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	Self-Triggered Thermomechanical Metamaterials with Asymmetric Structures for Programmable Response under Thermal Excitations. Materials, 2021, 14, 2177.	2.9	7
2	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
3	Triboelectric Nanogenerators: Multilayered Cylindrical Triboelectric Nanogenerator to Harvest Kinetic Energy of Tree Branches for Monitoring Environment Condition and Forest Fire (Adv. Funct.) Tj ETQq1 1 0.784314 rgBT /Overlock	14.9	37
4	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
5	Data Compression Approach for Long-Term Monitoring of Pavement Structures. Infrastructures, 2020, 5, 1.	2.8	5
6	Environment-Friendly, Self-Sensing Concrete Blended with Byproduct Wastes. Sensors, 2020, 20, 1925.	3.8	18
7	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
8	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
9	A Novel Data Reduction Approach for Structural Health Monitoring Systems. Sensors, 2019, 19, 4823.	3.8	4
10	Quasi-Self-Powered Piezo-Floating-Gate Sensing Technology for Continuous Monitoring of Large-Scale Bridges. Frontiers in Built Environment, 2019, 5, .	2.3	10
11	Small and large deformation models of post-buckled beams under lateral constraints. Mathematics and Mechanics of Solids, 2019, 24, 386-405.	2.4	15
12	Self-charging and self-monitoring smart civil infrastructure systems: current practice and future trends. , 2019, , .		5
13	A multistable mechanism to detect thermal limits for structural health monitoring (SHM). , 2019, , .		0
14	Damage localization and quantification in gusset plates: A battery-free sensing approach. Structural Control and Health Monitoring, 2018, 25, e2158.	4.0	10
15	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
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	Quasi-self-powered Infrastructural Internet of Things. , 2018, , .		5
18	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

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19	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
20	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
21	Structural health monitoring using a hybrid network of self-powered accelerometer and strain sensors. Proceedings of SPIE, 2017, , .	0.8	2
22	An energy harvesting solution based on the post-buckling response of non-prismatic slender beams. Proceedings of SPIE, 2017, , .	0.8	4
23	A new method for detection of fatigue cracking in steel bridge girders using self-powered wireless sensors. , 2017, , .		3
24	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
25	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
26	Self-powered piezo-floating-gate sensors for health monitoring of steel plates. Engineering Structures, 2017, 148, 584-601.	5.3	20
27	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
28	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
29	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
30	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
31	Continuous health monitoring of pavement systems using smart sensing technology. Construction and Building Materials, 2016, 114, 719-736.	7.2	100
32	Post-buckling response of non-uniform cross-section bilaterally constrained beams. Mechanics Research Communications, 2016, 78, 42-50.	1.8	21
33	Damage growth detection in steel plates: Numerical and experimental studies. Engineering Structures, 2016, 128, 124-138.	5.3	14
34	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
35	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
36	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

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37	An intelligent structural damage detection approach based on self-powered wireless sensor data. Automation in Construction, 2016, 62, 24-44.	9.8	89
38	Damage Detection in Pavement Structures Using Self-powered Sensors. RILEM Bookseries, 2016, , 665-671.	0.4	2
39	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
40	Quasi-static self-powered sensing and data logging. Proceedings of SPIE, 2014, , .	0.8	2
41	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
42	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
43	Infrasonic power-harvesting and nanowatt self-powered sensors. , 2009, , .		6
44	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
45	Calibration and characterization of self-powered floating-gate sensor arrays for long-term fatigue monitoring. , 2008, , .		2
46	Piezo-powered floating gate injector for self-powered fatigue monitoring in biomechanical implants. , 2007, , .		15
47	Multi-walled Carbon Nanotubes/Poly(L-lactide) Nanocomposite Strain Sensor for Biomechanical Implants. , 2007, , .		15
48	Feasibility of structural monitoring with vibration powered sensors. Smart Materials and Structures, 2006, 15, 977-986.	3.5	166
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