Frank M Flechtner

List of Publications by Year
in descending order

66 papers	3,653 citations	236833 25 h-index	133188 59 g-index
71 all docs	71 docs citations	71 times ranked	2697 citing authors

#	Article	IF	Citations
1	Contributions of GRACE to understanding climate change. Nature Climate Change, 2019, 9, 358-369.	8.1	536
2	Extending the Global Mass Change Data Record: GRACE Followâ€On Instrument and Science Data Performance. Geophysical Research Letters, 2020, 47, e2020GL088306.	1.5	330
3	An Earth gravity field model complete to degree and order 150 from GRACE: EIGEN-GRACE02S. Journal of Geodynamics, 2005, 39, 1-10.	0.7	279
4	GRACE observations of changes in continental water storage. Global and Planetary Change, 2006, 50, 112-126.	1.6	204
5	The GeoForschungsZentrum Potsdam/Groupe de Recherche de GÃ¨odÃ©sie Spatiale satellite-only and combined gravity field models: EIGEN-GL04S1 and EIGEN-GL04C. Journal of Geodesy, 2008, 82, 331-346.	1.6	204
6	A new high-resolution model of non-tidal atmosphere and ocean mass variability for de-aliasing of satellite gravity observations: AOD1B RL06. Geophysical Journal International, 2017, 211, 263-269.	1.0	174
7	ICGEM â€" 15 years of successful collection and distribution of global gravitational models, associated services, and future plans. Earth System Science Data, 2019, 11, 647-674.	3.7	172
8	In-Orbit Performance of the GRACE Follow-on Laser Ranging Interferometer. Physical Review Letters, 2019, 123, 031101.	2.9	161
9	What Can be Expected from the GRACE-FO Laser Ranging Interferometer for Earth Science Applications?. Surveys in Geophysics, 2016, 37, 453-470.	2.1	139
10	Hydrological Signals Observed by the GRACE Satellites. Surveys in Geophysics, 2008, 29, 319-334.	2.1	128
11	Simulating high-frequency atmosphere-ocean mass variability for dealiasing of satellite gravity observations: AOD1B RL05. Journal of Geophysical Research: Oceans, 2013, 118, 3704-3711.	1.0	103
12	Estimation of steric sea level variations from combined GRACE and Jason-1 data. Earth and Planetary Science Letters, 2007, 254, 194-202.	1.8	102
13	The GFZ GRACE RL06 Monthly Gravity Field Time Series: Processing Details and Quality Assessment. Remote Sensing, 2019, 11, 2116.	1.8	72
14	Combination of temporal gravity variations resulting from superconducting gravimeter (SG) recordings, GRACE satellite observations and global hydrology models. Journal of Geodesy, 2006, 79, 573-585.	1.6	64
15	Comparing seven candidate mission configurations for temporal gravity field retrieval through full-scale numerical simulation. Journal of Geodesy, 2014, 88, 31-43.	1.6	63
16	Status of the GRACE Follow-On Mission. International Association of Geodesy Symposia, 2014, , 117-121.	0.2	62
17	Land water storage contribution to sea level from GRACE geoid data over 2003â€"2006. Global and Planetary Change, 2008, 60, 381-392.	1.6	58
18	Daily GRACE gravity field solutions track major flood events in the Gangesâ€"Brahmaputra Delta. Hydrology and Earth System Sciences, 2018, 22, 2867-2880.	1.9	55

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19	EIGEN-6C: A High-Resolution Global Gravity Combination Model Including GOCE Data. Advanced Technologies in Earth Sciences, 2014, , 155-161.	0.9	55
20	Modeling of present-day atmosphere and ocean non-tidal de-aliasing errors for future gravity mission simulations. Journal of Geodesy, 2016, 90, 423-436.	1.6	52
21	Advanced technologies for satellite navigation and geodesy. Advances in Space Research, 2019, 64, 1256-1273.	1.2	52
22	Seasonal variation of ocean bottom pressure derived from Gravity Recovery and Climate Experiment (GRACE): Local validation and global patterns. Journal of Geophysical Research, 2005, 110, .	3.3	46
23	Mass, Volume and Velocity of the Antarctic Ice Sheet: Present-Day Changes and Error Effects. Surveys in Geophysics, 2014, 35, 1481-1505.	2.1	41
24	The Release 04 CHAMP and GRACE EIGEN Gravity Field Models. Advanced Technologies in Earth Sciences, 2010, , 41-58.	0.9	35
25	Can GPS-Derived Surface Loading Bridge a GRACE Mission Gap?. Surveys in Geophysics, 2014, 35, 1267-1283.	2.1	33
26	European Gravity Service for Improved Emergency Management (EGSIEM)â€"from concept to implementation. Geophysical Journal International, 2019, 218, 1572-1590.	1.0	27
27	Residual ocean tide signals from satellite altimetry, GRACE gravity fields, and hydrodynamic modelling. Geophysical Journal International, 2009, 178, 1185-1192.	1.0	26
28	Airborne Gravimetry of GEOHALO Mission: Data Processing and Gravity Field Modeling. Journal of Geophysical Research: Solid Earth, 2017, 122, 10,586.	1.4	23
29	GFZ RL05: An Improved Time-Series of Monthly GRACE Gravity Field Solutions. Advanced Technologies in Earth Sciences, 2014, , 29-39.	0.9	21
30	Correction of inconsistencies in ECMWF's operational analysis data during de-aliasing of GRACE gravity models. Geophysical Journal International, 2015, 202, 2150-2158.	1.0	20
31	The gravity field model IGGT_R1 based on the second invariant of the GOCE gravitational gradient tensor. Journal of Geodesy, 2018, 92, 561-572.	1.6	18
32	GNSS navigation and positioning for the GEOHALO experiment in Italy. GPS Solutions, 2016, 20, 215-224.	2.2	17
33	Gravitationally Consistent Mean Barystatic Sea Level Rise From Leakageâ€Corrected Monthly GRACE Data. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020923.	1.4	17
34	International Combination Service for Time-Variable Gravity Fields (COST-G). International Association of Geodesy Symposia, 2020, , 57-65.	0.2	17
35	On the impact of local ties on the datum realization of global terrestrial reference frames. Journal of Geodesy, 2019, 93, 655-667.	1.6	16
36	Satellite Gravimetry: A Review of Its Realization. Surveys in Geophysics, 2021, 42, 1029-1074.	2.1	16

