Alex Sen Gupta

List of Publications by Year
in descending order

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Version: 2024-02-01

112 papers	13,191 citations	43973 48 h-index	24179 110 g-index
127 all docs	127 docs citations	127 times ranked	11926 citing authors

#	Article	IF	Citations
1	Recent intensification of wind-driven circulation in the Pacific and the ongoing warming hiatus. Nature Climate Change, 2014, 4, 222-227.	8.1	1,115
2	A hierarchical approach to defining marine heatwaves. Progress in Oceanography, 2016, 141, 227-238.	1.5	1,081
3	Longer and more frequent marine heatwaves over the past century. Nature Communications, 2018, 9, 1324.	5.8	1,081
4	Marine heatwaves threaten global biodiversity and the provision of ecosystem services. Nature Climate Change, 2019, 9, 306-312.	8.1	883
5	The tropicalization of temperate marine ecosystems: climate-mediated changes in herbivory and community phase shifts. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20140846.	1.2	679
6	Coordinated Ocean-ice Reference Experiments (COREs). Ocean Modelling, 2009, 26, 1-46.	1.0	573
7	What causes southeast Australia's worst droughts?. Geophysical Research Letters, 2009, 36, .	1.5	527
8	Pacific western boundary currents and their roles in climate. Nature, 2015, 522, 299-308.	13.7	474
9	Categorizing and Naming Marine Heatwaves. Oceanography, 2018, 31, .	0.5	368
10	Connections of climate change and variability to large and extreme forest fires in southeast Australia. Communications Earth & Environment, 2021, 2, .	2.6	341
11	A global assessment of marine heatwaves and their drivers. Nature Communications, 2019, 10, 2624.	5.8	337
12	Projected Marine Heatwaves in the 21st Century and the Potential for Ecological Impact. Frontiers in Marine Science, 2019, 6, .	1.2	300
13	Coupled Oceanâ€“Atmosphereâ€“Ice Response to Variations in the Southern Annular Mode. Journal of Climate, 2006, 19, 4457-4486.	1.2	256
14	Marine Heatwaves. Annual Review of Marine Science, 2021, 13, 313-342.	5.1	254
15	Mixed responses of tropical Pacific fisheries and aquaculture to climate change. Nature Climate Change, 2013, 3, 591-599.	8.1	251
16	Climate Drift in the CMIP5 Models*. Journal of Climate, 2013, 26, 8597-8615.	1.2	195
17	Keeping pace with marine heatwaves. Nature Reviews Earth & Environment, 2020, 1, 482-493.	12.2	175
18	Coupled biophysical global ocean model and molecular genetic analyses identify multiple introductions of cryptogenic species. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11968-11973.	3.3	168

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19	Drivers and impacts of the most extreme marine heatwave events. Scientific Reports, 2020, 10, 19359.	1.6	155
20	The Indo-Australian monsoon and its relationship to ENSO and IOD in reanalysis data and the CMIP3/CMIP5 simulations. Climate Dynamics, 2013, 41, 3073-3102.	1.7	153
21	Effects of volcanism on tropical variability. Geophysical Research Letters, 2015, 42, 6024-6033.	1.5	150
22	Cold Tongue and Warm Pool ENSO Events in CMIP5: Mean State and Future Projections. Journal of Climate, 2014, 27, 2861-2885.	1.2	147
23	Projected Changes to the Southern Hemisphere Ocean and Sea Ice in the IPCC AR4 Climate Models. Journal of Climate, 2009, 22, 3047-3078.	1.2	144
24	Indian and Pacific Ocean Influences on Southeast Australian Drought and Soil Moisture. Journal of Climate, 2011, 24, 1313-1336.	1.2	139
25	Contributions of Indian Ocean Sea Surface Temperatures to Enhanced East African Rainfall. Journal of Climate, 2009, 22, 993-1013.	1.2	136
26	Common cause for severe droughts in South America and marine heatwaves in the South Atlantic. Nature Geoscience, 2019, 12, 620-626.	5.4	129
27	Socioeconomic impacts of marine heatwaves: Global issues and opportunities. Science, 2021, 374, eabj3593.	6.0	115
28	Pacificâ€toâ€Indian Ocean connectivity: Tasman leakage, Indonesian Throughflow, and the role of ENSO. Journal of Geophysical Research: Oceans, 2014, 119, 1365-1382.	1.0	105
29	Indian Ocean Dipole in CMIP5 and CMIP6: characteristics, biases, and links to ENSO. Scientific Reports, 2020, 10, 11500.	1.6	94
30	Anomalous Rainfall over Southwest Western Australia Forced by Indian Ocean Sea Surface Temperatures. Journal of Climate, 2008, 21, 5113-5134.	1.2	88
31	Drivers of decadal hiatus periods in the 20th and 21st centuries. Geophysical Research Letters, 2014, 41, 5978-5986.	1.5	84
32	Seasonal variability of the subpolar gyres in the Southern Ocean: a numerical investigation based on transfer operators. Nonlinear Processes in Geophysics, 2009, 16, 655-663.	0.6	81
33	Multi-decadal modulation of the El NiÃ±oâ€“Indian monsoon relationship by Indian Ocean variability. Environmental Research Letters, 2011, 6, 034006.	2.2	79
34	Constraining Wind Stress Products with Sea Surface Height Observations and Implications for Pacific Ocean Sea Level Trend Attribution*. Journal of Climate, 2012, 25, 8164-8176.	1.2	76
35	The Contribution of Indian Ocean Sea Surface Temperature Anomalies on Australian Summer Rainfall during El NiÃ±o Events. Journal of Climate, 2011, 24, 3734-3747.	1.2	74
36	Climate Drift in the CMIP3 Models. Journal of Climate, 2012, 25, 4621-4640.	1.2	72

