Mehdi Eshagh

List of Publications by Year
in descending order

112 papers	990 citations	516710 16 h-index	642732 23 g-index
113 all docs	113 docs citations	113 times ranked	327 citing authors

#	Article	IF	Citations
1	Inaccuracy in arc power calculation through a product of voltage and current averages. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2022, 44, 1.	1.6	2
2	Isostasy. , 2021, , 263-312.		1
3	Spherical harmonics and potential theory. , 2021, , 1-44.		1
4	Satellite gravimetry observables. , 2021, , 45-90.		6
5	Integral equations for inversion of satellite gravimetry data. , 2021, , 91-140.		0
6	Numerical inversion of satellite gravimetry data. , 2021, , 141-203.		0
7	The effect of mass heterogeneities and structures on satellite gravimetry data. , 2021, , 205-261.		1
8	Satellite gravimetry and isostasy. , 2021, , 313-373.		0
9	Satellite gravimetry and applications of temporal changes of gravity field. , 2021, , 451-474.		0
10	Satellite gravimetry and lithospheric stress. , 2021, , 413-449.		6
11	Comparison of Different Methods for a Moho Modeling Under Oceans and Marginal Seas: A Case Study for the Indian Ocean. Surveys in Geophysics, 2021, 42, 839-897.	4.6	6
12	The temporal viscoelastic model of flexural isostasy for estimating the elastic thickness of the lithosphere. Geophysical Journal International, 2021, 227, 1700-1714.	2.4	1
13	Effects of mantle dynamics on estimating effective elastic thickness of the lithosphere. Journal of African Earth Sciences, 2021, 183, 104318.	2.0	3
14	Application of the nonlinear optimisation in regional gravity field modelling using spherical radial base functions. Studia Geophysica Et Geodaetica, 2021, 65, 261-290.	0.5	3
15	Elastic thickness of the Iranian lithosphere from gravity and seismic data. Tectonophysics, 2020, 774, 228186.	2.2	7
16	Moho determination from GOCE gradiometry data over Ethiopia. Journal of African Earth Sciences, 2020, 163, 103741.	2.0	3
17	A new approach for generating optimal GLDAS hydrological products and uncertainties. Science of the Total Environment, 2020, 730, 138932.	8.0	16
18	Lithospheric stress, strain and displacement changes from GRACE-FO time-variable gravity: case study for Sar-e-Pol Zahab Earthquake 2018. Geophysical Journal International, 2020, 223, 379-397.	2.4	6

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19	Downward continuation of gravitational field quantities to an irregular surface by spectral weighting. Journal of Geodesy, 2020, 94, 1.	3.6	6
20	Gravity Maps of the Lithospheric Structure Beneath the Indian Ocean. Surveys in Geophysics, 2019, 40, 1055-1093.	4.6	5
21	Elastic Thickness Determination from on-orbit GOCE Data and CRUST1.0. Pure and Applied Geophysics, 2019, 176, 685-696.	1.9	11
22	Lithospheric elastic thickness estimates in central Eurasia. Terrestrial, Atmospheric and Oceanic Sciences, 2019, 30, 73-84.	0.6	2
23	On quality of NKG2015 geoid model over the Nordic countries. Journal of Geodetic Science, 2019, 9, 97-110.	1.0	5
24	Elastic thickness determination based on Vening Meinesz–Moritz and flexural theories of isostasy. Geophysical Journal International, 2018, 213, 1682-1692.	2.4	8
25	Optimization of deformation monitoring networks using finite element strain analysis. Journal of Applied Geodesy, 2018, 12, 187-197.	1.1	4
26	Spectral combination of spherical gravitational curvature boundary-value problems. Geophysical Journal International, 2018, 214, 773-791.	2.4	10
27	Comparison of gravimetric and mantle flow solutions for sub-lithopsheric stress modeling and their combination. Geophysical Journal International, 2018, 213, 1013-1028.	2.4	8
28	Polynomial approximation for fast generation of associated Legendre functions. Acta Geodaetica Et Geophysica, 2018, 53, 275-293.	1.6	2
29	Evidence of mantle upwelling/downwelling and localized subduction on Venus from the body-force vector analysis. Planetary and Space Science, 2018, 157, 48-62.	1.7	5
30	A case study on displacement analysis of Vasa warship. Journal of Geodetic Science, 2018, 8, 43-54.	1.0	0
31	Regional Recovery of Gravity Anomaly from the Inversion of Diagonal Components of GOCE Gravitational Tensor: A Case Study in Ethiopia. Artificial Satellites, 2018, 53, 55-74.	0.6	2
32	The sub-crustal stress estimation in central Eurasia from gravity, terrain and crustal structure models. Geosciences Journal, 2017, 21, 47-54.	1.2	2
33	Isostatic GOCE Moho model for Iran. Journal of Asian Earth Sciences, 2017, 138, 12-24.	2.3	12
34	Lithospheric Stress Tensor from Gravity and Lithospheric Structure Models. Pure and Applied Geophysics, 2017, 174, 2677-2688.	1.9	1
35	On the approximations in formulation of the Vening Meinesz–Moritz theory of isostasy. Geophysical Journal International, 2017, 210, 500-508.	2.4	14
36	Local recovery of lithospheric stress tensor from GOCE gravitational tensor. Geophysical Journal International, 2017, , ggx026.	2.4	0

