Mahdi Motagh

List of Publications by Year
in descending order

114 papers	3,572 citations	126708 33 h-index	149479 56 g-index
151 all docs	151 docs citations	151 times ranked	3815 citing authors

#	Article	IF	Citations
1	The June 2020 Aniangzhai landslide in Sichuan Province, Southwest China: slope instability analysis from radar and optical satellite remote sensing data. Landslides, 2022, 19, 313-329.	2.7	15
2	Land subsidence and rebound in the Taiyuan basin, northern China, in the context of inter-basin water transfer and groundwater management. Remote Sensing of Environment, 2022, 269, 112792.	4.6	30
3	Mapping land subsidence and aquifer system properties of the Willcox Basin, Arizona, from InSAR observations and independent component analysis. Remote Sensing of Environment, 2022, 271, 112894.	4.6	37
4	Tracking hidden crisis in India's capital from space: implications of unsustainable groundwater use. Scientific Reports, 2022, 12, 651.	1.6	33
5	Inferring subsidence characteristics in Wuhan (China) through multitemporal InSAR and hydrogeological analysis. Engineering Geology, 2022, 297, 106530.	2.9	11
6	Thaw Settlement Monitoring and Active Layer Thickness Retrieval Using Time Series COSMO-SkyMed Imagery in Iqaluit Airport. Remote Sensing, 2022, 14, 2156.	1.8	2
7	Cyclical geothermal unrest as a precursor to Iceland's 2021 Fagradalsfjall eruption. Nature Geoscience, 2022, 15, 397-404.	5.4	29
8	Automatic Detection of Volcanic Unrest Using Blind Source Separation With a Minimum Spanning Tree Based Stability Analysis. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 7771-7787.	2.3	7
9	A decade-long silent ground subsidence hazard culminating in a metropolitan disaster in Maceió, Brazil. Scientific Reports, 2021, 11, 7704.	1.6	15
10	Multi-sensor remote sensing analysis of coal fire induced land subsidence in Jharia Coalfields, Jharkhand, India. International Journal of Applied Earth Observation and Geoinformation, 2021, 102, 102439.	1.4	13
11	Spatial Variability of Relative Sea-Level Rise in Tianjin, China: Insight From InSAR, GPS, and Tide-Gauge Observations. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 2621-2633.	2.3	17
12	Multi-temporal landslide activity investigation by spaceborne SAR interferometry: The case study of the Polish Carpathians. Remote Sensing Applications: Society and Environment, 2021, 24, 100629.	0.8	3
13	Karst Collapse Risk Zonation and Evaluation in Wuhan, China Based on Analytic Hierarchy Process, Logistic Regression, and InSAR Angular Distortion Approaches. Remote Sensing, 2021, 13, 5063.	1.8	6
14	Improving tropospheric corrections on large-scale Sentinel-1 interferograms using a machine learning approach for integration with GNSS-derived zenith total delay (ZTD). Remote Sensing of Environment, 2020, 239, 111608.	4.6	26
15	Monitoring active open-pit mine stability in the Rhenish coalfields of Germany using a coherence-based SBAS method. International Journal of Applied Earth Observation and Geoinformation, 2020, 93, 102217.	1.4	11
16	The 29 March 2017 Yuzhno-Ozernovskoe Kamchatka Earthquake: Fault Activity in An Extension of the East Kamchatka Fault Zone as Constrained by InSAR Observations. Bulletin of the Seismological Society of America, 2020, 110, 1101-1114.	1.1	0
17	Co-seismic deformation of the 2017 M_s 7.0 Jiuzhaigou Earthquake observed with GaoFen-3 interferometry. International Journal of Remote Sensing, 2020, 41, 6618-6634.	1.3	4
18	Retrieval and Prediction of Three-Dimensional Displacements by Combining the DInSAR and Probability Integral Method in a Mining Area. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 1206-1217.	2.3	12

