FranÃ§ois G Schmitt

List of Publications by Year
in descending order

133	3,472	159585 30	168389 53
papers	citations	h-index	g-index

147	147	147	2701
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	About Boussinesq's turbulent viscosity hypothesis: historical remarks and a direct evaluation of its validity. Comptes Rendus - Mecanique, 2007, 335, 617-627.	2.1	255
2	Scaling invariance of crack surfaces. Journal of Geophysical Research, 1995, 100, 5953-5973.	3.3	222
3	Universal multifractal analysis as a tool to characterize multiscale intermittent patterns: example of phytoplankton distribution in turbulent coastal waters. Journal of Plankton Research, 1999, 21, 877-822.	1.8	136
4	An amplitude-frequency study of turbulent scaling intermittency using Empirical Mode Decomposition and Hilbert Spectral Analysis. Europhysics Letters, 2008, 84, 40010.	2.0	123
5	Analysis of daily river flow fluctuations using empirical mode decomposition and arbitrary order Hilbert spectral analysis. Journal of Hydrology, 2009, 373, 103-111.	5.4	118
6	Multifractal random walk in copepod behavior. Physica A: Statistical Mechanics and Its Applications, 2001, 301, 375-396.	2.6	87
7	Arbitrary-order Hilbert spectral analysis for time series possessing scaling statistics: Comparison study with detrended fluctuation analysis and wavelet leaders. Physical Review E, 2011, 84, 016208.	2.1	84
8	Empirical determination of universal multifractal exponents in turbulent velocity fields. Physical Review Letters, 1992, 68, 305-308.	7.8	81
9	A 5-year study of the influence of the northeast and southwest monsoons on copepod assemblages in the boundary coastal waters between the East China Sea and the Taiwan Strait. Journal of Plankton Research, 2006, 28, 943-958.	1.8	81
10	Multifractal analysis of the Greenland Iceâ€Core Project climate data. Geophysical Research Letters, 1995, 22, 1689-1692.	4.0	79
11	Time dependent intrinsic correlation analysis of temperature and dissolved oxygen time series using empirical mode decomposition. Journal of Marine Systems, 2014, 130, 90-100.	2.1	79
12	Multifractal analysis of phytoplankton biomass and temperature in the ocean. Geophysical Research Letters, 1996, 23, 3591-3594.	4.0	73
13	Modeling of atmospheric wind speed sequence using a lognormal continuous stochastic equation. Journal of Wind Engineering and Industrial Aerodynamics, 2012, 109, 1-8.	3.9	66
14	Multifractal temperature and flux of temperature variance in fully developed turbulence. Europhysics Letters, 1996, 34, 195-200.	2.0	65
15	Multifractal intermittency of Eulerian and Lagrangian turbulence of ocean temperature and plankton fields. Nonlinear Processes in Geophysics, 1996, 3, 236-246.	1.3	60
16	Turbulence intermittency, small-scale phytoplankton patchiness and encounter rates in plankton: where do we go from here?. Deep-Sea Research Part I: Oceanographic Research Papers, 2001, 48, 1199-1215.	1.4	58
17	MULTIFRACTAL FLUCTUATIONS IN FINANCE. International Journal of Theoretical and Applied Finance, 2000, 03, 361-364.	0.5	55
18	Second-order structure function in fully developed turbulence. Physical Review E, 2010, 82, 026319.	2.1	55

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19	Multiscaling and joint multiscaling description of the atmospheric wind speed and the aggregate power output from a wind farm. Nonlinear Processes in Geophysics, 2014, 21, 379-392.	1.3	55
20	Empirical study of multifractal phase transitions in atmospheric turbulence. Nonlinear Processes in Geophysics, 1994, 1, 95-104.	1.3	49
21	A causal multifractal stochastic equation and its statistical properties. European Physical Journal B, 2003, 34, 85-98.	1.5	48
