

Ghassan AlRegib

List of Publications by Year in descending order

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196
papers

3,376
citations

279798

23
h-index

265206

42
g-index

196
all docs

196
docs citations

196
times ranked

1948
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-Modal Learning Using Physicians Diagnostics for Optical Coherence Tomography Classification. , 2022, , .		4
2	Example Forgetting: A Novel Approach to Explain and Interpret Deep Neural Networks in Seismic Interpretation. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-12.	6.3	4
3	Explanatory Paradigms in Neural Networks: Towards relevant and contextual explanations. IEEE Signal Processing Magazine, 2022, 39, 59-72.	5.6	3
4	Fabric surface characterization: assessment of deep learning-based texture representations using a challenging dataset. Journal of the Textile Institute, 2021, 112, 293-305.	1.9	5
5	Joint learning for spatial context-based seismic inversion of multiple data sets for improved generalizability and robustness. Geophysics, 2021, 86, O37-O48.	2.6	16
6	Open-Set Recognition With Gradient-Based Representations. , 2021, , .		6
7	Man-Recon: Manifold Learning For Reconstruction With Deep Autoencoder For Smart Seismic Interpretation. , 2021, , .		9
8	A comparative study of transfer learning methodologies and causality for seismic inversion with temporal convolutional networks. , 2021, , .		1
9	Self-supervised delineation of geologic structures using latent space factorization. , 2021, , .		0
10	Explaining Deep Models Through Forgettable Learning Dynamics. , 2021, , .		6
11	Self-supervised delineation of geologic structures using orthogonal latent space projection. Geophysics, 2021, 86, V497-V508.	2.6	3
12	Extracting Causal Visual Features For Limited Label Classification. , 2021, , .		10
13	Explainable seismic neural networks using learning statistics. , 2021, , .		2
14	A novel attention model for salient structure detection in seismic volumes. , 2021, 1, 31-45.		2
15	Traffic Sign Detection Under Challenging Conditions: A Deeper Look into Performance Variations and Spectral Characteristics. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 3663-3673.	8.0	42
16	Relative Afferent Pupillary Defect Screening Through Transfer Learning. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 788-795.	6.3	10
17	A comparison of seismic saltbody interpretation via neural networks at sample and pattern levels. Geophysical Prospecting, 2020, 68, 521-535.	1.9	23
18	Texture classification using block intensity and gradient difference (BIGD) descriptor. Signal Processing: Image Communication, 2020, 83, 115770.	3.2	7

#	ARTICLE	IF	CITATIONS
19	Novelty Detection Through Model-Based Characterization of Neural Networks. , 2020, , .		16
20	On the Structures of Representation for the Robustness of Semantic Segmentation to Input Corruption. , 2020, , .		3
21	Action Segmentation with Mixed Temporal Domain Adaptation. , 2020, , .		12
22	Implicit Saliency In Deep Neural Networks. , 2020, , .		5
23	Gradients as a Measure of Uncertainty in Neural Networks. , 2020, , .		19
24	Contrastive Explanations In Neural Networks. , 2020, , .		22
25	Robustness And Overfitting Behavior Of Implicit Background Models. , 2020, , .		1
26	Action Segmentation With Joint Self-Supervised Temporal Domain Adaptation. , 2020, , .		57
27	Multiple Events Detection In Seismic Structures Using A Novel U-Net Variant. , 2020, , .		4
28	Self-Supervised Annotation of Seismic Images Using Latent Space Factorization. , 2020, , .		3
29	S ⁶ : Semi-Supervised Self-Supervised Semantic Segmentation. , 2020, , .		6
30	Backpropagated Gradient Representations for Anomaly Detection. Lecture Notes in Computer Science, 2020, , 206-226.	1.3	32
31	Spatiotemporal modeling of seismic images for acoustic impedance estimation. , 2020, , .		20
32	Joint learning for seismic inversion: An acoustic impedance estimation case study. , 2020, , .		16
33	Learning to Generate Grounded Visual Captions Without Localization Supervision. Lecture Notes in Computer Science, 2020, , 353-370.	1.3	12
34	Three-dimensional curvature analysis of seismic waveforms and its interpretational implications. Geophysical Prospecting, 2019, 67, 265-281.	1.9	9
35	A machine-learning benchmark for facies classification. Interpretation, 2019, 7, SE175-SE187.	1.1	100
36	Improving seismic fault detection by super-attribute-based classification. Interpretation, 2019, 7, SE251-SE267.	1.1	42

