

Karsten Trulsen

List of Publications by Year in descending order

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52
papers

2,772
citations

257450

24
h-index

233421

45
g-index

56
all docs

56
docs citations

56
times ranked

865
citing authors

#	ARTICLE	IF	CITATIONS
1	Note on Breather Type Solutions of the NLS as Models for Freak-Waves. <i>Physica Scripta</i> , 1999, T82, 48.	2.5	325
2	A modified nonlinear Schrödinger equation for broader bandwidth gravity waves on deep water. <i>Wave Motion</i> , 1996, 24, 281-289.	2.0	255
3	Probability distributions of surface gravity waves during spectral changes. <i>Journal of Fluid Mechanics</i> , 2005, 542, 195.	3.4	237
4	Statistical Properties of Directional Ocean Waves: The Role of the Modulational Instability in the Formation of Extreme Events. <i>Physical Review Letters</i> , 2009, 102, 114502.	7.8	206
5	Statistical properties of mechanically generated surface gravity waves: a laboratory experiment in a three-dimensional wave basin. <i>Journal of Fluid Mechanics</i> , 2009, 627, 235-257.	3.4	170
6	On weakly nonlinear modulation of waves on deep water. <i>Physics of Fluids</i> , 2000, 12, 2432.	4.0	151
7	Evolution of weakly nonlinear random directional waves: laboratory experiments and numerical simulations. <i>Journal of Fluid Mechanics</i> , 2010, 664, 313-336.	3.4	143
8	Evolution of a narrow-band spectrum of random surface gravity waves. <i>Journal of Fluid Mechanics</i> , 2003, 478, 1-10.	3.4	129
9	Influence of crest and group length on the occurrence of freak waves. <i>Journal of Fluid Mechanics</i> , 2007, 582, 463-472.	3.4	116
10	Laboratory evidence of freak waves provoked by non-uniform bathymetry. <i>Physics of Fluids</i> , 2012, 24, .	4.0	73
11	Frequency downshift in three-dimensional wave trains in a deep basin. <i>Journal of Fluid Mechanics</i> , 1997, 352, 359-373.	3.4	72
12	Hamiltonian form of the modified nonlinear Schrödinger equation for gravity waves on arbitrary depth. <i>Journal of Fluid Mechanics</i> , 2011, 670, 404-426.	3.4	66
13	Internal Tides in the Strait of Gibraltar. <i>Journal of Physical Oceanography</i> , 2002, 32, 3193-3206.	1.7	61
14	Freak wave statistics on collinear currents. <i>Journal of Fluid Mechanics</i> , 2009, 637, 267-284.	3.4	61
15	Evolution of skewness and kurtosis of weakly nonlinear unidirectional waves over a sloping bottom. <i>Natural Hazards and Earth System Sciences</i> , 2012, 12, 631-638.	3.6	58
16	Extreme wave statistics of long-crested irregular waves over a shoal. <i>Journal of Fluid Mechanics</i> , 2020, 882, .	3.4	56
17	Crossing sea state and rogue wave probability during the Prestige accident. <i>Journal of Geophysical Research: Oceans</i> , 2015, 120, 7113-7136.	2.6	48
18	Freak waves in weakly nonlinear unidirectional wave trains over a sloping bottom in shallow water. <i>Physics of Fluids</i> , 2013, 25, .	4.0	47

