

E M Abdel-Rahman

List of Publications by Citations

Source: <https://exaly.com/author-pdf/4171924/e-m-abdel-rahman-publications-by-citations.pdf>

Version: 2024-04-17

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

142
papers

3,714
citations

27
h-index

58
g-index

168
ext. papers

4,250
ext. citations

3.5
avg, IF

5.53
L-index

#	Paper	IF	Citations
142	. <i>Journal of Microelectromechanical Systems</i> , 2003 , 12, 672-680	2.5	416
141	Characterization of the mechanical behavior of an electrically actuated microbeam. <i>Journal of Micromechanics and Microengineering</i> , 2002 , 12, 759-766	2	337
140	Dynamic pull-in phenomenon in MEMS resonators. <i>Nonlinear Dynamics</i> , 2007 , 48, 153-163	5	333
139	A wideband vibration-based energy harvester. <i>Journal of Micromechanics and Microengineering</i> , 2008 , 18, 115021	2	223
138	Reduced-Order Models for MEMS Applications. <i>Nonlinear Dynamics</i> , 2005 , 41, 211-236	5	212
137	Three-dimensional dynamic behaviour of the human knee joint under impact loading. <i>Medical Engineering and Physics</i> , 1998 , 20, 276-90	2.4	104
136	A reduced-order model for electrically actuated microplates. <i>Journal of Micromechanics and Microengineering</i> , 2004 , 14, 900-906	2	102
135	Modeling and design of variable-geometry electrostatic microactuators. <i>Journal of Micromechanics and Microengineering</i> , 2005 , 15, 419-429	2	100
134	Secondary resonances of electrically actuated resonant microsensors. <i>Journal of Micromechanics and Microengineering</i> , 2003 , 13, 491-501	2	98
133	A Design Procedure for Wideband Micropower Generators. <i>Journal of Microelectromechanical Systems</i> , 2009 , 18, 1288-1299	2.5	63
132	Nonlinear dynamics of a resonant gas sensor. <i>Nonlinear Dynamics</i> , 2010 , 59, 607-618	5	59
131	A two-dimensional dynamic anatomical model of the human knee joint. <i>Journal of Biomechanical Engineering</i> , 1993 , 115, 357-65	2.1	57
130	Dynamics and Global Stability of Beam-based Electrostatic Microactuators. <i>JVC/Journal of Vibration and Control</i> , 2010 , 16, 721-748	2	55
129	Dynamic analysis of variable-geometry electrostatic microactuators. <i>Journal of Micromechanics and Microengineering</i> , 2006 , 16, 2449-2457	2	55
128	Nonlinear Analysis of MEMS Electrostatic Microactuators: Primary and Secondary Resonances of the First Mode*. <i>JVC/Journal of Vibration and Control</i> , 2010 , 16, 1321-1349	2	53
127	Modeling and performance study of a beam microgyroscope. <i>Journal of Sound and Vibration</i> , 2010 , 329, 4970-4979	3.9	40
126	A large-stroke electrostatic micro-actuator. <i>Journal of Micromechanics and Microengineering</i> , 2011 , 21, 075023	2	37