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37	Reflector dip estimates based on seismic waveform curvature/flexure analysis. Interpretation, 2019, 7, SC1-SC9.	1.1	6
38	Introduction to special section: Machine learning in seismic data analysis. Interpretation, 2019, 7, SEi-SEii.	1.1	1
39	Distorted Representation Space Characterization Through Backpropagated Gradients. , 2019, , .		12
40	Object Recognition Under Multifarious Conditions: A Reliability Analysis and a Feature Similarity-Based Performance Estimation. , 2019, , .		6
41	Implicit Background Estimation For Semantic Segmentation. , 2019, , .		2
42	Semisupervised sequence modeling for elastic impedance inversion. Interpretation, 2019, 7, SE237-SE249.	1.1	85
43	Developing a seismic texture analysis neural network for machine-aided seismic pattern recognition and classification. Geophysical Journal International, 2019, 218, 1262-1275.	2.4	39
44	Texture retrieval using periodically extended and adaptive curvelets. Signal Processing: Image Communication, 2019, 76, 252-260.	3.2	8
45	Automated Pupillary Light Reflex Test on a Portable Platform. , 2019, , .		0
46	Semi-automatic fault/fracture interpretation based on seismic geometry analysis. Geophysical Prospecting, 2019, 67, 1379-1391.	1.9	20
47	The Regretful Agent: Heuristic-Aided Navigation Through Progress Estimation. , 2019, , .		88
48	Compression of seismic signals via recurrent neural networks: Lossy and lossless algorithms. , 2019, , .		5
49	Temporal Attentive Alignment for Large-Scale Video Domain Adaptation. , 2019, , .		93
50	Multi-Level Texture Encoding and Representation (Multer) Based on Deep Neural Networks. , 2019, , .		14
51	Perceptual image quality assessment through spectral analysis of error representations. Signal Processing: Image Communication, 2019, 70, 37-46.	3.2	27
52	Structure label prediction using similarity-based retrieval and weakly supervised label mapping. Geophysics, 2019, 84, V67-V79.	2.6	28
53	PeQASO: Perceptual Quality Assessment of Streamed Videos Using Optical Flow Features. IEEE Transactions on Broadcasting, 2019, 65, 534-545.	3.2	3
54	TS-LSTM and temporal-inception: Exploiting spatiotemporal dynamics for activity recognition. Signal Processing: Image Communication, 2019, 71, 76-87.	3.2	130