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19	Assessments of land subsidence along the Rizhao–Lankao high-speed railway at Heze, China, between 2015 and 2019 with Sentinel-1 data. Natural Hazards and Earth System Sciences, 2020, 20, 3399-3411.	1.5	4
20	Three-Dimensional Displacement Fields from InSAR through Tikhonov Regularization and Least-Squares Variance Component Estimation. Journal of Surveying Engineering, - ASCE, 2019, 145, 04019011.	1.0	12
21	Complex hazard cascade culminating in the Anak Krakatau sector collapse. Nature Communications, 2019, 10, 4339.	5.8	105
22	Integrated Assessment of Ground Surface Displacements at the Ketzin Pilot Site for CO_2 Storage by Satellite-Based Measurements and Hydromechanical Simulations. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 186-199.	2.3	4
23	A Gaussian random field model for de-speckling of multi-polarized Synthetic Aperture Radar data. Advances in Space Research, 2019, 64, 64-78.	1.2	7
24	Extracting sinkhole features from time-series of TerraSAR-X/TanDEM-X data. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 150, 274-284.	4.9	13
25	Earth and Rock-Filled Dam Monitoring by High-Resolution X-Band Interferometry: Gongming Dam Case Study. Remote Sensing, 2019, 11, 246.	1.8	14
26	Modeling groundwater level fluctuations in Tehran aquifer: Results from a 3D unconfined aquifer model. Groundwater for Sustainable Development, 2019, 8, 439-449.	2.3	21
27	Ground surface response to continuous compaction of aquifer system in Tehran, Iran: Results from a long-term multi-sensor InSAR analysis. Remote Sensing of Environment, 2019, 221, 534-550.	4.6	108
28	Chilean megathrust earthquake recurrence linked to frictional contrast at depth. Nature Geoscience, 2018, 11, 285-290.	5.4	61
29	A New Hierarchical Object-Based Classification Algorithm for Wetland Mapping in Newfoundland, Canada. , 2018, , .		5
30	Wetland Water Level Monitoring Using Interferometric Synthetic Aperture Radar (InSAR): A Review. Canadian Journal of Remote Sensing, 2018, 44, 247-262.	1.1	43
31	Spatiotemporal evolution of seismic slip of the 31 October 2013 Ruisui, Taiwan, earthquake. , 2018, , .		0
32	Coseismic Deformation Field of the Mw 7.3 12 November 2017 Sarpol-e Zahab (Iran) Earthquake: A Decoupling Horizon in the Northern Zagros Mountains Inferred from InSAR Observations. Remote Sensing, 2018, 10, 1589.	1.8	49
33	An improved RUSLE/SDR model for the evaluation of soil erosion. Environmental Earth Sciences, 2018, 77, 1.	1.3	39
34	An efficient feature optimization for wetland mapping by synergistic use of SAR intensity, interferometry, and polarimetry data. International Journal of Applied Earth Observation and Geoinformation, 2018, 73, 450-462.	1.4	33
35	Persistent Scatterer Analysis Using Dual-Polarization Sentinel-1 Data: Contribution From VH Channel. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 3105-3112.	2.3	21
36	The rise, collapse, and compaction of Mt. Mantap from the 3 September 2017 North Korean nuclear test. Science, 2018, 361, 166-170.	6.0	62

