

Simo J Saarakkala

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

192
papers

3,985
citations

34
h-index

53
g-index

247
ext. papers

4,854
ext. citations

3.6
avg, IF

5.57
L-index

#	Paper	IF	Citations
192	Automatic Knee Osteoarthritis Diagnosis from Plain Radiographs: A Deep Learning-Based Approach. <i>Scientific Reports</i> , 2018 , 8, 1727	4.9	192
191	Depth-wise progression of osteoarthritis in human articular cartilage: investigation of composition, structure and biomechanics. <i>Osteoarthritis and Cartilage</i> , 2010 , 18, 73-81	6.2	166
190	Application of second derivative spectroscopy for increasing molecular specificity of Fourier transform infrared spectroscopic imaging of articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2012 , 20, 451-459	6.2	141
189	Proteoglycan and collagen sensitive MRI evaluation of normal and degenerated articular cartilage. <i>Journal of Orthopaedic Research</i> , 2004 , 22, 557-64	3.8	129
188	Ultrasonic quantitation of superficial degradation of articular cartilage. <i>Ultrasound in Medicine and Biology</i> , 2004 , 30, 783-92	3.5	92
187	Novel mechano-acoustic technique and instrument for diagnosis of cartilage degeneration. <i>Physiological Measurement</i> , 2002 , 23, 491-503	2.9	91
186	Speed of sound in normal and degenerated bovine articular cartilage. <i>Ultrasound in Medicine and Biology</i> , 2003 , 29, 447-54	3.5	90
185	Power Doppler ultrasonography and synovitis: correlating ultrasound imaging with histopathological findings and evaluating the performance of ultrasound equipments. <i>Annals of the Rheumatic Diseases</i> , 2006 , 65, 1590-5	2.4	88
184	Diagnostic performance of knee ultrasonography for detecting degenerative changes of articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2012 , 20, 376-381	6.2	80
183	Quantitative ultrasound imaging detects degenerative changes in articular cartilage surface and subchondral bone. <i>Physics in Medicine and Biology</i> , 2006 , 51, 5333-46	3.8	70
182	Infrared spectroscopy indicates altered bone turnover and remodeling activity in renal osteodystrophy. <i>Journal of Bone and Mineral Research</i> , 2010 , 25, 1360-6	6.3	64
181	Ultrasound attenuation in normal and spontaneously degenerated articular cartilage. <i>Ultrasound in Medicine and Biology</i> , 2004 , 30, 493-500	3.5	64
180	Ability of ultrasound backscattering to predict mechanical properties of bovine trabecular bone. <i>Ultrasound in Medicine and Biology</i> , 2004 , 30, 919-27	3.5	62
179	Ultrasound indentation of normal and spontaneously degenerated bovine articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2003 , 11, 697-705	6.2	62
178	Multimodal Machine Learning-based Knee Osteoarthritis Progression Prediction from Plain Radiographs and Clinical Data. <i>Scientific Reports</i> , 2019 , 9, 20038	4.9	61
177	Association between subchondral bone structure and osteoarthritis histopathological grade. <i>Journal of Orthopaedic Research</i> , 2017 , 35, 785-792	3.8	56
176	Subchondral bone histology and grading in osteoarthritis. <i>PLoS ONE</i> , 2017 , 12, e0173726	3.7	53

