

Lutz DÃ¼rselen

List of Publications by Year in descending order

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Version: 2024-02-01

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	Function and strain of the anterolateral ligament part II: reconstruction. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2023, 31, 390-398.	4.2	3
2	Meniscus biomechanics. , 2022, , 177-197.		1
3	Cartilage biomechanics. , 2022, , 151-176.		2
4	Knee Joint Menisci Are Shock Absorbers: A Biomechanical In-Vitro Study on Porcine Stifle Joints. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 837554.	4.1	2
5	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
6	Adding Flexible Instrumentation to a Curved Videolaryngoscope: A Novel Tool for Laryngeal Surgery. <i>Laryngoscope</i> , 2021, 131, E561-E568.	2.0	8
7	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
8	Biomechanics of a cemented short stem: a comparative in vitro study regarding primary stability and maximum fracture load. <i>Archives of Orthopaedic and Trauma Surgery</i> , 2021, 141, 1797-1806.	2.4	1
9	Neuromapping of the Capsuloligamentous Knee Joint Structures. <i>Arthroscopy, Sports Medicine, and Rehabilitation</i> , 2021, 3, e555-e563.	1.7	2
10	Osteoarthritis-Related Degeneration Alters the Biomechanical Properties of Human Menisci Before the Articular Cartilage. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 659989.	4.1	19
11	Biomechanics of a calcar loading and a shortened tapered femoral stem: Comparative in-vitro testing of primary stability and strain distribution. <i>Journal of Experimental Orthopaedics</i> , 2021, 8, 74.	1.8	2
12	Are Knotted or Knotless Techniques Better for Reconstruction of Full-Thickness Tears of the Superior Portion of the Subscapularis Tendon? A Study in Cadavers. <i>Clinical Orthopaedics and Related Research</i> , 2021, Publish Ahead of Print, .	1.5	2
13	Influence of Menisci on Tibiofemoral Contact Mechanics in Human Knees: A Systematic Review. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 765596.	4.1	18
14	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
15	The tibial cut influences the patellofemoral knee kinematics and pressure distribution in total knee arthroplasty with constitutional varus alignment. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2020, 28, 3258-3269.	4.2	2
16	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
17	Degeneration alters the biomechanical properties and structural composition of lateral human menisci. <i>Osteoarthritis and Cartilage</i> , 2020, 28, 1482-1491.	1.3	26
18	Automatic segmentation of knee menisci â€“ A systematic review. <i>Artificial Intelligence in Medicine</i> , 2020, 105, 101849.	6.5	16

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19	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
20	Establishment of a clinically relevant large animal model to assess the healing of metaphyseal bone. , 2019, 37, 444-466.		3
21	Meniscal Replacement With a Silk Fibroin Scaffold Reduces Contact Stresses in the Human Knee. <i>Journal of Orthopaedic Research</i> , 2019, 37, 2583-2592.	2.3	16
22	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
23	The effect of knee brace misalignment on the anterior cruciate ligament. <i>Prosthetics and Orthotics International</i> , 2019, 43, 309-315.	1.0	5
24	Differences between human septal and alar cartilage with respect to biomechanical features and biochemical composition. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 96, 236-243.	3.1	1
25	A biomechanical comparison of two plating techniques in lateral clavicle fractures. <i>Clinical Biomechanics</i> , 2019, 67, 78-84.	1.2	5
26	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
27	Surface analysis of sheep menisci after meniscectomy via infrared attenuated total reflection spectroscopy. <i>Journal of Biophotonics</i> , 2019, 12, e201800429.	2.3	3
28	Articular cartilage and meniscus reveal higher friction in swing phase than in stance phase under dynamic gait conditions. <i>Scientific Reports</i> , 2019, 9, 5785.	3.3	21
29	Deletion of nicotinic acetylcholine receptor alpha9 in mice resulted in altered bone structure. <i>Bone</i> , 2019, 120, 285-296.	2.9	11
30	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
31	Biomechanical considerations are crucial for the success of tendon and meniscus allograft integration—a systematic review. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2019, 27, 1708-1716.	4.2	17
32	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
33	Release of the medial collateral ligament is mandatory in medial open-wedge high tibial osteotomy. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2019, 27, 2917-2926.	4.2	21
34	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. <i>Clinical Biomechanics</i> , 2018, 52, 86-94.	1.2	17
35	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
36	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

