Meniscal screw fixation provides sufficient stability to prevent tears from gapping. <i>Clinical Biomechanics</i> , 2007, 22, 93-99.	1.2	8
92	Degeneration Affects Three-Dimensional Strains in Human Menisci: In situ MRI Acquisition Combined With Image Registration. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 582055.	4.1	8
93	Adding Flexible Instrumentation to a Curved Videolaryngoscope: A Novel Tool for Laryngeal Surgery. <i>Laryngoscope</i> , 2021, 131, E561-E568.	2.0	8
94	Computational modelling of ovine critical-sized tibial defects with implanted scaffolds and prediction of the safety of fixator removal. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 44, 133-146.	3.1	7
95	ACL double-bundle reconstruction with one tibial tunnel provides equal stability compared to two tibial tunnels. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2017, 25, 1646-1652.	4.2	7
96	Do Prophylactic Knee Braces Protect the Knee Against Impacts or Tibial Moments? An In Vitro Multisensory Study. <i>Orthopaedic Journal of Sports Medicine</i> , 2018, 6, 232596711880539.	1.7	7
97	Patella position and biomechanical properties of the patellar tendon 1 year after removal of its central third. <i>Clinical Biomechanics</i> , 1997, 12, 267-271.	1.2	6
98	German Society of Biomechanics (DGfB) Young Investigator Award 2019: Proof-of-Concept of a Novel Knee Joint Simulator Allowing Rapid Motions at Physiological Muscle and Ground Reaction Forces. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 244.	4.1	6
99	Impact of measurement errors on the determination of the linear modulus of human meniscal attachments. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 10, 120-127.	3.1	5
100	Bone status of adult female butyrylcholinesterase gene-deficient mice. <i>International Immunopharmacology</i> , 2015, 29, 208-214.	3.8	5
101	Experimental and Simulation-Based Investigation of Polycentric Motion of an Inherent Compliant Pneumatic Bending Actuator with Skewed Rotary Elastic Chambers. <i>Robotics</i> , 2017, 6, 2.	3.5	5
102	Analysis of human menisci degeneration <i>via</i> infrared attenuated total reflection spectroscopy. <i>Analyst</i> , 2018, 143, 5023-5029.	3.5	5
103	The effect of knee brace misalignment on the anterior cruciate ligament. <i>Prosthetics and Orthotics International</i> , 2019, 43, 309-315.	1.0	5
104	A biomechanical comparison of two plating techniques in lateral clavicle fractures. <i>Clinical Biomechanics</i> , 2019, 67, 78-84.	1.2	5
105	Optimizing Manufacturing and Osseointegration of Ti6Al4V Implants through Precision Casting and Calcium and Phosphorus Ion Implantation? In Vivo Results of a Large-Scale Animal Trial. <i>Materials</i> , 2020, 13, 1670.	2.9	5
106	Forces at the Anterior Meniscus Attachments Strongly Increase Under Dynamic Knee Joint Loading. <i>American Journal of Sports Medicine</i> , 2021, 49, 994-1004.	4.2	5
107	Meniscus Injury and its Surgical Treatment Does not Increase Initial Whole Knee Joint Friction. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 779946.	4.1	5
108	The tibial cut in total knee arthroplasty influences the varus alignment, the femoral roll-back and the tibiofemoral rotation in patients with constitutional varus. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2021, 29, 641-651.	4.2	4

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109	Biomimetic Hydroxyapatite Coated Titanium Screws Demonstrate Rapid Implant Stabilization and Safe Removal &i>In-Vivo&i>. Journal of Biomaterials and Nanobiotechnology, 2015, 06, 20-35.	0.5	4
110	Establishment of a clinically relevant large animal model to assess the healing of metaphyseal bone. , 2019, 37, 444-466.		3
111	Surface analysis of sheep menisci after meniscectomy via infrared attenuated total reflection spectroscopy. Journal of Biophotonics, 2019, 12, e201800429.	2.3	3
112	Function and strain of the anterolateral ligament part II: reconstruction. Knee Surgery, Sports Traumatology, Arthroscopy, 2023, 31, 390-398.	4.2	3
113	Suitability of External Fixators For Use in the Tropics - Eignung von externen Fixateuren fÄ¼r den Tropeneinsatz. Biomedizinische Technik, 2001, 46, 214-220.	0.8	2
114	Influence of tibial hybrid fixation on graft tension and stability in ACL double-bundle reconstruction. Archives of Orthopaedic and Trauma Surgery, 2017, 137, 981-988.	2.4	2
115	The tibial cut influences the patellofemoral knee kinematics and pressure distribution in total knee arthroplasty with constitutional varus alignment. Knee Surgery, Sports Traumatology, Arthroscopy, 2020, 28, 3258-3269.	4.2	2
116	Neuromapping of the Capsuloligamentous Knee Joint Structures. Arthroscopy, Sports Medicine, and Rehabilitation, 2021, 3, e555-e563.	1.7	2
117	Biomechanics of a calcar loading and a shortened tapered femoral stem: Comparative in-vitro testing of primary stability and strain distribution. Journal of Experimental Orthopaedics, 2021, 8, 74.	1.8	2
118	Are Knotted or Knotless Techniques Better for Reconstruction of Full-Thickness Tears of the Superior Portion of the Subscapularis Tendon? A Study in Cadavers. Clinical Orthopaedics and Related Research, 2021, Publish Ahead of Print, .	1.5	2
119	Cartilage biomechanics. , 2022, , 151-176.		2
120	Knee Joint Menisci Are Shock Absorbers: A Biomechanical In-Vitro Study on Porcine Stifle Joints. Frontiers in Bioengineering and Biotechnology, 2022, 10, 837554.	4.1	2
121	Differences between human septal and alar cartilage with respect to biomechanical features and biochemical composition. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 96, 236-243.	3.1	1
122	Biomechanics of a cemented short stem: a comparative in vitro study regarding primary stability and maximum fracture load. Archives of Orthopaedic and Trauma Surgery, 2021, 141, 1797-1806.	2.4	1
123	Meniscus biomechanics. , 2022, , 177-197.		1