175	Comparison of nonlinear mechanical properties of bovine articular cartilage and meniscus. <i>Journal of Biomechanics</i> , 2014 , 47, 200-6	2.9	53
174	WS and MoS thin film gas sensors with high response to NH in air at low temperature. <i>Nanotechnology</i> , 2019 , 30, 405501	3.4	52
173	Assessing the intra- and inter-reader reliability of dynamic ultrasound images in power Doppler ultrasonography. <i>Annals of the Rheumatic Diseases</i> , 2006 , 65, 1658-60	2.4	48
172	Minimally invasive ultrasound method for intra-articular diagnostics of cartilage degeneration. <i>Ultrasound in Medicine and Biology</i> , 2009 , 35, 1546-54	3.5	47
171	Determining collagen distribution in articular cartilage using contrast-enhanced micro-computed tomography. <i>Osteoarthritis and Cartilage</i> , 2015 , 23, 1613-21	6.2	46
170	Quantification of the optical surface reflection and surface roughness of articular cartilage using optical coherence tomography. <i>Physics in Medicine and Biology</i> , 2009 , 54, 6837-52	3.8	46
169	Multiparametric MRI assessment of human articular cartilage degeneration: Correlation with quantitative histology and mechanical properties. <i>Magnetic Resonance in Medicine</i> , 2015 , 74, 249-259	4.4	45
168	Recent advances in understanding the phenotypes of osteoarthritis. <i>F1000Research</i> , 2019 , 8,	3.6	45
167	Comparison between infrared and Raman spectroscopic analysis of maturing rabbit cortical bone. <i>Applied Spectroscopy</i> , 2011 , 65, 595-603	3.1	44
166	Ultrasound indentation of bovine knee articular cartilage in situ. <i>Journal of Biomechanics</i> , 2003 , 36, 1259-67	2.5	44
165	Comparison of Diagnostic Performance of Semi-Quantitative Knee Ultrasound and Knee Radiography with MRI: Oulu Knee Osteoarthritis Study. <i>Scientific Reports</i> , 2016 , 6, 22365	4.9	42
164	Quantitative assessment of articular cartilage with morphologic, acoustic and mechanical properties obtained using high-frequency ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2010 , 36, 512-27	3.5	39
163	Quantitative analysis of spatial proteoglycan content in articular cartilage with Fourier transform infrared imaging spectroscopy: Critical evaluation of analysis methods and specificity of the parameters. <i>Microscopy Research and Technique</i> , 2010 , 73, 503-12	2.8	36
162	Quantitative ultrasound imaging of spontaneous repair of porcine cartilage. <i>Osteoarthritis and Cartilage</i> , 2006 , 14, 258-63	6.2	35
161	Electrical and dielectric properties of bovine trabecular bone--relationships with mechanical properties and mineral density. <i>Physics in Medicine and Biology</i> , 2003 , 48, 775-86	3.8	35
160	Cellulose nanofiber aerogels impregnated with bio-based epoxy using vacuum infusion: Structure, orientation and mechanical properties. <i>Composites Science and Technology</i> , 2018 , 155, 64-71	8.6	35
159	Fourier transform infrared spectroscopic imaging and multivariate regression for prediction of proteoglycan content of articular cartilage. <i>PLoS ONE</i> , 2012 , 7, e32344	3.7	34
158	In vivo comparison of delayed gadolinium-enhanced MRI of cartilage and delayed quantitative CT arthrography in imaging of articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2013 , 21, 434-42	6.2	33

157	Orientation anisotropy of quantitative MRI relaxation parameters in ordered tissue. <i>Scientific Reports</i> , 2017 , 7, 9606	4.9	33
156	Arthroscopic Ultrasound Assessment of Articular Cartilage in the Human Knee Joint: A Potential Diagnostic Method. <i>Cartilage</i> , 2011 , 2, 246-53	3	33
155	Quantitative evaluation of spontaneously and surgically repaired rabbit articular cartilage using intra-articular ultrasound method in situ. <i>Ultrasound in Medicine and Biology</i> , 2010 , 36, 833-9	3.5	33
154	Dual energy x-ray laser measurement of calcaneal bone mineral density. <i>Physics in Medicine and Biology</i> , 2003 , 48, 1741-52	3.8	32
153	Quantification of differences in bone texture from plain radiographs in knees with and without osteoarthritis. <i>Osteoarthritis and Cartilage</i> , 2014 , 22, 1724-31	6.2	31
152	Ultrasound arthroscopy of human knee cartilage and subchondral bone in vivo. <i>Ultrasound in Medicine and Biology</i> , 2014 , 40, 2039-47	3.5	30
151	Simulation of Subject-Specific Progression of Knee Osteoarthritis and Comparison to Experimental Follow-up Data: Data from the Osteoarthritis Initiative. <i>Scientific Reports</i> , 2017 , 7, 9177	4.9	30
150	Mechano-acoustic diagnosis of cartilage degeneration and repair. <i>Journal of Bone and Joint Surgery - Series A</i> , 2003 , 85-A Suppl 2, 78-84	5.6	30
149	Comparison of different material models of articular cartilage in 3D computational modeling of the knee: Data from the Osteoarthritis Initiative (OAI). <i>Journal of Biomechanics</i> , 2016 , 49, 3891-3900	2.9	29
148	Vibrational spectroscopy of articular cartilage. <i>Applied Spectroscopy Reviews</i> , 2017 , 52, 249-266	4.5	28
147	Structure-function relationships of human meniscus. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017 , 67, 51-60	4.1	27
146	State of the Art: Imaging of Osteoarthritis-Revisited 2020. <i>Radiology</i> , 2020 , 296, 5-21	20.5	27
145	Site-specific ultrasound reflection properties and superficial collagen content of bovine knee articular cartilage. <i>Physics in Medicine and Biology</i> , 2005 , 50, 3221-33	3.8	27
144	Imaging of subchondral bone by optical coherence tomography upon optical clearing of articular cartilage. <i>Journal of Biophotonics</i> , 2016 , 9, 270-5	3.1	26
143	Arthroscopic ultrasound technique for simultaneous quantitative assessment of articular cartilage and subchondral bone: an in vitro and in vivo feasibility study. <i>Ultrasound in Medicine and Biology</i> , 2013 , 39, 1460-8	3.5	25
142	Association between quantitative MRI and ICRS arthroscopic grading of articular cartilage. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2016 , 24, 2046-54	5.5	24
141	Ultrasound evaluation of mechanical injury of bovine knee articular cartilage under arthroscopic control. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2011 , 58, 148-55	3.2	24
140	Specificity of Fourier Transform Infrared (FTIR) Microspectroscopy to Estimate Depth-Wise Proteoglycan Content in Normal and Osteoarthritic Human Articular Cartilage. <i>Cartilage</i> , 2010 , 1, 262-9 ³		24

