X San Liang

List of Publications by Year in descending order

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73 papers	2,254 citations	257450 24 h-index	233421 45 g-index
76 all docs	76 docs citations	76 times ranked	1529 citing authors

#	Article	IF	Citations
1	Rectification of the Bias in the Wavelet Power Spectrum. Journal of Atmospheric and Oceanic Technology, 2007, 24, 2093-2102.	1.3	373
2	Unraveling the cause-effect relation between time series. Physical Review E, 2014, 90, 052150.	2.1	198
3	On the causal structure between CO2 and global temperature. Scientific Reports, 2016, 6, 21691.	3.3	153
4	Information Transfer between Dynamical System Components. Physical Review Letters, 2005, 95, 244101.	7.8	113
5	Information flow and causality as rigorous notionsab initio. Physical Review E, 2016, 94, 052201.	2.1	110
6	Normalizing the causality between time series. Physical Review E, 2015, 92, 022126.	2.1	84
7	Multiscale Window Transform. Multiscale Modeling and Simulation, 2007, 6, 437-467.	1.6	69
8	Information flow within stochastic dynamical systems. Physical Review E, 2008, 78, 031113.	2.1	66
9	Canonical Transfer and Multiscale Energetics for Primitive and Quasigeostrophic Atmospheres. Journals of the Atmospheric Sciences, 2016, 73, 4439-4468.	1.7	61
10	Localized multiscale energy and vorticity analysis. Dynamics of Atmospheres and Oceans, 2005, 38, 195-230.	1.8	59
11	The Liang-Kleeman Information Flow: Theory and Applications. Entropy, 2013, 15, 327-360.	2.2	57
12	On the Decadal Variability of the Eddy Kinetic Energy in the Kuroshio Extension. Journal of Physical Oceanography, 2017, 47, 1169-1187.	1.7	50
13	Localized multi-scale energy and vorticity analysis. Dynamics of Atmospheres and Oceans, 2007, 44, 51-76.	1.8	47
14	Causation and information flow with respect to relative entropy. Chaos, 2018, 28, 075311.	2.5	45
15	On the Seasonal Eddy Variability in the Kuroshio Extension. Journal of Physical Oceanography, 2018, 48, 1675-1689.	1.7	43
16	Instabilities and Multiscale Interactions Underlying the Loop Current Eddy Shedding in the Gulf of Mexico. Journal of Physical Oceanography, 2020, 50, 1289-1317.	1.7	42
17	The Instabilities and Multiscale Energetics Underlying the Meanâ€“Interannualâ€“Eddy Interactions in the Kuroshio Extension Region. Journal of Physical Oceanography, 2016, 46, 1477-1494.	1.7	41
18	Spatial Distribution and Physical Controls of the Spring Algal Blooming Off the Changjiang River Estuary. Estuaries and Coasts, 2019, 42, 1066-1083.	2.2	35

