Isabella Velicogna

List of Publications by Year
in descending order

85 papers	13,564 citations	57758 44 h-index	54911 84 g-index
99 all docs	99 docs citations	99 times ranked	10827 citing authors

#	Article	IF	Citations
1	Anthropogenic influence on the changing risk of heat waves over India. Scientific Reports, 2022, 12, 3337.	3.3	8
2	Precipitation variability over India during the 20th and 21st centuries: investigating natural and anthropogenic drivers. Climatic Change, 2022, 172, .	3.6	5
3	Ecological restoration impact on total terrestrial water storage. Nature Sustainability, 2021, 4, 56-62.	23.7	121
4	Automatic delineation of glacier grounding lines in differential interferometric synthetic-aperture radar data using deep learning. Scientific Reports, 2021, 11, 4992.	3.3	22
5	Calving Front Machine (CALFIN): glacial termini dataset and automated deep learning extraction method for Greenland, 1972â€“2019. Cryosphere, 2021, 15, 1663-1675.	3.9	38
6	The Paris Climate Agreement and future sea-level rise from Antarctica. Nature, 2021, 593, 83-89.	27.8	219
7	Synergistic Satellite Assessment of Global Vegetation Health in Relation to ENSOâ€Induced Droughts and Pluvials. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG006006.	3.0	4
8	Ocean forcing drives glacier retreat in Greenland. Science Advances, 2021, 7, .	10.3	86
9	Grand Challenges of Hydrologic Modeling for Food-Energy-Water Nexus Security in High Mountain Asia. Frontiers in Water, 2021, 3, .	2.3	5
10	Assessment of CMIP6 Cloud Fraction and Comparison with Satellite Observations. Earth and Space Science, 2020, 7, e2019EA000975.	2.6	55
11	The International Bathymetric Chart of the Arctic Ocean Version 4.0. Scientific Data, 2020, 7, 176.	5.3	129
12	Selfâ€Consistent Ice Mass Balance and Regional Sea Level From Timeâ€Variable Gravity. Earth and Space Science, 2020, 7, e2019EA000860.	2.6	3
13	Continuity of Ice Sheet Mass Loss in Greenland and Antarctica From the GRACE and GRACE Followâ€On Missions. Geophysical Research Letters, 2020, 47, e2020GL087291.	4.0	155
14	Below-surface water mediates the response of African forests to reduced rainfall. Environmental Research Letters, 2020, 15, 034063.	5.2	18
15	Continuity of the Mass Loss of the World's Glaciers and Ice Caps From the GRACE and GRACE Followâ€On Missions. Geophysical Research Letters, 2020, 47, e2019GL086926.	4.0	88
16	Understanding of Contemporary Regional Seaâ€Level Change and the Implications for the Future. Reviews of Geophysics, 2020, 58, e2019RG000672.	23.0	74
17	Satellite detection of varying seasonal water supply restrictions on grassland productivity in the Missouri basin, USA. Remote Sensing of Environment, 2020, 239, 111623.	11.0	4
18	Global climatology of planetary boundary layer top obtained from multi-satellite GPS RO observations. Climate Dynamics, 2019, 52, 2385-2398.	3.8	23

