Edmond Lou

List of Publications by Year
in descending order

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102	1,938	236925 25	315739 38
papers	citations	h-index	g-index

102	102	102	1568
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Trunk Distortion in Adolescent Idiopathic Scoliosis. Journal of Pediatric Orthopaedics, 1998, 18, 222-226.	1.2	112
2	The effect of Schroth exercises added to the standard of care on the quality of life and muscle endurance in adolescents with idiopathic scoliosisâ€"an assessor and statistician blinded randomized controlled trial: â€œSOSORT 2015 Award Winnerâ€• Scoliosis, 2015, 10, 24.	0.4	106
3	Schroth Physiotherapeutic Scoliosis-Specific Exercises Added to the Standard of Care Lead to Better Cobb Angle Outcomes in Adolescents with Idiopathic Scoliosis â€“ an Assessor and Statistician Blinded Randomized Controlled Trial. PLoS ONE, 2016, 11, e0168746.	2.5	87
4	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. Spine Journal, 2017, 17, 1215-1229.	1.3	72
5	Automatic Cobb Measurement of Scoliosis Based on Fuzzy Hough Transform with Vertebral Shape Prior. Journal of Digital Imaging, 2009, 22, 463-472.	2.9	59
6	Reliability of assessing the coronal curvature of children with scoliosis by using ultrasound images. Journal of Children's Orthopaedics, 2013, 7, 521-529.	1.1	56
7	Discriminative and Predictive Validity of the Scoliosis Research Society-22 Questionnaire in Management and Curve-Severity Subgroups of Adolescents With Idiopathic Scoliosis. Spine, 2009, 34, 2450-2457.	2.0	53
8	High Sensitivity MEMS Strain Sensor: Design and Simulation. Sensors, 2008, 8, 2642-2661.	3.8	50
9	Reliability and accuracy of ultrasound measurements with and without the aid of previous radiographs in adolescent idiopathic scoliosis (AIS). European Spine Journal, 2015, 24, 1427-1433.	2.2	50
10	Validity and Reliability of Active Shape Models for the Estimation of Cobb Angle in Patients with Adolescent Idiopathic Scoliosis. Journal of Digital Imaging, 2008, 21, 208-218.	2.9	48
11	Computer-aided assessment of scoliosis on posteroanterior radiographs. Medical and Biological Engineering and Computing, 2010, 48, 185-195.	2.8	46
12	A Computer-aided Cobb Angle Measurement Method and its Reliability. Journal of Spinal Disorders and Techniques, 2010, 23, 383-387.	1.9	44
13	Excitation of ultrasonic Lamb waves using a phased array system with two array probes: Phantom and in vitro bone studies. Ultrasonics, 2014, 54, 1178-1185.	3.9	43
14	An objective measurement of brace usage for the treatment of adolescent idiopathic scoliosis. Medical Engineering and Physics, 2011, 33, 290-294.	1.7	38
15	Polyacrylamide/Alginate double-network tough hydrogels for intraoral ultrasound imaging. Journal of Colloid and Interface Science, 2020, 578, 598-607.	9.4	38
16	The Association Between Scoliosis Research Society-22 Scores and Scoliosis Severity Changes at a Clinically Relevant Threshold. Spine, 2010, 35, 315-322.	2.0	37
17	Intra- and Inter-rater Reliability of Coronal Curvature Measurement for Adolescent Idiopathic Scoliosis Using Ultrasonic Imaging Methodâ€"A Pilot Study. Spine Deformity, 2015, 3, 151-158.	1.5	35
18	Score Distribution of the Scoliosis Research Society-22 Questionnaire in Subgroups of Patients of All Ages With Idiopathic Scoliosis. Spine, 2010, 35, 568-577.	2.0	33

