

Edmond Lou

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5999698/publications.pdf>

Version: 2024-02-01

102
papers

1,938
citations

236925

25
h-index

315739

38
g-index

102
all docs

102
docs citations

102
times ranked

1568
citing authors

#	ARTICLE	IF	CITATIONS
1	3D ultrasound navigation system for screw insertion in posterior spine surgery: a phantom study. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2022, 17, 271-281.	2.8	5
2	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, 10, 501-507.	1.5	2
3	Immediate Outcomes and Benefits of 3D Printed Braces for the Treatment of Adolescent Idiopathic Scoliosis. <i>Frontiers in Rehabilitation Sciences</i> , 2022, 3, .	1.2	4
4	Convolutional Neural Network to Segment Laminae on 3D Ultrasound Spinal Images to Assist Cobb Angle Measurement. <i>Annals of Biomedical Engineering</i> , 2022, 50, 401-412.	2.5	4
5	Nonoperative management of adolescent idiopathic scoliosis (AIS) using braces. <i>Prosthetics and Orthotics International</i> , 2022, Publish Ahead of Print, .	1.0	5
6	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.	1.5	1
7	Compliance study of hip protector users for prevention of fragility fracture: A pilot randomized trial. <i>Prosthetics and Orthotics International</i> , 2022, Publish Ahead of Print, .	1.0	1
8	Applying a Convolutional Neural Network Based Iterative Algorithm to Automatically Measure Spinal Curvature on Radiographs for Children with Scoliosis. <i>Journal of Medical and Biological Engineering</i> , 2022, 42, 388-396.	1.8	2
9	Using machine learning to automatically measure axial vertebral rotation on radiographs in adolescents with idiopathic scoliosis. <i>Medical Engineering and Physics</i> , 2022, 107, 103848.	1.7	6
10	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.	2.5	9
11	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.	5.8	2
12	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.	1.4	2
13	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.	2.6	4
14	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.	2.2	0
15	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.	3.0	16
16	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.	2.8	4
17	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.	3.4	8
18	Localization of cementoenamel junction in intraoral ultrasonographs with machine learning. <i>Journal of Dentistry</i> , 2021, 112, 103752.	4.1	18

#	ARTICLE	IF	CITATIONS
19	Automatic spinal curvature measurement on ultrasound spine images using Faster R-CNN. , 2021, , .		3
20	Centroid-based Distance Loss Function for Lamina Segmentation in 3D Ultrasound Spine Volumes. , 2021, 2021, 1723-1726.		0
21	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
22	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
23	Development of Doped Silicon Multi-Element Stress Sensor Rosette With Temperature Compensation. IEEE Sensors Journal, 2020, 20, 1176-1183.	4.7	7
24	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
25	The Intelligent Automated Pressure-Adjustable Orthosis for Patients With Adolescent Idiopathic Scoliosis. Spine, 2020, 45, 1395-1402.	2.0	7
26	Mussel-Inspired Adhesive Double-Network Hydrogel for Intraoral Ultrasound Imaging. ACS Applied Bio Materials, 2020, 3, 8943-8952.	4.6	17
27	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
28	Polyacrylamide/Alginate double-network tough hydrogels for intraoral ultrasound imaging. Journal of Colloid and Interface Science, 2020, 578, 598-607.	9.4	38
29	Hybrid Smart Temperature Compensation System for Piezoresistive 3D Stress Sensors. IEEE Sensors Journal, 2020, 20, 13310-13317.	4.7	8
30	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
31	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
32	Nonlinear Inversion of Ultrasonic Dispersion Curves for Cortical Bone Thickness and Elastic Velocities. Annals of Biomedical Engineering, 2019, 47, 2178-2187.	2.5	19
33	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
34	Imaging Spinal Curvatures of AIS Patients using 3D US Free-hand Fast Reconstruction Method. , 2019, , .		5
35	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
36	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

