

Walter H F Smith

List of Publications by Citations

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85
papers

23,460
citations

36
h-index

93
g-index

93
ext. papers

26,149
ext. citations

5.8
avg. IF

7.18
L-index

| # | Paper | IF | Citations |
|----|--|------|-----------|
| 85 | New, improved version of generic mapping tools released. <i>Eos</i> , 1998 , 79, 579-579 | 1.5 | 4984 |
| 84 | Global Sea Floor Topography from Satellite Altimetry and Ship Depth Soundings. <i>Science</i> , 1997 , 277, 1956-1962 | 33.3 | 3268 |
| 83 | Free software helps map and display data. <i>Eos</i> , 1991 , 72, 441-441 | 1.5 | 2559 |
| 82 | Generic Mapping Tools: Improved Version Released. <i>Eos</i> , 2013 , 94, 409-410 | 1.5 | 2195 |
| 81 | New version of the generic mapping tools. <i>Eos</i> , 1995 , 76, 329-329 | 1.5 | 1811 |
| 80 | Marine gravity anomaly from Geosat and ERS 1 satellite altimetry. <i>Journal of Geophysical Research</i> , 1997 , 102, 10039-10054 | | 1274 |
| 79 | Gridding with continuous curvature splines in tension. <i>Geophysics</i> , 1990 , 55, 293-305 | 3.1 | 1004 |
| 78 | Global Bathymetry and Elevation Data at 30 Arc Seconds Resolution: SRTM30_PLUS. <i>Marine Geodesy</i> , 2009 , 32, 355-371 | 1.2 | 916 |
| 77 | Marine geophysics. New global marine gravity model from CryoSat-2 and Jason-1 reveals buried tectonic structure. <i>Science</i> , 2014 , 346, 65-7 | 33.3 | 767 |
| 76 | A global, self-consistent, hierarchical, high-resolution shoreline database. <i>Journal of Geophysical Research</i> , 1996 , 101, 8741-8743 | | 711 |
| 75 | Global marine gravity from retracked Geosat and ERS-1 altimetry: Ridge segmentation versus spreading rate. <i>Journal of Geophysical Research</i> , 2009 , 114, | | 501 |
| 74 | The Generic Mapping Tools Version 6. <i>Geochemistry, Geophysics, Geosystems</i> , 2019 , 20, 5556-5564 | 3.6 | 425 |
| 73 | Bathymetric prediction from dense satellite altimetry and sparse shipboard bathymetry. <i>Journal of Geophysical Research</i> , 1994 , 99, 21803-21824 | | 323 |
| 72 | An empirical thermal history of the Earth's upper mantle. <i>Journal of Geophysical Research</i> , 1994 , 99, 13835-13850 | | 300 |
| 71 | Global Bathymetry and Topography at 15 Arc Sec: SRTM15+. <i>Earth and Space Science</i> , 2019 , 6, 1847-1864 | 3.1 | 158 |
| 70 | The longevity of the South Pacific isotopic and thermal anomaly. <i>Earth and Planetary Science Letters</i> , 1991 , 102, 24-44 | 5.3 | 152 |
| 69 | Toward 1-mGal accuracy in global marine gravity from CryoSat-2, Envisat, and Jason-1. <i>The Leading Edge</i> , 2013 , 32, 892-899 | 1 | 151 |

