

Edmond Lou

List of Publications by Year in Descending Order

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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.

95
papers

1,299
citations

20
h-index

31
g-index

102
ext. papers

1,632
ext. citations

3
avg, IF

4.6
L-index

#	Paper	IF	Citations
95	Intra- and inter-rater reliabilities and differences of kyphotic angle measurements on ultrasound images versus radiographs for children with adolescent idiopathic scoliosis: a preliminary study.. <i>Spine Deformity</i> , 2022 , 1	2	0
94	Convolutional Neural Network to Segment Laminae on 3D Ultrasound Spinal Images to Assist Cobb Angle Measurement.. <i>Annals of Biomedical Engineering</i> , 2022 , 50, 401	4.7	0
93	Assessing Bone Quality of the Spine in Children with Scoliosis Using the Ultrasound Reflection Frequency Amplitude Index Method: A Preliminary Study.. <i>Ultrasound in Medicine and Biology</i> , 2022 , 48, 808-819	3.5	0
92	Centroid-based Distance Loss Function for Lamina Segmentation in 3D Ultrasound Spine Volumes. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2021 , 2021, 1723-1726	0.9	
91	3D ultrasound navigation system for screw insertion in posterior spine surgery: a phantom study. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2021 , 1	3.9	0
90	Reliability of measurements of a reflection coefficient index to indicate spinal bone strength on adolescents with idiopathic scoliosis (AIS): a pilot study. <i>European Spine Journal</i> , 2021 , 30, 1888-1895	2.7	
89	Automatic Detection and Measurement of Spinous Process Curve on Clinical Ultrasound Spine Images. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021 , 68, 1696-1706	3.2	3
88	Development and Evaluation of CT-to-3D Ultrasound Image Registration Algorithm in Vertebral Phantoms for Spine Surgery. <i>Annals of Biomedical Engineering</i> , 2021 , 49, 310-321	4.7	8
87	Testing of a Strained Silicon Based 3-D Stress Sensor for Out-of-Plane Stress Measurements. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021 , 26, 1076-1083	5.5	2
86	Quantitative imaging of the spine in adolescent idiopathic scoliosis: shifting the paradigm from diagnostic to comprehensive prognostic evaluation. <i>European Journal of Orthopaedic Surgery and Traumatology</i> , 2021 , 31, 1273-1285	2.2	
85	Development of MEMS-based piezoresistive 3D stress/strain sensor using strain technology and smart temperature compensation. <i>Journal of Micromechanics and Microengineering</i> , 2021 , 31, 035010	2	0
84	Assessment of hip displacement in children with cerebral palsy using machine learning approach. <i>Medical and Biological Engineering and Computing</i> , 2021 , 59, 1877-1887	3.1	1
83	Using an artificial neural network to predict the probability of oviposition events of precision-fed broiler breeder hens. <i>Poultry Science</i> , 2021 , 100, 101187	3.9	2
82	Localization of cemento-enamel junction in intraoral ultrasonographs with machine learning. <i>Journal of Dentistry</i> , 2021 , 112, 103752	4.8	4
81	Polyacrylamide/Alginate double-network tough hydrogels for intraoral ultrasound imaging. <i>Journal of Colloid and Interface Science</i> , 2020 , 578, 598-607	9.3	21
80	Hybrid Smart Temperature Compensation System for Piezoresistive 3D Stress Sensors. <i>IEEE Sensors Journal</i> , 2020 , 20, 13310-13317	4	4
79	. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020 , 69, 6412-6419	5.2	7