125	Contact force identification using the subharmonic resonance of a contact-mode atomic force microscopy. <i>Nanotechnology</i> , 2005 , 16, 199-207	3.4	37
124	Dynamics of a close-loop controlled MEMS resonator. <i>Nonlinear Dynamics</i> , 2012 , 69, 615-633	5	35
123	Jerk as an indicator of physical exertion and fatigue. <i>Automation in Construction</i> , 2019 , 104, 120-128	9.6	34
122	Vibrations of balanced fault-free ball bearings. <i>Journal of Sound and Vibration</i> , 2010 , 329, 1332-1347	3.9	34
121	Nanogenerators based on vertically aligned InN nanowires. <i>Nanoscale</i> , 2016 , 8, 2097-106	7.7	30
120	Modal interactions in contact-mode atomic force microscopes. <i>Nonlinear Dynamics</i> , 2008 , 54, 151-166	5	30
119	Nonlinear Dynamics of a Boom Crane. <i>JVC/Journal of Vibration and Control</i> , 2001 , 7, 199-220	2	28
118	Experience, Productivity, and Musculoskeletal Injury among Masonry Workers. <i>Journal of Construction Engineering and Management - ASCE</i> , 2017 , 143, 05017003	4.2	27
117	Identifying poses of safe and productive masons using machine learning. <i>Automation in Construction</i> , 2017 , 84, 345-355	9.6	27
116	Modeling and analysis of electrostatic MEMS filters. <i>Nonlinear Dynamics</i> , 2010 , 60, 385-401	5	27
115	Pendulation Reduction in Boom Cranes Using Cable Length Manipulation. <i>Nonlinear Dynamics</i> , 2002 , 27, 255-269	5	27
114	Binary MEMS gas sensors. <i>Journal of Micromechanics and Microengineering</i> , 2014 , 24, 065007	2	23
113	Doped Polyaniline for the Detection of Formaldehyde. <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 2012 , 49, 1-6	2.2	22
112	Dynamic actuation methods for capacitive MEMS shunt switches. <i>Journal of Micromechanics and Microengineering</i> , 2011 , 21, 035009	2	21
111	Analysis of a Chaotic Electrostatic Micro-Oscillator. <i>Journal of Computational and Nonlinear Dynamics</i> , 2011 , 6,	1.4	21
110	Two-to-one internal resonance in microscanners. <i>Nonlinear Dynamics</i> , 2009 , 57, 231-251	5	19
109	Towards a stable low-voltage torsional microscanner. <i>Microsystem Technologies</i> , 2008 , 14, 725-737	1.7	19
108	Porosity Modulated High-Performance Piezoelectric Nanogenerator Based on Organic/Inorganic Nanomaterials for Self-Powered Structural Health Monitoring. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 47503-47512	9.5	19

107	A novel differential frequency micro-gyroscope. <i>JVC/Journal of Vibration and Control</i> , 2015 , 21, 872-882	2	18
106	Surface and thermal load effects on the buckling of curved nanowires	2014 , 17, 279-283	17
105	A mechanical thermal noise analysis of a nonlinear microgyroscope. <i>Mechanical Systems and Signal Processing</i> , 2017 , 83, 163-175	7.8	17
104	Dynamic bifurcation MEMS gas sensors. <i>Journal of Micromechanics and Microengineering</i> , 2019 , 29, 015005	0.5	17
103	Primary resonance of a beam-rigid body microgyroscope. <i>International Journal of Non-Linear Mechanics</i> , 2015 , 77, 364-375	2.8	16
102	Electrostatic arch micro-tweezers. <i>International Journal of Non-Linear Mechanics</i> , 2020 , 118, 103298	2.8	16
101	A High Performance and Consolidated Piezoelectric Energy Harvester Based on 1D/2D Hybrid Zinc Oxide Nanostructures. <i>Advanced Materials Interfaces</i> , 2018 , 5, 1801167	4.6	16
100	Static and Dynamic Behavior of an Electrically Excited Resonant Microbeam	2002 ,	14
99	A Tunable MEMS Magnetic Sensor. <i>Journal of Microelectromechanical Systems</i> , 2017 , 26, 255-263	2.5	13
98	Modeling MEMS Resonators Past Pull-In. <i>Journal of Computational and Nonlinear Dynamics</i> , 2011 , 6,	1.4	13
97	Analysis of Relationships between Body Load and Training, Work Methods, and Work Rate: Overcoming the Novice Mason's Risk Hump. <i>Journal of Construction Engineering and Management - ASCE</i> , 2020 , 146, 04020097	4.2	12
96	Nonlinear Parameter Identification of a Resonant Electrostatic MEMS Actuator. <i>Sensors</i> , 2017 , 17,	3.8	11
95	Performance optimization of p-n homojunction nanowire-based piezoelectric nanogenerators through control of doping concentration. <i>Journal of Applied Physics</i> , 2015 , 118, 094307	2.5	11
94	A comparative study of in-field motion capture approaches for body kinematics measurement in construction. <i>Robotica</i> , 2019 , 37, 928-946	2.1	11
93	On modeling beam-rigid-body microgyroscopes. <i>Applied Mathematical Modelling</i> , 2017 , 42, 753-760	4.5	10
92	A parametric study of the nonlinear dynamics and sensitivity of a beam-rigid body microgyroscope. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2017 , 50, 180-192	3.7	9
91	Bifurcation-based MEMS mass sensors. <i>International Journal of Mechanical Sciences</i> , 2020 , 180, 105705	5.5	9
90	Wideband, low-frequency springless vibration energy harvesters: part I. <i>Journal of Micromechanics and Microengineering</i> , 2016 , 26, 115021	2	9

