

Norbert Hoffmann

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8174100/publications.pdf>

Version: 2024-02-01

119
papers

3,852
citations

212478

28
h-index

150775

59
g-index

124
all docs

124
docs citations

124
times ranked

1908
citing authors

#	ARTICLE	IF	CITATIONS
1	bSTAB: an open-source software for computing the basin stability of multi-stable dynamical systems. <i>Nonlinear Dynamics</i> , 2022, 107, 1451-1468.	2.7	15
2	Galilean-transformed solitons and supercontinuum generation in dispersive media. <i>Physica D: Nonlinear Phenomena</i> , 2022, 439, 133342.	1.3	2
3	The Influence of Characteristic Sea State Parameters on the Accuracy of Irregular Wave Field Simulations of Different Complexity. <i>Fluids</i> , 2022, 7, 243.	0.8	3
4	Hydroelastic potential flow solver suited for nonlinear wave dynamics in ice-covered waters. <i>Ocean Engineering</i> , 2022, 259, 111756.	1.9	2
5	Deep learning for brake squeal: Brake noise detection, characterization and prediction. <i>Mechanical Systems and Signal Processing</i> , 2021, 149, 107181.	4.4	48
6	Nonlinear vibration localisation in a symmetric system of two coupled beams. <i>Nonlinear Dynamics</i> , 2021, 103, 3417-3428.	2.7	7
7	Modelling shear wave propagation in soft tissue surrogates using a finite element and finite difference method. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000148.	0.2	1
8	Limit cycle computation of self-excited dynamic systems using nonlinear modes. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000340.	0.2	1
9	Spatially localized vibrations in a rotor subjected to flutter. <i>Nonlinear Dynamics</i> , 2021, 103, 309-325.	2.7	6
10	Explainable machine learning determines effects on the sound absorption coefficient measured in the impedance tube. <i>Journal of the Acoustical Society of America</i> , 2021, 149, 1932-1945.	0.5	8
11	Experimental observations of nonlinear vibration localization in a cyclic chain of weakly coupled nonlinear oscillators. <i>Journal of Sound and Vibration</i> , 2021, 497, 115952.	2.1	10
12	Critical thresholds for mode-coupling instability in viscoelastic sliding contacts. <i>Nonlinear Dynamics</i> , 2021, 104, 2995-3011.	2.7	6
13	The Peregrine Breather on the Zero-Background Limit as the Two-Soliton Degenerate Solution: An Experimental Study. <i>Frontiers in Physics</i> , 2021, 9, .	1.0	9
14	Parameter Identification for Ultrasound Shear Wave Elastography Simulation. <i>Current Directions in Biomedical Engineering</i> , 2021, 7, 35-38.	0.2	0
15	Introducing envelope soliton solutions for wave structure investigations. <i>Ocean Engineering</i> , 2021, 234, 109271.	1.9	4
16	Experiments on uni-directional and nonlinear wave group shoaling. <i>Ocean Dynamics</i> , 2021, 71, 1105.	0.9	8
17	A novel unknown-input and single-output approach to extract vibration patterns via a roving continuous random excitation. <i>ISA Transactions</i> , 2021, , .	3.1	0
18	The extended periodic motion concept for fast limit cycle detection of self-excited systems. <i>Computers and Structures</i> , 2020, 227, 106139.	2.4	8

