Nizar Lajnef

List of Publications by Year
in descending order

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49 papers	1,506 citations	331670 21 h-index	315739 38 g-index
49 all docs	49 docs citations	49 times ranked	1269 citing authors

#	Article	IF	Citations
1	Internet of Things-enabled smart cities: State-of-the-art and future trends. Measurement: Journal of the International Measurement Confederation, 2018, 129, 589-606.	5.0	264
2	Feasibility of structural monitoring with vibration powered sensors. Smart Materials and Structures, 2006, 15, 977-986.	3.5	166
3	Continuous health monitoring of pavement systems using smart sensing technology. Construction and Building Materials, 2016, 114, 719-736.	7.2	100
4	An intelligent structural damage detection approach based on self-powered wireless sensor data. Automation in Construction, 2016, 62, 24-44.	9.8	89
5	Toward an Integrated Smart Sensing System and Data Interpretation Techniques for Pavement Fatigue Monitoring. Computer-Aided Civil and Infrastructure Engineering, 2011, 26, 513-523.	9.8	72
6	Detection of fatigue cracking in steel bridge girders: A support vector machine approach. Archives of Civil and Mechanical Engineering, 2017, 17, 609-622.	3.8	67
7	Calibration and Characterization of Self-Powered Floating-Gate Usage Monitor With Single Electron per Second Operational Limit. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 556-567.	5.4	52
8	Fatigue cracking detection in steel bridge girders through a self-powered sensing concept. Journal of Constructional Steel Research, 2017, 128, 19-38.	3.9	51
9	A comprehensive review of self-powered sensors in civil infrastructure: State-of-the-art and future research trends. Engineering Structures, 2021, 234, 111963.	5.3	49
10	Damage detection using self-powered wireless sensor data: An evolutionary approach. Measurement: Journal of the International Measurement Confederation, 2016, 82, 254-283.	5.0	46
11	A Piezo-Powered Floating-Gate Sensor Array for Long-Term Fatigue Monitoring in Biomechanical Implants. IEEE Transactions on Biomedical Circuits and Systems, 2008, 2, 164-172.	4.0	45
12	Multilayered Cylindrical Triboelectric Nanogenerator to Harvest Kinetic Energy of Tree Branches for Monitoring Environment Condition and Forest Fire. Advanced Functional Materials, 2020, 30, 2003598.	14.9	39
13	Monitoring of Postoperative Bone Healing Using Smart Trauma-Fixation Device With Integrated Self-Powered Piezo-Floating-Gate Sensors. IEEE Transactions on Biomedical Engineering, 2016, 63, 1463-1472.	4.2	33
14	A self-powered surface sensing approach for detection of bottom-up cracking in asphalt concrete pavements: Theoretical/numerical modeling. Construction and Building Materials, 2017, 144, 728-746.	7.2	32
15	A new approach for damage detection in asphalt concrete pavements using battery-free wireless sensors with non-constant injection rates. Measurement: Journal of the International Measurement Confederation, 2017, 110, 217-229.	5.0	32
16	Structural health monitoring of steel frames using a network of self-powered strain and acceleration sensors: A numerical study. Automation in Construction, 2018, 85, 344-357.	9.8	32
17	Enhancement of quasi-static strain energy harvesters using non-uniform cross-section post-buckled beams. Smart Materials and Structures, 2017, 26, 085045.	3.5	29
18	Self-Powered Piezo-Floating-Gate Smart-Gauges Based on Quasi-Static Mechanical Energy Concentrators and Triggers. IEEE Sensors Journal, 2015, 15, 676-683.	4.7	23