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37	Moho Density Contrast in Central Eurasia from GOCE Gravity Gradients. Remote Sensing, 2016, 8, 418.	4.0	18
38	An approach to Moho discontinuity recovery from on-orbit GOCE data with application over Indo-Pak region. Tectonophysics, 2016, 690, 253-262.	2.2	23
39	Local error calibration of EGM08 geoid using GNSS/levelling data. Journal of Applied Geophysics, 2016, 130, 209-217.	2.1	8
40	A theoretical discussion on Vening Meinesz-Moritz inverse problem of isostasy. Geophysical Journal International, 2016, 207, 1420-1431.	2.4	20
41	Towards sub-lithospheric stress determination from seismic Moho, topographic heights and GOCE data. Journal of Asian Earth Sciences, 2016, 129, 1-12.	2.3	6
42	Changes in gravitational parameters inferred from time variable GRACE data—A case study for October 2005 Kashmir earthquake. Journal of Applied Geophysics, 2016, 132, 174-183.	2.1	5
43	Local Recovery of Sub-Crustal Stress Due to Mantle Convection from Satellite-to-Satellite Tracking Data. Acta Geophysica, 2016, 64, 904-929.	2.0	3
44	On Vening Meinesz-Moritz and flexural theories of isostasy and their comparison over Tibet Plateau. Journal of Geodetic Science, 2016, 6, .	1.0	5
45	Integral Approaches to Determine Sub-Crustal Stress from Terrestrial Gravimetric Data. Pure and Applied Geophysics, 2016, 173, 805-825.	1.9	5
46	The effect of instrumental precision on optimisation of displacement monitoring networks. Acta Geodaetica Et Geophysica, 2016, 51, 761-772.	1.6	0
47	On the integral inversion of satellite-to-satellite velocity differences for local gravity field recovery: a theoretical study. Celestial Mechanics and Dynamical Astronomy, 2016, 124, 127-144.	1.4	4
48	TWO-EPOCH OPTIMAL DESIGN OF DISPLACEMENT MONITORING NETWORKS. Boletim De Ciencias Geodesicas, 2015, 21, 484-497.	0.3	3
49	DETERMINISTICALLY-MODIFIED INTEGRAL ESTIMATORS OF GRAVITATIONAL TENSOR. Boletim De Ciencias Geodesicas, 2015, 21, 189-212.	0.3	2
50	On the relation between Moho and sub-crustal stress induced by mantle convection. Journal of Geophysics and Engineering, 2015, 12, 1-11.	1.4	13
51	Sub-crustal stress determined using gravity and crust structure models. Computational Geosciences, 2015, 19, 115-125.	2.4	17
52	Martian sub-crustal stress from gravity and topographic models. Earth and Planetary Science Letters, 2015, 425, 84-92.	4.4	31
53	The effect of constraints on bi-objective optimisation of geodetic networks. Acta Geodaetica Et Geophysica, 2015, 50, 449-459.	1.6	10
54	Determination of sub-lithospheric stress due to mantle convection using GOCE gradiometric data over Iran. Journal of Applied Geophysics, 2015, 122, 11-17.	2.1	8