#	ARTICLE	IF	CITATIONS
55	Semi-supervised learning for acoustic impedance inversion. , 2019, , .		60
56	Facies classification with weak and strong supervision: A comparative study. , 2019, , .		15
57	Estimation of acoustic impedance from seismic data using temporal convolutional network. , 2019, , .		47
58	Subsurface Exploration: Recent Advances in Geo-Signal Processing, Interpretation, and Learning [From the Guest Editors]. IEEE Signal Processing Magazine, 2018, 35, 16-18.	5.6	1
59	Traffic Signs in the Wild: Highlights from the IEEE Video and Image Processing Cup 2017 Student Competition [SP Competitions]. IEEE Signal Processing Magazine, 2018, 35, 154-161.	5.6	15
60	Subsurface Structure Analysis Using Computational Interpretation and Learning: A Visual Signal Processing Perspective. IEEE Signal Processing Magazine, 2018, 35, 82-98.	5.6	56
61	Unsupervised Uncertainty Estimation Using Spatiotemporal Cues in Video Saliency Detection. IEEE Transactions on Image Processing, 2018, 27, 2818-2827.	9.8	14
62	The role of visual saliency in the automation of seismic interpretation. Geophysical Prospecting, 2018, 66, 132-143.	1.9	18
63	CURE-OR: Challenging Unreal and Real Environments for Object Recognition. , 2018, , .		31
64	Why using CNN for seismic interpretation? An investigation. , 2018, , .		18
65	Attend and Interact: Higher-Order Object Interactions for Video Understanding. , 2018, , .		83
66	A comparative study of texture attributes for characterizing subsurface structures in seismic volumes. Interpretation, 2018, 6, T1055-T1066.	1.1	20
67	Multi-attribute k -means clustering for salt-boundary delineation from three-dimensional seismic data. Geophysical Journal International, 2018, 215, 1999-2007.	2.4	43
68	3D structural-orientation vector guided autotracking for weak seismic reflections: A new tool for shale reservoir visualization and interpretation. Interpretation, 2018, 6, SN47-SN56.	1.1	20
69	Petrophysical-property estimation from seismic data using recurrent neural networks. , 2018, , .		45
70	Patch-level MLP classification for improved fault detection. , 2018, , .		36
71	Real-time seismic-image interpretation via deconvolutional neural network. , 2018, , .		17
72	Learning to label seismic structures with deconvolution networks and weak labels. , 2018, , .		31

#	ARTICLE	IF	CITATIONS
73	Seeding undergraduate research experience: From Georgia Tech to KFUPM case study. International Journal of Electrical Engineering and Education, 2018, 55, 313-323.	0.8	1
74	A High-Speed, Real-Time Vision System for Texture Tracking and Thread Counting. IEEE Signal Processing Letters, 2018, 25, 758-762.	3.6	10
75	A novel approach for automated detection of listric faults within migrated seismic volumes. Journal of Applied Geophysics, 2018, 155, 94-101.	2.1	12
76	Multiresolution analysis and learning for computational seismic interpretation. The Leading Edge, 2018, 37, 443-450.	0.7	12
77	Successful leveraging of image processing and machine learning in seismic structural interpretation: A review. The Leading Edge, 2018, 37, 451-461.	0.7	78
78	Towards understanding common features between natural and seismic images. , 2018, , .		10
79	Curvelet transform with learning-based tiling. Signal Processing: Image Communication, 2017, 53, 24-39.	3.2	14
80	A texture-based interpretation workflow with application to delineating salt domes. Interpretation, 2017, 5, SJ1-SJ19.	1.1	39
81	Interactive Fault Extraction in 3-D Seismic Data Using the Hough Transform and Tracking Vectors. IEEE Transactions on Computational Imaging, 2017, 3, 99-109.	4.4	18
82	Multiscale fusion for seismic geometric attribute enhancement. , 2017, , .		5
83	Seismic-fault detection based on multiattribute support vector machine analysis. , 2017, , .		34
84	Automated salt-dome detection using an attribute ranking framework with a dictionary-based classifier. Interpretation, 2017, 5, SJ61-SJ79.	1.1	16
85	Phase Congruency for image understanding with applications in computational seismic interpretation. , 2017, , .		5
86	Scale selective extended local binary pattern for texture classification. , 2017, , .		11
87	Saliency detection for seismic applications using multi-dimensional spectral projections and directional comparisons. , 2017, , .		6
88	Generating adaptive and robust filter sets using an unsupervised learning framework. , 2017, , .		1
89	Power of temporospatially unified spectral density for perceptual video quality assessment. , 2017, , .		5
90	Salt dome detection within migrated seismic volumes using phase congruency. , 2017, , .		7

