

# Edmond Lou

## List of Publications by Citations

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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	Trunk Distortion in Adolescent Idiopathic Scoliosis. <i>Journal of Pediatric Orthopaedics</i> , <b>1998</b> , 18, 222-226	2.4	85
94	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> , <b>2015</b> , 10, 24		68
93	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> , <b>2017</b> , 17, 1215-1229	4	46
92	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> , <b>2016</b> , 11, e0168746	3.7	44
91	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> , <b>2009</b> , 34, 2450-7	3.3	43
90	Reliability of assessing the coronal curvature of children with scoliosis by using ultrasound images. <i>Journal of Children's Orthopaedics</i> , <b>2013</b> , 7, 521-9	2.1	41
89	High Sensitivity MEMS Strain Sensor: Design and Simulation. <i>Sensors</i> , <b>2008</b> , 8, 2642-2661	3.8	41
88	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> , <b>2008</b> , 21, 208-18	5.3	40
87	Automatic Cobb measurement of scoliosis based on fuzzy Hough Transform with vertebral shape prior. <i>Journal of Digital Imaging</i> , <b>2009</b> , 22, 463-72	5.3	39
86	Reliability and accuracy of ultrasound measurements with and without the aid of previous radiographs in adolescent idiopathic scoliosis (AIS). <i>European Spine Journal</i> , <b>2015</b> , 24, 1427-33	2.7	34
85	A computer-aided Cobb angle measurement method and its reliability. <i>Journal of Spinal Disorders and Techniques</i> , <b>2010</b> , 23, 383-7		34
84	Computer-aided assessment of scoliosis on posteroanterior radiographs. <i>Medical and Biological Engineering and Computing</i> , <b>2010</b> , 48, 185-95	3.1	34
83	Excitation of ultrasonic Lamb waves using a phased array system with two array probes: phantom and in vitro bone studies. <i>Ultrasonics</i> , <b>2014</b> , 54, 1178-85	3.5	33
82	The association between Scoliosis Research Society-22 scores and scoliosis severity changes at a clinically relevant threshold. <i>Spine</i> , <b>2010</b> , 35, 315-22	3.3	30
81	Intra- and Inter-rater Reliability of Coronal Curvature Measurement for Adolescent Idiopathic Scoliosis Using Ultrasonic Imaging Method-A Pilot Study. <i>Spine Deformity</i> , <b>2015</b> , 3, 151-158	2	26
80	Score distribution of the scoliosis research society-22 questionnaire in subgroups of patients of all ages with idiopathic scoliosis. <i>Spine</i> , <b>2010</b> , 35, 568-77	3.3	25
79	An objective measurement of brace usage for the treatment of adolescent idiopathic scoliosis. <i>Medical Engineering and Physics</i> , <b>2011</b> , 33, 290-4	2.4	24