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37	Assessment of the <scp>CMIP5</scp> global climate model simulations of the western tropical Pacific climate system and comparison to <scp>CMIP3</scp>. International Journal of Climatology, 2014, 34, 3382-3399.	1.5	70
38	Coupled Oceanâ€“Atmosphere Feedback in the Southern Annular Mode. Journal of Climate, 2007, 20, 3677-3692.	1.2	68
39	Three-dimensional characterization and tracking of an Agulhas Ring. Ocean Modelling, 2012, 52-53, 69-75.	1.0	63
40	Implications of CMIP3 model biases and uncertainties for climate projections in the western tropical Pacific. Climatic Change, 2013, 119, 147-161.	1.7	62
41	Effect of anomalous warming in the central Pacific on the Australian monsoon. Geophysical Research Letters, 2009, 36, .	1.5	60
42	Multi-decadal projections of surface and interior pathways of the Fukushima Cesium-137 radioactive plume. Deep-Sea Research Part I: Oceanographic Research Papers, 2013, 80, 37-46.	0.6	59
43	Historical and Projected Changes in the Southern Hemisphere Surface Westerlies. Geophysical Research Letters, 2021, 48, e2020GL090849.	1.5	57
44	Modulation of Australian Precipitation by Meridional Gradients in East Indian Ocean Sea Surface Temperature. Journal of Climate, 2009, 22, 5597-5610.	1.2	56
45	Future changes to the Indonesian Throughflow and Pacific circulation: The differing role of wind and deep circulation changes. Geophysical Research Letters, 2016, 43, 1669-1678.	1.5	56
46	Tropical Pacific Observing System. Frontiers in Marine Science, 2019, 6, .	1.2	56
47	How did ocean warming affect Australian rainfall extremes during the 2010/2011 La NiÃ±a event?. Geophysical Research Letters, 2015, 42, 9942-9951.	1.5	55
48	Large-scale stress factors affecting coral reefs: open ocean sea surface temperature and surface seawater aragonite saturation over the next 400 years. Coral Reefs, 2012, 31, 309-319.	0.9	52
49	Causes of Late Twentieth-Century Trends in New Zealand Precipitation. Journal of Climate, 2009, 22, 3-19.	1.2	51
50	Future Changes to El NiÃ±oâ€“Southern Oscillation Temperature and Precipitation Teleconnections. Geophysical Research Letters, 2017, 44, 10,608.	1.5	50
51	Australian Monsoon Variability Driven by a Gillâ€“Matsuno-Type Response to Central West Pacific Warming. Journal of Climate, 2010, 23, 4717-4736.	1.2	49
52	Genesis of Indian Ocean Mixed Layer Temperature Anomalies: A Heat Budget Analysis. Journal of Climate, 2010, 23, 5375-5403.	1.2	48
53	Pathways to sustaining tuna-dependent Pacific Island economies during climate change. Nature Sustainability, 2021, 4, 900-910.	11.5	47
54	Dynamics and Predictability of El NiÃ±oâ€“Southern Oscillation: An Australian Perspective on Progress and Challenges. Bulletin of the American Meteorological Society, 2019, 100, 403-420.	1.7	46