89	2013,		9
88	An ultrasensitive heart-failure BNP biosensor using B/N co-doped graphene oxide gel FET. <i>Biosensors and Bioelectronics</i> , 2021 , 180, 113114	11.8	9
87	Architecture for MEMS-based analogue demodulation. <i>Journal of Micromechanics and Microengineering</i> , 2013 , 23, 045013	2	8
86	Electromechanical coupling in electrostatic micro-power generators. <i>Smart Materials and Structures</i> , 2010 , 19, 025007	3.4	8
85	Two-Dimensional Control for Ship-Mounted Cranes: A Feasibility Study. <i>JVC/Journal of Vibration and Control</i> , 2003 , 9, 1327-1342	2	8
84	Finite-Amplitude Motions of Beam Resonators and Their Stability. <i>Journal of Computational and Theoretical Nanoscience</i> , 2004 , 1, 385-391	0.3	8
83	A Human Body Posture Sensor for Monitoring and Diagnosing MSD Risk Factors 2013,		8
82	Arch microbeam bifurcation gas sensors. <i>Nonlinear Dynamics</i> , 2021 , 104, 923-940	5	8
81	A square wave is the most efficient and reliable waveform for resonant actuation of micro switches. <i>Journal of Micromechanics and Microengineering</i> , 2018 , 28, 055002	2	7
80	Measuring the Quality Factor in MEMS Devices. <i>Micromachines</i> , 2015 , 6, 1935-1945	3.3	7
79	Electromagnetic Impact Vibration Energy Harvesters. <i>Springer Proceedings in Physics</i> , 2015 , 29-58	0.2	7
78	High-efficiency passive full wave rectification for electromagnetic harvesters. <i>Journal of Applied Physics</i> , 2014 , 116, 134902	2.5	7
77	Dynamic Pull-in of Shunt Capacitive MEMS Switches. <i>Procedia Chemistry</i> , 2009 , 1, 622-625		7
76	A Nonlinear Reduced-Order Model for Electrostatic MEMS 2003 , 1771		7
75	A unified model for electrostatic sensors in fluid media. <i>Nonlinear Dynamics</i> , 2020 , 101, 271-291	5	7
74	Dimpled electrostatic MEMS actuators. <i>Journal of Applied Physics</i> , 2019 , 125, 024304	2.5	7
73	On the Use of the Subharmonic Resonance as a Method for Filtration. <i>Journal of Computational and Nonlinear Dynamics</i> , 2011 , 6,	1.4	6
72	Inertial Motion Capture-Based Whole-Body Inverse Dynamics. <i>Sensors</i> , 2021 , 21,	3.8	6