78	Polyacrylamide/Alginate double-network tough hydrogels for intraoral ultrasound imaging. <i>Journal of Colloid and Interface Science</i> , <b>2020</b> , 578, 598-607	9.3	21
77	Optimization of geometric characteristics to improve sensing performance of MEMS piezoresistive strain sensors. <i>Journal of Micromechanics and Microengineering</i> , <b>2010</b> , 20, 015015	2	21
76	How quantity and quality of brace wear affect the brace treatment outcomes for AIS. <i>European Spine Journal</i> , <b>2016</b> , 25, 495-9	2.7	20
75	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> , <b>2015</b> , 24, 306-12	2.7	20
74	Validation of 3D surface reconstruction of vertebrae and spinal column using 3D ultrasound data--a pilot study. <i>Medical Engineering and Physics</i> , <b>2015</b> , 37, 239-44	2.4	20
73	Improvement on the Accuracy and Reliability of Ultrasound Coronal Curvature Measurement on Adolescent Idiopathic Scoliosis With the Aid of Previous Radiographs. <i>Spine</i> , <b>2016</b> , 41, 404-11	3.3	20
72	Reliability and Validity Study of Clinical Ultrasound Imaging on Lateral Curvature of Adolescent Idiopathic Scoliosis. <i>PLoS ONE</i> , <b>2015</b> , 10, e0135264	3.7	19
71	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> , <b>2018</b> , 43, E494-E503 <sup>3.3</sup>	3.3	18
70	Multichannel filtering and reconstruction of ultrasonic guided wave fields using time intercept-slowness transform. <i>Journal of the Acoustical Society of America</i> , <b>2014</b> , 136, 248-59	2.2	18
69	High-performance piezoresistive MEMS strain sensor with low thermal sensitivity. <i>Sensors</i> , <b>2011</b> , 11, 1819-46	3.8	18
68	Score distribution of the Scoliosis Quality of Life Index questionnaire in different subgroups of patients with adolescent idiopathic scoliosis. <i>Spine</i> , <b>2007</b> , 32, 1767-77	3.3	18
67	Factors influencing spinal curvature measurements on ultrasound images for children with adolescent idiopathic scoliosis (AIS). <i>PLoS ONE</i> , <b>2018</b> , 13, e0198792	3.7	16
66	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> , <b>2014</b> , 228, 523-529	1.7	16
65	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> , <b>2016</b> , 25, 3265-3273	2.7	15
64	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> , <b>2014</b> , 60, 234; discussion 234	2.9	15
63	Inertial sensing algorithms for long-term foot angle monitoring for assessment of idiopathic toe-walking. <i>Gait and Posture</i> , <b>2014</b> , 39, 485-9	2.6	14
62	Brace treatment for adolescent idiopathic scoliosis. <i>Studies in Health Technology and Informatics</i> , <b>2008</b> , 135, 265-73	0.5	14
61	Validity Study of Vertebral Rotation Measurement Using 3-D Ultrasound in Adolescent Idiopathic Scoliosis. <i>Ultrasound in Medicine and Biology</i> , <b>2016</b> , 42, 1473-81	3.5	13

60	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> , <b>2018</b> , 18, 2128-2139	4	13
59	Development and Experimental Evaluation of a Novel Piezoresistive MEMS Strain Sensor. <i>IEEE Sensors Journal</i> , <b>2011</b> , 11, 2220-2232	4	13
58	A wireless sensor network system to determine biomechanics of spinal braces during daily living. <i>Medical and Biological Engineering and Computing</i> , <b>2010</b> , 48, 235-43	3.1	13
57	Predicting success or failure of brace treatment for adolescents with idiopathic scoliosis. <i>Medical and Biological Engineering and Computing</i> , <b>2015</b> , 53, 1001-9	3.1	12
56	Development of a smart garment to reduce kyphosis during daily living. <i>Medical and Biological Engineering and Computing</i> , <b>2012</b> , 50, 1147-54	3.1	12
55	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> , <b>2011</b> , 2011, 8495-8	0.9	12
54	Nonlinear Inversion of Ultrasonic Dispersion Curves for Cortical Bone Thickness and Elastic Velocities. <i>Annals of Biomedical Engineering</i> , <b>2019</b> , 47, 2178-2187	4.7	11
53	Imaging Internal Structure of Long Bones Using Wave Scattering Theory. <i>Ultrasound in Medicine and Biology</i> , <b>2015</b> , 41, 2955-65	3.5	11
52	Review of current technologies and methods supplementing brace treatment in adolescent idiopathic scoliosis. <i>Journal of Children's Orthopaedics</i> , <b>2013</b> , 7, 309-16	2.1	11
51	An advanced compliance monitor for patients undergoing brace treatment for idiopathic scoliosis. <i>Medical Engineering and Physics</i> , <b>2015</b> , 37, 203-9	2.4	10
50	Development of a pressure control system for brace treatment of scoliosis. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2012</b> , 20, 557-63	4.8	10
49	Assessment of curve progression on children with idiopathic scoliosis using ultrasound imaging method. <i>European Spine Journal</i> , <b>2018</b> , 27, 2114-2119	2.7	9
48	Intra- and Interrater Reliability of Cobb Angle Measurements on the Plane of Maximum Curvature Using Ultrasound Imaging Method. <i>Spine Deformity</i> , <b>2019</b> , 7, 18-26	2	9
47	Optimization of a Low-Cost Force Sensor for Spinal Orthosis Applications. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2013</b> , 62, 3243-3250	5.2	8
46	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> , <b>2020</b> , 29, 694-716	2.7	8
45	Development and Evaluation of CT-to-3D Ultrasound Image Registration Algorithm in Vertebral Phantoms for Spine Surgery. <i>Annals of Biomedical Engineering</i> , <b>2021</b> , 49, 310-321	4.7	8
44	. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2020</b> , 69, 6412-6419	5.2	7
43	Design and validation of transducers to measure interface force distribution in a spinal orthosis. <i>Medical Engineering and Physics</i> , <b>2012</b> , 34, 1310-6	2.4	7