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|----|--|------|-----|
| 68 | Observational hints for a plume-fed, suboceanic asthenosphere and its role in mantle convection. <i>Journal of Geophysical Research</i> , 1995 , 100, 12753-12767 | | 126 |
| 67 | On the accuracy of digital bathymetric data. <i>Journal of Geophysical Research</i> , 1993 , 98, 9591 | | 119 |
| 66 | A consistent data set of Antarctic ice sheet topography, cavity geometry, and global bathymetry. <i>Earth System Science Data</i> , 2010 , 2, 261-273 | 10.5 | 116 |
| 65 | Flattening of the sea-floor depth-age curve as a response to asthenospheric flow. <i>Nature</i> , 1992 , 359, 524-527 | 50.4 | 115 |
| 64 | The Volume of Earth's Ocean. <i>Oceanography</i> , 2010 , 23, 112-114 | 2.3 | 102 |
| 63 | Retracking ERS-1 altimeter waveforms for optimal gravity field recovery. <i>Geophysical Journal International</i> , 2005 , 163, 79-89 | 2.6 | 100 |
| 62 | Satellite altimetry and the intensification of Hurricane Katrina. <i>Eos</i> , 2005 , 86, 366 | 1.5 | 89 |
| 61 | The Magellan seamounts: Early Cretaceous record of the South Pacific isotopic and thermal anomaly. <i>Journal of Geophysical Research</i> , 1989 , 94, 10501-10523 | | 89 |
| 60 | An Evaluation of Publicly Available Global Bathymetry Grids. <i>Marine Geophysical Researches</i> , 2006 , 27, 19-34 | 2.3 | 85 |
| 59 | Flat to steep transition in subduction style. <i>Geology</i> , 1994 , 22, 937 | 5 | 84 |
| 58 | Retracking CryoSat-2, Envisat and Jason-1 radar altimetry waveforms for improved gravity field recovery. <i>Geophysical Journal International</i> , 2014 , 196, 1402-1422 | 2.6 | 71 |
| 57 | A global positioning system-based climatology for the total electron content in the ionosphere. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a | | 61 |
| 56 | Global gravity, bathymetry, and the distribution of submarine volcanism through space and time. <i>Journal of Geophysical Research</i> , 2006 , 111, | | 56 |
| 55 | SEAFLOOR TECTONIC FABRIC FROM SATELLITE ALTIMETRY. <i>Annual Review of Earth and Planetary Sciences</i> , 1998 , 26, 697-747 | 15.3 | 49 |
| 54 | Cross-Calibration and Long-Term Monitoring of the Microwave Radiometers of ERS, TOPEX, GFO, Jason, and Envisat. <i>Marine Geodesy</i> , 2004 , 27, 279-297 | 1.2 | 45 |
| 53 | Deformation of the oceanic crust between the North American and South American Plates. <i>Journal of Geophysical Research</i> , 1993 , 98, 8275-8291 | | 45 |
| 52 | . <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2017 , 55, 392-406 | 8.1 | 41 |
| 51 | Comparison of along-track resolution of stacked Geosat, ERS 1, and TOPEX satellite altimeters. <i>Journal of Geophysical Research</i> , 1995 , 100, 15117-15127 | | 41 |