#	ARTICLE	IF	CITATIONS
91	A directional coherence attribute for seismic interpretation. , 2017, , .		3
92	A weakly supervised approach to seismic structure labeling. , 2017, , .		8
93	MS-UNIQUE: Multi-model and Sharpness-weighted Unsupervised Image Quality Estimation. IS&T International Symposium on Electronic Imaging, 2017, 29, 30-35.	0.4	19
94	3D curvature analysis of seismic waveform and its interpretational implications. , 2017, , .		6
95	Content-adaptive non-parametric texture similarity measure. , 2016, , .		17
96	Tensor-based subspace learning for tracking salt-dome boundaries constrained by seismic attributes. , 2016, , .		4
97	Boosting in image quality assessment. , 2016, , .		1
98	HeartBEAT: Heart beat estimation through adaptive tracking. , 2016, , .		12
99	CSV: Image quality assessment based on color, structure, and visual system. Signal Processing: Image Communication, 2016, 48, 92-103.	3.2	19
100	Understanding spatial correlation in eye-fixation maps for visual attention in videos. , 2016, , .		7
101	Completed local derivative pattern for rotation invariant texture classification. , 2016, , .		12
102	UNIQUE: Unsupervised Image Quality Estimation. IEEE Signal Processing Letters, 2016, 23, 1414-1418.	3.6	34
103	ReSIFT: Reliability-weighted sift-based image quality assessment. , 2016, , .		4
104	Fault detection using seismic attributes and visual saliency. , 2016, , .		2
105	BLeSS: Bio-inspired low-level spatiochromatic similarity assisted image quality assessment. , 2016, , .		1
106	Weakly-supervised labeling of seismic volumes using reference exemplars. , 2016, , .		15
107	Perceptual video quality assessment: Spatiotemporal pooling strategies for different distortions and visual maps. , 2016, , .		2
108	SalSi: A new seismic attribute for salt dome detection. , 2016, , .		20

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109	Air-Writing Recognitionâ€™Part I: Modeling and Recognition of Characters, Words, and Connecting Motions. IEEE Transactions on Human-Machine Systems, 2016, 46, 403-413.	3.5	110
110	Air-Writing Recognitionâ€™Part II: Detection and Recognition of Writing Activity in Continuous Stream of Motion Data. IEEE Transactions on Human-Machine Systems, 2016, 46, 436-444.	3.5	60
111	Tensor-based subspace learning for tracking salt-dome boundaries. , 2015, , .		6
112	A Novel Approach for Salt Dome Detection using A Dictionary-based Classifier. , 2015, , .		12
113	Detection of Salt-dome Boundary Surfaces in Migrated Seismic Volumes Using Gradient of Textures. , 2015, , .		30
114	Noise-robust detection and tracking of salt domes in postmigrated volumes using texture, tensors, and subspace learning. Geophysics, 2015, 80, WD101-WD116.	2.6	66
115	Characterization of migrated seismic volumes using texture attributes: a comparative study. , 2015, , .		9
116	A curvelet-based distance measure for seismic images. , 2015, , .		7
117	A comparative study of quality and content-based spatial pooling strategies in image quality assessment. , 2015, , .		2
118	Seismic interpretation of migrated data using edge-based geodesic active contours. , 2015, , .		16
119	Reduced-reference perceptual quality assessment for video streaming. , 2015, , .		7
120	Unsupervised uncertainty analysis for video saliency detection. , 2015, , .		1
121	Unsupervised estimation of uncertainty for video saliency detection using temporal cues. , 2015, , .		4
122	Saliency detection for videos using 3D FFT local spectra. Proceedings of SPIE, 2015, , .	0.8	8
123	PerSIM: Multi-resolution image quality assessment in the perceptually uniform color domain. , 2015, , .		14
124	Image quality assessment and color difference. , 2014, , .		4
125	Fault detection using color blending and color transformations. , 2014, , .		7
126	Automatic fault tracking across seismic volumes via tracking vectors. , 2014, , .		12