139	Improving Robustness of Deep Learning Based Knee MRI Segmentation: Mixup and Adversarial Domain Adaptation 2019 ,		24
138	Nanotechnological Strategies for Osteoarthritis Diagnosis, Monitoring, Clinical Management, and Regenerative Medicine: Recent Advances and Future Opportunities. <i>Current Rheumatology Reports</i> , 2020 , 22, 12	4.9	23
137	Experimental and numerical validation for the novel configuration of an arthroscopic indentation instrument. <i>Physics in Medicine and Biology</i> , 2003 , 48, 1565-76	3.8	23
136	Assessment of risk of femoral neck fracture with radiographic texture parameters: a retrospective study. <i>Radiology</i> , 2014 , 272, 184-91	20.5	22
135	Application of a semi-automatic cartilage segmentation method for biomechanical modeling of the knee joint. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2017 , 20, 1453-1463	2.1	22
134	In-vitro comparison of time-domain, frequency-domain and wavelet ultrasound parameters in diagnostics of cartilage degeneration. <i>Ultrasound in Medicine and Biology</i> , 2008 , 34, 155-9	3.5	21
133	Clinimetrics of ultrasound pathologies in osteoarthritis: systematic literature review and meta-analysis. <i>Osteoarthritis and Cartilage</i> , 2018 , 26, 601-611	6.2	20
132	Composition, structure and tensile biomechanical properties of equine articular cartilage during growth and maturation. <i>Scientific Reports</i> , 2018 , 8, 11357	4.9	20
131	Effects of ultrasound beam angle and surface roughness on the quantitative ultrasound parameters of articular cartilage. <i>Ultrasound in Medicine and Biology</i> , 2009 , 35, 1344-51	3.5	20
130	Effects of Articular Cartilage Constituents on Phosphotungstic Acid Enhanced Micro-Computed Tomography. <i>PLoS ONE</i> , 2017 , 12, e01711075	3.7	20
129	Effects of tofacitinib in early arthritis-induced bone loss in an adjuvant-induced arthritis rat model. <i>Rheumatology</i> , 2018 , 57, 1461-1471	3.9	20
128	Histochemical quantification of collagen content in articular cartilage. <i>PLoS ONE</i> , 2019 , 14, e0224839	3.7	19
127	A Novel Method for Automatic Localization of Joint Area on Knee Plain Radiographs. <i>Lecture Notes in Computer Science</i> , 2017 , 290-301	0.9	19
126	Osteoarthritis year in review 2018: imaging. <i>Osteoarthritis and Cartilage</i> , 2019 , 27, 401-411	6.2	19
125	Effect of celastrol on bone structure and mechanics in arthritic rats. <i>RMD Open</i> , 2017 , 3, e000438	5.9	18
124	Mechano-acoustic determination of Young's modulus of articular cartilage. <i>Biorheology</i> , 2004 , 41, 167-79	1.7	18
123	Elastic, Viscoelastic and Fibril-Reinforced Poroelastic Material Properties of Healthy and Osteoarthritic Human Tibial Cartilage. <i>Annals of Biomedical Engineering</i> , 2019 , 47, 953-966	4.7	17
122	Correlation of Subchondral Bone Density and Structure from Plain Radiographs with Micro Computed Tomography Ex Vivo. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 1698-709	4.7	17