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| 50 | Conventional Bathymetry, Bathymetry from Space, and Geodetic Altimetry. <i>Oceanography</i> , 2004 , 17, 8-23 | 2.3 | 39 |
| 49 | Bathymetry from space: Rationale and requirements for a new, high-resolution altimetric mission. <i>Comptes Rendus - Geoscience</i> , 2006 , 338, 1049-1062 | 1.4 | 35 |
| 48 | Gravity field recovery from geodetic altimeter missions. <i>Advances in Space Research</i> , 2021 , 68, 1059-1072. | 2.4 | 34 |
| 47 | Calibration of the CryoSat-2 Interferometer and Measurement of Across-Track Ocean Slope. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2013 , 51, 57-72 | 8.1 | 33 |
| 46 | The Benefits of the Ka-Band as Evidenced from the SARAL/AltiKa Altimetric Mission: Scientific Applications. <i>Remote Sensing</i> , 2018 , 10, 163 | 5 | 32 |
| 45 | Three-dimensional estimation of elastic thickness under the Louisville Ridge. <i>Journal of Geophysical Research</i> , 2000 , 105, 13239-13252 | | 30 |
| 44 | Waveform Aliasing in Satellite Radar Altimetry. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2015 , 53, 1671-1682 | 8.1 | 26 |
| 43 | How supercontinents and superoceans affect seafloor roughness. <i>Nature</i> , 2008 , 456, 938-41 | 50.4 | 24 |
| 42 | The Contributions of Abyssal Hill Morphology and Noise to Altimetric Gravity Fabric. <i>Oceanography</i> , 2004 , 17, 24-37 | 2.3 | 22 |
| 41 | Mapping the Southwest Indian Ridge with Geosat. <i>Eos</i> , 1993 , 74, 81-86 | 1.5 | 21 |
| 40 | Chapter 12 Bathymetric Estimation. <i>International Geophysics</i> , 2001 , 441-xxxiv | | 19 |
| 39 | Resolution of Seamount Geoid Anomalies Achieved by the SARAL/AltiKa and Envisat RA2 Satellite Radar Altimeters. <i>Marine Geodesy</i> , 2015 , 38, 644-671 | 1.2 | 18 |
| 38 | A consistent dataset of Antarctic ice sheet topography, cavity geometry, and global bathymetry 2010 , | | 18 |
| 37 | An uncertainty model for deep ocean single beam and multibeam echo sounder data. <i>Marine Geophysical Researches</i> , 2008 , 29, 239-250 | 2.3 | 18 |
| 36 | The Copernicus Sentinel-6 mission: Enhanced continuity of satellite sea level measurements from space. <i>Remote Sensing of Environment</i> , 2021 , 258, 112395 | 13.2 | 17 |
| 35 | Removing Intra-1-Hz Covariant Error to Improve Altimetric Profiles of σ^0 and Sea Surface Height. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2019 , 57, 3741-3752 | 8.1 | 16 |
| 34 | Seafloor in the Malaysia Airlines Flight MH370 Search Area. <i>Eos</i> , 2014 , 95, 173-174 | 1.5 | 15 |
| 33 | Evolution of errors in the altimetric bathymetry model used by Google Earth and GEBCO. <i>Marine Geophysical Researches</i> , 2010 , 31, 223-238 | 2.3 | 15 |

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| 32 | Bathymetry from space is now possible. <i>Eos</i> , 2003 , 84, 37-44 | 1.5 | 14 |
| 31 | Gravity and the hydrosphere: new frontier. <i>Hydrological Sciences Journal</i> , 1999 , 44, 407-415 | 3.5 | 14 |
| 30 | Slope correction for ocean radar altimetry. <i>Journal of Geodesy</i> , 2014 , 88, 765-771 | 4.5 | 13 |
| 29 | Radially symmetric coherence between satellite gravity and multibeam bathymetry grids. <i>Marine Geophysical Researches</i> , 2012 , 33, 223-227 | 2.3 | 13 |
| 28 | Introduction to This Special Issue on Bathymetry from Space. <i>Oceanography</i> , 2004 , 17, 6-7 | 2.3 | 13 |
| 27 | Some remarks on resolving seamounts in satellite gravity. <i>Geophysical Research Letters</i> , 2007 , 34, | 4.9 | 11 |
| 26 | Impact of synthetic abyssal hill roughness on resolved motions in numerical global ocean tide models. <i>Ocean Modelling</i> , 2017 , 112, 1-16 | 3 | 9 |
| 25 | The performance of CryoSat-2 fully-focussed SAR for inland water-level estimation. <i>Remote Sensing of Environment</i> , 2020 , 237, 111589 | 13.2 | 9 |
| 24 | Mesoscale ocean dynamics observed by satellite altimeters in non-repeat orbits. <i>Geophysical Research Letters</i> , 2009 , 36, | 4.9 | 8 |
| 23 | Spectral windows for satellite radar altimeters. <i>Advances in Space Research</i> , 2018 , 62, 1576-1588 | 2.4 | 7 |
| 22 | A Semianalytical Model of the Synthetic Aperture, Interferometric Radar Altimeter Mean Echo, and Echo Cross-Product and Its Statistical Fluctuations. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2018 , 56, 2539-2553 | 8.1 | 7 |
| 21 | Detecting small seamounts in AltiKa repeat cycle data. <i>Marine Geophysical Researches</i> , 2016 , 37, 349-359 | 2.3 | 7 |
| 20 | A correspondence of altimetric gravity texture to abyssal hill morphology along the flanks of the Southeast Indian Ridge. <i>Geophysical Research Letters</i> , 2003 , 30, | 4.9 | 7 |
| 19 | The SARAL/AltiKa mission: A step forward to the future of altimetry. <i>Advances in Space Research</i> , 2021 , 68, 808-828 | 2.4 | 7 |
| 18 | Significant improvements in marine gravity from ongoing satellite missions. <i>Marine Geophysical Researches</i> , 2013 , 34, 137-146 | 2.3 | 6 |
| 17 | . <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2019 , 57, 2610-2617 | 8.1 | 6 |
| 16 | First Coastal Altimetry Workshop: Cooperative Institute for Oceanographic Satellite Studies/National Oceanic and Atmospheric Administration Coastal Altimeter Workshop; 5 th February 2008, Silver Spring, Maryland. <i>Eos</i> , 2008 , 89, 380-380 | 1.5 | 5 |
| 15 | Reply to Comment on Satellite altimetry and the intensification of Hurricane Katrina. <i>Eos</i> , 2006 , 87, 89-89 | 1.5 | 5 |