42	Human experts and a fuzzy model's predictions of outcomes of scoliosis treatment: a comparative analysis. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2015</b> , 62, 1001-1007	5	6
41	Precision and accuracy of consumer-grade motion tracking system for pedicle screw placement in pediatric spinal fusion surgery. <i>Medical Engineering and Physics</i> , <b>2017</b> , 46, 33-43	2.4	5
40	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> , <b>2018</b> , 27, 2156-2164	2.7	5
39	A semi-automatic 3D ultrasound reconstruction method to assess the true severity of adolescent idiopathic scoliosis. <i>Medical and Biological Engineering and Computing</i> , <b>2019</b> , 57, 2115-2128	3.1	5
38	Prescriptive analytics applied to brace treatment for AIS: a pilot demonstration. <i>Scoliosis</i> , <b>2015</b> , 10, S13		5
37	Intra- and Interobserver Reliability of the Cobb Angle-Vertebral Rotation Angle-Spinous Process Angle for Adolescent Idiopathic Scoliosis. <i>Spine Deformity</i> , <b>2014</b> , 2, 168-175	2	5
36	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> , <b>2019</b> , 14, 427-439	3.9	5
35	Assessment of Curve Flexibility on Scoliotic Surgical Candidates Using Ultrasound Imaging Method. <i>Ultrasound in Medicine and Biology</i> , <b>2017</b> , 43, 934-942	3.5	4
34	Hybrid Smart Temperature Compensation System for Piezoresistive 3D Stress Sensors. <i>IEEE Sensors Journal</i> , <b>2020</b> , 20, 13310-13317	4	4
33	Predicting the outcome of brace treatment for scoliosis using conditional fuzzy clustering <b>2013</b> ,		4
32	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> , <b>2015</b> , 2015, 1540-3	0.9	4
31	Development of Doped Silicon Multi-Element Stress Sensor Rosette With Temperature Compensation. <i>IEEE Sensors Journal</i> , <b>2020</b> , 20, 1176-1183	4	4
30	Mussel-Inspired Adhesive Double-Network Hydrogel for Intraoral Ultrasound Imaging.. <i>ACS Applied Bio Materials</i> , <b>2020</b> , 3, 8943-8952	4.1	4
29	Localization of cemento-enamel junction in intraoral ultrasonographs with machine learning. <i>Journal of Dentistry</i> , <b>2021</b> , 112, 103752	4.8	4
28	Brace wear characteristics during the first 6 months for the treatment of scoliosis. <i>Studies in Health Technology and Informatics</i> , <b>2012</b> , 176, 346-9	0.5	4
27	Microfabrication and integration of a sol-gel PZT folded spring energy harvester. <i>Sensors</i> , <b>2015</b> , 15, 12213-12218	3.841	3
26	Quantitative measurement of hip protector use and compliance. <i>Medical and Biological Engineering and Computing</i> , <b>2014</b> , 52, 9-15	3.1	3
25	Design and validation of a small-scale 5.9 GHz DSRC system for vehicular communication <b>2012</b> ,		3