121	Contrast-Enhanced Computed Tomography Enables Quantitative Evaluation of Tissue Properties at Intra-joint Regions in Cadaveric Knee Cartilage. <i>Cartilage</i> , 2017 , 8, 391-399	3	17
120	Elevated adiabatic T and T ₂ in articular cartilage are associated with cartilage and bone lesions in early osteoarthritis: A preliminary study. <i>Journal of Magnetic Resonance Imaging</i> , 2017 , 46, 678-689	5.6	16
119	Automatic Grading of Individual Knee Osteoarthritis Features in Plain Radiographs Using Deep Convolutional Neural Networks. <i>Diagnostics</i> , 2020 , 10,	3.8	16
118	Quantitative susceptibility mapping of articular cartilage: Ex vivo findings at multiple orientations and following different degradation treatments. <i>Magnetic Resonance in Medicine</i> , 2018 , 80, 2702-2716	4.4	15
117	Cationic Contrast Agent Diffusion Differs Between Cartilage and Meniscus. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 2913-2921	4.7	15
116	Clustering of infrared spectra reveals histological zones in intact articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2012 , 20, 460-468	6.2	15
115	Bone healing in rabbit calvarial critical-sized defects filled with stem cells and growth factors combined with granular or solid scaffolds. <i>Child's Nervous System</i> , 2016 , 32, 681-8	1.7	14
114	Site-specific glycosaminoglycan content is better maintained in the pericellular matrix than the extracellular matrix in early post-traumatic osteoarthritis. <i>PLoS ONE</i> , 2018 , 13, e0196203	3.7	14
113	Age-related changes in organization and content of the collagen matrix in rabbit cortical bone. <i>Journal of Orthopaedic Research</i> , 2012 , 30, 435-42	3.8	14
112	Infrared spectroscopic analysis of human and bovine articular cartilage proteoglycans using carbohydrate peak or its second derivative. <i>Journal of Biomedical Optics</i> , 2013 , 18, 097006	3.5	14
111	Trabecular homogeneity index derived from plain radiograph to evaluate bone quality. <i>Journal of Bone and Mineral Research</i> , 2013 , 28, 2584-91	6.3	14
110	Characterization of center frequency and bandwidth of broadband ultrasound reflected by the articular cartilage to subchondral bone interface. <i>Ultrasound in Medicine and Biology</i> , 2011 , 37, 112-21	3.5	14
109	Differences in tibial subchondral bone structure evaluated using plain radiographs between knees with and without cartilage damage or bone marrow lesions - the Oulu Knee Osteoarthritis study. <i>European Radiology</i> , 2017 , 27, 4874-4882	8	13
108	Combination of optical coherence tomography and near infrared spectroscopy enhances determination of articular cartilage composition and structure. <i>Scientific Reports</i> , 2017 , 7, 10586	4.9	13
107	Hypotonic challenge modulates cell volumes differently in the superficial zone of intact articular cartilage and cartilage explant. <i>Biomechanics and Modeling in Mechanobiology</i> , 2012 , 11, 665-75	3.8	13
106	Prediction of compressive stiffness of articular cartilage using Fourier transform infrared spectroscopy. <i>Journal of Biomechanics</i> , 2013 , 46, 1269-75	2.9	13
105	Optical spectral reflectance of human articular cartilage - relationships with tissue structure, composition and mechanical properties. <i>Biomedical Optics Express</i> , 2011 , 2, 1394-402	3.5	13
104	Structural and Compositional Changes in Peri- and Extracellular Matrix of Osteoarthritic Cartilage Modulate Chondrocyte Morphology. <i>Cellular and Molecular Bioengineering</i> , 2011 , 4, 484-494	3.9	13