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| 14 | Satellite gravity: Insights into the Solid Earth and its fluid envelope. <i>Eos</i> , 1998 , 79, 237-237 | 1.5 | 5 |
| 13 | Improved Bathymetric Prediction Using Geological Information: SYN-BATH. <i>Earth and Space Science</i> , 2022 , 9, | 3.1 | 5 |
| 12 | The Marine Geoid and Satellite Altimetry 2010 , 181-193 | | 5 |
| 11 | The Unique Role of the Jason Geodetic Missions for high Resolution Gravity Field and Mean Sea Surface Modelling. <i>Remote Sensing</i> , 2021 , 13, 646 | 5 | 4 |
| 10 | Airline Flight Paths over the Unmapped Ocean. <i>Eos</i> , 2017 , | 1.5 | 3 |
| 9 | A Method of Stacking AltiKa Repeat Cycle Data that May Reveal 75,000+ Possible Small Seamounts. <i>Earth and Space Science</i> , 2018 , 5, 964-969 | 3.1 | 3 |
| 8 | Orbit Accuracy Requirement for ABYSS: The Space Station Radar Altimeter to Map Global Bathymetry. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2009 , 6, 653-657 | 4.1 | 2 |
| 7 | Bathymetry from satellite altimetry: present and future | | 2 |
| 6 | Abyss-Lite: A High-resolution Gravimetric and Bathymetric Mission 2004 , | | 1 |
| 5 | Marine Gravity from Satellite Altimetry over Ocean and Sea Ice. <i>International Association of Geodesy Symposia</i> , 1996 , 12-19 | 0.8 | 1 |
| 4 | The second-order effect of Earth's rotation on Cryosat-2 fully focused SAR processing. <i>Journal of Geodesy</i> , 2020 , 94, 1 | 4.5 | 0 |
| 3 | Direct conversion of latitude and height from one ellipsoid to another. <i>Journal of Geodesy</i> , 2022 , 96, 1 | 4.5 | 0 |
| 2 | Corrections to Removing Intra-1-Hz Covariant Error to Improve Altimetric Profiles of σ^0 and Sea Surface Height [Jun 19 DOI: 10.1109/TGRS.2018.2886998]. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2019 , 57, 8327-8327 | 8.1 | |
| 1 | Comparison of Stacked Sentinel-3 A&B and AltiKa Repeat Cycle Data. <i>Earth and Space Science</i> , e2021EA001892 | | |