#	ARTICLE	IF	CITATIONS
19	Double reflection of capillary/gravity waves by a non-uniform current: a boundary-layer theory. <i>Journal of Fluid Mechanics</i> , 1993, 251, 239-271.	3.4	36
20	Modulational Instability and Rogue Waves in Crossing Sea States. <i>Journal of Physical Oceanography</i> , 2018, 48, 1317-1331.	1.7	36
21	Interpretations and observations of ocean wave spectra. <i>Ocean Dynamics</i> , 2010, 60, 973-991.	2.2	33
22	Surface wave predictions in weakly nonlinear directional seas. <i>Applied Ocean Research</i> , 2017, 65, 79-89.	4.1	30
23	Fourth-order coupled nonlinear Schrödinger equations for gravity waves on deep water. <i>Physics of Fluids</i> , 2011, 23, .	4.0	27
24	Spatial Extreme Value Analysis of Nonlinear Simulations of Random Surface Waves. , 2004, , 285.		26
25	Can swell increase the number of freak waves in a wind sea?. <i>Journal of Fluid Mechanics</i> , 2010, 650, 57-79.	3.4	26
26	Frequency Down-Shift Through Self Modulation and Breaking. , 1990, , 561-572.		25
27	Laboratory evidence of three-dimensional frequency downshift of waves in a long tank. <i>Physics of Fluids</i> , 1999, 11, 235-237.	4.0	20
28	Measurement of the dispersion relation for random surface gravity waves. <i>Journal of Fluid Mechanics</i> , 2015, 766, 326-336.	3.4	20
29	Statistical properties of wave kinematics in long-crested irregular waves propagating over non-uniform bathymetry. <i>Physics of Fluids</i> , 2021, 33, .	4.0	20
30	Consistency between Sea Surface Reconstructions from Nautical X-Band Radar Doppler and Amplitude Measurements. <i>Journal of Atmospheric and Oceanic Technology</i> , 2018, 35, 1201-1220.	1.3	18
31	Nonlinear resonance of free surface waves in a current over a sinusoidal bottom: a numerical study. <i>Journal of Fluid Mechanics</i> , 1994, 279, 377-405.	3.4	17
32	Modulation of three resonating gravity-capillary waves by a long gravity wave. <i>Journal of Fluid Mechanics</i> , 1995, 290, 345-376.	3.4	15
33	Rogue Waves in the Ocean, the Role of Modulational Instability, and Abrupt Changes of Environmental Conditions that Can Provoke Non Equilibrium Wave Dynamics. <i>Springer Oceanography</i> , 2018, , 239-247.	0.3	15
34	Extreme wave statistics of counter-propagating, irregular, long-crested sea states. <i>Physics of Fluids</i> , 2018, 30, .	4.0	15
35	Extreme Wave Statistics in Combined and Partitioned Windsea and Swell. <i>Water Waves</i> , 2020, 2, 169-184.	1.0	14
36	Development of frequency-dependent ocean wave directional distributions. <i>Applied Ocean Research</i> , 2016, 59, 304-312.	4.1	12

#	ARTICLE	IF	CITATIONS
37	Weakly nonlinear and stochastic properties of ocean wave fields. Application to an extreme wave event. , 2006, , 49-106.		12
38	The nonlinear Schrödinger method for water wave kinematics on finite depth. Wave Motion, 2001, 33, 379-395.	2.0	10
39	Extreme wave statistics of surface elevation and velocity field of gravity waves over a two-dimensional bathymetry. Journal of Fluid Mechanics, 2022, 939, .	3.4	10
40	Crest pairing predicted by modulation theory. Journal of Geophysical Research, 1998, 103, 3143-3147.	3.3	9
41	Variational Boussinesq model for kinematics calculation of surface gravity waves over bathymetry. Wave Motion, 2021, 100, 102665.	2.0	8
42	Weakly Nonlinear Sea Surface Waves " Freak Waves and Deterministic Forecasting. , 2007, , 191-209.		8
43	Effects of weak wind and damping on Wilton's ripples. Journal of Fluid Mechanics, 1997, 335, 141-163.	3.4	7
44	On dispersion of directional surface gravity waves. Journal of Fluid Mechanics, 2017, 812, 681-697.	3.4	7
45	Bimodality of Directional Distributions in Ocean Wave Spectra: A Comparison of Data-Adaptive Estimation Techniques. Journal of Atmospheric and Oceanic Technology, 2018, 35, 365-384.	1.3	6
46	Wave Scattering Around a Vertical Cylinder: Fully Nonlinear Potential Flow Calculations Compared With Low Order Perturbation Results and Experiment. , 2002, , 359.		5
47	Wave Kinematics Computed With the Nonlinear Schrödinger Method for Deep Water. Journal of Offshore Mechanics and Arctic Engineering, 1999, 121, 126-130.	1.2	3
48	"Three Sisters" Measured As a Triple Rogue Wave Group. , 2019, , .		3
49	A Resonating Triad of Gravity " Capillary Waves on a Long Gravity Wave. Fluid Mechanics and Its Applications, 1996, , 165-176.	0.2	2
50	High-order evolution equation for nonlinear wave-packet propagation with surface tension accounting. Comptes Rendus - Mecanique, 2003, 331, 197-201.	2.1	1
51	An operational wave monitoring system based on a Dopplerized marine radar. , 2017, , .		1
52	The deconvolution as a method to deal with gaps in ocean wave measurements. Ocean Engineering, 2021, 219, 108373.	4.3	1