71	Large oscillation of electrostatically actuated curved beams. <i>Journal of Micromechanics and Microengineering</i> , 2020 , 30, 095005	2	6
70	Health and productivity impact of semi-automated work systems in construction. <i>Automation in Construction</i> , 2020 , 120, 103396	9.6	6
69	Analysis of the Limits of Automated Rule-Based Ergonomic Assessment in Bricklaying. <i>Journal of Construction Engineering and Management - ASCE</i> , 2021 , 147, 04020163	4.2	6
68	Detection of cyclic-fold bifurcation in electrostatic MEMS transducers by motion-induced current. <i>Journal of Micromechanics and Microengineering</i> , 2017 , 27, 085007	2	5
67	Nonlinear Analysis and Performance of Electret-Based Microcantilever Energy Harvesters. <i>Energies</i> , 2019 , 12, 4249	3.1	5
66	Contact damping in microelectromechanical actuators. <i>Applied Physics Letters</i> , 2014 , 105, 253501	3.4	5
65	A Mass Sensing Technique for Electrostatically-Actuated MEMS 2009 ,		5
64	Modeling of Contact and Stiction in Electrostatic Microcantilever Actuators. <i>Journal of Nanotechnology in Engineering and Medicine</i> , 2012 , 3,		5
63	Design and modeling of a wideband MEMS-based energy harvester with experimental verification 2008 ,		5
62	Axisymmetric Natural Frequencies of Statically Loaded Annular Plates. <i>Shock and Vibration</i> , 2003 , 10, 301-312	1.1	5
61	Automated Monitoring of Physical Fatigue Using Jerk 2019 ,		5
60	Fatigue Detection Using Phase-Space Warping. <i>Journal of Biomechanical Engineering</i> , 2017 , 139,	2.1	4
59	Nonlinear dynamic modeling of a V-shaped metal based thermally driven MEMS actuator for RF switches. <i>Journal of Micromechanics and Microengineering</i> , 2018 , 28, 054004	2	4
58	Modeling of low-damping laterally actuated electrostatic MEMS. <i>Mechatronics</i> , 2018 , 52, 1-6	3	4
57	Dual actuation micro-mirrors. <i>Journal of Micromechanics and Microengineering</i> , 2018 , 28, 075014	2	4
56	Wideband, low-frequency springless vibration energy harvesters: part II. <i>Journal of Micromechanics and Microengineering</i> , 2016 , 26, 115022	2	4
55	Cascade-type hybrid energy cells for driving wireless sensors. <i>Nano Energy</i> , 2016 , 26, 641-647	17.1	4
54	Low-voltage closed loop MEMS actuators. <i>Nonlinear Dynamics</i> , 2012 , 69, 565-575	5	4

53	Springless Vibration Energy Harvesters 2010 ,		4
52	Nonlinear Modeling and Analysis of a Vertical Springless Energy Harvester. <i>MATEC Web of Conferences</i> , 2012 , 1, 01004	0.3	4
51	On Design and Analysis of Electrostatic Arch Micro-Tweezers. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2021 , 143,	1.6	4
50	Colocalized Sensing and Intelligent Computing in Micro-Sensors. <i>Sensors</i> , 2020 , 20,	3.8	4
49	Quasi-Static Pull-in: an Instability in Electrostatic Actuators. <i>Scientific Reports</i> , 2020 , 10, 4990	4.9	3
48	Prototypes of a Field Disruption Energy Harvester 2012 ,		3
47	Nonlinear Feedback Control and Dynamics of an Electrostatically Actuated Microbeam Filter 2008 ,		3
46	A Study of Noise Impact on the Stability of Electrostatic MEMS. <i>Journal of Computational and Nonlinear Dynamics</i> , 2020 , 15,	1.4	3
45	Motion Data Based Construction Worker Training Support Tool: Case Study of Masonry Work 2018 ,		3
44	Switching intermittency. <i>Applied Physics Letters</i> , 2018 , 113, 153501	3.4	3
43	Aqueous Media Electrostatic MEMS Sensors 2019 ,		2
42	Modeling and analysis of a horizontally-aligned energy harvester. <i>MATEC Web of Conferences</i> , 2014 , 16, 01003	0.3	2
41	Out-of-Plane Continuous Electrostatic Micro-Power Generators. <i>Sensors</i> , 2017 , 17,	3.8	2
40	Nonlinear Dynamics of a Beam-Rigid Body Microgyroscope 2014 ,		2
39	Output Power Optimization for Electromagnetic Vibration Energy Harvesters 2010 ,		2
38	Special issue on micro- and nano-electromechanical systems. <i>Nonlinear Dynamics</i> , 2008 , 54, 1-2	5	2
37	Chaos in Healthy Ball Bearings 2007 , 369		2
36	Dynamics of Variable-Geometry Electrostatic Microactuators 2006 , 273		2