#	ARTICLE	IF	CITATIONS
37	Assessment of curve progression on children with idiopathic scoliosis using ultrasound imaging method. <i>European Spine Journal</i> , 2018, 27, 2114-2119.	2.2	12
38	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.	1.3	4
39	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.	2.2	11
40	Whether Orthotic Management and Exercise are Equally Effective to the Patients With Adolescent Idiopathic Scoliosis in Mainland China?. <i>Spine</i> , 2018, 43, E494-E503.	2.0	31
41	Real time monitoring of transtibial elevated vacuum prostheses: A case series on socket air pressure. <i>PLoS ONE</i> , 2018, 13, e0202716.	2.5	4
42	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.	1.3	16
43	Factors influencing spinal curvature measurements on ultrasound images for children with adolescent idiopathic scoliosis (AIS). <i>PLoS ONE</i> , 2018, 13, e0198792.	2.5	21
44	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.	1.3	72
45	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.	1.7	6
46	Assessment of Curve Flexibility on Scoliotic Surgical Candidates Using Ultrasound Imaging Method. <i>Ultrasound in Medicine and Biology</i> , 2017, 43, 934-942.	1.5	4
47	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, 404-411.	2.0	26
48	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.	2.2	20
49	Validity Study of Vertebral Rotation Measurement Using 3-D Ultrasound in Adolescent Idiopathic Scoliosis. <i>Ultrasound in Medicine and Biology</i> , 2016, 42, 1473-1481.	1.5	19
50	How quantity and quality of brace wear affect the brace treatment outcomes for AIS. <i>European Spine Journal</i> , 2016, 25, 495-499.	2.2	29
51	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.	2.5	87
52	3D ultrasound imaging method to assess the true spinal deformity. , 2015, 2015, 1540-3.		5
53	Prescriptive analytics applied to brace treatment for AIS: a pilot demonstration. <i>Scoliosis</i> , 2015, 10, S13.	0.4	5
54	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.	0.4	106

#	ARTICLE	IF	CITATIONS
55	Microfabrication and Integration of a Sol-Gel PZT Folded Spring Energy Harvester. <i>Sensors</i> , 2015, 15, 12218-12241.	3.8	4
56	Reliability and Validity Study of Clinical Ultrasound Imaging on Lateral Curvature of Adolescent Idiopathic Scoliosis. <i>PLoS ONE</i> , 2015, 10, e0135264.	2.5	32
57	Estimation of bone quality on scoliotic subjects using ultrasound reflection imaging method - a preliminary study. , 2015, , .		3
58	An advanced compliance monitor for patients undergoing brace treatment for idiopathic scoliosis. <i>Medical Engineering and Physics</i> , 2015, 37, 203-209.	1.7	15
59	Human Expertsâ€™ 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.	4.2	7
60	Validation of 3D surface reconstruction of vertebrae and spinal column using 3D ultrasound data â€” A pilot study. <i>Medical Engineering and Physics</i> , 2015, 37, 239-244.	1.7	27
61	Intra- and Inter-rater Reliability of Coronal Curvature Measurement for Adolescent Idiopathic Scoliosis Using Ultrasonic Imaging Methodâ€”A Pilot Study. <i>Spine Deformity</i> , 2015, 3, 151-158.	1.5	35
62	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, 1427-1433.	2.2	50
63	Predicting success or failure of brace treatment for adolescents with idiopathic scoliosis. <i>Medical and Biological Engineering and Computing</i> , 2015, 53, 1001-1009.	2.8	18
64	Imaging Internal Structure of Long Bones Using Wave Scattering Theory. <i>Ultrasound in Medicine and Biology</i> , 2015, 41, 2955-2965.	1.5	16
65	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, 306-312.	2.2	27
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> , 2014, 228, 523-529.	1.8	19
67	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, 1178-1185.	3.9	43
68	Inertial sensing algorithms for long-term foot angle monitoring for assessment of idiopathic toe-walking. <i>Gait and Posture</i> , 2014, 39, 485-489.	1.4	15
69	Intra- and Interobserver Reliability of the Cobb Angleâ€”Vertebral Rotation Angleâ€”Spinous Process Angle for Adolescent Idiopathic Scoliosis. <i>Spine Deformity</i> , 2014, 2, 168-175.	1.5	8
70	Quantitative measurement of hip protector use and compliance. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 9-15.	2.8	4
71	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.	1.7	28
72	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, 248-259.	1.1	24