22	Individual variability in the swimming behavior of the sub-tropical copepod Oncaea venusta (Copepoda:) Tj ETQq0 0 0 rgBT /Overlock 10	1.9	48
23	Multifractal description of wind power fluctuations using arbitrary order Hilbert spectral analysis. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 4106-4120.	2.6	47
24	Analysis of velocity fluctuations and their intermittency properties in the surf zone using empirical mode decomposition. Journal of Marine Systems, 2009, 77, 473-481.	2.1	46
25	Changes in the swimming behavior of Eurytemora affinis (Copepoda, Calanoida) in response to a sub-lethal exposure to nonylphenols. Aquatic Toxicology, 2011, 102, 228-231.	4.0	40
26	Differences in behavioral responses of Eurytemora affinis (Copepoda, Calanoida) reproductive stages to salinity variations. Journal of Plankton Research, 2010, 32, 805-813.	1.8	39
27	Intermittency study of high frequency global solar radiation sequences under a tropical climate. Solar Energy, 2013, 98, 349-365.	6.1	38
28	Predation of Pseudodiaptomus annandalei (Copepoda: Calanoida) by the grouper fish fry Epinephelus coioides under different hydrodynamic conditions. Journal of Experimental Marine Biology and Ecology, 2010, 393, 17-22.	1.5	34
29	Spectral fluorometric characterization of Haptophyte dynamics using the FluoroProbe: an application in the eastern English Channel for monitoring Phaeocystis globosa. Journal of Plankton Research, 2012, 34, 136-151.	1.8	34
30	Turbulence analysis and multiscale correlations between synchronized flow velocity and marine turbine power production. Renewable Energy, 2017, 112, 314-327.	8.9	32
31	Intermittent turbulence and copepod dynamics: Increase in encounter rates through preferential concentration. Journal of Marine Systems, 2008, 70, 263-272.	2.1	31
32	Scaling of swimming sequences in copepod behavior: Data analysis and simulation. Physica A: Statistical Mechanics and Its Applications, 2006, 364, 287-296.	2.6	30
33	Multifractal analysis of the dollarâ€“yuan and euroâ€“yuan exchange rates before and after the reform of the peg. Quantitative Finance, 2011, 11, 505-513.	1.7	30
34	Swimming kinematics of Eurytemora affinis (Copepoda, Calanoida) reproductive stages and differential vulnerability to predation of larval Dicentrarchus labrax (Teleostei, Perciformes). Journal of Plankton Research, 2011, 33, 1095-1103.	1.8	29
35	Impact of turbulence on power production by a free-stream tidal turbine in real sea conditions. Renewable Energy, 2020, 147, 1932-1940.	8.9	29
36	ESTIMATION OF UNIVERSAL FOR ATMOSPHERIC TURBULENT MULTIFRACTAL INDICES VELOCITY FIELDS. Fractals, 1993, 01, 568-575.	3.7	28

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37	An individual-based model to study the reproduction of egg bearing copepods: Application to Eurytemora affinis (Copepoda Calanoida) from the Seine estuary, France. Ecological Modelling, 2009, 220, 1073-1089.	2.5	27
38	The different aspects in motion of the three reproductive stages of Pseudodiaptomus annandalei (Copepoda, Calanoida). Journal of Plankton Research, 2010, 32, 423-440.	1.8	27
39	Direct evidence of tidally oriented behavior of the copepod Eurytemora affinis in the Seine estuary. Ecological Research, 2011, 26, 773-780.	1.5	27
40	Effects of animal density, volume, and the use of 2D/3D recording on behavioral studies of copepods. Hydrobiologia, 2011, 666, 197-214.	2.0	26
41	Mating and mate choice in Pseudodiaptomus annandalei (Copepoda: Calanoida). Journal of Experimental Marine Biology and Ecology, 2011, 402, 1-11.	1.5	25