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37	Analysis of human menisci degeneration <i>via</i> infrared attenuated total reflection spectroscopy. Analyst, The, 2018, 143, 5023-5029.	3.5	5
38	Improved tendon healing using bFGF, BMP-12 and TGFÎ²1 in a rat model. , 2018, 35, 318-334.		28
39	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
40	Diet-Induced Obesity Affects Muscle Regeneration After Murine Blunt Muscle Traumaâ€”A Broad Spectrum Analysis. Frontiers in Physiology, 2018, 9, 674.	2.8	20
41	Features of haptic and tactile feedback in TORS-a comparison of available surgical systems. Journal of Robotic Surgery, 2018, 12, 103-108.	1.8	11
42	ACL double-bundle reconstruction with one tibial tunnel provides equal stability compared to two tibial tunnels. Knee Surgery, Sports Traumatology, Arthroscopy, 2017, 25, 1646-1652.	4.2	7
43	The role of lesser trochanter fragment in unstable pertrochanteric A2 proximal femur fractures - is refixation of the lesser trochanter worth the effort?. Clinical Biomechanics, 2017, 42, 31-37.	1.2	36
44	Function and strain of the anterolateral ligament part I: biomechanical analysis. Knee Surgery, Sports Traumatology, Arthroscopy, 2017, 25, 1132-1139.	4.2	26
45	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
46	Friction properties of a new silk fibroin scaffold for meniscal replacement. Tribology International, 2017, 109, 586-592.	5.9	22
47	Functional and Molecular Characterization of a Novel Traumatic Peripheral Nerveâ€”Muscle Injury Model. NeuroMolecular Medicine, 2017, 19, 357-374.	3.4	18
48	Experimental and Simulation-Based Investigation of Polycentric Motion of an Inherent Compliant Pneumatic Bending Actuator with Skewed Rotary Elastic Chambers. Robotics, 2017, 6, 2.	3.5	5
49	Primary stability of a shoulderless ZweymÃ¼ller hip stem: a comparative in vitro micromotion study. Journal of Orthopaedic Surgery and Research, 2016, 11, 73.	2.3	12
50	Effect of a Simple Collagen Type I Sponge for Achilles Tendon Repair in a Rat Model. American Journal of Sports Medicine, 2016, 44, 1998-2004.	4.2	36
51	The influence of the test setup on knee joint kinematics â€” A meta-analysis of tibial rotation. Journal of Biomechanics, 2016, 49, 2982-2988.	2.1	12
52	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
53	Computational modelling of ovine critical-sized tibial defects with implanted scaffolds and prediction of the safety of fixator removal. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 44, 133-146.	3.1	7
54	Small changes in bone structure of female Î±7 nicotinic acetylcholine receptor knockout mice. BMC Musculoskeletal Disorders, 2015, 16, 5.	1.9	15

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55	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
56	Material properties of individual menisci and their attachments obtained through inverse FE-analysis. <i>Journal of Biomechanics</i> , 2015, 48, 1343-1349.	2.1	22
57	Mechanical properties and morphological analysis of the transitional zone between meniscal body and ligamentous meniscal attachments. <i>Journal of Biomechanics</i> , 2015, 48, 1350-1355.	2.1	18
58	Impaired extracellular matrix structure resulting from malnutrition in ovariectomized mature rats. <i>Histochemistry and Cell Biology</i> , 2015, 144, 491-507.	1.7	17
59	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
60	Bone status of adult female butyrylcholinesterase gene-deficient mice. <i>International Immunopharmacology</i> , 2015, 29, 208-214.	3.8	5
61	Bone status of acetylcholinesterase-knockout mice. <i>International Immunopharmacology</i> , 2015, 29, 222-230.	3.8	11
62	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
63	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
64	Influence of partial meniscectomy on attachment forces, superficial strain and contact mechanics in porcine knee joints. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2015, 23, 74-82.	4.2	15
65	Biomimetic Hydroxyapatite Coated Titanium Screws Demonstrate Rapid Implant Stabilization and Safe Removal <i>In-Vivo</i>. <i>Journal of Biomaterials and Nanobiotechnology</i> , 2015, 06, 20-35.	0.5	4
66	Improved Anchorage of Ti6Al4V Orthopaedic Bone Implants through Oligonucleotide Mediated Immobilization of BMP-2 in Osteoporotic Rats. <i>PLoS ONE</i> , 2014, 9, e86151.	2.5	20
67	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
68	Short-term glucocorticoid treatment causes spinal osteoporosis in ovariectomized rats. <i>European Spine Journal</i> , 2014, 23, 2437-2448.	2.2	16
69	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
70	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
71	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
72	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