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19	Reliability and Validity Study of Clinical Ultrasound Imaging on Lateral Curvature of Adolescent Idiopathic Scoliosis. PLoS ONE, 2015, 10, e0135264.	2.5	32
20	Whether Orthotic Management and Exercise are Equally Effective to the Patients With Adolescent Idiopathic Scoliosis in Mainland China?. Spine, 2018, 43, E494-E503.	2.0	31
21	How quantity and quality of brace wear affect the brace treatment outcomes for AIS. European Spine Journal, 2016, 25, 495-499.	2.2	29
22	Effect of Schroth exercises on curve characteristics and clinical outcomes in adolescent idiopathic scoliosis: protocol for a multicentre randomised controlled trial. Journal of Physiotherapy, 2014, 60, 234.	1.7	28
23	Validation of 3D surface reconstruction of vertebrae and spinal column using 3D ultrasound data â€“ A pilot study. Medical Engineering and Physics, 2015, 37, 239-244.	1.7	27
24	Correlation between Cobb angle, spinous process angle (SPA) and apical vertebrae rotation (AVR) on posteroanterior radiographs in adolescent idiopathic scoliosis (AIS). European Spine Journal, 2015, 24, 306-312.	2.2	27
25	Optimization of geometric characteristics to improve sensing performance of MEMS piezoresistive strain sensors. Journal of Micromechanics and Microengineering, 2010, 20, 015015.	2.6	26
26	Improvement on the Accuracy and Reliability of Ultrasound Coronal Curvature Measurement on Adolescent Idiopathic Scoliosis With the Aid of Previous Radiographs. Spine, 2016, 41, 404-411.	2.0	26
27	High-Performance Piezoresistive MEMS Strain Sensor with Low Thermal Sensitivity. Sensors, 2011, 11, 1819-1846.	3.8	24
28	Multichannel filtering and reconstruction of ultrasonic guided wave fields using time intercept-slowness transform. Journal of the Acoustical Society of America, 2014, 136, 248-259.	1.1	24
29	Score Distribution of the Scoliosis Quality of Life Index Questionnaire in Different Subgroups of Patients With Adolescent Idiopathic Scoliosis. Spine, 2007, 32, 1767-1777.	2.0	23
30	Does image guidance decrease pedicle screw-related complications in surgical treatment of adolescent idiopathic scoliosis: a systematic review update and meta-analysis. European Spine Journal, 2020, 29, 694-716.	2.2	22
31	A wireless sensor network system to determine biomechanics of spinal braces during daily living. Medical and Biological Engineering and Computing, 2010, 48, 235-243.	2.8	21
32	Factors influencing spinal curvature measurements on ultrasound images for children with adolescent idiopathic scoliosis (AIS). PLoS ONE, 2018, 13, e0198792.	2.5	21
33	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. European Spine Journal, 2016, 25, 3265-3273.	2.2	20
34	Using ultrasound imaging to identify landmarks in vertebra models to assess spinal deformity. , 2011, 2011, 8495-8.		19
35	Assessing asymmetry using reflection and rotoinversion in biomedical engineering applications. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2014, 228, 523-529.	1.8	19
36	Validity Study of Vertebral Rotation Measurement Using 3-D Ultrasound in Adolescent Idiopathic Scoliosis. Ultrasound in Medicine and Biology, 2016, 42, 1473-1481.	1.5	19

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37	Nonlinear Inversion of Ultrasonic Dispersion Curves for Cortical Bone Thickness and Elastic Velocities. Annals of Biomedical Engineering, 2019, 47, 2178-2187.	2.5	19
38	Development and Experimental Evaluation of a Novel Piezoresistive MEMS Strain Sensor. IEEE Sensors Journal, 2011, 11, 2220-2232.	4.7	18
39	Predicting success or failure of brace treatment for adolescents with idiopathic scoliosis. Medical and Biological Engineering and Computing, 2015, 53, 1001-1009.	2.8	18
40	Localization of cementoenamel junction in intraoral ultrasonographs with machine learning. Journal of Dentistry, 2021, 112, 103752.	4.1	18
41	Mussel-Inspired Adhesive Double-Network Hydrogel for Intraoral Ultrasound Imaging. ACS Applied Bio Materials, 2020, 3, 8943-8952.	4.6	17
42	Imaging Internal Structure of Long Bones Using Wave ScatteringÂTheory. Ultrasound in Medicine and Biology, 2015, 41, 2955-2965.	1.5	16
43	Radiographic methods to estimate surgical outcomes based on spinal flexibility assessment in patients who have adolescent idiopathic scoliosis: A systematic review. Spine Journal, 2018, 18, 2128-2139.	1.3	16
44	Automatic Detection and Measurement of Spinous Process Curve on Clinical Ultrasound Spine Images. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 1696-1706.	3.0	16
45	Development of a smart garment to reduce kyphosis during daily living. Medical and Biological Engineering and Computing, 2012, 50, 1147-1154.	2.8	15
46	Review of current technologies and methods supplementing brace treatment in adolescent idiopathic scoliosis. Journal of Children's Orthopaedics, 2013, 7, 309-316.	1.1	15
47	Inertial sensing algorithms for long-term foot angle monitoring for assessment of idiopathic toe-walking. Gait and Posture, 2014, 39, 485-489.	1.4	15
48	An advanced compliance monitor for patients undergoing brace treatment for idiopathic scoliosis. Medical Engineering and Physics, 2015, 37, 203-209.	1.7	15
49	Brace treatment for adolescent idiopathic scoliosis. Studies in Health Technology and Informatics, 2008, 135, 265-73.	0.3	14
50	Intra- and Interrater Reliability of Cobb Angle Measurements on the Plane of Maximum Curvature Using Ultrasound Imaging Method. Spine Deformity, 2019, 7, 18-26.	1.5	13
51	Positional and Orientational Accuracy of 3-D Ultrasound Navigation System on Vertebral Phantom Study. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 6412-6419.	4.7	13
52	Optimization of a Low-Cost Force Sensor for Spinal Orthosis Applications. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 3243-3250.	4.7	12
53	Assessment of curve progression on children with idiopathic scoliosis using ultrasound imaging method. European Spine Journal, 2018, 27, 2114-2119.	2.2	12
54	Development of a Pressure Control System for Brace Treatment of Scoliosis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 557-563.	4.9	11