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37	Shipborne gravimetry in the Baltic Sea: data processing strategies, crucial findings and preliminary geoid determination tests. Journal of Geodesy, 2019, 93, 1059-1071.	1.6	15
38	Performance Assessment of Multi-GNSS Precise Velocity and Acceleration Determination over Antarctica. Journal of Navigation, 2019, 72, 1-18.	1.0	14
39	De-aliasing of Short-term Atmospheric and Oceanic Mass Variations for GRACE. , 2006, , 83-97.		12
40	What Can be Expected from the GRACE-FO Laser Ranging Interferometer for Earth Science Applications?. Space Sciences Series of ISSI, 2016, , 263-280.	0.0	12
41	Comparison of ECMWF analyses with GPS radio occultations from CHAMP. Annales Geophysicae, 2008, 26, 3225-3234.	0.6	11
42	GNSS Precise Kinematic Positioning for Multiple Kinematic Stations Based on A Priori Distance Constraints. Sensors, 2016, 16, 470.	2.1	11
43	Technical note: Introduction of a superconducting gravimeter as novel hydrological sensor for the Alpine research catchment Zugspitze. Hydrology and Earth System Sciences, 2021, 25, 5047-5064.	1.9	11
44	Non-tidal atmospheric and oceanic mass variations and their impact on GRACE data analysis. Journal of Geodynamics, 2012, 59-60, 9-15.	0.7	10
45	GGOS-SIM: Simulation of the Reference Frame for the Global Geodetic Observing System. International Association of Geodesy Symposia, 2015, , 95-100.	0.2	10
46	A Global Terrestrial Reference Frame from simulated VLBI and SLR data in view of GGOS. Journal of Geodesy, 2017, 91, 723-733.	1.6	10
47	Improved Non-tidal Atmospheric and Oceanic De-aliasing for GRACE and SLR Satellites. Advanced Technologies in Earth Sciences, 2010, , 131-142.	0.9	10
48	Modelling spatial covariances for terrestrial water storage variations verified with synthetic GRACE-FO data. GEM - International Journal on Geomathematics, 2020, 11, 1.	0.7	9
49	Forward Gravity Modelling to Augment High-Resolution Combined Gravity Field Models. Surveys in Geophysics, 2020, 41, 767-804.	2.1	8
50	Uncertainties of GRACEâ€Based Terrestrial Water Storage Anomalies for Arbitrary Averaging Regions. Journal of Geophysical Research: Solid Earth, 2022, 127, .	1.4	7
51	Satellite dynamics of the CHAMP and GRACE leos as revealed from space- and ground-based tracking. Advances in Space Research, 2003, 31, 1869-1874.	1.2	6
52	Improving the Performance of Multi-GNSS (Global Navigation Satellite System) Ambiguity Fixing for Airborne Kinematic Positioning over Antarctica. Remote Sensing, 2019, 11, 992.	1.8	6
53	Impact of PRARE on ERS-2 POD. Advances in Space Research, 1997, 19, 1645-1648.	1.2	5
54	Simulation study for the determination of the lunar gravity field from PRARE-L tracking onboard the German LEO mission. Advances in Space Research, 2008, 42, 1405-1413.	1.2	5

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55	Using real polar ground gravimetry data to solve the GOCE polar gap problem in satellite-only gravity field recovery. Journal of Geodesy, 2020, 94, 1.	1.6	5
56	Static and Time-Variable Gravity from GRACE Mission Data. , 2006, , 115-129.		5
57	Future Gravity Field Satellite Missions. Advanced Technologies in Earth Sciences, 2014, , 165-230.	0.9	5
58	Simulation of VLBI Observations to Determine a Global TRF for GGOS. International Association of Geodesy Symposia, 2016, , 3-9.	0.2	4
59	First results of comparisons of PRARE TEC with TOPEX measurements and with ionospheric models. Advances in Space Research, 1998, 22, 815-818.	1.2	3
60	Atmospheric Loading and Mass Variation Effects on the SLR-Defined Geocenter. International Association of Geodesy Symposia, 2015, , 227-232.	0.2	3
61	Integrated GNSS Doppler velocity determination for GEOHALO airborne gravimetry. GPS Solutions, 2021, 25, 1.	2.2	3
62	Gravity Field Mapping from GRACE: Different Approachesâ€"Same Results?. International Association of Geodesy Symposia, 2015, , 165-175.	0.2	2
63	Benchmark data for verifying background model implementations in orbit and gravity field determination software. Advances in Geosciences, 0, 55, 1-11.	12.0	2
64	High Frequency Temporal Earth Gravity Variations Detected by GRACE Satellites. , 2006, , 165-174.		1
65	Die Surfer im Erdschwerefeld. Physik in Unserer Zeit, 2013, 44, 286-292.	0.0	0
66	Impact of Numerical Weather Models on Gravity Field Analysis. International Association of Geodesy Symposia, 2015, , 355-365.	0.2	0