103	Effects of optical beam angle on quantitative optical coherence tomography (OCT) in normal and surface degenerated bovine articular cartilage. <i>Physics in Medicine and Biology</i> , 2011 , 56, 491-509	3.8	13
102	Micro-CT Analysis of Bone Healing in Rabbit Calvarial Critical-Sized Defects with Solid Bioactive Glass, Tricalcium Phosphate Granules or Autogenous Bone. <i>Journal of Oral & Maxillofacial Research</i> , 2016 , 7, e4	2.1	13
101	Machine Learning Classification of Articular Cartilage Integrity Using Near Infrared Spectroscopy. <i>Cellular and Molecular Bioengineering</i> , 2020 , 13, 219-228	3.9	12
100	Raman microspectroscopic analysis of the tissue-specific composition of the human osteochondral junction in osteoarthritis: A pilot study. <i>Acta Biomaterialia</i> , 2020 , 106, 145-155	10.8	12
99	Cluster analysis of infrared spectra can differentiate intact and repaired articular cartilage. <i>Osteoarthritis and Cartilage</i> , 2013 , 21, 462-9	6.2	12
98	The effect of collagen degradation on chondrocyte volume and morphology in bovine articular cartilage following a hypotonic challenge. <i>Biomechanics and Modeling in Mechanobiology</i> , 2013 , 12, 417-29 ⁸	2.8	12
97	Optical spectral imaging of degeneration of articular cartilage. <i>Journal of Biomedical Optics</i> , 2010 , 15, 046024	3.5	12
96	Collagen XIII-derived ectodomain regulates bone angiogenesis and intracortical remodeling. <i>Matrix Biology</i> , 2019 , 83, 6-25	11.4	11
95	Delivering Agents Locally into Articular Cartilage by Intense MHz Ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2015 , 41, 2259-65	3.5	11
94	Optimal variable selection for Fourier transform infrared spectroscopic analysis of articular cartilage composition. <i>Journal of Biomedical Optics</i> , 2014 , 19, 027003	3.5	11
93	Ability of ultrasound imaging to detect erosions in a bone phantom model. <i>Annals of the Rheumatic Diseases</i> , 2010 , 69, 1618-22	2.4	11
92	Anterior cruciate ligament transection of rabbits alters composition, structure and biomechanics of articular cartilage and chondrocyte deformation 2 weeks post-surgery in a site-specific manner. <i>Journal of Biomechanics</i> , 2020 , 98, 109450	2.9	11
91	Anterior cruciate ligament transection alters the n-3/n-6 fatty acid balance in the lapine infrapatellar fat pad. <i>Lipids in Health and Disease</i> , 2019 , 18, 67	4.4	10
90	Variable angle gray level co-occurrence matrix analysis of T relaxation time maps reveals degenerative changes of cartilage in knee osteoarthritis: Oulu knee osteoarthritis study. <i>Journal of Magnetic Resonance Imaging</i> , 2018 , 47, 1316-1327	5.6	10
89	Cluster analysis of infrared spectra of rabbit cortical bone samples during maturation and growth. <i>Analyst, The</i> , 2010 , 135, 3147-55	5	10
88	Structure-Function Relationships of Healthy and Osteoarthritic Human Tibial Cartilage: Experimental and Numerical Investigation. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 2887-2900	4.7	10
87	3D morphometric analysis of calcified cartilage properties using micro-computed tomography. <i>Osteoarthritis and Cartilage</i> , 2019 , 27, 172-180	6.2	10
86	Ultrasonography of the late-stage knee osteoarthritis prior to total knee arthroplasty: comparison of the ultrasonographic, radiographic and intra-operative findings. <i>Scientific Reports</i> , 2018 , 8, 17742	4.9	10