35	A Technique to Detect Fatigue in the Lower Limbs 2014 ,		2
34	A Subharmonic Resonance-Based MEMS Filter 2007 ,		2
33	Analysis of response to thermal noise in electrostatic MEMS bifurcation sensors. <i>Nonlinear Dynamics</i> ,1	5	2
32	Measurement of In-Plane Motions in MEMS. <i>Sensors</i> , 2020 , 20,	3.8	2
31	Characterization of Shear Horizontal Waves Using a 1D Laser Doppler Vibrometer. <i>Sensors</i> , 2021 , 21,	3.8	2
30	An overview of sensors and sensing materials for heavy metals in aqueous environments. <i>Canadian Journal of Chemical Engineering</i> ,	2.3	2
29	Reliability Criteria for Thick Bonding Wire. <i>Materials</i> , 2018 , 11,	3.5	2
28	The impact of thermal-noise on bifurcation MEMS sensors. <i>Mechanical Systems and Signal Processing</i> , 2021 , 161, 107941	7.8	2
27	Electronic field effect detection of SARS-CoV-2 N-protein before the onset of symptoms.. <i>Biosensors and Bioelectronics</i> , 2022 , 210, 114331	11.8	2
26	Techniques for dynamic analysis of bonding wire. <i>Microelectronics Reliability</i> , 2016 , 58, 73-81	1.2	1
25	A Parametric Study of the Response of a Beam-Rigid-Body Microgyroscope 2014 ,		1
24	Test and Validation of a Nonlinear Electromagnetic Energy Harvester 2014 ,		1
23	The application of a new beam-rigid body MEMS gyroscope in the frequency-modulation mode 2014 ,		1
22	Model for nano-scale bonding wires under thermal loading 2014 ,		1
21	Analysis of out-of-plane Micro-Power Generators 2012 ,		1
20	Lorentz force transduction for RF micromechanical filters 2011 ,		1
19	Lorentz-force transduction for RF micromechanical filters. <i>Journal of Micromechanics and Microengineering</i> , 2012 , 22, 035018	2	1
18	Low voltage electrostatic actuation and angular displacement measurement of micromirror coupled with resonant drive circuit 2012 ,		1

17	Low Voltage Electrostatic Actuation and Displacement Measurement Through Resonant Drive Circuit 2012,			1
16	A Study of Subharmonic Excitation of Mechanically Coupled Microbeams for Filtration 2008,			1
15	Static and Dynamic Analysis of a Bistable Micro-Actuator 2008,			1
14	Modelling MEMS Resonators Past Pull-In 2008,			1
13	Quadratic controller for a chaotic micro-resonator 2009,			1
12	Mechanical Behavior of an Electrostatically Actuated Microplate 2003, 1875			1
11	Long-Term Stability of Ferroelectret Energy Harvesters. <i>Materials</i> , 2019, 13,	3.5		1
10	Analysis of tunable Bleustein-Gulyaev permittivity sensors. <i>Journal of Applied Physics</i> , 2021, 129, 164501	2.5		1
9	Automatic clustering of proper working postures for phases of movement. <i>Automation in Construction</i> , 2022, 138, 104223	9.6		1
8	Highly Sensitive Self-Actuated Zinc Oxide Resonant Microcantilever Humidity Sensor.. <i>Nano Letters</i> , 2022,	11.5		1
7	Detection of Volatile Organic Compounds by Using MEMS Sensors. <i>Sensors</i> , 2022, 22, 4102	3.8		1
6	Measurement of the electric permittivity using Bleustein-Gulyaev wave sensor. <i>Journal of Micromechanics and Microengineering</i> , 2022, 32, 034004	2		0
5	Evaluation of Silicon Nanonet Field Effect Transistor as Photodiodes. <i>Proceedings (mdpi)</i> , 2018, 2, 124	0.3		
4	Control of a Digital Micromirror Device Using Input Shaping 2007, 237			
3	Analysis of new actuation methods for capacitive shunt micro switches. <i>MATEC Web of Conferences</i> , 2016, 83, 04003	0.3		
2	Single Input Single Output MEMS Gas Sensor 2022, 321-334			
1	Performance and Ergonomic Characteristics of Expert Masons. <i>Lecture Notes in Civil Engineering</i> , 2023, 505-515	0.3		