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73	Finite element modeling of soft tissues: Material models, tissue interaction and challenges. <i>Clinical Biomechanics</i> , 2014, 29, 363-372.	1.2	126
74	Bone Matrix, Cellularity, and Structural Changes in a Rat Model with High-Turnover Osteoporosis Induced by Combined Ovariectomy and a Multiple-Deficient Diet. <i>American Journal of Pathology</i> , 2014, 184, 765-777.	3.8	24
75	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
76	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
77	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
78	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
79	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
80	Increasing posterior tibial slope does not raise anterior cruciate ligament strain but decreases tibial rotation ability. <i>Clinical Biomechanics</i> , 2013, 28, 285-290.	1.2	24
81	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
82	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
83	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
84	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
85	Single impact cartilage trauma and TNF- α : 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	Fabrication, mechanical and in vivo performance of polycaprolactone/tricalcium phosphate composite scaffolds. <i>Acta Biomaterialia</i> , 2012, 8, 3446-3456.	8.3	93
87	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
88	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
89	Quantitative analyses of bone composition in acetylcholine receptor M3R and alpha7 knockout mice. <i>Life Sciences</i> , 2012, 91, 997-1002.	4.3	25
90	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

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91	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
92	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
93	Forces acting on the anterior meniscotibial ligaments. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2012, 20, 1488-1495.	4.2	19
94	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
95	Single impact trauma in human early-stage osteoarthritic cartilage: Implication of prostaglandin D2 but no additive effect of IL-1 β on cell survival. <i>International Journal of Molecular Medicine</i> , 2011, 28, 271-7.	4.0	20
96	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
97	Anterior Knee Laxity Increases Gapping of Posterior Horn Medial Meniscal Tears. <i>American Journal of Sports Medicine</i> , 2011, 39, 1749-1756.	4.2	25
98	A novel method for lateral callus distraction and its importance for the mechano-biology of bone formation. <i>Bone</i> , 2010, 47, 712-717.	2.9	24
99	Meniscal screw fixation provides sufficient stability to prevent tears from gapping. <i>Clinical Biomechanics</i> , 2007, 22, 93-99.	1.2	8
100	Sagittal curvature of total knee replacements predicts in vivo kinematics. <i>Clinical Biomechanics</i> , 2007, 22, 52-58.	1.2	57
101	Evaluation of a 3D object registration method for analysis of humeral kinematics. <i>Journal of Biomechanics</i> , 2007, 40, 511-518.	2.1	9
102	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
103	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
104	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
105	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
106	Establishment of a Knee-Joint Coordinate System From Helical Axes Analysisâ€”A Kinematic Approach Without Anatomical Referencing. <i>IEEE Transactions on Biomedical Engineering</i> , 2004, 51, 1341-1347.	4.2	26
107	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
108	Anterior cruciate ligament rupture translates the axes of motion within the knee. <i>Clinical Biomechanics</i> , 2004, 19, 130-135.	1.2	44

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109	Correction of axis misalignment in the analysis of knee rotations. Human Movement Science, 2003, 22, 285-296.	1.4	42
110	Control of material stiffness during degradation for constructs made of absorbable polymer fibers. , 2003, 67B, 697-701.		8
111	Cyclic joint loading can affect the initial stability of meniscal fixation implants. Clinical Biomechanics, 2003, 18, 44-49.	1.2	24
112	Gapping phenomenon of longitudinal meniscal tears. Clinical Biomechanics, 2003, 18, 505-510.	1.2	26
113	Accurate Determination of a Joint Rotation Center Based on the Minimal Amplitude Point Method. Computer Aided Surgery, 2003, 8, 30-34.	1.8	36
114	Augmentation of a ruptured posterior cruciate ligament provides normal knee joint stability during ligament healing. Clinical Biomechanics, 2001, 16, 222-228.	1.2	19
115	Resorbable polymer fibers for ligament augmentation. Journal of Biomedical Materials Research Part B, 2001, 58, 666-672.	3.1	67
116	Musculo-skeletal loading conditions at the hip during walking and stair climbing. Journal of Biomechanics, 2001, 34, 883-893.	2.1	389
117	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
118	Patella position and biomechanical properties of the patellar tendon 1 year after removal of its central third. Clinical Biomechanics, 1997, 12, 267-271.	1.2	6
119	Acutely repaired proximal anterior cruciate ligament ruptures in sheep - by augmentation improved stability and reduction of cartilage damage. Journal of Materials Science: Materials in Medicine, 1997, 8, 855-859.	3.6	10
120	Identification and distribution of synthetic ligament wear particles in sheep. , 1996, 31, 319-328.		20
121	Comparative animal study of three ligament prostheses for the replacement of the anterior cruciate and medial collateral ligament. Biomaterials, 1996, 17, 977-982.	11.4	46
122	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
123	The Influence of Muscle Forces and External Loads on Cruciate Ligament Strain. American Journal of Sports Medicine, 1995, 23, 129-136.	4.2	180