

Bin Gao

List of Publications by Year in Descending Order

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

107
papers

2,446
citations

29
h-index

44
g-index

128
ext. papers

2,978
ext. citations

4.7
avg, IF

5.74
L-index

#	Paper	IF	Citations
107	RLC parameters measurement and fusion for high sensitivity inductive sensors. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022 , 1-1	5.2	
106	Time-Response-Histogram-Based Feature of Magnetic Barkhausen Noise for Material Characterization Considering Influences of Grain and Grain Boundary under In Situ Tensile Test. <i>Sensors</i> , 2021 , 21,	3.8	1
105	Pipeline In-Line Inspection Method, Instrumentation and Data Management. <i>Sensors</i> , 2021 , 21,	3.8	13
104	. <i>IEEE Transactions on Industrial Informatics</i> , 2021 , 17, 1810-1820	11.9	10
103	Multiphysics Structured Eddy Current and Thermography Defects Diagnostics System in Moving Mode. <i>IEEE Transactions on Industrial Informatics</i> , 2021 , 17, 2566-2578	11.9	11
102	Ensemble Joint Sparse Low-Rank Matrix Decomposition for Thermography Diagnosis System. <i>IEEE Transactions on Industrial Electronics</i> , 2021 , 68, 2648-2658	8.9	7
101	Deep Temporal Convolution Network for Time Series Classification. <i>Sensors</i> , 2021 , 21,	3.8	16
100	A Lightweight Spatial and Temporal Multi-Feature Fusion Network for Defect Detection. <i>IEEE Transactions on Image Processing</i> , 2021 , 30, 472-486	8.7	24
99	Memory Linked Anomaly Metric Learning of Thermography Rail Defects Detection System. <i>IEEE Sensors Journal</i> , 2021 , 1-1	4	2
98	Differential Coupling Double-Layer Coil for Eddy Current Testing With High Lift-Off. <i>IEEE Sensors Journal</i> , 2021 , 21, 18146-18155	4	8
97	High sensitivity flexible double square winding eddy current array for surface micro-defects inspection. <i>Sensors and Actuators A: Physical</i> , 2020 , 309, 111844	3.9	16
96	Attention-Block Deep Learning Based Features Fusion in Wearable Social Sensor for Mental Wellbeing Evaluations. <i>IEEE Access</i> , 2020 , 8, 89258-89268	3.5	16
95	Physical perspective forward-inverse learning for ultrasonic sensing diagnosis in small diameter and thin-wall tube. <i>Ultrasonics</i> , 2020 , 105, 106115	3.5	5
94	Microcracks Detection Based on Shuttle-Shaped Electromagnetic Thermography. <i>IEEE Sensors Journal</i> , 2020 , 20, 12961-12971	4	3
93	Ensemble tensor decomposition for infrared thermography cracks detection system. <i>Infrared Physics and Technology</i> , 2020 , 105, 103203	2.7	6
92	. <i>IEEE Sensors Journal</i> , 2020 , 20, 8091-8097	4	2
91	Natural Crack Diagnosis System Based on Novel L-Shaped Electromagnetic Sensing Thermography. <i>IEEE Transactions on Industrial Electronics</i> , 2020 , 67, 9703-9714	8.9	29

90	DefectNet: Joint loss structured deep adversarial network for thermography defect detecting system. <i>Neurocomputing</i> , 2020 , 417, 441-457	5.4	14
89	Physic perspective fusion of electromagnetic acoustic transducer and pulsed eddy current testing in non-destructive testing system. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190608	3	7
88	Hierarchical low-rank and sparse tensor micro defects decomposition by electromagnetic thermography imaging system. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190584	3	2
87	Resonant frequency tracking mode on eddy current pulsed thermography non-destructive testing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190607	3	2
86	Micro-macro characteristics between domain wall motion and magnetic Barkhausen noise under tensile stress. <i>Journal of Magnetism and Magnetic Materials</i> , 2020 , 493, 165719	2.8	24
85	Structured iterative alternating sparse matrix decomposition for thermal imaging diagnostic system. <i>Infrared Physics and Technology</i> , 2020 , 107, 103288	2.7	7
84	Halogen optical referred pulse-compression thermography for defect detection of CFRP. <i>Infrared Physics and Technology</i> , 2019 , 102, 103006	2.7	18
83	Multi-Layer Magnetic Focusing Sensor Structure for Pulsed Remote Field Eddy Current. <i>IEEE Sensors Journal</i> , 2019 , 19, 2490-2499	4	15
82	Single-Channel Signal Separation Using Spectral Basis Correlation with Sparse Nonnegative Tensor Factorization. <i>Circuits, Systems, and Signal Processing</i> , 2019 , 38, 5786-5816	2.2	5
81	Coupling pulse eddy current sensor for deeper defects NDT. <i>Sensors and Actuators A: Physical</i> , 2019 , 293, 189-199	3.9	24
80	Repeatability and stability study of residual magnetic field for domain wall characterization. <i>Journal of Magnetism and Magnetic Materials</i> , 2019 , 485, 391-400	2.8	13
79	Wavelet-Integrated Alternating Sparse Dictionary Matrix Decomposition in Thermal Imaging CFRP Defect Detection. <i>IEEE Transactions on Industrial Informatics</i> , 2019 , 15, 4033-4043	11.9	22
78	Fusion model of inductive thermography and ultrasound for nondestructive testing. <i>Infrared Physics and Technology</i> , 2019 , 101, 162-170	2.7	6
77	Variational mode decomposition linked wavelet method for EMAT denoise with large lift-off effect. <i>NDT and E International</i> , 2019 , 107, 102149	4.1	15
76	A Deep-Learning-Driven Light-Weight Phishing Detection Sensor. <i>Sensors</i> , 2019 , 19,	3.8	24
75	Temporal and spatial deep learning network for infrared thermal defect detection. <i>NDT and E International</i> , 2019 , 108, 102164	4.1	54
74	Deep Adversarial Network for CFRP Thermal Imaging Debond Diagnosis 2019 ,		2
73	UHF RFID Sensor Array for Bending stress assessment 2019 ,		2