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19	Evaluation of Regional Climate Models Using Regionally Optimized GRACE Mascons in the Amery and Getz Ice Shelves Basins, Antarctica. Geophysical Research Letters, 2019, 46, 13883-13891.	4.0	8
20	Bathymetry of Southeast Greenland From Oceans Melting Greenland (OMG) Data. Geophysical Research Letters, 2019, 46, 11197-11205.	4.0	12
21	Improved Estimates of Geocenter Variability from Time-Variable Gravity and Ocean Model Outputs. Remote Sensing, 2019, 11, 2108.	4.0	5
22	Multicomponent Satellite Assessment of Drought Severity in the Contiguous United States From 2002 to 2017 Using AMSRâ€E and AMSR2. Water Resources Research, 2019, 55, 5394-5412.	4.2	22
23	Detection of Glacier Calving Margins with Convolutional Neural Networks: A Case Study. Remote Sensing, 2019, 11, 74.	4.0	56
24	Contributions of GRACE to understanding climate change. Nature Climate Change, 2019, 9, 358-369.	18.8	536
25	Long-term variation of dust episodes over the United Arab Emirates. Journal of Atmospheric and Solar-Terrestrial Physics, 2019, 187, 33-39.	1.6	11
26	Soil Moisture Variability in India: Relationship of Land Surfaceâ€“Atmosphere Fields Using Maximum Covariance Analysis. Remote Sensing, 2019, 11, 335.	4.0	26
27	A case study of mesospheric planetary waves observed over a three-radar network using empirical mode decomposition. Annales Geophysicae, 2018, 36, 925-936.	1.6	0
28	Evaluation of Reconstructions of Snow/Ice Melt in Greenland by Regional Atmospheric Climate Models Using Laser Altimetry Data. Geophysical Research Letters, 2018, 45, 8324-8333.	4.0	14
29	Mass Balance of Novaya Zemlya Archipelago, Russian High Arctic, Using Time-Variable Gravity from GRACE and Altimetry Data from ICESat and CryoSat-2. Remote Sensing, 2018, 10, 1817.	4.0	17
30	Mass Loss of Totten and Moscow University Glaciers, East Antarctica, Using Regionally Optimized GRACE Mascons. Geophysical Research Letters, 2018, 45, 7010-7018.	4.0	27
31	Satellite-observed changes in vegetation sensitivities to surface soil moisture and total water storage variations since the 2011 Texas drought. Environmental Research Letters, 2017, 12, 054006.	5.2	30
32	Satellite Observations of Regional Drought Severity in the Continental United States Using GRACE-Based Terrestrial Water Storage Changes. Journal of Climate, 2017, 30, 6297-6308.	3.2	101
33	A Global Gridded Dataset of GRACE Drought Severity Index for 2002â€“14: Comparison with PDSI and SPEI and a Case Study of the Australia Millennium Drought. Journal of Hydrometeorology, 2017, 18, 2117-2129.	1.9	133
34	Investigation of Kelvin wave periods during Hai-Tang typhoon using Empirical Mode Decomposition. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 164, 192-202.	1.6	1
35	Detection of sea level fingerprints derived from GRACE gravity data. Geophysical Research Letters, 2017, 44, 8953-8961.	4.0	43
36	Groundwater rejuvenation in parts of India influenced by water-policy change implementation. Scientific Reports, 2017, 7, 7453.	3.3	109

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37	Historical and Projected Surface Temperature over India during the 20th and 21st century. Scientific Reports, 2017, 7, 2987.	3.3	116
38	Atmospheric summer teleconnections and Greenland Ice Sheet surface mass variations: insights from MERRA-2. Environmental Research Letters, 2016, 11, 024002.	5.2	26
39	Bathymetry data reveal glaciers vulnerable to iceâ€ocean interaction in Uummannaq and Vaigat glacial fjords, west Greenland. Geophysical Research Letters, 2016, 43, 2667-2674.	4.0	52
40	Validation of GRACE based groundwater storage anomaly using in-situ groundwater level measurements in India. Journal of Hydrology, 2016, 543, 729-738.	5.4	121
41	Sudden stratospheric warmings observed in the last decade by satellite measurements. Remote Sensing of Environment, 2016, 184, 263-275.	11.0	9
42	Rapid submarine ice melting in the grounding zones of ice shelves in West Antarctica. Nature Communications, 2016, 7, 13243.	12.8	58
43	Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2 Â°C global warming could be dangerous. Atmospheric Chemistry and Physics, 2016, 16, 3761-3812.	4.9	421
44	Evaluating CMIP5 models using GPS radio occultation COSMIC temperature in UTLS region during 2006â€“2013: twenty-first century projection and trends. Climate Dynamics, 2016, 47, 3253-3270.	3.8	15
45	Precipitation climatology over India: validation with observations and reanalysis datasets and spatial trends. Climate Dynamics, 2016, 46, 541-556.	3.8	117
46	Potential for Southern Hemisphere climate surprises. Journal of Quaternary Science, 2015, 30, 391-395.	2.1	22
47	Impact of changes in GRACE derived terrestrial water storage on vegetation growth in Eurasia. Environmental Research Letters, 2015, 10, 124024.	5.2	33
48	Two-day wave observations over the middle and high latitudes in the NH and SH using COSMIC GPSRO measurements. Advances in Space Research, 2015, 55, 722-731.	2.6	11
49	Vertical and latitudinal variation of the intertropical convergence zone derived using GPS radio occultation measurements. Remote Sensing of Environment, 2015, 163, 262-269.	11.0	15
50	Satellites provide the big picture. Science, 2015, 349, 684-685.	12.6	94
51	The amount and timing of precipitation control the magnitude, seasonality and sources (¹⁴C) of ecosystem respiration in a polar semi-desert, northwestern Greenland. Biogeosciences, 2014, 11, 4289-4304.	3.3	20
52	Long-term trends observed in the middle atmosphere temperatures using ground based LIDARs and satellite borne measurements. Annales Geophysicae, 2014, 32, 301-317.	1.6	12
53	Mass loss of the Amundsen Sea Embayment of West Antarctica from four independent techniques. Geophysical Research Letters, 2014, 41, 8421-8428.	4.0	91
54	Evaluating Greenland glacial isostatic adjustment corrections using GRACE, altimetry and surface mass balance data. Environmental Research Letters, 2014, 9, 014004.	5.2	19