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55	Intra- and inter-rater reliability of spinal flexibility measurements using ultrasonic (US) images for non-surgical candidates with adolescent idiopathic scoliosis: a pilot study. European Spine Journal, 2018, 27, 2156-2164.	2.2	11
56	A semi-automatic 3D ultrasound reconstruction method to assess the true severity of adolescent idiopathic scoliosis. Medical and Biological Engineering and Computing, 2019, 57, 2115-2128.	2.8	9
57	Investigation of future 3D printed brace design parameters: evaluation of mechanical properties and prototype outcomes. Journal of 3D Printing in Medicine, 2019, 3, 171-184.	2.0	9
58	A High Efficiency AC/DC NVC-PSSHI Electrical Interface for Vibration-Based Energy Harvesters. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 346-355.	5.4	9
59	Development and Evaluation of CT-to-3D Ultrasound Image Registration Algorithm in Vertebral Phantoms for Spine Surgery. Annals of Biomedical Engineering, 2021, 49, 310-321.	2.5	9
60	Design and validation of transducers to measure interface force distribution in a spinal orthosis. Medical Engineering and Physics, 2012, 34, 1310-1316.	1.7	8
61	Intra- and Interobserver Reliability of the Cobb Angleâ€“Vertebral Rotation Angleâ€“Spinous Process Angle for Adolescent Idiopathic Scoliosis. Spine Deformity, 2014, 2, 168-175.	1.5	8
62	Hybrid Smart Temperature Compensation System for Piezoresistive 3D Stress Sensors. IEEE Sensors Journal, 2020, 20, 13310-13317.	4.7	8
63	Using an artificial neural network to predict the probability of oviposition events of precision-fed broiler breeder hens. Poultry Science, 2021, 100, 101187.	3.4	8
64	Human Expertsâ€™ and a Fuzzy Model's Predictions of Outcomes of Scoliosis Treatment: A Comparative Analysis. IEEE Transactions on Biomedical Engineering, 2015, 62, 1001-1007.	4.2	7
65	Development of Doped Silicon Multi-Element Stress Sensor Rosette With Temperature Compensation. IEEE Sensors Journal, 2020, 20, 1176-1183.	4.7	7
66	The Intelligent Automated Pressure-Adjustable Orthosis for Patients With Adolescent Idiopathic Scoliosis. Spine, 2020, 45, 1395-1402.	2.0	7
67	Precision and accuracy of consumer-grade motion tracking system for pedicle screw placement in pediatric spinal fusion surgery. Medical Engineering and Physics, 2017, 46, 33-43.	1.7	6
68	Reconstruction and positional accuracy of 3D ultrasound on vertebral phantoms for adolescent idiopathic scoliosis spinal surgery. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 427-439.	2.8	6
69	Using machine learning to automatically measure axial vertebral rotation on radiographs in adolescents with idiopathic scoliosis. Medical Engineering and Physics, 2022, 107, 103848.	1.7	6
70	Predicting the outcome of brace treatment for scoliosis using conditional fuzzy clustering. , 2013, , .		5
71	3D ultrasound imaging method to assess the true spinal deformity. , 2015, 2015, 1540-3.		5
72	Prescriptive analytics applied to brace treatment for AIS: a pilot demonstration. Scoliosis, 2015, 10, S13.	0.4	5