#	ARTICLE	IF	CITATIONS
127	Texture attributes for detecting salt bodies in seismic data. , 2014, , .		33
128	A comparative study of computational aesthetics. , 2014, , .		5
129	No-reference quality assessment of HEVC videos in loss-prone networks. , 2014, , .		6
130	Fault detection in seismic datasets using hough transform. , 2014, , .		19
131	Automatic fault surface detection by using 3D Hough transform. , 2014, , .		16
132	Similarity index for seismic data sets using adaptive curvelets. , 2014, , .		5
133	Feature Processing and Modeling for 6D Motion Gesture Recognition. IEEE Transactions on Multimedia, 2013, 15, 561-571.	7.2	47
134	Joint Framework for Motion Validity and Estimation Using Block Overlap. IEEE Transactions on Image Processing, 2013, 22, 1610-1619.	9.8	3
135	Effectiveness of 3VQM in capturing depth inconsistencies. , 2013, , .		1
136	Cooperative Delivery Techniques to Support Video-on-Demand Service in IPTV Networks. IEEE Transactions on Multimedia, 2013, 15, 2149-2161.	7.2	3
137	Using the coefficient of variation to improve the sparsity of seismic data. , 2013, , .		5
138	Modified weak fusion model for depthless streaming of 3D videos. , 2013, , .		0
139	Searching for the optimal curvelet tiling. , 2013, , .		5
140	Coding of 3D videos based on visual discomfort. , 2013, , .		0
141	Curvelet transform with adaptive tiling. Proceedings of SPIE, 2012, , .	0.8	2
142	6DMG. , 2012, , .		31
143	Cooperative on-demand delivery for IPTV networks. , 2012, , .		0
144	Hierarchical Hole-Filling For Depth-Based View Synthesis in FTV and 3D Video. IEEE Journal on Selected Topics in Signal Processing, 2012, 6, 495-504.	10.8	87

#	ARTICLE	IF	CITATIONS
145	Motion estimation using block overlap minimization. , 2012, , .		3
146	Depth map estimation in DIBR stereoscopic 3d videos using a combination of monocular cues. , 2012, , .		2
147	Block-overlap-based validity metric for hybrid de-interlacing. , 2012, , .		3
148	Depth-less 3D rendering. , 2012, , .		0
149	A new 6D motion gesture database and the benchmark results of feature-based statistical recognition. , 2012, , .		12
150	Statistical modeling of social networks activities. , 2012, , .		0
151	Depth adaptive hierarchical hole filling for DIBR-based 3D videos. , 2012, , .		1
152	Introduction to the Issue on Emerging Techniques in 3-D. IEEE Journal on Selected Topics in Signal Processing, 2012, 6, 409-410.	10.8	0
153	6D motion gesture recognition using spatio-temporal features. , 2012, , .		2
154	MIQM: A Multicamera Image Quality Measure. IEEE Transactions on Image Processing, 2012, 21, 3902-3914.	9.8	8
155	Misalignment correction for depth estimation using stereoscopic 3-D cameras. , 2012, , .		9
156	The Mosaic Camera: Streaming, Coding and Compositing Experiments. , 2011, , .		0
157	SPS Global Presence and Extinct Technologies [From the Editor]. IEEE Signal Processing Magazine, 2011, 28, 2-18.	5.6	0
158	An integrated framework for universal motion control. , 2011, , .		1
159	Improved DCT coefficient distribution modeling for H.264-like video coders based on block classification. , 2011, , .		2
160	Multimedia Quality Assessment [DSP Forum]. IEEE Signal Processing Magazine, 2011, 28, 164-177.	5.6	14
161	A no-reference quality measure for DIBR-based 3D videos. , 2011, , .		16
162	Trajectory triangulation: 3D motion reconstruction with ℓ_1 optimization. , 2011, , .		2