85	Development of osteoarthritis in patients with degenerative meniscal tears treated with exercise therapy or surgery: a randomized controlled trial. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, 897-906	6.2	9
84	Estimation of the Effect of Body Weight on the Development of Osteoarthritis Based on Cumulative Stresses in Cartilage: Data from the Osteoarthritis Initiative. <i>Annals of Biomedical Engineering</i> , 2018 , 46, 334-344	4.7	9
83	Effects of ultrasound frequency, temporal sampling frequency, and spatial sampling step on the quantitative ultrasound parameters of articular cartilage. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2009 , 56, 1383-93	3.2	9
82	In vitro method for 3D morphometry of human articular cartilage chondrons based on micro-computed tomography. <i>Osteoarthritis and Cartilage</i> , 2018 , 26, 1118-1126	6.2	9
81	Standard radiography: untapped potential in the assessment of osteoporotic fracture risk. <i>European Radiology</i> , 2013 , 23, 1375-82	8	8
80	Micro-Scale Distribution of CA4+ in Ex vivo Human Articular Cartilage Detected with Contrast-Enhanced Micro-Computed Tomography Imaging. <i>Frontiers in Physics</i> , 2017 , 5,	3.9	8
79	Quantification of stiffness change in degenerated articular cartilage using optical coherence tomography-based air-jet indentation. <i>Connective Tissue Research</i> , 2011 , 52, 433-43	3.3	8
78	Undersulfated chondroitin sulfate does not increase in osteoarthritic cartilage. <i>Journal of Rheumatology</i> , 2004 , 31, 2449-53	4.1	8
77	Alterations in structural macromolecules and chondrocyte deformations in lapine retropatellar cartilage 9 weeks after anterior cruciate ligament transection. <i>Journal of Orthopaedic Research</i> , 2018 , 36, 342-350	3.8	7
76	Cell-tissue interactions in osteoarthritic human hip joint articular cartilage. <i>Connective Tissue Research</i> , 2014 , 55, 282-91	3.3	7
75	Early arthritis induces disturbances at bone nanostructural level reflected in decreased tissue hardness in an animal model of arthritis. <i>PLoS ONE</i> , 2018 , 13, e0190920	3.7	7
74	Semixup: In- and Out-of-Manifold Regularization for Deep Semi-Supervised Knee Osteoarthritis Severity Grading From Plain Radiographs. <i>IEEE Transactions on Medical Imaging</i> , 2020 , 39, 4346-4356	11.7	7
73	Bone Density and Texture from Minimally Post-Processed Knee Radiographs in Subjects with Knee Osteoarthritis. <i>Annals of Biomedical Engineering</i> , 2019 , 47, 1181-1190	4.7	7
72	KNEEL: Knee Anatomical Landmark Localization Using Hourglass Networks 2019 ,		7
71	Mineralization of dental tissues and caries lesions detailed with Raman microspectroscopic imaging. <i>Analyst, The</i> , 2021 , 146, 1705-1713	5	7
70	Structure-symptom relationship with wide-area ultrasound scanning of knee osteoarthritis. <i>Scientific Reports</i> , 2017 , 7, 44470	4.9	6
69	Infrared microspectroscopic determination of collagen cross-links in articular cartilage. <i>Journal of Biomedical Optics</i> , 2017 , 22, 35007	3.5	6
68	Automatic grading of individual knee osteoarthritis features in plain radiographs using deep convolutional neural networks. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, S308	6.2	6