72	Investigation of ultrasonic NDT for small diameter and thin-wall tube 2019 ,		3
71	Domain wall characterization inside grain and around grain boundary under tensile stress. <i>Journal of Magnetism and Magnetic Materials</i> , 2019 , 471, 39-48	2.8	13
70	IoT Structured Long-Term Wearable Social Sensing for Mental Wellbeing. <i>IEEE Internet of Things Journal</i> , 2019 , 6, 3652-3662	10.7	32
69	AR-Aided Smart Sensing for In-Line Condition Monitoring of IGBT Wafer. <i>IEEE Transactions on Industrial Electronics</i> , 2019 , 66, 8197-8204	8.9	6
68	Deep Multiview Heartwave Authentication. <i>IEEE Transactions on Industrial Informatics</i> , 2019 , 15, 777-786	11.9	11
67	Heart-rate-Dependent Heartwave Biometric Identification With Thresholding-Based GMM-BMM Methodology. <i>IEEE Transactions on Industrial Informatics</i> , 2019 , 15, 45-53	11.9	25
66	Wearable Long-Term Social Sensing for Mental Wellbeing. <i>IEEE Sensors Journal</i> , 2019 , 19, 8532-8542	4	12
65	Weld Crack Detection Based on Region Electromagnetic Sensing Thermography. <i>IEEE Sensors Journal</i> , 2019 , 19, 751-762	4	5
64	AKA-IoTs: authenticated key agreement for Internet of Things. <i>Wireless Networks</i> , 2019 , 25, 3081-3101	2.5	28
63	Periodic Pulsed Thermography for Inner Defects Detection of Lead-Steel Bonded Structure. <i>IEEE Sensors Journal</i> , 2018 , 18, 4679-4688	4	8
62	Computational Deep Intelligence Vision Sensing for Nutrient Content Estimation in Agricultural Automation. <i>IEEE Transactions on Automation Science and Engineering</i> , 2018 , 15, 1243-1257	4.9	25
61	Physics-Based Image Segmentation Using First Order Statistical Properties and Genetic Algorithm for Inductive Thermography Imaging. <i>IEEE Transactions on Image Processing</i> , 2018 , 27, 2160-2175	8.7	47
60	Thermal Pattern Contrast Diagnostic of Microcracks With Induction Thermography for Aircraft Braking Components. <i>IEEE Transactions on Industrial Informatics</i> , 2018 , 14, 5563-5574	11.9	31
59	Variational Bayesian Subgroup Adaptive Sparse Component Extraction for Diagnostic Imaging System. <i>IEEE Transactions on Industrial Electronics</i> , 2018 , 65, 8142-8152	8.9	45
58	Spatial-time-state fusion algorithm for defect detection through eddy current pulsed thermography. <i>Infrared Physics and Technology</i> , 2018 , 90, 133-145	2.7	8
57	HOOSC: heterogeneous online/offline signcryption for the Internet of Things. <i>Wireless Networks</i> , 2018 , 24, 3141-3160	2.5	21
56	Single channel informed signal separation using artificial-stereophonic mixtures and exemplar-guided matrix factor deconvolution. <i>International Journal of Adaptive Control and Signal Processing</i> , 2018 , 32, 1259	2.8	6
55	Automatic seeded region growing for thermography debonding detection of CFRP. <i>NDT and E International</i> , 2018 , 99, 36-49	4.1	38