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37	Ground Deformations around the Toktogul Reservoir, Kyrgyzstan, from Envisat ASAR and Sentinel-1 Data—A Case Study about the Impact of Atmospheric Corrections on InSAR Time Series. Remote Sensing, 2018, 10, 462.	1.8	23
38	Efficient Ground Surface Displacement Monitoring Using Sentinel-1 Data: Integrating Distributed Scatterers (DS) Identified Using Two-Sample t-Test with Persistent Scatterers (PS). Remote Sensing, 2018, 10, 794.	1.8	28
39	Multi-temporal, multi-frequency, and multi-polarization coherence and SAR backscatter analysis of wetlands. ISPRS Journal of Photogrammetry and Remote Sensing, 2018, 142, 78-93.	4.9	79
40	Quantifying groundwater exploitation induced subsidence in the Rafsanjan plain, southeastern Iran, using InSAR time-series and in situ measurements. Engineering Geology, 2017, 218, 134-151.	2.9	178
41	Characterizing post-construction settlement of the Masjed-Soleyman embankment dam, Southwest Iran, using TerraSAR-X SpotLight radar imagery. Engineering Structures, 2017, 143, 261-273.	2.6	37
42	High-resolution digital elevation models from single-pass TanDEM-X interferometry over mountainous regions: A case study of Inylchek Glacier, Central Asia. ISPRS Journal of Photogrammetry and Remote Sensing, 2017, 130, 108-121.	4.9	32
43	Random forest wetland classification using ALOS-2 L-band, RADARSAT-2 C-band, and TerraSAR-X imagery. ISPRS Journal of Photogrammetry and Remote Sensing, 2017, 130, 13-31.	4.9	225
44	Application of Dual-Polarimetry SAR Images in Multitemporal InSAR Processing. IEEE Geoscience and Remote Sensing Letters, 2017, 14, 1489-1493.	1.4	15
45	X-band interferometric sar observations for wetland water level monitoring in newfoundland and labrador. , 2017, , .		1
46	Imaging Land Subsidence Induced by Groundwater Extraction in Beijing (China) Using Satellite Radar Interferometry. Remote Sensing, 2016, 8, 468.	1.8	142
47	Assessment of ground surface displacement in Taihape landslide, New Zealand, with C- and X-band SAR interferometry. New Zealand Journal of Geology, and Geophysics, 2016, 59, 136-146.	1.0	21
48	Improved Persistent Scatterer analysis using Amplitude Dispersion Index optimization of dual polarimetry data. ISPRS Journal of Photogrammetry and Remote Sensing, 2016, 117, 108-114.	4.9	25
49	Multi-sensor InSAR Analysis of Surface Displacement over Coastal Urban City of Trondheim. Procedia Computer Science, 2016, 100, 1141-1146.	1.2	3
50	Bathymetric survey of water reservoirs in north-eastern Brazil based on TanDEM-X satellite data. Science of the Total Environment, 2016, 571, 575-593.	3.9	52
51	Inversion of surface gravity data for 3-D density modeling of geologic structures using total variation regularization. Studia Geophysica Et Geodaetica, 2016, 60, 69-90.	0.3	4
52	ALOS/PALSAR InSAR Time-Series Analysis for Detecting Very Slow-Moving Landslides in Southern Kyrgyzstan. Remote Sensing, 2015, 7, 8973-8994.	1.8	24
53	StaMPS Improvement for Deformation Analysis in Mountainous Regions: Implications for the Damavand Volcano and Mosha Fault in Alborz. Remote Sensing, 2015, 7, 8323-8347.	1.8	36
54	Response to Sowter, A.; Cigna, F. On the Use of the ISBAS Acronym in InSAR Applications. Comment on Vajedian, S.; Motagh, M.; Nilfouroushan, F. StaMPS Improvement for Deformation Analysis in Mountainous Regions: Implications for the Damavand Volcano and Mosha Fault in Alborz. Remote Sens. 2015, 7, 8323–8347. Remote Sensing, 2015, 7, 11324-11325.	1.8	0

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55	The 18 August 2014 Mw 6.2 Mormori, Iran, Earthquake: A Thin-Skinned Faulting in the Zagros Mountain Inferred from InSAR Measurements. Seismological Research Letters, 2015, 86, 775-782.	0.8	32
56	InSAR imaging of displacement on flexural‐slip faults triggered by the 2013 <i>Mw</i> 6.6 Lake Grassmere earthquake, central New Zealand. Geophysical Research Letters, 2015, 42, 781-788.	1.5	48
57	Fault Slip Rate of the Kazerun Fault System (KFS), Iran, Investigated Using Finite Element Modeling. Pure and Applied Geophysics, 2015, 172, 2495-2516.	0.8	0
58	Accuracy Assessment of IWCM Soil Moisture Estimation Model in Different Frequency and Polarization Bands. Journal of the Indian Society of Remote Sensing, 2015, 43, 859-865.	1.2	3
59	Land Subsidence in Mahyar Plain, Central Iran, Investigated Using Envisat SAR Data. International Association of Geodesy Symposia, 2015, , 127-130.	0.2	6
60	Spatial and Temporal Kinematics of the Inylchek Glacier in Kyrgyzstan Derived from Landsat and ASTER Imagery. International Association of Geodesy Symposia, 2015, , 145-149.	0.2	3
61	Comparison of X-band, L-band and C-band radar images for monitoring subsidence in agricultural regions. , 2015, , .		0
62	The Inylchek Glacier in Kyrgyzstan, Central Asia: Insight on Surface Kinematics from Optical Remote Sensing Imagery. Remote Sensing, 2014, 6, 841-856.	1.8	18
63	Estimating Spatial and Temporal Variability in Surface Kinematics of the Inylchek Glacier, Central Asia, using TerraSAR‐X Data. Remote Sensing, 2014, 6, 9239-9259.	1.8	30
64	Ground Surface Response to Geothermal Drilling and the Following Counteractions in Staufen im Breisgau (Germany) Investigated by TerraSAR-X Time Series Analysis and Geophysical Modeling. Remote Sensing, 2014, 6, 10571-10592.	1.8	5
65	The 2013 Mw 7.7 Balochistan Earthquake: Seismic Potential of an Accretionary Wedge. Bulletin of the Seismological Society of America, 2014, 104, 1020-1030.	1.1	77
66	Deflation and inflation of a large magma body beneath Uturuncu volcano, Bolivia? Insights from InSAR data, surface lineaments and stress modelling. Geophysical Journal International, 2014, 198, 462-473.	1.0	29
67	Ground displacement measurement of the 2013 M7.7 and M6.8 Balochistan Earthquake with TerraSAR-X ScanSAR data. , 2014, , .		1
68	Deformation and fault parameters of the 2005 Qeshm earthquake in Iran revisited: A Bayesian simulated annealing approach applied to the inversion of space geodetic data. International Journal of Applied Earth Observation and Geoinformation, 2014, 26, 184-192.	1.4	10
69	Using Envisat InSAR time-series to investigate the surface kinematics of an active salt extrusion near Qum, Iran. Journal of Geodynamics, 2014, 81, 56-66.	0.7	10
70	Deformation analysis of the Lake Urmia causeway (LUC) embankments in northwest Iran: insights from multi-sensor interferometry synthetic aperture radar (InSAR) data and finite element modeling (FEM). Journal of Geodesy, 2014, 88, 1171-1185.	1.6	26
71	Postseismic Ground Deformation Following the September 2010 Darfield, New Zealand, Earthquake From TerraSAR-X, COSMO-SkyMed, and ALOS InSAR. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 186-190.	1.4	12
72	Crustal deformation and stress transfer during a propagating earthquake sequence: The 2013 Cook Strait sequence, central New Zealand. Journal of Geophysical Research: Solid Earth, 2014, 119, 6080-6092.	1.4	45