#	ARTICLE	IF	CITATIONS
73	Toward maximum-predictive-value classification. <i>Pattern Recognition</i> , 2014, 47, 3949-3958.	8.1	4
74	Review of current technologies and methods supplementing brace treatment in adolescent idiopathic scoliosis. <i>Journal of Children's Orthopaedics</i> , 2013, 7, 309-316.	1.1	15
75	Predicting the outcome of brace treatment for scoliosis using conditional fuzzy clustering. , 2013, , .		5
76	Reliability of assessing the coronal curvature of children with scoliosis by using ultrasound images. <i>Journal of Children's Orthopaedics</i> , 2013, 7, 521-529.	1.1	56
77	Optimization of a Low-Cost Force Sensor for Spinal Orthosis Applications. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2013, 62, 3243-3250.	4.7	12
78	Design and validation of transducers to measure interface force distribution in a spinal orthosis. <i>Medical Engineering and Physics</i> , 2012, 34, 1310-1316.	1.7	8
79	Development of a Pressure Control System for Brace Treatment of Scoliosis. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2012, 20, 557-563.	4.9	11
80	Development of a smart garment to reduce kyphosis during daily living. <i>Medical and Biological Engineering and Computing</i> , 2012, 50, 1147-1154.	2.8	15
81	Design and validation of a small-scale 5.9 GHz DSRC system for vehicular communication. , 2012, , .		4
82	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.	0.3	3
83	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.	0.3	4
84	Using ultrasound imaging to identify landmarks in vertebra models to assess spinal deformity. , 2011, 2011, 8495-8.		19
85	Development and Experimental Evaluation of a Novel Piezoresistive MEMS Strain Sensor. <i>IEEE Sensors Journal</i> , 2011, 11, 2220-2232.	4.7	18
86	An objective measurement of brace usage for the treatment of adolescent idiopathic scoliosis. <i>Medical Engineering and Physics</i> , 2011, 33, 290-294.	1.7	38
87	High-Performance Piezoresistive MEMS Strain Sensor with Low Thermal Sensitivity. <i>Sensors</i> , 2011, 11, 1819-1846.	3.8	24
88	Score Distribution of the Scoliosis Research Society-22 Questionnaire in Subgroups of Patients of All Ages With Idiopathic Scoliosis. <i>Spine</i> , 2010, 35, 568-577.	2.0	33
89	A Computer-aided Cobb Angle Measurement Method and its Reliability. <i>Journal of Spinal Disorders and Techniques</i> , 2010, 23, 383-387.	1.9	44
90	The Association Between Scoliosis Research Society-22 Scores and Scoliosis Severity Changes at a Clinically Relevant Threshold. <i>Spine</i> , 2010, 35, 315-322.	2.0	37

#	ARTICLE	IF	CITATIONS
91	Computer-aided assessment of scoliosis on posteroanterior radiographs. Medical and Biological Engineering and Computing, 2010, 48, 185-195.	2.8	46
92	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
93	Wireless implantable sensor platform. , 2010, , .		0
94	Optimization of geometric characteristics to improve sensing performance of MEMS piezoresistive strain sensors. Journal of Micromechanics and Microengineering, 2010, 20, 015015.	2.6	26
95	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
96	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
97	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
98	High Sensitivity MEMS Strain Sensor: Design and Simulation. Sensors, 2008, 8, 2642-2661.	3.8	50
99	Brace treatment for adolescent idiopathic scoliosis. Studies in Health Technology and Informatics, 2008, 135, 265-73.	0.3	14
100	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
101	Towards Medical Ultrasound Image Segmentation with Limited Prior Knowledge. , 2006, , .		1
102	Trunk Distortion in Adolescent Idiopathic Scoliosis. Journal of Pediatric Orthopaedics, 1998, 18, 222-226.	1.2	112