# Christopher J Zappa

List of Publications by Year
in descending order



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|---|---|---|---|
| 77 papers | 3,421 citations | 159585 30 h-index | 149698 56 g-index |
| 81 all docs | 81 docs citations | 81 times ranked | 3965 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Scaling the gas transfer velocity and hydraulic geometry in streams and small rivers. Limnology & Oceanography Fluids & Environments, 2012, 2, 41-53. | 1.7 | 444 |
| 2 | Environmental turbulent mixing controls on air-water gas exchange in marine and aquatic systems. Geophysical Research Letters, 2007, 34, . | 4.0 | 253 |
| 3 | Infrared remote sensing of breaking waves. Nature, 1997, 385, 52-55. | 27.8 | 168 |
| 4 | The Coupled Boundary Layers and Airâ€“Sea Transfer Experiment in Low Winds. Bulletin of the American Meteorological Society, 2007, 88, 341-356. | 3.3 | 154 |
| 5 | Air-sea CO2exchange in the equatorial Pacific. Journal of Geophysical Research, 2004, 109, n/a-n/a. | 3.3 | 143 |
| 6 | Variation in surface turbulence and the gas transfer velocity over a tidal cycle in a macro-tidal estuary. Estuaries and Coasts, 2003, 26, 1401-1415. | 1.7 | 141 |
| 7 | Antarctic ice shelf potentially stabilized by export of meltwater in surface river. Nature, 2017, 544, 344-348. | 27.8 | 124 |
| 8 | Defining and quantifying microscale wave breaking with infrared imagery. Journal of Geophysical Research, 1997, 102, 23145-23153. | 3.3 | 100 |
| 9 | Airâ€“Sea Interactions from Westerly Wind Bursts During the November 2011 MJO in the Indian Ocean. Bulletin of the American Meteorological Society, 2014, 95, 1185-1199. | 3.3 | 100 |
| 10 | Microbreaking and the enhancement of air-water transfer velocity. Journal of Geophysical Research, 2004, 109, n/a-n/a. | 3.3 | 89 |
| 11 | Retrieval of short ocean wave slope using polarimetric imaging. Measurement Science and Technology, 2008, 19, 055503. | 2.6 | 89 |
| 12 | Microscale wave breaking and air-water gas transfer. Journal of Geophysical Research, 2001, 106, 9385-9391. | 3.3 | 87 |
| 13 | Sea surface microlayer in a changing ocean â€“ A perspective. Elementa, 2017, 5, . | 3.2 | 73 |
| 14 | Transfer Across the Air-Sea Interface. Springer Earth System Sciences, 2014, , 55-112. | 0.2 | 69 |
| 15 | Direct covariance measurement of CO<sub>2</sub>gas transfer velocity during the 2008 Southern Ocean Gas Exchange Experiment: Wind speed dependency. Journal of Geophysical Research, 2011, 116, . | 3.3 | 67 |
| 16 | Scalar flux profile relationships over the open ocean. Journal of Geophysical Research, 2004, 109, n/a-n/a. | 3.3 | 63 |
| 17 | A parameter model of gas exchange for the seasonal sea ice zone. Ocean Science, 2014, 10, 17-28. | 3.4 | 62 |
| 18 | Whitecap Coverage Dependence on Wind and Wave Statistics as Observed during SO GasEx and HiWinGS. Journal of Physical Oceanography, 2017, 47, 2211-2235. | 1.7 | 62 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Rainâ€induced turbulence and airâ€sea gas transfer. Journal of Geophysical Research, 2009, 114, . | 3.3 | 53 |
| 20 | Basal channels drive active surface hydrology and transverse ice shelf fracture. Science Advances, 2018, 4, eaao7212. | 10.3 | 50 |
| 21 | An overview of sea state conditions and airâ€sea fluxes during RaDyO. Journal of Geophysical Research, 2012, 117, . | 3.3 | 47 |
| 22 | Wind Speed and Sea State Dependencies of Airâ€Sea Gas Transfer: Results From the High Wind Speed Gas Exchange Study (HiWinGS). Journal of Geophysical Research: Oceans, 2017, 122, 8034-8062. | 2.6 | 47 |
| 23 | Influence of rain on air-sea gas exchange: Lessons from a model ocean. Journal of Geophysical Research, 2004, 109, n/a-n/a. | 3.3 | 46 |
| 24 | Aircraft Observations of Dry Air, the ITCZ, Convective Cloud Systems, and Cold Pools in MJO during DYNAMO. Bulletin of the American Meteorological Society, 2016, 97, 405-423. | 3.3 | 43 |
| 25 | Waveâ€Related Reynolds Number Parameterizations of CO<sub>2</sub> and DMS Transfer Velocities. Geophysical Research Letters, 2017, 44, 9865-9875. | 4.0 | 40 |
| 26 | Rain impacts on CO<sub>2</sub> exchange in the western equatorial Pacific Ocean. Geophysical Research Letters, 2010, 37, . | 4.0 | 38 |
| 27 | Observations of Antarctic Polynya With Unmanned Aircraft Systems. Eos, 2010, 91, 245-246. | 0.1 | 37 |
| 28 | Skin layer recovery of free-surface wakes: Relationship to surface renewal and dependence on heat flux and background turbulence. Journal of Geophysical Research, 1998, 103, 21711-21722. | 3.3 | 33 |
| 29 | Sea surface temperature signatures of oceanic internal waves in low winds. Journal of Geophysical Research, 2007, 112, . | 3.3 | 31 |
| 30 | Constraining Southern Ocean Air-Sea-Ice Fluxes Through Enhanced Observations. Frontiers in Marine Science, 2019, 6, . | 2.5 | 31 |
| 31 | Optical measurements of small deeply penetrating bubble populations generated by breaking waves in the Southern Ocean. Journal of Geophysical Research: Oceans, 2014, 119, 757-776. | 2.6 | 29 |
| 32 | Co-production of knowledge reveals loss of Indigenous hunting opportunities in the face of accelerating Arctic climate change. Environmental Research Letters, 2021, 16, 095003. | 5.2 | 28 |
| 33 | High-Resolution Airborne Infrared Measurements of Ocean Skin Temperature. IEEE Geoscience and Remote Sensing Letters, 2005, 2, 146-150. | 3.1 | 26 |
| 34 | Polarized light field under dynamic ocean surfaces: Numerical modeling compared with measurements. Journal of Geophysical Research, 2011, 116, . | 3.3 | 25 |
| 35 | Warming and Inhibition of Salinization at the Ocean's Surface by Cyanobacteria. Geophysical Research Letters, 2018, 45, 4230-4237. | 4.0 | 25 |
| 36 | Sea surfacepCO<sub>2</sub>and O<sub>2</sub>in the Southern Ocean during the austral fall, 2008. Journal of Geophysical Research, 2011, 116, . | 3.3 | 24 |