#	Article	IF	Citations
19	Static and dynamic post-buckling analyses of irregularly constrained beams under the small and large deformation assumptions. International Journal of Mechanical Sciences, 2017, 124-125, 203-215.	6.7	22
20	A new solution of measuring thermal response of prestressed concrete bridge girders for structural health monitoring. Measurement Science and Technology, 2017, 28, 085005.	2.6	22
21	Post-buckling response of non-uniform cross-section bilaterally constrained beams. Mechanics Research Communications, 2016, 78, 42-50.	1.8	21
22	Large deformation solutions to post-buckled beams confined by movable and flexible constraints: A static and dynamic analysis. International Journal of Solids and Structures, 2017, 128, 85-98.	2.7	21
23	Self-powered piezo-floating-gate sensors for health monitoring of steel plates. Engineering Structures, 2017, 148, 584-601.	5.3	20
24	An Intelligent Model for the Prediction of Bond Strength of FRP Bars in Concrete: A Soft Computing Approach. Technologies, 2019, 7, 42.	5.1	18
25	Environment-Friendly, Self-Sensing Concrete Blended with Byproduct Wastes. Sensors, 2020, 20, 1925.	3.8	18
26	Piezo-powered floating gate injector for self-powered fatigue monitoring in biomechanical implants. , 2007, , .		15
27	Multi-walled Carbon Nanotubes/Poly(L-lactide) Nanocomposite Strain Sensor for Biomechanical Implants. , 2007, , .		15
28	Small and large deformation models of post-buckled beams under lateral constraints. Mathematics and Mechanics of Solids, 2019, 24, 386-405.	2.4	15
29	Damage growth detection in steel plates: Numerical and experimental studies. Engineering Structures, 2016, 128, 124-138.	5.3	14
30	Damage localization and quantification in gusset plates: A battery-free sensing approach. Structural Control and Health Monitoring, 2018, 25, e2158.	4.0	10
31	An energy harvesting and damage sensing solution based on postbuckling response of nonuniform crossâ€section beams. Structural Control and Health Monitoring, 2018, 25, e2052.	4.0	10
32	Quasi-Self-Powered Piezo-Floating-Gate Sensing Technology for Continuous Monitoring of Large-Scale Bridges. Frontiers in Built Environment, 2019, 5, .	2.3	10
33	Design of a CMOS System-on-Chip for Passive, Near-Field Ultrasonic Energy Harvesting and Back-Telemetry. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2016, 24, 544-554.	3.1	7
34	Self-Triggered Thermomechanical Metamaterials with Asymmetric Structures for Programmable Response under Thermal Excitations. Materials, 2021, 14, 2177.	2.9	7
35	Infrasonic power-harvesting and nanowatt self-powered sensors. , 2009, , .		6
36	Quasi-self-powered Infrastructural Internet of Things. , 2018, , .		5

#	Article	IF	Citations
37	Data Compression Approach for Long-Term Monitoring of Pavement Structures. Infrastructures, 2020, 5, 1.	2.8	5
38	Self-charging and self-monitoring smart civil infrastructure systems: current practice and future trends. , 2019, , .		5
39	An energy harvesting solution based on the post-buckling response of non-prismatic slender beams. Proceedings of SPIE, 2017, , .	0.8	4
40	A Novel Data Reduction Approach for Structural Health Monitoring Systems. Sensors, 2019, 19, 4823.	3.8	4
41	A new method for detection of fatigue cracking in steel bridge girders using self-powered wireless sensors. , 2017, , .		3
42	Calibration and characterization of self-powered floating-gate sensor arrays for long-term fatigue monitoring. , 2008, , .		2
43	Quasi-static self-powered sensing and data logging. Proceedings of SPIE, 2014, , .	0.8	2
44	Structural health monitoring using a hybrid network of self-powered accelerometer and strain sensors. Proceedings of SPIE, 2017, , .	0.8	2
45	Damage Detection in Pavement Structures Using Self-powered Sensors. RILEM Bookseries, 2016, , 665-671.	0.4	2
46	Triboelectric Nanogenerators: Multilayered Cylindrical Triboelectric Nanogenerator to Harvest Kinetic Energy of Tree Branches for Monitoring Environment Condition and Forest Fire (Adv. Funct.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	14.9	0
47	A multistable mechanism to detect thermal limits for structural health monitoring (SHM). , 2019, , .		0
48	Monitoring Road Pavement Performance Through a Novel Data Processing Approach, Accelerated Pavement Test Results. Lecture Notes in Civil Engineering, 2020, , 545-554.	0.4	0
49	A sub-microwatt piezo-floating-gate sensor for long-term fatigue monitoring in biomechanical implants. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0