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55	Evaluating global climate models for theÂPacificÂisland region. Climate Research, 2011, 49, 169-187.	0.4	46
56	Drivers of the projected changes to the Pacific Ocean equatorial circulation. Geophysical Research Letters, 2012, 39, .	1.5	45
57	Quantification of errors induced by temporal resolution on Lagrangian particles in an eddy-resolving model. Ocean Modelling, 2014, 76, 20-30.	1.0	42
58	Further Insights on the Influence of the Indian Ocean Dipole on the Following Yearâ€™s ENSO from Observations and CMIP5 Models. Journal of Climate, 2016, 29, 637-658.	1.2	42
59	Coral bleaching pathways under the control of regional temperature variability. Nature Climate Change, 2017, 7, 839-844.	8.1	40
60	Global Perspectives on Observing Ocean Boundary Current Systems. Frontiers in Marine Science, 2019, 6, .	1.2	39
61	Projected changes in the tropical Pacific Ocean of importance to tuna fisheries. Climatic Change, 2013, 119, 163-179.	1.7	37
62	Projected sea surface temperature changes in the equatorial Pacific relative to the Warm Pool edge. Deep-Sea Research Part II: Topical Studies in Oceanography, 2015, 113, 47-58.	0.6	35
63	Reduction in surface climate change achieved by the 1987 Montreal Protocol. Environmental Research Letters, 2019, 14, 124041.	2.2	35
64	Episodic and non-uniform shifts of thermal habitats in a warming ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2015, 113, 59-72.	0.6	31
65	An individual-based model of skipjack tuna (Katsuwonus pelamis) movement in the tropical Pacific ocean. Progress in Oceanography, 2018, 164, 63-74.	1.5	27
66	Role of Pacific trade winds in driving ocean temperatures during the recent slowdown and projections under a wind trend reversal. Climate Dynamics, 2018, 51, 321-336.	1.7	27
67	Future changes to the upper ocean Western Boundary Currents across two generations of climate models. Scientific Reports, 2021, 11, 9538.	1.6	27
68	Drier tropical and subtropical Southern Hemisphere in the mid-Pliocene Warm Period. Scientific Reports, 2020, 10, 13458.	1.6	25
69	Evaluation of Interior Circulation in a High-Resolution Global Ocean Model. Part I: Deep and Bottom Waters. Journal of Physical Oceanography, 2004, 34, 2592-2614.	0.7	24
70	Resolution dependence of the simulated precipitation and diurnal cycle over the Maritime Continent. Climate Dynamics, 2017, 48, 4009-4028.	1.7	24
71	Iron sources and pathways into the Pacific Equatorial Undercurrent. Geophysical Research Letters, 2016, 43, 9843-9851.	1.5	23
72	Decadal changes in the relationship between the Indian and Australian summer monsoons. Climate Dynamics, 2014, 42, 1043-1052.	1.7	22

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73	Variability in the origins and pathways of <scp>P</scp>acific <scp>E</scp>quatorial <scp>U</scp>ndercurrent water. Journal of Geophysical Research: Oceans, 2015, 120, 3113-3128.	1.0	22
74	Impacts of the tropical trans-basin variability on Australian rainfall. Climate Dynamics, 2017, 49, 1617-1629.	1.7	21
75	Can We Constrain CMIP5 Rainfall Projections in the Tropical Pacific Based on Surface Warming Patterns?*. Journal of Climate, 2014, 27, 9123-9138.	1.2	20
76	An Assessment of Drift Correction Alternatives for CMIP5 Decadal Predictions. Journal of Geophysical Research D: Atmospheres, 2017, 122, 10,282.	1.2	19
77	Uncertainty in near-term global surface warming linked to tropical Pacific climate variability. Nature Communications, 2019, 10, 1990.	5.8	19
78	The Impact of Interacting Climate Modes on East Australian Precipitation Moisture Sources. Journal of Climate, 2022, 35, 3147-3159.	1.2	19
79	When 1+1 can be >2: Uncertainties compound when simulating climate, fisheries and marine ecosystems. Deep-Sea Research Part II: Topical Studies in Oceanography, 2015, 113, 312-322.	0.6	18
80	Can Australian Multiyear Droughts and Wet Spells Be Generated in the Absence of Oceanic Variability?. Journal of Climate, 2016, 29, 6201-6221.	1.2	16
81	Optimising fisheries management in relation to tuna catches in the western central Pacific Ocean: A review of research priorities and opportunities. Marine Policy, 2015, 59, 94-104.	1.5	15
82	Projected changes to South Atlantic boundary currents and confluence region in the CMIP5 models: the role of wind and deep ocean changes. Environmental Research Letters, 2016, 11, 094013.	2.2	15
83	Factors influencing the skill of synthesized satellite wind products in the tropical Pacific. Journal of Geophysical Research: Oceans, 2017, 122, 1072-1089.	1.0	15
84	Environmental versus operational drivers of drifting FAD beaching in the Western and Central Pacific Ocean. Scientific Reports, 2019, 9, 14005.	1.6	15
85	Projected late 21st century changes to the regional impacts of the El NiÃ±o-Southern Oscillation. Climate Dynamics, 2020, 54, 395-412.	1.7	15
86	Generation of the Amundsen Sea Low by Antarctic Orography. Geophysical Research Letters, 2021, 48, e2020GL091487.	1.5	15
87	Zonal wave 3 pattern in the Southern Hemisphere generated by tropical convection. Nature Geoscience, 2021, 14, 732-738.	5.4	15
88	Regional Versus Remote Atmosphereâ€Ocean Drivers of the Rapid Projected Intensification of the East Australian Current. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015889.	1.0	14
89	Constraining future greenhouse gas emissions by a cumulative target. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16539-16540.	3.3	13
90	Variability and Change in the Ocean. , 2012, , 141-165.		13