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|---|---|---|---|
| 37 | Sea-to-air fluxes from measurements of the atmospheric gradient of dimethylsulfide and comparison with simultaneous relaxed eddy accumulation measurements. Journal of Geophysical Research, 2004, 109, . | 3.3 | 22 |
| 38 | The <scp>G</scp>as <scp>T</scp>ransfer through <scp>P</scp>olar <scp>S</scp>ea ice experiment: Insights into the rates and pathways that determine geochemical fluxes. Journal of Geophysical Research: Oceans, 2015, 120, 8177-8194. | 2.6 | 22 |
| 39 | Evidence for complete and partial surface renewal at an airâ€water interface. Geophysical Research Letters, 2009, 36, . | 4.0 | 21 |
| 40 | Anthropogenic inputs from a coastal megacity are linked to greenhouse gas concentrations in the surrounding estuary. Limnology and Oceanography, 2019, 64, 2497-2511. | 3.1 | 21 |
| 41 | Using Ship-Deployed High-Endurance Unmanned Aerial Vehicles for the Study of Ocean Surface and Atmospheric Boundary Layer Processes. Frontiers in Marine Science, 2020, 6, . | 2.5 | 21 |
| 42 | Introduction to special section on Recent Advances in the Study of Optical Variability in the Nearâ€Surface and Upper Ocean. Journal of Geophysical Research, 2012, 117, . | 3.3 | 19 |
| 43 | Substantial overnight reaeration by convective cooling discovered in pond ecosystems. Geophysical Research Letters, 2016, 43, 8044-8051. | 4.0 | 19 |
| 44 | A Multisensor Comparison of Ocean Wave Frequency Spectra from a Research Vessel during the Southern Ocean Gas Exchange Experiment. Journal of Atmospheric and Oceanic Technology, 2013, 30, 2907-2925. | 1.3 | 18 |
| 45 | Wave breaking in developing and mature seas. Journal of Geophysical Research: Oceans, 2013, 118, 4542-4552. | 2.6 | 18 |
| 46 | Sea breeze forcing of estuary turbulence and airâ€water CO<sub>2</sub> exchange. Geophysical Research Letters, 2010, 37, . | 4.0 | 17 |
| 47 | Analyzing the footprints of nearâ€surface aqueous turbulence: An image processingâ€based approach. Journal of Geophysical Research: Oceans, 2013, 118, 1272-1286. | 2.6 | 16 |
| 48 | Airâ€“Sea Interaction in the Southern Ocean: Exploring the Height of the Wave Boundary Layer at the Airâ€“Sea Interface. Boundary-Layer Meteorology, 2018, 169, 461-482. | 2.3 | 16 |
| 49 | Spectral Characteristics of Gravityâ€Capillary Waves, With Connections to Wave Growth and Microbreaking. Journal of Geophysical Research: Oceans, 2018, 123, 4576-4592. | 2.6 | 16 |
| 50 | Tidal and atmospheric influences on nearâ€surface turbulence in an estuary. Journal of Geophysical Research, 2010, 115, . | 3.3 | 15 |
| 51 | Variations in Ocean Surface Temperature due to Near-Surface Flow: Straining the Cool Skin Layer. Journal of Physical Oceanography, 2009, 39, 2685-2710. | 1.7 | 14 |
| 52 | Waveâ€induced light field fluctuations in measured irradiance depth profiles: A wavelet analysis. Journal of Geophysical Research: Oceans, 2014, 119, 1344-1364. | 2.6 | 14 |
| 53 | Novel Methods for Optically Measuring Whitecaps under Natural Wave-Breaking Conditions in the Southern Ocean. Journal of Atmospheric and Oceanic Technology, 2017, 34, 533-554. | 1.3 | 14 |
| 54 | Direct measurements of CO2flux in the Greenland Sea. Geophysical Research Letters, 2011, 38, n/a-n/a. | 4.0 | 13 |