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55	The Sub-Crustal Stress Field in the Taiwan Region. Terrestrial, Atmospheric and Oceanic Sciences, 2015, 26, 261.	0.6	11
56	From Tensor to Vector of Gravitation. Artificial Satellites, 2014, 49, 63-80.	0.7	1
57	A theoretical study on terrestrial gravimetric data refinement by Earth gravity models. Geophysical Prospecting, 2014, 62, 158-171.	1.9	2
58	From Satellite Gradiometry Data to Subcrustal Stress Due to Mantle Convection. Pure and Applied Geophysics, 2014, 171, 2391-2406.	1.9	16
59	A strategy to calibrate errors of Earth gravity models. Journal of Applied Geophysics, 2014, 103, 215-220.	2.1	3
60	An alternative approach to Eulerian pole determination and unification of velocity fields of tectonic motions. Tectonophysics, 2014, 617, 79-87.	2.2	0
61	The effect of spatial truncation error on variance of gravity anomalies derived from inversion of satellite orbital and gradiometric data. Advances in Space Research, 2014, 54, 261-271.	2.6	11
62	Spectral Combination in Vector Gravimetric Boundary Value Problems. Journal of Geospatial Information Technology, 2014, 1, 33-50.	0.2	1
63	Geoid modelling based on EGM08 and recent Earth gravity models of GOCE. Earth Science Informatics, 2013, 6, 113-125.	3.2	8
64	Evaluation of gravitational gradients generated by Earth's crustal structures. Computers and Geosciences, 2013, 51, 22-33.	4.2	7
65	On the reliability and error calibration of some recent Earth's gravity models of GOCE with respect to EGM08. Acta Geodaetica Et Geophysica, 2013, 48, 199-208.	1.6	7
66	Quality assessment for terrestrial gravity anomalies by variance component estimation using GOCE gradiometric data and Earth's gravity models. Studia Geophysica Et Geodaetica, 2013, 57, 67-83.	0.5	6
67	The use of Gaussian equations of motions of a satellite for local gravity anomaly recovery. Advances in Space Research, 2013, 52, 30-38.	2.6	6
68	Numerical aspects of EGM08-based geoid computations in Fennoscandia regarding the applied reference surface and error propagation. Journal of Applied Geophysics, 2013, 96, 28-32.	2.1	5
69	On regularized time varying gravity field models based on grace data and their comparison with hydrological models. Acta Geophysica, 2013, 61, 1-17.	2.0	16
70	An integral approach to regional gravity field refinement using earth gravity models. Journal of Geodynamics, 2013, 68, 18-28.	1.6	1
71	Crustal thickness recovery using an isostatic model and GOCE data. Earth, Planets and Space, 2012, 64, 1053-1057.	2.5	12
72	A strategy towards an EGM08-based Fennoscandian geoid model. Journal of Applied Geophysics, 2012, 87, 53-59.	2.1	7

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73	A theory on geoid modelling by spectral combination of data from satellite gravity gradiometry, terrestrial gravity and an Earth Gravitational Model. Acta Geodaetica Et Geophysica Hungarica, 2012, 47, 13-28.	0.4	21
74	Quality description for gravimetric and seismic moho models of fennoscandia through a combined adjustment. Acta Geodaetica Et Geophysica Hungarica, 2012, 47, 388-401.	0.4	3
75	Spectral Combination of Spherical Gradiometric Boundary-Value Problems: A Theoretical Study. Pure and Applied Geophysics, 2012, 169, 2201-2215.	1.9	13
76	Software for generating gravity gradients using a geopotential model based on an irregular semivectorization algorithm. Computers and Geosciences, 2012, 39, 152-160.	4.2	15
77	Recovery of Moho's undulations based on the Vening Meinesz–Moritz theory from satellite gravity gradiometry data: A simulation study. Advances in Space Research, 2012, 49, 1097-1111.	2.6	11
78	A combined global Moho model based on seismic and gravimetric data. Acta Geodaetica Et Geophysica Hungarica, 2011, 46, 25-38.	0.4	25
79	On the estimation of variance in unstable condition adjustment models. Acta Geodaetica Et Geophysica Hungarica, 2011, 46, 71-83.	0.4	2
80	Determination of gravity anomaly at sea level from inversion of satellite gravity gradiometric data. Journal of Geodynamics, 2011, 51, 366-377.	1.6	24
81	Generation of vertical–horizontal and horizontal–horizontal gravity gradients using stochastically modified integral estimators. Advances in Space Research, 2011, 48, 1341-1358.	2.6	7
82	On integral approach to regional gravity field modelling from satellite gradiometric data. Acta Geophysica, 2011, 59, 29-54.	2.0	24
83	Smoothing impact of isostatic crustal thickness models on local integral inversion of satellite gravity gradiometry data. Acta Geophysica, 2011, 59, 891-906.	2.0	11
84	Inversion of satellite gradiometry data using statistically modified integral formulas for local gravity field recovery. Advances in Space Research, 2011, 47, 74-85.	2.6	19
85	The effect of spatial truncation error on integral inversion of satellite gravity gradiometry data. Advances in Space Research, 2011, 47, 1238-1247.	2.6	41
86	Semi-stochastic modification of second-order radial derivative of Abel–Poisson's formula for validating satellite gravity gradiometry data. Advances in Space Research, 2011, 47, 757-767.	2.6	12
87	Alternative expressions for gravity gradients in local north-oriented frame and tensor spherical harmonics. Acta Geophysica, 2010, 58, 215-243.	2.0	37
88	Comparison of two approaches for considering laterally varying density in topographic effect on satellite gravity gradiometric data. Acta Geophysica, 2010, 58, 661-686.	2.0	18
89	Semi-vectorization: an efficient technique for synthesis and analysis of gravity gradiometry data. Earth Science Informatics, 2010, 3, 149-158.	3.2	14
90	Optimal combination of integral solutions of gradiometric boundary value problem using variance component estimation in Earth gravitational modelling. Earth, Planets and Space, 2010, 62, 437-448.	2.5	8