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55	Regional acceleration in ice mass loss from Greenland and Antarctica using GRACE timeâ€variable gravity data. Geophysical Research Letters, 2014, 41, 8130-8137.	4.0	268
56	Attribution of divergent northern vegetation growth responses to lengthening non-frozen seasons using satellite optical-NIR and microwave remote sensing. International Journal of Remote Sensing, 2014, 35, 3700-3721.	2.9	46
57	Global distribution of pauses observed with satellite measurements. Journal of Earth System Science, 2013, 122, 515-529.	1.3	3
58	Satellite observations of terrestrial water storage provide early warning information about drought and fire season severity in the Amazon. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 495-504.	3.0	66
59	A review of global ocean temperature observations: Implications for ocean heat content estimates and climate change. Reviews of Geophysics, 2013, 51, 450-483.	23.0	367
60	Timeâ€variable gravity observations of ice sheet mass balance: Precision and limitations of the GRACE satellite data. Geophysical Research Letters, 2013, 40, 3055-3063.	4.0	166
61	Planetary waves in the upper stratosphere and lower mesosphere during 2009 Arctic major stratospheric warming. Annales Geophysicae, 2012, 30, 1529-1538.	1.6	10
62	A Reconciled Estimate of Ice-Sheet Mass Balance. Science, 2012, 338, 1183-1189.	12.6	1,246
63	Timing and origin of recent regional ice-mass loss in Greenland. Earth and Planetary Science Letters, 2012, 333-334, 293-303.	4.4	179
64	Increasing subsurface water storage in discontinuous permafrost areas of the Lena River basin, Eurasia, detected from GRACE. Geophysical Research Letters, 2012, 39, .	4.0	68
65	Acceleration of the contribution of the Greenland and Antarctic ice sheets to sea level rise. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	870
66	Revisiting the Earth's sea-level and energy budgets from 1961 to 2008. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	415
67	Global (50Â°Sâ€“50Â°N) distribution of water vapor observed by COSMIC GPS RO: Comparison with GPS radiosonde, NCEP, ERA-Interim, and JRA-25 reanalysis data sets. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 1849-1860.	1.6	65
68	Rapid submarine melting of the calving faces of West Greenland glaciers. Nature Geoscience, 2010, 3, 187-191.	12.9	338
69	A Comparison of AMSR-E/Aqua Snow Products with in situ Observations and MODIS Snow Cover Products in the Mackenzie River Basin, Canada. Remote Sensing, 2010, 2, 2313-2322.	4.0	22
70	Impact of selfâ€attraction and loading on the annual cycle in sea level. Journal of Geophysical Research, 2010, 115, .	3.3	69
71	Spread of ice mass loss into northwest Greenland observed by GRACE and GPS. Geophysical Research Letters, 2010, 37, .	4.0	168
72	Partitioning Recent Greenland Mass Loss. Science, 2009, 326, 984-986.	12.6	755

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73	Satellite-based estimates of groundwater depletion in India. Nature, 2009, 460, 999-1002.	27.8	2,107
74	Increasing rates of ice mass loss from the Greenland and Antarctic ice sheets revealed by GRACE. Geophysical Research Letters, 2009, 36, .	4.0	582
75	Accuracy of GRACE mass estimates. Geophysical Research Letters, 2006, 33, .	4.0	369
76	Acceleration of Greenland ice mass loss in spring 2004. Nature, 2006, 443, 329-331.	27.8	326
77	Measurements of Time-Variable Gravity Show Mass Loss in Antarctica. Science, 2006, 311, 1754-1756.	12.6	486
78	Short term mass variability in Greenland, from GRACE. Geophysical Research Letters, 2005, 32, .	4.0	29
79	Greenland mass balance from GRACE. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	125
80	On the recovery of effective elastic thickness using spectral methods: Examples from synthetic data and from the Fennoscandian Shield. Journal of Geophysical Research, 2004, 109, .	3.3	101
81	Time-variable gravity from GRACE: First results. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	628
82	What Might GRACE Contribute to Studies of Post Glacial Rebound?. Space Science Reviews, 2003, 108, 319-330.	8.1	20
83	A method for separating Antarctic postglacial rebound and ice mass balance using future ICESat Geoscience Laser Altimeter System, Gravity Recovery and Climate Experiment, and GPS satellite data. Journal of Geophysical Research, 2002, 107, ETG 20-1-ETG 20-11.	3.3	30
84	Postglacial rebound and Earth's viscosity structure from GRACE. Journal of Geophysical Research, 2002, 107, ETG 17-1-ETG 17-12.	3.3	29
85	Can surface pressure be used to remove atmospheric contributions from GRACE data with sufficient accuracy to recover hydrological signals?. Journal of Geophysical Research, 2001, 106, 16415-16434.	3.3	59