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73	Splay fault slip during the Mw 8.8 2010 Maule Chile earthquake: REPLY. Geology, 2013, 41, e310-e310.	2.0	4
74	A TerraSAR-X InSAR study of landslides in southern Kyrgyzstan, Central Asia. Remote Sensing Letters, 2013, 4, 657-666.	0.6	39
75	A Study on Rational Function Model Generation for TerraSAR-X Imagery. Sensors, 2013, 13, 12030-12043.	2.1	10
76	Land cover change detection using unsupervised kernel C-means and multi-temporal SAR data. , 2013, , .		0
77	Remarkable Urban Uplift in Staufen im Breisgau, Germany: Observations from TerraSAR-X InSAR and Leveling from 2008 to 2011. Remote Sensing, 2013, 5, 3082-3100.	1.8	31
78	Slope Stability Assessment of the Sarcheshmeh Landslide, Northeast Iran, Investigated Using InSAR and GPS Observations. Remote Sensing, 2013, 5, 3681-3700.	1.8	46
79	Fault slip models of the 2010–2011 Canterbury, New Zealand, earthquakes from geodetic data and observations of postseismic ground deformation. New Zealand Journal of Geology, and Geophysics, 2012, 55, 207-221.	1.0	118
80	The M$_w$6.2 Christchurch earthquake of February 2011: preliminary report. New Zealand Journal of Geology, and Geophysics, 2012, 55, 67-90.	1.0	155
81	TerraSAR-X contributions to GEO Supersites and selected results. , 2012, , .		0
82	Comparison of the performance of L-band polarimetric parameters for land cover classification. Canadian Journal of Remote Sensing, 2012, 38, 629-643.	1.1	8
83	TerraSAR-X Time series uplift monitoring in Staufen, South-West Germany. , 2012, , .		0
84	Improved Interferometric Synthetic Aperture Radar processing via advanced co-registration and phase correction techniques. , 2012, , .		1
85	Splay fault slip during the Mw 8.8 2010 Maule Chile earthquake. Geology, 2012, 40, 251-254.	2.0	81
86	Improved Ground Subsidence Monitoring Using Small Baseline SAR Interferograms and a Weighted Least Squares Inversion Algorithm. IEEE Geoscience and Remote Sensing Letters, 2012, 9, 437-441.	1.4	35
87	Source Parameters of the September 10, 2008 Qeshm Earthquake in Iran Inferred from the Bayesian Inversion of Envisat and ALOS InSAR Observations. International Association of Geodesy Symposia, 2012, , 319-325.	0.2	0
88	Classification of polarimetric SAR images using Support Vector Machines. Canadian Journal of Remote Sensing, 2011, 37, 220-233.	1.1	25
89	Fault Location and Slip Distribution of the 22 February 2011 Mw 6.2 Christchurch, New Zealand, Earthquake from Geodetic Data. Seismological Research Letters, 2011, 82, 789-799.	0.8	90
90	Subduction earthquake deformation associated with 14 November 2007, Mw 7.8 Tocopilla earthquake in Chile: Results from InSAR and aftershocks. Tectonophysics, 2010, 490, 60-68.	0.9	49