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91	Error calibration of quasi-geoidal, normal and ellipsoidal heights of Sweden using variance component estimation. Contributions To Geophysics and Geodesy, 2010, 40, 1-30.	0.6	11
92	Least-squares modification of extended Stokes' formula and its second-order radial derivative for validation of satellite gravity gradiometry data. Journal of Geodynamics, 2010, 49, 92-104.	1.6	13
93	Considering data gaps in geoid modelling by modifying Stokes' formula. Acta Geodaetica Et Geophysica Hungarica, 2010, 45, 165-183.	0.4	1
94	Variance component estimation in linear ill-posed problems: TSVD issue. Acta Geodaetica Et Geophysica Hungarica, 2010, 45, 184-194.	0.4	5
95	Topographic and atmospheric effects on goce gradiometric data in a local north-oriented frame: A case study in Fennoscandia and Iran. Studia Geophysica Et Geodaetica, 2009, 53, 61-80.	0.5	22
96	A geoid solution for airborne gravity data. Studia Geophysica Et Geodaetica, 2009, 53, 359-374.	0.5	10
97	Least‐squares modification of stokes' formula with EGM08. Geodesy and Cartography, 2009, 35, 111-117.	0.5	7
98	Atmospheric effects on satellite gravity gradiometry data. Journal of Geodynamics, 2009, 47, 9-19.	1.6	21
99	The effect of geopotential perturbations of GOCE on its observations â€" A numerical study. Acta Geodaetica Et Geophysica Hungarica, 2009, 44, 385-398.	0.4	2
100	The effect of lateral density variations of crustal and topographic masses on GOCE gradiometric data â€" A study in Iran and Fennoscandia. Acta Geodaetica Et Geophysica Hungarica, 2009, 44, 399-418.	0.4	12
101	Impact of vectorization on global synthesis and analysis in gradiometry. Acta Geodaetica Et Geophysica Hungarica, 2009, 44, 323-342.	0.4	9
102	Contribution of 1st -3rd Order Terms of a Binomial Expansion of Topographic Heights in Topographic and Atmospheric Effects on Satellite Gravity Gradiometric Data. Artificial Satellites, 2009, 44, .	0.7	8
103	On the convergence of spherical harmonic expansion of topographic and atmospheric biases in gradiometry. Contributions To Geophysics and Geodesy, 2009, 39, 273-299.	0.6	9
104	Towards Validation of Satellite Gradiometric Data Using Modified Version of 2nd Order Partial Derivatives of Extended Stokes' Formula. Artificial Satellites, 2009, 44, .	0.7	4
105	Spatially Restricted Integrals in Gradiometric Boundary Value Problems. Artificial Satellites, 2009, 44, 131-148.	0.7	14
106	The Modified Best Quadratic Unbiased Non-Negative Estimator (MBQUNE) of variance components. Studia Geophysica Et Geodaetica, 2008, 52, 305-320.	0.5	14
107	Interpretation of general geophysical patterns in Iran based on GRACE gradient component analysis. Acta Geophysica, 2008, 56, 440-454.	2.0	5
108	Non-singular expressions for the vector and the gradient tensor of gravitation in a geocentric spherical frame. Computers and Geosciences, 2008, 34, 1762-1768.	4.2	34

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109	Spherical Harmonics Expansion of the Atmospheric Gravitational Potential Based on Exponential and Power Models of Atmosphere. Artificial Satellites, 2008, 43, 25-43.	0.7	3
110	Evaluation of robust techniques in suppressing the impact of outliers in a deformation monitoring network â€" a case study on the Tehran Milad tower network. Acta Geodaetica Et Geophysica Hungarica, 2007, 42, 449-463.	0.4	5
111	A strategy for optimum designing of the geodetic networks from the cost, reliability and precision views. Acta Geodaetica Et Geophysica Hungarica, 2007, 42, 297-308.	0.4	16
112	The Earthâ€™s Gravity Field Role in Geodesy and Large-Scale Geophysics. , 0, , .		0