24	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> , <b>2020</b> , 67, 346-355	3.9	3
23	. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 646-651	2.9	3
22	Automatic Detection and Measurement of Spinous Process Curve on Clinical Ultrasound Spine Images. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , <b>2021</b> , 68, 1696-1706	3.2	3
21	Imaging Spinal Curvatures of AIS Patients using 3D US Free-hand Fast Reconstruction Method <b>2019</b> ,		3
20	Real time monitoring of transtibial elevated vacuum prostheses: A case series on socket air pressure. <i>PLoS ONE</i> , <b>2018</b> , 13, e0202716	3.7	3
19	Longitudinal Evaluation of Bone-Anchored Hearing Aid Implant Stability Using the Advanced System for Implant Stability Testing (ASIST). <i>Otology and Neurotology</i> , <b>2018</b> , 39, e489-e495	2.6	2
18	Toward maximum-predictive-value classification. <i>Pattern Recognition</i> , <b>2014</b> , 47, 3949-3958	7.7	2
17	Estimation of bone quality on scoliotic subjects using ultrasound reflection imaging method - a preliminary study <b>2015</b> ,		2
16	Investigation of future 3D printed brace design parameters: evaluation of mechanical properties and prototype outcomes. <i>Journal of 3D Printing in Medicine</i> , <b>2019</b> , 3, 171-184	1.5	2
15	Testing of a Strained Silicon Based 3-D Stress Sensor for Out-of-Plane Stress Measurements. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2021</b> , 26, 1076-1083	5.5	2
14	Using an artificial neural network to predict the probability of oviposition events of precision-fed broiler breeder hens. <i>Poultry Science</i> , <b>2021</b> , 100, 101187	3.9	2
13	Smart brace versus standard rigid brace for the treatment of scoliosis: a pilot study. <i>Studies in Health Technology and Informatics</i> , <b>2012</b> , 176, 338-41	0.5	2
12	Towards Medical Ultrasound Image Segmentation with Limited Prior Knowledge <b>2006</b> ,		1
11	The Intelligent Automated Pressure-Adjustable Orthosis for Patients With Adolescent Idiopathic Scoliosis: A Bi-Center Randomized Controlled Trial. <i>Spine</i> , <b>2020</b> , 45, 1395-1402	3.3	1
10	Development of a Self-Monitored 3D Stress Sensor for Adhesive Degradation Detection in Multilayer Assemblies. <i>IEEE Sensors Journal</i> , <b>2020</b> , 20, 14676-14684	4	1
9	Assessment of hip displacement in children with cerebral palsy using machine learning approach. <i>Medical and Biological Engineering and Computing</i> , <b>2021</b> , 59, 1877-1887	3.1	1
8	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> , <b>2022</b> , 1	2	0
7	3D ultrasound navigation system for screw insertion in posterior spine surgery: a phantom study. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2021</b> , 1	3.9	0

6	Development of MEMS-based piezoresistive 3D stress/strain sensor using strain technology and smart temperature compensation. <i>Journal of Micromechanics and Microengineering</i> , <b>2021</b> , 31, 035010	2	○
5	Convolutional Neural Network to Segment Laminae on 3D Ultrasound Spinal Images to Assist Cobb Angle Measurement.. <i>Annals of Biomedical Engineering</i> , <b>2022</b> , 50, 401	4.7	○
4	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> , <b>2022</b> , 48, 808-819	3.5	○
3	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> , <b>2021</b> , 2021, 1723-1726	0.9	
2	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> , <b>2021</b> , 30, 1888-1895	2.7	
1	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> , <b>2021</b> , 31, 1273-1285	2.2	