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19	Forecasting the Tropical Cyclone Genesis over the Northwest Pacific through Identifying the Causal Factors in Cycloneâ€“Climate Interactions. Journal of Atmospheric and Oceanic Technology, 2018, 35, 247-259.	1.3	33
20	Normalized Multivariate Time Series Causality Analysis and Causal Graph Reconstruction. Entropy, 2021, 23, 679.	2.2	33
21	Analyzing the Characteristics of Soil Moisture Using GLDAS Data: A Case Study in Eastern China. Applied Sciences (Switzerland), 2017, 7, 566.	2.5	31
22	A rigorous formalism of information transfer between dynamical system components. I. Discrete mapping. Physica D: Nonlinear Phenomena, 2007, 231, 1-9.	2.8	29
23	Comparison of Oil Spill Classifications Using Fully and Compact Polarimetric SAR Images. Applied Sciences (Switzerland), 2017, 7, 193.	2.5	29
24	A Time-Varying Causality Formalism Based on the Liangâ€“Kleeman Information Flow for Analyzing Directed Interactions in Nonstationary Climate Systems. Journal of Climate, 2019, 32, 7521-7537.	3.2	29
25	A rigorous formalism of information transfer between dynamical system components. II. Continuous flow. Physica D: Nonlinear Phenomena, 2007, 227, 173-182.	2.8	26
26	Multiscale Dynamical Processes Underlying the Wintertime Atlantic Blockings. Journals of the Atmospheric Sciences, 2017, 74, 3815-3831.	1.7	22
27	Long-term trends in Arctic surface temperature and potential causality over the last 100Âyears. Climate Dynamics, 2020, 55, 1443-1456.	3.8	21
28	El NiÃ±o Modoki can be mostly predicted more than 10 years ahead of time. Scientific Reports, 2021, 11, 17860.	3.3	20
29	Multiscale Processes and Nonlinear Dynamics of the Circulation and Upwelling Events off Monterey Bay. Journal of Physical Oceanography, 2009, 39, 290-313.	1.7	18
30	The changing relationship between the convection over the western Tibetan Plateau and the sea surface temperature in the northern Bay of Bengal. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 70, 1440869.	1.7	18
31	Local predictability and information flow in complex dynamical systems. Physica D: Nonlinear Phenomena, 2013, 248, 1-15.	2.8	17
32	On the Generation and Maintenance of the 2012/13 Sudden Stratospheric Warming. Journals of the Atmospheric Sciences, 2017, 74, 3209-3228.	1.7	17
33	Causal Links Between Arctic Sea Ice and Its Potential Drivers Based on the Rate of Information Transfer. Geophysical Research Letters, 2022, 49, .	4.0	17
34	Tropospheric temperature gradient and its relation to the South and East Asian precipitation variability. Meteorology and Atmospheric Physics, 2015, 127, 579-585.	2.0	16
35	Different Generating Mechanisms for the Summer Surface Cold Patches in the Yellow Sea. Atmosphere - Ocean, 2018, 56, 199-211.	1.6	15
36	Entropy Evolution and Uncertainty Estimation with Dynamical Systems. Entropy, 2014, 16, 3605-3634.	2.2	14

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37	Nonlinear multiscale interactions and internal dynamics underlying a typical eddy-shedding event at Luzon Strait. Journal of Geophysical Research: Oceans, 2016, 121, 8208-8229.	2.6	14
38	New Perspectives on the Generation and Maintenance of the Kuroshio Large Meander. Journal of Physical Oceanography, 2019, 49, 2095-2113.	1.7	13
39	Causes and underlying dynamic processes of the mid-winter suppression in the North Pacific storm track. Science China Earth Sciences, 2019, 62, 872-890.	5.2	12
40	Chlorophyll-a Estimation in Turbid Waters Using Combined SAR Data With Hyperspectral Reflectance Data: A Case Study in Lake Taihu, China. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 1325-1336.	4.9	11
41	On the Inverse Relationship between the Boreal Wintertime Pacific Jet Strength and Storm-Track Intensity. Journal of Climate, 2018, 31, 9545-9564.	3.2	11
42	Relative contributions of global warming, AMO and IPO to the land precipitation variabilities since 1930s. Climate Dynamics, 2021, 56, 2225-2243.	3.8	11
43	The Synchronization between the Zonal Jet Stream and Temperature Anomalies Leads to an Extremely Freezing North America in January 2019. Geophysical Research Letters, 2020, 47, e2020GL089689.	4.0	10
44	Influence of the Kuroshio Intrusion on Deep Flow Intraseasonal Variability in the Northern South China Sea. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017429.	2.6	9
45	Dynamical Dependencies at Monthly and Interannual Time Scales in the Climate System: Study of the North Pacific and Atlantic Regions. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 74, 141-158.	1.7	9
46	Effect of Upper Tropospheric Vertical Thermal Contrast Over the Mediterranean Region on Convection over the Western Tibetan Plateau during ENSO Years. Atmosphere - Ocean, 2020, 58, 98-109.	1.6	8
47	The Out-of-Phase Variation in Vertical Thermal Contrast Over the Western and Eastern Sides of the Northern Tibetan Plateau. Pure and Applied Geophysics, 2019, 176, 5337-5348.	1.9	7
48	Spatiotemporal Variability of the Global Ocean Internal Processes Inferred from Satellite Observations. Journal of Physical Oceanography, 2019, 49, 2147-2164.	1.7	7
49	A Note on Causation versus Correlation in an Extreme Situation. Entropy, 2021, 23, 316.	2.2	7
50	The Causal Interaction between Complex Subsystems. Entropy, 2022, 24, 3.	2.2	7
51	Uncertainty generation in deterministic flows: Theory and application with an atmospheric jet stream model. Dynamics of Atmospheres and Oceans, 2011, 52, 51-79.	1.8	6
52	A Study of the Impact of the Fukushima Nuclear Leak on East China Coastal Regions. Atmosphere - Ocean, 2018, 56, 254-267.	1.6	6
53	The asymmetric eddyâ€“background flow interaction in the North Pacific storm track. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 575-596.	2.7	6
54	Measuring the importance of individual units in producing the collective behavior of a complex network. Chaos, 2021, 31, 093123.	2.5	6