54	Unsupervised Learning for Monaural Source Separation Using Maximization?Minimization Algorithm with Time?Frequency Deconvolution. <i>Sensors</i> , 2018 , 18,	3.8	8
53	Variational Bayes Sub-Group Adaptive Sparse Component Extraction for Diagnostic Imaging System 2018 ,		3
52	Pattern Deep Region Learning for Crack Detection in Thermography Diagnosis System. <i>Metals</i> , 2018 , 8, 612	2.3	15
51	Transfer Learning for Wearable Long-Term Social Speech Evaluations. <i>IEEE Access</i> , 2018 , 6, 61305-61316	3.5	10
50	Remote Authentication Schemes for Wireless Body Area Networks Based on the Internet of Things. <i>IEEE Internet of Things Journal</i> , 2018 , 5, 4926-4944	10.7	33
49	Passive UHF RFID Tag as a Sensor for Crack Depths. <i>IEEE Sensors Journal</i> , 2018 , 18, 9867-9873	4	7
48	Reverberant signal separation using optimized complex sparse nonnegative tensor deconvolution on spectral covariance matrix 2018 , 83, 9-23		6
47	Sparse ensemble matrix factorization for debond detection in CFRP composites using optical thermography. <i>Infrared Physics and Technology</i> , 2018 , 92, 392-401	2.7	13
46	Structural Health Monitoring Framework Based on Internet of Things: A Survey. <i>IEEE Internet of Things Journal</i> , 2017 , 4, 619-635	10.7	207
45	Electromagnetic pulsed thermography for natural cracks inspection. <i>Scientific Reports</i> , 2017 , 7, 42073	4.9	19
44	Characterization of applied tensile stress using domain wall dynamic behavior of grain-oriented electrical steel. <i>Journal of Magnetism and Magnetic Materials</i> , 2017 , 432, 250-259	2.8	29
43	Wavelet domain based directional dictionaries for single image super-resolution 2017 ,		2
42	Nondestructive Testing for Multi-Layer Metal-Metal Bonded Structure by Using Inductive Lock-In Thermography. <i>IEEE Sensors Journal</i> , 2017 , 17, 6716-6723	4	4
41	Ensemble variational Bayes tensor factorization for super resolution of CFRP debond detection. <i>Infrared Physics and Technology</i> , 2017 , 85, 335-346	2.7	12
40	Automatic Relevance Determination of Adaptive Variational Bayes Sparse Decomposition for Micro-Cracks Detection in Thermal Sensing. <i>IEEE Sensors Journal</i> , 2017 , 17, 5220-5230	4	9
39	Crack Evaluation Based on Novel Circle-Ferrite Induction Thermography. <i>IEEE Sensors Journal</i> , 2017 , 17, 5637-5645	4	13
38	. <i>IEEE Sensors Journal</i> , 2017 , 17, 412-421	4	45
37	Underdetermined Convolutional Source Separation Using GEM-MU With Variational Approximated Optimum Model Order NMF2D. <i>IEEE/ACM Transactions on Audio Speech and Language Processing</i> , 2017 , 25, 35-49	3.6	14