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73	Imaging Spinal Curvatures of AIS Patients using 3D US Free-hand Fast Reconstruction Method. , 2019, , .		5
74	3D ultrasound navigation system for screw insertion in posterior spine surgery: a phantom study. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 271-281.	2.8	5
75	Nonoperative management of adolescent idiopathic scoliosis (AIS) using braces. Prosthetics and Orthotics International, 2022, Publish Ahead of Print, .	1.0	5
76	Design and validation of a small-scale 5.9 GHz DSRC system for vehicular communication. , 2012, , .		4
77	Quantitative measurement of hip protector use and compliance. Medical and Biological Engineering and Computing, 2014, 52, 9-15.	2.8	4
78	Toward maximum-predictive-value classification. Pattern Recognition, 2014, 47, 3949-3958.	8.1	4
79	Microfabrication and Integration of a Sol-Gel PZT Folded Spring Energy Harvester. Sensors, 2015, 15, 12218-12241.	3.8	4
80	Assessment of Curve Flexibility on Scoliotic Surgical Candidates Using Ultrasound Imaging Method. Ultrasound in Medicine and Biology, 2017, 43, 934-942.	1.5	4
81	Longitudinal Evaluation of Bone-Anchored Hearing Aid Implant Stability Using the Advanced System for Implant Stability Testing (ASIST). Otology and Neurotology, 2018, 39, e489-e495.	1.3	4
82	Real time monitoring of transtibial elevated vacuum prostheses: A case series on socket air pressure. PLoS ONE, 2018, 13, e0202716.	2.5	4
83	Development of MEMS-based piezoresistive 3D stress/strain sensor using strain technology and smart temperature compensation. Journal of Micromechanics and Microengineering, 2021, 31, 035010.	2.6	4
84	Assessment of hip displacement in children with cerebral palsy using machine learning approach. Medical and Biological Engineering and Computing, 2021, 59, 1877-1887.	2.8	4
85	Brace wear characteristics during the first 6 months for the treatment of scoliosis. Studies in Health Technology and Informatics, 2012, 176, 346-9.	0.3	4
86	Immediate Outcomes and Benefits of 3D Printed Braces for the Treatment of Adolescent Idiopathic Scoliosis. Frontiers in Rehabilitation Sciences, 2022, 3, .	1.2	4
87	Convolutional Neural Network to Segment Laminae on 3D Ultrasound Spinal Images to Assist Cobb Angle Measurement. Annals of Biomedical Engineering, 2022, 50, 401-412.	2.5	4
88	Estimation of bone quality on scoliotic subjects using ultrasound reflection imaging method - a preliminary study. , 2015, , .		3
89	A New Approach for Developing a 3-D Stress Sensing Rosette Featuring Strain Engineering. IEEE Transactions on Electron Devices, 2020, 67, 646-651.	3.0	3
90	Automatic spinal curvature measurement on ultrasound spine images using Faster R-CNN. , 2021, , .		3

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91	Smart brace versus standard rigid brace for the treatment of scoliosis: a pilot study. Studies in Health Technology and Informatics, 2012, 176, 338-41.	0.3	3
92	Testing of a Strained Silicon Based 3-D Stress Sensor for Out-of-Plane Stress Measurements. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1076-1083.	5.8	2
93	Quantitative imaging of the spine in adolescent idiopathic scoliosis: shifting the paradigm from diagnostic to comprehensive prognostic evaluation. European Journal of Orthopaedic Surgery and Traumatology, 2021, 31, 1273-1285.	1.4	2
94	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. Spine Deformity, 2022, 10, 501-507.	1.5	2
95	Applying a Convolutional Neural Network Based Iterative Algorithm to Automatically Measure Spinal Curvature on Radiographs for Children with Scoliosis. Journal of Medical and Biological Engineering, 2022, 42, 388-396.	1.8	2
96	Towards Medical Ultrasound Image Segmentation with Limited Prior Knowledge. , 2006, , .		1
97	Development of a Self-Monitored 3D Stress Sensor for Adhesive Degradation Detection in Multilayer Assemblies. IEEE Sensors Journal, 2020, 20, 14676-14684.	4.7	1
98	Assessing Bone Quality of the Spine in Children with Scoliosis Using the Ultrasound Reflection Frequency Amplitude Index Method: A Preliminary Study. Ultrasound in Medicine and Biology, 2022, 48, 808-819.	1.5	1
99	Compliance study of hip protector users for prevention of fragility fracture: A pilot randomized trial. Prosthetics and Orthotics International, 2022, Publish Ahead of Print, .	1.0	1
100	Wireless implantable sensor platform. , 2010, , .		0
101	Reliability of measurements of a reflection coefficient index to indicate spinal bone strength on adolescents with idiopathic scoliosis (AIS): a pilot study. European Spine Journal, 2021, 30, 1888-1895.	2.2	0
102	Centroid-based Distance Loss Function for Lamina Segmentation in 3D Ultrasound Spine Volumes. , 2021, 2021, 1723-1726.		0