42	Effect of temperature on Temora longicornis swimming behaviour: illustration of seasonal effects in a temperate ecosystem. Aquatic Biology, 2012, 16, 149-162.	1.4	24
43	Variability of turbulent quantities in the tidal bottom boundary layer: Case study in the eastern English Channel. Continental Shelf Research, 2013, 58, 21-31.	1.8	24
44	Pseudodiaptomus marinus Sato, 1913, a new invasive copepod in Lake Faro (Sicily): observations on the swimming behaviour and the sex-dependent responses to food. Zoological Studies, 2014, 53, .	0.3	24
45	Mulifractal phase transitions: the origin of self-organized criticality in earthquakes. Nonlinear Processes in Geophysics, 1994, 1, 191-197.	1.3	22
46	Multiscaling statistical procedures for the exploration of biophysical couplings in intermittent turbulence. Part I. Theory. Deep-Sea Research Part II: Topical Studies in Oceanography, 2005, 52, 1308-1324.	1.4	22
47	Investigation of Turbulence Behaviour in the Stable Boundary Layer Using Arbitrary-Order Hilbert Spectra. Boundary-Layer Meteorology, 2017, 163, 311-326.	2.3	22
48	Copepod diffusion within multifractal phytoplankton fields. Journal of Marine Systems, 1998, 16, 69-83.	2.1	21
49	Statistical properties of turbidity, oxygen and pH fluctuations in the Seine river estuary (France). Physica A: Statistical Mechanics and Its Applications, 2008, 387, 6613-6623.	2.6	21
50	High frequency variability of particle size distribution and its dependency on turbulence over the sea bottom during re-suspension processes. Continental Shelf Research, 2014, 77, 51-60.	1.8	21
51	Eulerian and Lagrangian properties of biophysical intermittency in the ocean. Geophysical Research Letters, 2004, 31, .	4.0	20
52	Analysis of high frequency temperature time series in the Seine estuary from the Marel autonomous monitoring buoy. Hydrobiologia, 2007, 588, 59-68.	2.0	20
53	Impact of Sea Breeze Dynamics on Atmospheric Pollutants and Their Toxicity in Industrial and Urban Coastal Environments. Remote Sensing, 2020, 12, 648.	4.0	20
54	Effect of variable winds on current structure and Reynolds stresses in a tidal flow: analysis of experimental data in the eastern English Channel. Ocean Science, 2012, 8, 1025-1040.	3.4	18

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55	Linking Eulerian and Lagrangian structure functionsâ€™ scaling exponents in turbulence. Physica A: Statistical Mechanics and Its Applications, 2006, 368, 377-386.	2.6	17
56	Direct test of a nonlinear constitutive equation for simple turbulent shear flows using DNS data. Communications in Nonlinear Science and Numerical Simulation, 2007, 12, 1251-1264.	3.3	17
57	Mating behaviour of Pseudodiaptomus annandalei (Copepoda, Calanoida) at calm and hydrodynamically disturbed waters. Marine Biology, 2011, 158, 1085-1094.	1.5	17
58	Describing space-time patterns in aquatic ecology using IBMs and scaling and multi-scaling approaches. Nonlinear Analysis: Real World Applications, 2005, 6, 705-730.	1.7	16
59	Multiscaling statistical procedures for the exploration of biophysical couplings in intermittent turbulence. Part II. Applications. Deep-Sea Research Part II: Topical Studies in Oceanography, 2005, 52, 1325-1343.	1.4	16
60	The Analyses of Turbulence Characteristics in the Atmospheric Surface Layer Using Arbitrary-Order Hilbert Spectra. Boundary-Layer Meteorology, 2016, 159, 391-406.	2.3	16
61	Correlation between long-term marine temperature time series from the eastern and western English Channel: Scaling analysis using empirical mode decomposition. Comptes Rendus - Geoscience, 2016, 348, 343-349.	1.2	15
62	Explicit predictability and dispersion scaling exponents in fully developed turbulence. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 342, 448-458.	2.1	14