36	Wearable Social Sensing: Content-Based Processing Methodology and Implementation. <i>IEEE Sensors Journal</i> , 2017 , 17, 7167-7176	4	16
35	Wearable Social Sensing and Its Application in Anxiety Assesment 2017 ,		2
34	Online Noisy Single-Channel Source Separation Using Adaptive Spectrum Amplitude Estimator and Masking. <i>IEEE Transactions on Signal Processing</i> , 2016 , 64, 1881-1895	4.8	31
33	Impact damage detection and characterization using eddy current pulsed thermography 2016 ,		2
32	Evaluation of Atmospheric Corrosion on Coated Steel Using K^{Q} -Band Sweep Frequency Microwave Imaging. <i>IEEE Sensors Journal</i> , 2016 , 16, 3025-3033	4	21
31	Diffusion and separation mechanism of transient electromagnetic and thermal fields. <i>International Journal of Thermal Sciences</i> , 2016 , 102, 308-318	4.1	13
30	Unsupervised Diagnostic and Monitoring of Defects Using Waveguide Imaging With Adaptive Sparse Representation. <i>IEEE Transactions on Industrial Informatics</i> , 2016 , 12, 405-416	11.9	37
29	Unsupervised Sparse Pattern Diagnostic of Defects With Inductive Thermography Imaging System. <i>IEEE Transactions on Industrial Informatics</i> , 2016 , 12, 371-383	11.9	75
28	Eddy Current Pulsed Thermography with Different Excitation Configurations for Metallic Material and Defect Characterization. <i>Sensors</i> , 2016 , 16,	3.8	45
27	Electromagnetic Thermography Nondestructive Evaluation: Physics-based Modeling and Pattern Mining. <i>Scientific Reports</i> , 2016 , 6, 25480	4.9	29
26	Multidimensional Tensor-Based Inductive Thermography With Multiple Physical Fields for Offshore Wind Turbine Gear Inspection. <i>IEEE Transactions on Industrial Electronics</i> , 2016 , 63, 6305-6315	8.9	82
25	Single-channel blind separation using L^1 -sparse complex non-negative matrix factorization for acoustic signals. <i>Journal of the Acoustical Society of America</i> , 2015 , 137, EL124-9	2.2	14
24	Underdetermined reverberant acoustic source separation using weighted full-rank nonnegative tensor models. <i>Journal of the Acoustical Society of America</i> , 2015 , 138, 3411-26	2.2	3
23	Fast partial differential equation de-noising filter for mechanical vibration signal. <i>Mathematical Methods in the Applied Sciences</i> , 2015 , 38, 4879-4890	2.3	4
22	Nondestructive Evaluation of Early Contact Fatigue Using Eddy Current Pulsed Thermography. <i>IEEE Sensors Journal</i> , 2015 , 15, 4409-4419	4	6
21	Lateral heat conduction based eddy current thermography for detection of parallel cracks and rail tread oblique cracks. <i>Measurement: Journal of the International Measurement Confederation</i> , 2015 , 66, 54-61	4.6	46
20	Smooth Nonnegative Matrix Factorization for Defect Detection Using Microwave Nondestructive Testing and Evaluation. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2014 , 63, 923-934	5.2	28
19	Impact Damage Detection and Identification Using Eddy Current Pulsed Thermography Through Integration of PCA and ICA. <i>IEEE Sensors Journal</i> , 2014 , 14, 1655-1663	4	100

18	Temperature recovery from degenerated infrared image based on the principle for temperature measurement using infrared sensor. <i>Journal of Applied Physics</i> , 2014 , 115, 043522	2.5	7
17	Wearable Audio Monitoring: Content-Based Processing Methodology and Implementation. <i>IEEE Transactions on Human-Machine Systems</i> , 2014 , 44, 222-233	4.1	16
16	Automatic Defect Identification of Eddy Current Pulsed Thermography Using Single Channel Blind Source Separation. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2014 , 63, 913-922	5.2	103
15	Thermography spatial-transient-stage tensor model and material property characterization 2014 ,		2
14	Machine learning source separation using maximum a posteriori nonnegative matrix factorization. <i>IEEE Transactions on Cybernetics</i> , 2014 , 44, 1169-79	10.2	38
13	Cochleagram-based audio pattern separation using two-dimensional non-negative matrix factorization with automatic sparsity adaptation. <i>Journal of the Acoustical Society of America</i> , 2014 , 135, 1171-85	2.2	17
12	Thermography spatial-transient-stage mathematical tensor construction and material property variation track. <i>International Journal of Thermal Sciences</i> , 2014 , 85, 112-122	4.1	25
11	Thermography pattern analysis and separation. <i>Applied Physics Letters</i> , 2014 , 104, 251902	3.4	36
10	Early contact fatigue evaluation of gear using eddy current pulsed thermography 2014 ,		3
9	Unsupervised Single-Channel Separation of Nonstationary Signals Using Gammatone Filterbank and ItakuraBaito Nonnegative Matrix Two-Dimensional Factorizations. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2013 , 60, 662-675	3.9	46
8	Single-channel blind separation using pseudo-stereo mixture and complex 2-D histogram. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2013 , 24, 1722-35	10.3	29
7	Quantitative non-destructive evaluation method for impact damage using eddy current pulsed thermography. <i>Composites Part B: Engineering</i> , 2013 , 54, 169-179	10	49
6	Spatial and Time Patterns Extraction of Eddy Current Pulsed Thermography Using Blind Source Separation. <i>IEEE Sensors Journal</i> , 2013 , 13, 2094-2101	4	35
5	Physical interpretation and separation of eddy current pulsed thermography. <i>Journal of Applied Physics</i> , 2013 , 113, 064101	2.5	72
4	Variational regularized 2-D nonnegative matrix factorization. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2012 , 23, 703-16	10.3	52
3	Adaptive Sparsity Non-Negative Matrix Factorization for Single-Channel Source Separation. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2011 , 5, 989-1001	7.5	35
2	. <i>IEEE Transactions on Audio Speech and Language Processing</i> , 2011 , 19, 961-976		86
1	Single Channel Blind Source Separation using the Best Characteristic Basis 2008 ,		2