78	A High Efficiency AC/DC NVC-PSSHI Electrical Interface for Vibration-Based Energy Harvesters. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2020 , 67, 346-355	3.9	3
77	Does image guidance decrease pedicle screw-related complications in surgical treatment of adolescent idiopathic scoliosis: a systematic review update and meta-analysis. <i>European Spine Journal</i> , 2020 , 29, 694-716	2.7	8
76	Development of Doped Silicon Multi-Element Stress Sensor Rosette With Temperature Compensation. <i>IEEE Sensors Journal</i> , 2020 , 20, 1176-1183	4	4
75	. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 646-651	2.9	3
74	The Intelligent Automated Pressure-Adjustable Orthosis for Patients With Adolescent Idiopathic Scoliosis: A Bi-Center Randomized Controlled Trial. <i>Spine</i> , 2020 , 45, 1395-1402	3.3	1
73	Mussel-Inspired Adhesive Double-Network Hydrogel for Intraoral Ultrasound Imaging.. <i>ACS Applied Bio Materials</i> , 2020 , 3, 8943-8952	4.1	4
72	Development of a Self-Monitored 3D Stress Sensor for Adhesive Degradation Detection in Multilayer Assemblies. <i>IEEE Sensors Journal</i> , 2020 , 20, 14676-14684	4	1
71	Nonlinear Inversion of Ultrasonic Dispersion Curves for Cortical Bone Thickness and Elastic Velocities. <i>Annals of Biomedical Engineering</i> , 2019 , 47, 2178-2187	4.7	11
70	A semi-automatic 3D ultrasound reconstruction method to assess the true severity of adolescent idiopathic scoliosis. <i>Medical and Biological Engineering and Computing</i> , 2019 , 57, 2115-2128	3.1	5
69	Investigation of future 3D printed brace design parameters: evaluation of mechanical properties and prototype outcomes. <i>Journal of 3D Printing in Medicine</i> , 2019 , 3, 171-184	1.5	2
68	Imaging Spinal Curvatures of AIS Patients using 3D US Free-hand Fast Reconstruction Method 2019 ,		3
67	Intra- and Interrater Reliability of Cobb Angle Measurements on the Plane of Maximum Curvature Using Ultrasound Imaging Method. <i>Spine Deformity</i> , 2019 , 7, 18-26	2	9
66	Reconstruction and positional accuracy of 3D ultrasound on vertebral phantoms for adolescent idiopathic scoliosis spinal surgery. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2019 , 14, 427-439	3.9	5
65	Assessment of curve progression on children with idiopathic scoliosis using ultrasound imaging method. <i>European Spine Journal</i> , 2018 , 27, 2114-2119	2.7	9
64	Longitudinal Evaluation of Bone-Anchored Hearing Aid Implant Stability Using the Advanced System for Implant Stability Testing (ASIST). <i>Otology and Neurotology</i> , 2018 , 39, e489-e495	2.6	2
63	Intra- and inter-rater reliability of spinal flexibility measurements using ultrasonic (US) images for non-surgical candidates with adolescent idiopathic scoliosis: a pilot study. <i>European Spine Journal</i> , 2018 , 27, 2156-2164	2.7	5
62	Whether Orthotic Management and Exercise are Equally Effective to the Patients With Adolescent Idiopathic Scoliosis in Mainland China?: A Randomized Controlled Trial Study. <i>Spine</i> , 2018 , 43, E494-E503 ^{3.3}		18
61	Radiographic methods to estimate surgical outcomes based on spinal flexibility assessment in patients who have adolescent idiopathic scoliosis: A systematic review. <i>Spine Journal</i> , 2018 , 18, 2128-2139 ⁴		13

60	Factors influencing spinal curvature measurements on ultrasound images for children with adolescent idiopathic scoliosis (AIS). <i>PLoS ONE</i> , 2018 , 13, e0198792	3.7	16
59	Real time monitoring of transtibial elevated vacuum prostheses: A case series on socket air pressure. <i>PLoS ONE</i> , 2018 , 13, e0202716	3.7	3
58	Intraoperative image guidance compared with free-hand methods in adolescent idiopathic scoliosis posterior spinal surgery: a systematic review on screw-related complications and breach rates. <i>Spine Journal</i> , 2017 , 17, 1215-1229	4	46
57	Precision and accuracy of consumer-grade motion tracking system for pedicle screw placement in pediatric spinal fusion surgery. <i>Medical Engineering and Physics</i> , 2017 , 46, 33-43	2.4	5
56	Assessment of Curve Flexibility on Scoliotic Surgical Candidates Using Ultrasound Imaging Method. <i>Ultrasound in Medicine and Biology</i> , 2017 , 43, 934-942	3.5	4
55	How quantity and quality of brace wear affect the brace treatment outcomes for AIS. <i>European Spine Journal</i> , 2016 , 25, 495-9	2.7	20
54	Reliability of the axial vertebral rotation measurements of adolescent idiopathic scoliosis using the center of lamina method on ultrasound images: in vitro and in vivo study. <i>European Spine Journal</i> , 2016 , 25, 3265-3273	2.7	15
53	Validity Study of Vertebral Rotation Measurement Using 3-D Ultrasound in Adolescent Idiopathic Scoliosis. <i>Ultrasound in Medicine and Biology</i> , 2016 , 42, 1473-81	3.5	13
52	Schroth Physiotherapeutic Scoliosis-Specific Exercises Added to the Standard of Care Lead to Better Cobb Angle Outcomes in Adolescents with Idiopathic Scoliosis - an Assessor and Statistician Blinded Randomized Controlled Trial. <i>PLoS ONE</i> , 2016 , 11, e0168746	3.7	44
51	Improvement on the Accuracy and Reliability of Ultrasound Coronal Curvature Measurement on Adolescent Idiopathic Scoliosis With the Aid of Previous Radiographs. <i>Spine</i> , 2016 , 41, 404-11	3.3	20
50	Intra- and Inter-rater Reliability of Coronal Curvature Measurement for Adolescent Idiopathic Scoliosis Using Ultrasonic Imaging Method-A Pilot Study. <i>Spine Deformity</i> , 2015 , 3, 151-158	2	26
49	Reliability and accuracy of ultrasound measurements with and without the aid of previous radiographs in adolescent idiopathic scoliosis (AIS). <i>European Spine Journal</i> , 2015 , 24, 1427-33	2.7	34
48	Predicting success or failure of brace treatment for adolescents with idiopathic scoliosis. <i>Medical and Biological Engineering and Computing</i> , 2015 , 53, 1001-9	3.1	12
47	Imaging Internal Structure of Long Bones Using Wave Scattering Theory. <i>Ultrasound in Medicine and Biology</i> , 2015 , 41, 2955-65	3.5	11
46	Correlation between Cobb angle, spinous process angle (SPA) and apical vertebrae rotation (AVR) on posteroanterior radiographs in adolescent idiopathic scoliosis (AIS). <i>European Spine Journal</i> , 2015 , 24, 306-12	2.7	20
45	3D ultrasound imaging method to assess the true spinal deformity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 1540-3	0.9	4
44	Prescriptive analytics applied to brace treatment for AIS: a pilot demonstration. <i>Scoliosis</i> , 2015 , 10, S13		5
43	The effect of Schroth exercises added to the standard of care on the quality of life and muscle endurance in adolescents with idiopathic scoliosis-an assessor and statistician blinded randomized controlled trial: "SOSORT 2015 Award Winner". <i>Scoliosis</i> , 2015 , 10, 24		68