63	Symbolic dynamics and entropies of copepod behaviour under non-turbulent and turbulent conditions. Journal of Marine Systems, 2009, 77, 388-396.	2.1	14
64	Benefits of machine learning and sampling frequency on phytoplankton bloom forecasts in coastal areas. Ecological Informatics, 2020, 60, 101174.	5.2	14
65	Experimental Study of the Constitutive Equation for an Axisymmetric Complex Turbulent Flow. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2000, 80, 815-825.	1.6	13
66	STATISTICAL STUDY OF BIVALVE HIGH FREQUENCY MICROCLOSING BEHAVIOR: SCALING PROPERTIES AND SHOT NOISE ANALYSIS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2011, 21, 3565-3576.	1.7	13
67	SCALING OF RETURN TIMES FOR A HIGH-RESOLUTION RAINFALL TIME SERIES. Fractals, 2002, 10, 285-290.	3.7	12
68	Relating Lagrangian passive scalar scaling exponents to Eulerian scaling exponents in turbulence. European Physical Journal B, 2005, 48, 129-137.	1.5	12
69	How does salinity influence the swimming speed of the estuarine calanoid copepod Eurytemora affinis?: Reply. Journal of Plankton Research, 2010, 32, 1227-1229.	1.8	12
70	Scaling properties of pH fluctuations in coastal waters of the English Channel: pH as a turbulent active scalar. Nonlinear Processes in Geophysics, 2011, 18, 829-839.	1.3	12
71	Spatio-temporal variability of phytoplankton photosynthetic activity in a macrotidal ecosystem (the) Tj ETQq1 1 0.784314 rgBT /Over	2.1	12
72	Multiscale Analysis of Wind Velocity, Power Output and Rotation of a Windmill. Energy Procedia, 2015, 76, 193-199.	1.8	12

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73	Rapid light curves (RLC) or non-sequential steady-state light curves (N-SSLC): which fluorescence-based light response curve methodology robustly characterizes phytoplankton photosynthetic activity and acclimation status?. Marine Biology, 2017, 164, 1.	1.5	12
74	On causal stochastic equations for log-stable multiplicative cascades. European Physical Journal B, 2007, 58, 149-158.	1.5	11
75	Autocorrelation function of velocity increments time series in fully developed turbulence. Europhysics Letters, 2009, 86, 40010.	2.0	11
76	Anisotropy and shift of search behavior in Malabar grouper (Epinephelus malabaricus) larvae in response to prey availability. Hydrobiologia, 2011, 666, 215-222.	2.0	11
77	Scaling Analysis of Ocean Surface Turbulent Heterogeneities from Satellite Remote Sensing: Use of 2D Structure Functions. PLoS ONE, 2015, 10, e0126975.	2.5	11
78	Copepods encounter rates from a model of escape jump behaviour in turbulence. Journal of Plankton Research, 2017, 39, 878-890.	1.8	11
79	Turbulence effects on the feeding dynamics in European sea bass (Dicentrarchus labrax) larvae. Journal of Experimental Marine Biology and Ecology, 2012, 416-417, 61-67.	1.5	10
80	Characterization of intermittency in zooplankton behaviour in turbulence. European Physical Journal E, 2015, 38, 108.	1.6	10
81	Long-term high frequency phytoplankton dynamics, recorded from a coastal water autonomous measurement system in the eastern English Channel. Continental Shelf Research, 2015, 109, 210-221.	1.8	10
82	Morphological traits, niche-environment interaction and temporal changes in diatoms. Progress in Oceanography, 2022, 201, 102747.	3.2	10
83	Nonlinear dynamics and intermittency in a long-term copepod time series. Communications in Nonlinear Science and Numerical Simulation, 2008, 13, 407-415.	3.3	9
84	Lagrangian model of copepod dynamics: Clustering by escape jumps in turbulence. Physical Review E, 2016, 93, 043117.	2.1	9