67	Near Infrared Spectroscopy Enables Differentiation of Mechanically and Enzymatically Induced Cartilage Injuries. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 2343-2353	4.7	6
66	Three-dimensional microstructure of human meniscus posterior horn in health and osteoarthritis. <i>Osteoarthritis and Cartilage</i> , 2019 , 27, 1790-1799	6.2	6
65	Infrared spectroscopy reveals both qualitative and quantitative differences in equine subchondral bone during maturation. <i>Journal of Biomedical Optics</i> , 2010 , 15, 067003	3.5	6
64	Rapid CT-based Estimation of Articular Cartilage Biomechanics in the Knee Joint Without Cartilage Segmentation. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 2965-2975	4.7	6
63	Adaptive segmentation of knee radiographs for selecting the optimal ROI in texture analysis. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, 941-952	6.2	6
62	Method for Segmentation of Knee Articular Cartilages Based on Contrast-Enhanced CT Images. <i>Annals of Biomedical Engineering</i> , 2018 , 46, 1756-1767	4.7	6
61	Optical coherence tomography enables accurate measurement of equine cartilage thickness for determination of speed of sound. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2016 , 87, 418-24	4.3	5
60	Correlations of low-field NMR and variable-field NMR parameters with osteoarthritis in human articular cartilage under load. <i>NMR in Biomedicine</i> , 2017 , 30, e3738	4.4	5
59	Dependence of light attenuation and backscattering on collagen concentration and chondrocyte density in agarose scaffolds. <i>Physics in Medicine and Biology</i> , 2014 , 59, 6537-48	3.8	5
58	In vivo quantitative ultrasound image analysis of femoral subchondral bone in knee osteoarthritis. <i>Scientific World Journal, The</i> , 2013 , 2013, 182562	2.2	5
57	2-D finite difference time domain model of ultrasound reflection from normal and osteoarthritic human articular cartilage surface. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2010 , 57, 892-9	3.2	5
56	Automating three-dimensional osteoarthritis histopathological grading of human osteochondral tissue using machine learning on contrast-enhanced micro-computed tomography. <i>Osteoarthritis and Cartilage</i> , 2020 , 28, 1133-1144	6.2	5
55	Quantifying Complex Micro-Topography of Degenerated Articular Cartilage Surface by Contrast-Enhanced Micro-Computed Tomography and Parametric Analyses. <i>Journal of Orthopaedic Research</i> , 2019 , 37, 855-866	3.8	4
54	Multiparametric MR imaging reveals early cartilage degeneration at 2 and 8 weeks after ACL transection in a rabbit model. <i>Journal of Orthopaedic Research</i> , 2020 , 38, 1974-1986	3.8	4
53	Trabecular and subchondral bone development of the talus and distal tibia from foal to adult in the warmblood horse. <i>Journal of Veterinary Medicine Series C: Anatomia Histologia Embryologia</i> , 2018 , 47, 206-215	1.1	4
52	An Automatic Regularization Method: An Application for 3-D X-Ray Micro-CT Reconstruction Using Sparse Data. <i>IEEE Transactions on Medical Imaging</i> , 2019 , 38, 417-425	11.7	4
51	Structural risk factors for low-energy acetabular fractures. <i>Bone</i> , 2019 , 127, 334-342	4.7	4
50	Laser-ultrasonic delivery of agents into articular cartilage. <i>Scientific Reports</i> , 2017 , 7, 3991	4.9	4

49	Localization of sentinel nodes in breast cancer: novel method and device to help pen marking of active nodes during gamma camera imaging. <i>Physics in Medicine and Biology</i> , 2005 , 50, N49-54	3.8	4
48	Machine learning based texture analysis of patella from X-rays for detecting patellofemoral osteoarthritis. <i>International Journal of Medical Informatics</i> , 2022 , 157, 104627	5.3	4
47	Local Binary Patterns to Evaluate Trabecular Bone Structure from Micro-CT Data: Application to Studies of Human Osteoarthritis. <i>Lecture Notes in Computer Science</i> , 2015 , 63-79	0.9	4
46	Quantifying Subresolution 3D Morphology of Bone with Clinical Computed Tomography. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 595-605	4.7	4
45	Comparison of bone texture between normal individuals and patients with Kashin-Beck disease from plain radiographs in knee. <i>Scientific Reports</i> , 2018 , 8, 17510	4.9	4
44	Iterative and discrete reconstruction in the evaluation of the rabbit model of osteoarthritis. <i>Scientific Reports</i> , 2018 , 8, 12051	4.9	4
43	Automated detection of patellofemoral osteoarthritis from knee lateral view radiographs using deep learning: data from the Multicenter Osteoarthritis Study (MOST). <i>Osteoarthritis and Cartilage</i> , 2021 , 29, 1432-1447	6.2	4
42	Quantitative information from ultrasound evaluation of articular cartilage should be interpreted with care. <i>Arthroscopy - Journal of Arthroscopic and Related Surgery</i> , 2007 , 23, 1137-8; author reply 1139-41	5.4	3
41	A Lightweight CNN and Joint Shape-Joint Space (JS^2) Descriptor for Radiological Osteoarthritis Detection. <i>Communications in Computer and Information Science</i> , 2020 , 331-345	0.3	3
40	Deep-Learning for Tidemark Segmentation in Human Osteochondral Tissues Imaged with Micro-computed Tomography. <i>Lecture Notes in Computer Science</i> , 2020 , 131-138	0.9	3
39	. <i>IEEE Sensors Journal</i> , 2020 , 20, 143-148	4	3
38	Discrimination of Low-Energy Acetabular Fractures from Controls Using Computed Tomography-Based Bone Characteristics. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 367-381	4.7	3
37	The effect of body configuration on the strain magnitude and distribution within the acetabulum during sideways falls: A finite element approach. <i>Journal of Biomechanics</i> , 2021 , 114, 110156	2.9	3
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