42	Microfabrication and integration of a sol-gel PZT folded spring energy harvester. <i>Sensors</i> , 2015 , 15, 12213841	3.8	1
41	Reliability and Validity Study of Clinical Ultrasound Imaging on Lateral Curvature of Adolescent Idiopathic Scoliosis. <i>PLoS ONE</i> , 2015 , 10, e0135264	3.7	19
40	Estimation of bone quality on scoliotic subjects using ultrasound reflection imaging method - a preliminary study 2015 ,		2
39	An advanced compliance monitor for patients undergoing brace treatment for idiopathic scoliosis. <i>Medical Engineering and Physics</i> , 2015 , 37, 203-9	2.4	10
38	Human experts and a fuzzy model's predictions of outcomes of scoliosis treatment: a comparative analysis. <i>IEEE Transactions on Biomedical Engineering</i> , 2015 , 62, 1001-1007	5	6
37	Validation of 3D surface reconstruction of vertebrae and spinal column using 3D ultrasound data--a pilot study. <i>Medical Engineering and Physics</i> , 2015 , 37, 239-44	2.4	20
36	Effect of Schroth exercises on curve characteristics and clinical outcomes in adolescent idiopathic scoliosis: protocol for a multicentre randomised controlled trial. <i>Journal of Physiotherapy</i> , 2014 , 60, 234; discussion 234	2.9	15
35	Multichannel filtering and reconstruction of ultrasonic guided wave fields using time intercept-slowness transform. <i>Journal of the Acoustical Society of America</i> , 2014 , 136, 248-59	2.2	18
34	Toward maximum-predictive-value classification. <i>Pattern Recognition</i> , 2014 , 47, 3949-3958	7.7	2
33	Assessing asymmetry using reflection and rotoinversion in biomedical engineering applications. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2014 , 228, 523-529	1.7	16
32	Excitation of ultrasonic Lamb waves using a phased array system with two array probes: phantom and in vitro bone studies. <i>Ultrasonics</i> , 2014 , 54, 1178-85	3.5	33
31	Inertial sensing algorithms for long-term foot angle monitoring for assessment of idiopathic toe-walking. <i>Gait and Posture</i> , 2014 , 39, 485-9	2.6	14
30	Intra- and Interobserver Reliability of the Cobb Angle-Vertebral Rotation Angle-Spinous Process Angle for Adolescent Idiopathic Scoliosis. <i>Spine Deformity</i> , 2014 , 2, 168-175	2	5
29	Quantitative measurement of hip protector use and compliance. <i>Medical and Biological Engineering and Computing</i> , 2014 , 52, 9-15	3.1	3
28	Review of current technologies and methods supplementing brace treatment in adolescent idiopathic scoliosis. <i>Journal of Children's Orthopaedics</i> , 2013 , 7, 309-16	2.1	11
27	Predicting the outcome of brace treatment for scoliosis using conditional fuzzy clustering 2013 ,		4
26	Reliability of assessing the coronal curvature of children with scoliosis by using ultrasound images. <i>Journal of Children's Orthopaedics</i> , 2013 , 7, 521-9	2.1	41
25	Optimization of a Low-Cost Force Sensor for Spinal Orthosis Applications. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2013 , 62, 3243-3250	5.2	8