85	Nonlinear dynamics of the sea level time series in the eastern English Channel. Natural Hazards, 2018, 91, 267-285.	3.4	9
86	Propelled microprobes in turbulence. Physical Review Fluids, 2018, 3, .	2.5	9
87	LDV Measurements of the Flow Field in the Nozzle Region of a Confined Double Annular Burner. Journal of Fluids Engineering, Transactions of the ASME, 2001, 123, 228-236.	1.5	8
88	Regional patterns of continental shelf polychaete diversity: examples for the North Sea, English Channel, Irish Sea and Outer Bristol Channel areas. Italian Journal of Zoology, 2011, 78, 324-332.	0.6	8
89	Lagrangian cascade in three-dimensional homogeneous and isotropic turbulence. Journal of Fluid Mechanics, 2014, 741, .	3.4	8
90	Scaling of maximum probability density functions of velocity and temperature increments in turbulent systems. Physics of Fluids, 2011, 23, .	4.0	7

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91	Fluctuations of satellite-derived chlorophyll concentrations and optical indices at the Southern Yellow Sea. Aquatic Ecosystem Health and Management, 2012, 15, 168-175.	0.6	7
92	Short-term variability and control of phytoplankton photosynthetic activity in a macrotidal ecosystem (the Strait of Dover, eastern English Channel). Marine Biology, 2013, 160, 1661-1679.	1.5	7
93	Continuous multifractal models with zero values: a continuous $eta $ -multifractal model. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P02008.	2.3	7
94	Description of turbulent dynamics in the interstellar medium: multifractal-microcanonical analysis. Astronomy and Astrophysics, 2021, 649, A33.	5.1	7
95	Impact of the Nocturnal Low-Level Jet and Orographic Waves on Turbulent Motions and Energy Fluxes in the Lower Atmospheric Boundary Layer. Boundary-Layer Meteorology, 2021, 180, 527-542.	2.3	7
96	A discrete log-normal process to sequentially generate a multifractal time series. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P12013.	2.3	6
97	Differences in feeding activity between females and males of Temora longicornis. Ecological Research, 2013, 28, 459-467.	1.5	6
98	Taylor Law in Wind Energy Data. Resources, 2015, 4, 787-795.	3.5	6
99	Phytoplankton photosynthetic activity dynamics in a temperate macrotidal ecosystem (the Strait of) Tj ETQq1 1 0.784314 rgBT /Over Marine Systems, 2015, 147, 61-75.	2.1	6
100	Study of Local Correlations of the Simultaneous wind Speed-irradiance Measurements Using the Time Dependent Intrinsic Correlation Method. Journal of Applied Nonlinear Dynamics, 2016, 5, 373-390.	0.3	6
101	Direct investigation of the K-transport equation for a complex turbulent flow. Journal of Turbulence, 2003, 4, .	1.4	5
102	Turbulence from 1870 to 1920: The birth of a noun and of a concept. Comptes Rendus - Mecanique, 2017, 345, 620-626.	2.1	5
103	Phytoplankton distribution from Western to Central English Channel, revealed by automated flow cytometry during the summer-fall transition. Continental Shelf Research, 2020, 195, 104056.	1.8	5
104	Development and Environmental Conflicts in China. China Perspectives, 2008, 2008, 94-102.	0.6	5
105	Statistical analysis of polychaete population density: dynamics of dominant species and scaling properties in relative abundance fluctuations. Nonlinear Processes in Geophysics, 2012, 19, 45-52.	1.3	4
106	Gusts in Intermittent Wind Turbulence and the Dynamics of their Recurrent Times. , 2007, , 73-79.		4
107	Climate Change and Risk Perceptions in Two French Coastal Communities. Journal of Coastal Research, 2020, 95, 875.	0.3	4
108	Use of Lagrangian statistics for the analysis of the scale separation hypothesis in turbulent channel flow. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 3319-3327.	2.1	3