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55	The causal role of South China Sea on the Pacificâ€“North American teleconnection pattern. Climate Dynamics, 2022, 59, 1815-1832.	3.8	6
56	A Study of the Cross-Scale Causation and Information Flow in a Stormy Model Mid-Latitude Atmosphere. Entropy, 2019, 21, 149.	2.2	5
57	Panel Data Causal Inference Using a Rigorous Information Flow Analysis for Homogeneous, Independent and Identically Distributed Datasets. IEEE Access, 2021, 9, 47266-47274.	4.2	5
58	Absolute and convective instabilities and their roles in the forecasting of large frontal meanderings. Journal of Geophysical Research: Oceans, 2013, 118, 5686-5702.	2.6	4
59	A Diagnosis of Some Dynamical Processes Underlying a Higher-Latitude Typhoon Using the Multiscale Window Transform. Atmosphere, 2017, 8, 118.	2.3	4
60	The intrinsic nonlinear multiscale interactions among the mean flow, low frequency variability and mesoscale eddies in the Kuroshio region. Science China Earth Sciences, 2019, 62, 595-608.	5.2	4
61	Vertical coupling and dynamical source for the intraseasonal variability in the deep Kuroshio Extension. Ocean Dynamics, 2021, 71, 1069.	2.2	3
62	Different mechanisms for the seasonal variations of the mesoscale eddy energy in the South China Sea. Deep-Sea Research Part I: Oceanographic Research Papers, 2022, 179, 103677.	1.4	3
63	An Information Flow-Based Sea Surface Height Reconstruction Through Machine Learning. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-9.	6.3	3
64	The Cyclogenesis and Decay of Typhoon Damrey. , 2018, , .		2
65	Drastic change in dynamics as Typhoon Lekima experiences an eyewall replacement cycle. Frontiers of Earth Science, 0, , 1.	2.1	2
66	Multiscale Interactive Processes Underlying the Heavy Rainstorm Associated with a Landfalling Atmospheric River. Atmosphere, 2022, 13, 29.	2.3	1
67	Preface: Coastal-Ocean Issues and Inland Water Pollution Effects on Environmental Change. Atmosphere - Ocean, 2018, 56, 197-198.	1.6	0
68	The Slow Coastal-Trapped Waves off Subei Bank in the Yellow Sea and Their Climatic Change in the Past Decades. , 0, , .		0
69	Evaluation of the Influence of Aquatic Plants and Lake Bottom on the Remote-Sensing Reflectance of Optically Shallow Waters. Atmosphere - Ocean, 2018, 56, 277-288.	1.6	0
70	Regional Characteristics of Typhoon-Induced Ocean Eddies in the East China Sea. Advances in Atmospheric Sciences, 2018, 35, 826-838.	4.3	0
71	Charneyâ€™s Modelâ€”the Renowned Prototype of Baroclinic Instabilityâ€”Is Barotropically Unstable As Well. Advances in Atmospheric Sciences, 2019, 36, 733-752.	4.3	0
72	Absolute instabilities in the spatially developing Kuroshio Extension. Dynamics of Atmospheres and Oceans, 2021, 93, 101205.	1.8	0

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73	Nexus of ambient flow and squall line via turbulence in the March 2018 meso-scale convective system over Southeast China. Atmospheric Research, 2022, 277, 106287.	4.1	0