24	Design and validation of transducers to measure interface force distribution in a spinal orthosis. <i>Medical Engineering and Physics</i> , 2012 , 34, 1310-6	2.4	7
23	Development of a pressure control system for brace treatment of scoliosis. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2012 , 20, 557-63	4.8	10
22	Development of a smart garment to reduce kyphosis during daily living. <i>Medical and Biological Engineering and Computing</i> , 2012 , 50, 1147-54	3.1	12
21	Design and validation of a small-scale 5.9 GHz DSRC system for vehicular communication 2012 ,		3
20	Smart brace versus standard rigid brace for the treatment of scoliosis: a pilot study. <i>Studies in Health Technology and Informatics</i> , 2012 , 176, 338-41	0.5	2
19	Brace wear characteristics during the first 6 months for the treatment of scoliosis. <i>Studies in Health Technology and Informatics</i> , 2012 , 176, 346-9	0.5	4
18	Development and Experimental Evaluation of a Novel Piezoresistive MEMS Strain Sensor. <i>IEEE Sensors Journal</i> , 2011 , 11, 2220-2232	4	13
17	An objective measurement of brace usage for the treatment of adolescent idiopathic scoliosis. <i>Medical Engineering and Physics</i> , 2011 , 33, 290-4	2.4	24
16	Using ultrasound imaging to identify landmarks in vertebra models to assess spinal deformity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 8495-8	0.9	12
15	High-performance piezoresistive MEMS strain sensor with low thermal sensitivity. <i>Sensors</i> , 2011 , 11, 1819-46	3.8	18
14	Optimization of geometric characteristics to improve sensing performance of MEMS piezoresistive strain sensors. <i>Journal of Micromechanics and Microengineering</i> , 2010 , 20, 015015	2	21
13	Score distribution of the scoliosis research society-22 questionnaire in subgroups of patients of all ages with idiopathic scoliosis. <i>Spine</i> , 2010 , 35, 568-77	3.3	25
12	A computer-aided Cobb angle measurement method and its reliability. <i>Journal of Spinal Disorders and Techniques</i> , 2010 , 23, 383-7		34
11	The association between Scoliosis Research Society-22 scores and scoliosis severity changes at a clinically relevant threshold. <i>Spine</i> , 2010 , 35, 315-22	3.3	30
10	Computer-aided assessment of scoliosis on posteroanterior radiographs. <i>Medical and Biological Engineering and Computing</i> , 2010 , 48, 185-95	3.1	34
9	A wireless sensor network system to determine biomechanics of spinal braces during daily living. <i>Medical and Biological Engineering and Computing</i> , 2010 , 48, 235-43	3.1	13
8	Automatic Cobb measurement of scoliosis based on fuzzy Hough Transform with vertebral shape prior. <i>Journal of Digital Imaging</i> , 2009 , 22, 463-72	5.3	39
7	Discriminative and predictive validity of the scoliosis research society-22 questionnaire in management and curve-severity subgroups of adolescents with idiopathic scoliosis. <i>Spine</i> , 2009 , 34, 2450-7	3.7	43

6	High Sensitivity MEMS Strain Sensor: Design and Simulation. <i>Sensors</i> , 2008 , 8, 2642-2661	3.8	41
5	Validity and reliability of active shape models for the estimation of cobb angle in patients with adolescent idiopathic scoliosis. <i>Journal of Digital Imaging</i> , 2008 , 21, 208-18	5.3	40
4	Brace treatment for adolescent idiopathic scoliosis. <i>Studies in Health Technology and Informatics</i> , 2008 , 135, 265-73	0.5	14
3	Score distribution of the Scoliosis Quality of Life Index questionnaire in different subgroups of patients with adolescent idiopathic scoliosis. <i>Spine</i> , 2007 , 32, 1767-77	3.3	18
2	Towards Medical Ultrasound Image Segmentation with Limited Prior Knowledge 2006 ,		1
1	Trunk Distortion in Adolescent Idiopathic Scoliosis. <i>Journal of Pediatric Orthopaedics</i> , 1998 , 18, 222-226	2.4	85