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109	Modeling turbulent-bounded flow using non-Newtonian viscometric functions. Journal of Turbulence, 2011, 12, N15.	1.4	3
110	Application of Arbitrary-Order Hilbert Spectral Analysis to Passive Scalar Turbulence. Journal of Physics: Conference Series, 2011, 318, 042003.	0.4	3
111	Intermittent particle dynamics in marine coastal waters. Nonlinear Processes in Geophysics, 2015, 22, 633-643.	1.3	3
112	Scaling Analysis of the China France Oceanography Satellite Alongâ€Track Wind and Wave Data. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC017119.	2.6	3
113	The Scaling Properties of the Turbulent Wind Using Empirical Mode Decomposition and Arbitrary Order Hilbert Spectral Analysis. Research Topics in Wind Energy, 2014, , 43-49.	0.2	3
114	An algorithm for the direct estimation of the parameters of the SIR epidemic model from the I(t) dynamics. European Physical Journal Plus, 2022, 137, 57.	2.6	3
115	Eulerian and Lagrangian Structure Functionâ€™s Scaling Exponents in Turbulent Channel Flow. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2006, 61, 624-628.	1.5	2
116	Two-scale correlation and energy cascade in three-dimensional turbulent flows. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P05002.	2.3	2
117	Extremal-point density of scaling processes: From fractional Brownian motion to turbulence in one dimension. Physical Review E, 2017, 96, 012215.	2.1	2
118	The Effects of Tidal Translation on Wave and Current Dynamics on a Barred Macrotidal Beach, Northern France. Journal of Marine Science and Engineering, 2021, 9, 909.	2.6	2
119	A quadratic Reynolds stress development for the turbulent Kolmogorov flow. Physics of Fluids, 2021, 33, .	4.0	2
120	Analysis and simulations of multifractal random walks. , 2015, , .		1
121	â^'5/3 Kolmogorov Turbulent Behaviour and Intermittent Sustainable Energies. , 2016, , .		1
122	Scaling properties of the turbidity and streamflow time series at two different locations of an intra-Apennine stream: Case study. Journal of Hydrology, 2021, 603, 126943.	5.4	1
123	Analysis of Nonlinear Biophysical Time Series in Aquatic Environments: Scaling Properties and Empirical Mode Decomposition. , 2007, , 261-280.		1
124	Fluctuations and correlations of reactive scalars near chemical equilibrium in incompressible turbulence. Physical Review Fluids, 2020, 5, .	2.5	1
125	Copepod swimming activity and turbulence intensity: study in the Agiturb turbulence generator system. European Physical Journal Plus, 2022, 137, 1.	2.6	1
126	EMPIRICAL MODE DECOMPOSITION OF DAILY RIVER FLUCTUATIONS. , 2009, , .		0

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127	Turbulence modeling based on non-Newtonian constitutive laws. Journal of Physics: Conference Series, 2011, 318, 042030.	0.4	0
128	Multifractal anisotropic swimming: the optimal foraging behaviour of grouper larvae. Journal of Fish Biology, 2016, 88, 1835-1846.	1.6	0
129	Experimental analysis of cumulants scaling properties in fully developed intermittent turbulence. , 2006, , .		0
130	Use of Lagrangian Statistics for the Direct Analysis of the Turbulent Constitutive Equation. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2010, , 319-325.	0.3	0
131	Small-Scale Prediction of Wind Energy in a Scale Invariant Framework. Springer Proceedings in Physics, 2019, , 297-303.	0.2	0
132	Lagrangian passive scalar intermittency in marine waters: theory and data analysis. , 2007, , 129-138.		0
133	Reactive scalars in incompressible turbulence with strongly out of equilibrium chemistry. Journal of Fluid Mechanics, 2022, 938, .	3.4	0