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91	Projected slow down of South Indian Ocean circulation. Scientific Reports, 2019, 9, 17705.	1.6	13
92	Evaluation of Interior Circulation in a High-Resolution Global Ocean Model. Part II: Southern Hemisphere Intermediate, Mode, and Thermocline Waters. Journal of Physical Oceanography, 2007, 37, 2612-2636.	0.7	12
93	Evaluation of monsoon seasonality and the tropospheric biennial oscillation transitions in the CMIP models. Geophysical Research Letters, 2012, 39, .	1.5	12
94	Sampling biases in CMIP5 decadal forecasts. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3435-3445.	1.2	12
95	Teleconnections associated with the intensification of the Australian monsoon during El NiÃ±o Modoki events. IOP Conference Series: Earth and Environmental Science, 2010, 11, 012031.	0.2	11
96	Effectiveness of CMIP5 Decadal Experiments for Interannual Rainfall Prediction Over Australia. Water Resources Research, 2019, 55, 7400-7418.	1.7	11
97	Projected Changes to Australian Marine Heatwaves. Geophysical Research Letters, 2021, 48, e2020GL091323.	1.5	11
98	On Challenges in Predicting Bottom Water Transport in the Southern Ocean. Journal of Climate, 2012, 25, 1349-1356.	1.2	9
99	On the predictability of SSTA indices from CMIP5 decadal experiments. Environmental Research Letters, 2015, 10, 074013.	2.2	9
100	Exploring qualitative regional climate projections: a case study for Nauru. Climate Research, 2013, 58, 165-182.	0.4	9
101	The Modulation of ENSO Variability in CCSM3 by Extratropical Rossby Waves. Journal of Climate, 2009, 22, 5839-5853.	1.2	8
102	Regional connectivity and spatial densities of drifting fish aggregating devices, simulated from fishing events in the Western and Central Pacific Ocean. Environmental Research Communications, 2019, 1, 055001.	0.9	7
103	Exploring Potential Links Between Co-occurring Coastal Terrestrial and Marine Heatwaves in Australia. Frontiers in Climate, 2022, 4, .	1.3	7
104	What Determines the Lagged ENSO Response in the Southâ€West Indian Ocean?. Geophysical Research Letters, 2021, 48, e2020GL091958.	1.5	6
105	A New Zonal Wave-3 Index for the Southern Hemisphere. Journal of Climate, 2022, 35, 5137-5149.	1.2	6
106	Assessing the role of the oceanâ€“atmosphere coupling frequency in the western Maritime Continent rainfall. Climate Dynamics, 2020, 54, 4935-4952.	1.7	5
107	Response of Southern Hemisphere Western Boundary Current Regions to Future Zonally Symmetric and Asymmetric Atmospheric Changes. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017858.	1.0	4
108	Probability of committed warming exceeding 1.5 ^{â˜}C and 2.0 ^{â˜}C Paris targets. Environmental Research Letters, 2022, 17, 064022.	2.2	3

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109	A multimodel investigation of atmospheric mechanisms for driving Arctic amplification in warmer climates. Journal of Climate, 2021, , 1-55.	1.2	2
110	Introduction to the Special Issue on Ocean Warming. Oceanography, 2018, 31, 28-31.	0.5	2
111	East Australian Cyclones and Airâ€Sea Feedbacks. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034391.	1.2	0
112	The impact of Indonesian Throughflow constrictions on eastern Pacific upwelling and waterâ€mass transformation. Journal of Geophysical Research: Oceans, 0, , .	1.0	0