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91	Satellite Monitoring of Hazards: A Focus on Istanbul, Turkey. Eos, 2010, 91, 313-314.	0.1	10
92	The Darfield (Canterbury) earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2010, 43, 228-235.	0.2	60
93	Surface deformation time series and source modeling for a volcanic complex system based on satellite wide swath and image mode interferometry: The Lazufre system, central Andes. Remote Sensing of Environment, 2009, 113, 2062-2075.	4.6	41
94	Land subsidence pattern controlled by old alpine basement faults in the Kashmar Valley, northeast Iran: results from InSAR and levelling. Geophysical Journal International, 2008, 174, 287-294.	1.0	33
95	Coseismic slip model of the 2007 August Pisco earthquake (Peru) as constrained by Wide Swath radar observations. Geophysical Journal International, 2008, 174, 842-848.	1.0	33
96	Caldera-scale inflation of the Lazufre volcanic area, South America: Evidence from InSAR. Journal of Volcanology and Geothermal Research, 2008, 174, 337-344.	0.8	39
97	Land subsidence in Iran caused by widespread water reservoir overexploitation. Geophysical Research Letters, 2008, 35, .	1.5	191
98	Land subsidence monitoring using InSAR time series, case study: Mashhad, Iran (2004–2007). , 2008, , .		0
99	Strain accumulation across the Gazikoy–Saros segment of the North Anatolian Fault inferred from Persistent Scatterer Interferometry and GPS measurements. Earth and Planetary Science Letters, 2007, 255, 432-444.	1.8	53
100	Land subsidence in Mashhad Valley, northeast Iran: results from InSAR, levelling and GPS. Geophysical Journal International, 2007, 168, 518-526.	1.0	143
101	Combination of Precise Leveling and InSAR Data to Constrain Source Parameters of the Mw = 6.5, 26 December 2003 Bam Earthquake. Pure and Applied Geophysics, 2006, 163, 1-18.	0.8	50
102	USING GENERATIVE ADVERSARIAL NETWORKS FOR EXTRACTION OF INSAR SIGNALS FROM LARGE-SCALE SENTINEL-1 INTERFEROGRAMS BY IMPROVING TROPOSPHERIC NOISE CORRECTION. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, V-3-2021, 57-64.	0.0	3
103	LAND SUBSIDENCE HAZARD IN IRAN REVEALED BY COUNTRY-SCALE ANALYSIS OF SENTINEL-1 INSAR. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLIII-B3-2021, 155-161.	0.2	5
104	EXPLORING CLOUD-BASED PLATFORMS FOR RAPID INSAR TIME SERIES ANALYSIS. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLIII-B3-2021, 171-176.	0.2	3
105	EVALUATING THREE INSAR TIME-SERIES METHODS TO ASSESS CREEP MOTION, CASE STUDY: MASOULEH LANDSLIDE IN NORTH IRAN. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, IV-1/W1, 223-228.	0.0	11
106	COSEISMIC DISPLACEMENT ANALYSIS OF THE 12 NOVEMBER 2017 MW 7.3 SARPOL-E ZAHAB (IRAN) EARTHQUAKE FROM SAR INTERFEROMETRY, BURST OVERLAP INTERFEROMETRY AND OFFSET TRACKING. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, IV-3, 205-209.	0.0	6
107	LANDSLIDE MONITORING USING INSAR TIME-SERIES AND GPS OBSERVATIONS, CASE STUDY: SHABKOLA LANDSLIDE IN NORTHERN IRAN. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLII-1/W1, 487-492.	0.2	5
108	PSINSAR IMPROVEMENT USING AMPLITUDE DISPERSION INDEX OPTIMIZATION OF DUAL POLARIMETRY DATA. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-1/W5, 175-177.	0.2	2

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109	ASSESSMENT OF REFERENCE HEIGHT MODELS ON QUALITY OF TANDEM-X DEM. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-1/W5, 463-466.	0.2	2
110	Classification of agricultural fields using time series of dual polarimetry TerraSAR-X images. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-2/W3, 191-196.	0.2	8
111	Fusion of hyperspectral and lidar data based on dimension reduction and maximum likelihood. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-7/W3, 569-573.	0.2	8
112	Phenological tracking og agricultural feilds investigated by using dual polarimetry tanDEM-X images. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-7/W3, 73-76.	0.2	1
113	SENTINEL-1 IMAGE MATCHING USING STRONG SCATTERS. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-1/W5, 233-235.	0.2	0
114	LAKE URMIA BRIDGE STABILITY ASSESSMENT: RESULTS FROM TERRASAR-X SPOTLIGHT MODE IMAGES. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-1/W5, 313-317.	0.2	0