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|---|---|---|---|
| 55 | A Note on the Phillips Spectral Framework for Ocean Whitecaps*. Journal of Physical Oceanography, 2014, 44, 1727-1734. | 1.7 | 13 |
| 56 | The Impact of Rain on Ocean Surface Waves and Currents. Geophysical Research Letters, 2020, 47, e2020GL087287. | 4.0 | 13 |
| 57 | Shipboard Wave Measurements in the Southern Ocean. Journal of Atmospheric and Oceanic Technology, 2017, 34, 2113-2126. | 1.3 | 12 |
| 58 | Blue pigmentation of neustonic copepods benefits exploitation of a prey-rich niche at the air-sea boundary. Scientific Reports, 2018, 8, 11510. | 3.3 | 12 |
| 59 | Observations of submesoscale eddy-driven heat transport at an ice shelf calving front. Communications Earth & Environment, 2022, 3, . | 6.8 | 11 |
| 60 | Environmental impact assessment: a multilevel, multi-parametric framework for coastal waters. International Journal of Sustainable Development and Planning, 2018, 13, 1041-1049. | 0.7 | 10 |
| 61 | On the Variation of the Effective Breaking Strength in Oceanic Sea States. Journal of Physical Oceanography, 2016, 46, 2049-2061. | 1.7 | 9 |
| 62 | The Ocean's Skin Layer in the Tropics. Journal of Geophysical Research: Oceans, 2019, 124, 59-74. | 2.6 | 9 |
| 63 | Statistics of surface divergence and their relation to airâ€water gas transfer velocity. Journal of Geophysical Research, 2012, 117, . | 3.3 | 8 |
| 64 | Thin ice, deep snow and surface flooding in Kotzebue Sound: landfast ice mass balance during two anomalously warm winters and implications for marine mammals and subsistence hunting. Journal of Glaciology, 2021, 67, 1013-1027. | 2.2 | 8 |
| 65 | Observations of mean and wave orbital flows in the oceanâ€™s upper centimetres. Journal of Fluid Mechanics, 2020, 887, . | 3.4 | 8 |
| 66 | Riverine skin temperature response to subsurface processes in low wind speeds. Journal of Geophysical Research: Oceans, 2016, 121, 1721-1735. | 2.6 | 7 |
| 67 | Air-Water Flux Reconciliation Between the Atmospheric CO2 Profile and Mass Balance Techniques. Environmental Science and Engineering, 2007, , 181-192. | 0.2 | 7 |
| 68 | Parsing the Kinetic Energy Budget of the Ocean Surface Mixed Layer. Geophysical Research Letters, 2022, 49, e2021GL095920. | 4.0 | 6 |
| 69 | Water wave measurement from stereo images of specular reflections. Measurement Science and Technology, 2015, 26, 115401. | 2.6 | 5 |
| 70 | The Winter Heat Budget of Sea Ice in Kotzebue Sound: Residual Ocean Heat and the Seasonal Roles of River Outflow. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016784. | 2.6 | 5 |
| 71 | The Impact of Wind Gusts on the Ocean Thermal Skin Layer. Geophysical Research Letters, 2019, 46, 11301-11309. | 4.0 | 4 |
| 72 | Bioindicators as a tool in environmental impact assessment: Cyanobacteria as a sentinel of pollution. International Journal of Sustainable Development and Planning, 2019, 14, 1-8. | 0.7 | 4 |

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|---|---|---|---|
| 73 | Sea Ice Freeboard in the Ross Sea from Airborne Altimetry IcePod 2016â€“2017 and a Comparison with IceBridge 2013 and ICESat 2003â€“2008. Remote Sensing, 2020, 12, 2226. | 4.0 | 3 |
| 74 | Salinity response to atmospheric forcing of the Terra Nova Bay polynya, Antarctica. Antarctic Science, 2021, 33, 318-331. | 0.9 | 3 |
| 75 | Inferences to Be Drawn from a Consideration of Power-Law Descriptions of Multiple Data Sets Each Comprised of Whitecap Coverage, WB, and 10-m Elevation Wind Speed Measurements (U10). , 2020, , 43-63. | | 2 |
| 76 | Super Sites for Advancing Understanding of the Oceanic and Atmospheric Boundary Layers. Marine Technology Society Journal, 2021, 55, 144-145. | 0.4 | 1 |
| 77 | Resilience Indicators and Monitoring: An Example of Climate Change Resiliency Indicators for Jamaica Bay. , 2016, , 141-165. | | 1 |