#	ARTICLE	IF	CITATIONS
163	3VQM: A vision-based quality measure for DIBR-based 3D videos. , 2011, , .		26
164	Characteristics of spatio-temporal signals acquired by optical motion tracking. , 2010, , .		2
165	Hierarchical Hole-Filling(HHF): Depth image based rendering without depth map filtering for 3D-TV. , 2010, , .		17
166	Gadgets and Signal Processing: The 2010 International CES [In the Spotlight]. IEEE Signal Processing Magazine, 2010, 27, 176-170.	5.6	0
167	From Admiration, Celebration, and Guessing to Innovation [From the Editor. IEEE Signal Processing Magazine, 2010, 27, 2-18.	5.6	0
168	MIQM: A novel Multi-view Images Quality Measure. , 2009, , .		11
169	Context-adaptive hybrid variable length coding in H.264/AVC. , 2009, , .		0
170	Quality matters, especially in sharing knowledge [From the Editor]. IEEE Signal Processing Magazine, 2009, 26, 2-2, 6.	5.6	0
171	Network Lifetime Maximization for Estimation in Multihop Wireless Sensor Networks. IEEE Transactions on Signal Processing, 2009, 57, 2456-2466.	5.3	56
172	Distributed Estimation in Energy-Constrained Wireless Sensor Networks. IEEE Transactions on Signal Processing, 2009, 57, 3746-3758.	5.3	116
173	Characterization of image distortions in multi-camera systems. , 2009, , .		5
174	Technology and Tools to Enhance Distributed Engineering Education. Proceedings of the IEEE, 2008, 96, 951-969.	21.3	7
175	Optimal weighted data gathering in multi-hop heterogeneous sensor networks. , 2008, , .		1
176	Joint position and amplitude coding in hybrid variable length coding for video compression. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	2
177	BaTex3: Bit Allocation for Progressive Transmission of Textured 3-D Models. IEEE Transactions on Circuits and Systems for Video Technology, 2008, 18, 23-35.	8.3	21
178	Maximizing Network Lifetime for Estimation in Multi-Hop Wireless Sensor Networks. , 2008, , .		2
179	Arm Movement Prediction Using Neural Networks. , 2008, , .		0
180	Function-Based Network Lifetime for Estimation in Wireless Sensor Networks. IEEE Signal Processing Letters, 2008, 15, 533-536.	3.6	9

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181	3-D Position and Amplitude VLC Coding in H.264/AVC. , 2008, , .		0
182	Three-dimensional position and amplitude VLC coding in H.264/AVC. , 2008, , .		1
183	Multimedia Immersive Technologies and Networking. Advances in Multimedia, 2008, 2008, 1-2.	0.4	4
184	Energy-Constrained Distributed Estimation in Wireless Sensor Networks. , 2007, , .		9
185	Rate-Constrained Distributed Estimation in Wireless Sensor Networks. IEEE Transactions on Signal Processing, 2007, 55, 1634-1643.	5.3	143
186	Hybrid Variable Length Coding for Image and Video Compression. , 2007, , .		6
187	Joint Source and Channel Coding for 3-D Scene Databases Using Vector Quantization and Embedded Parity Objects. IEEE Transactions on Image Processing, 2007, 16, 1675-1685.	9.8	1
188	Towards Modeling Human Arm Movement in a CVE. , 2007, , .		2
189	On-demand transmission of 3D models over lossy networks. Signal Processing: Image Communication, 2006, 21, 396-415.	3.2	11
190	Energy-Efficient Cluster-based Distributed Estimation in Wireless Sensor Networks. , 2006, , .		8
191	Parity-Object Embedded Streaming for Synthetic Graphics. , 2006, , .		0
192	Design of a Transmission Protocol for a CVE. , 2006, , .		2
193	Rate-Constrained Distributed Estimation in Wireless Sensor Networks. Computer Communications and Networks (IC3N), Proceedings of the IEEE International Conference on, 2006, , .	0.0	5
194	Multi-Streaming of Visual Scenes with Scalable Partial Reliability. , 2006, , .		0
195	Adaptive Multi-Resolution Coding for 3D Scenes using Vector Quantization. , 2006, , .		0
196	Error-resilient transmission of 3D models. ACM Transactions on Graphics, 2005, 24, 182-208.	7.2	52