#	ARTICLE	IF	CITATIONS
19	Nucleation and propagation of excitation fronts in self-excited systems. <i>Physica D: Nonlinear Phenomena</i> , 2020, 401, 132176.	1.3	8
20	Numerical and experimental analysis of the bi-stable state for frictional continuous system. <i>Nonlinear Dynamics</i> , 2020, 102, 1361-1374.	2.7	11
21	The Basin Stability of Bi-Stable Friction-Excited Oscillators. <i>Lubricants</i> , 2020, 8, 105.	1.2	5
22	On the Deterministic Prediction of Water Waves. <i>Fluids</i> , 2020, 5, 9.	0.8	32
23	Hyperchaos co-existing with periodic orbits in a frictional oscillator. <i>Journal of Sound and Vibration</i> , 2020, 472, 115203.	2.1	13
24	Self-excited vibrations due to viscoelastic interactions. <i>Mechanical Systems and Signal Processing</i> , 2020, 144, 106894.	4.4	28
25	Investigation of Nonlinear Wave-Ice Interaction Using Parameter Study and Numerical Simulation. <i>Journal of Offshore Mechanics and Arctic Engineering</i> , 2020, 142, .	0.6	3
26	Dissipative solitons in forced cyclic and symmetric structures. <i>Mechanical Systems and Signal Processing</i> , 2019, 117, 280-292.	4.4	3
27	Complex machine dynamics: systematic recurrence quantification analysis of disk brake vibration data. <i>Nonlinear Dynamics</i> , 2019, 97, 2483-2497.	2.7	23
28	Reconstruction of Governing Equations from Vibration Measurements for Geometrically Nonlinear Systems. <i>Lubricants</i> , 2019, 7, 64.	1.2	13
29	Determining growth rates of instabilities from time-series vibration data: Methods and applications for brake squeal. <i>Mechanical Systems and Signal Processing</i> , 2019, 129, 250-264.	4.4	18
30	Energy harvesting below the onset of flutter. <i>Journal of Sound and Vibration</i> , 2019, 458, 17-21.	2.1	10
31	Recovery of Differential Equations from Impulse Response Time Series Data for Model Identification and Feature Extraction. <i>Vibration</i> , 2019, 2, 25-46.	0.9	18
32	Drifting breathers and Fermi-Pasta-Ulam paradox for water waves. <i>Wave Motion</i> , 2019, 90, 168-174.	1.0	17
33	Multi-scale dynamics of particle dampers using wavelets: Extracting particle activity metrics from ring down experiments. <i>Journal of Sound and Vibration</i> , 2019, 454, 1-13.	2.1	7
34	Revealing transitions in friction-excited vibrations by nonlinear time-series analysis. <i>Nonlinear Dynamics</i> , 2019, 98, 2613-2630.	2.7	18
35	Directional soliton and breather beams. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 9759-9763.	3.3	17
36	Establishing a common database of ice experiments and using machine learning to understand and predict ice behavior. <i>Cold Regions Science and Technology</i> , 2019, 162, 56-73.	1.6	20

#	ARTICLE	IF	CITATIONS
37	Computation of quasi-periodic localised vibrations in nonlinear cyclic and symmetric structures using harmonic balance methods. <i>Journal of Sound and Vibration</i> , 2019, 438, 54-65.	2.1	29
38	Multistability and localization in forced cyclic symmetric structures modelled by weakly-coupled Duffing oscillators. <i>Journal of Sound and Vibration</i> , 2019, 440, 202-211.	2.1	30
39	Systematic Experimental Validation of High-Order Spectral Method for Deterministic Wave Prediction. , 2019, , .		2
40	Solitons in Cyclic and Symmetric Structures. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2019, , 175-178.	0.3	0
41	Numerical Study on Nonlinear Wave-Ice-Interaction. , 2019, , .		0
42	Impact of an irregular friction formulation on dynamics of a minimal model for brake squeal. <i>Mechanical Systems and Signal Processing</i> , 2018, 107, 439-451.	4.4	31
43	Nonlinear real time prediction of ocean surface waves. <i>Ocean Engineering</i> , 2018, 157, 387-400.	1.9	30
44	Dark solitons, modulation instability and breathers in a chain of weakly nonlinear oscillators with cyclic symmetry. <i>Journal of Sound and Vibration</i> , 2018, 413, 467-481.	2.1	15
45	Multiple spatially localized dynamical states in friction-excited oscillator chains. <i>Journal of Sound and Vibration</i> , 2018, 417, 56-64.	2.1	32
46	Drifting Rogue Packets. , 2018, , .		0
47	Detection of unstable periodic orbits in mineralising geological systems. <i>Chaos</i> , 2018, 28, 085711.	1.0	16
48	Phase Domain Walls in Weakly Nonlinear Deep Water Surface Gravity Waves. <i>Physical Review Letters</i> , 2018, 120, 224102.	2.9	5
49	Vibro-acoustic and nonlinear analysis of cadavric femoral bone impaction in cavity preparations. <i>MATEC Web of Conferences</i> , 2018, 148, 14007.	0.1	7
50	Vibro-acoustic and nonlinear analysis of cadavric femoral bone impaction in cavity preparations. <i>International Journal of Mechanical Sciences</i> , 2018, 144, 739-745.	3.6	9
51	Subcritical bifurcation in a self-excited single-degree-of-freedom system with velocity weakening“strengthening friction law: analytical results and comparison with experiments. <i>Nonlinear Dynamics</i> , 2017, 90, 2037-2046.	2.7	50
52	Determining periodic orbits via nonlinear filtering and recurrence spectra in the presence of noise. <i>Procedia Engineering</i> , 2017, 199, 772-777.	1.2	7
53	Load-separation curves for the contact of self-affine rough surfaces. <i>Scientific Reports</i> , 2017, 7, 6900.	1.6	46
54	Snaking bifurcations in a self-excited oscillator chain with cyclic symmetry. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2017, 44, 108-119.	1.7	22

#	ARTICLE	IF	CITATIONS
55	Rogue waves and entropy consumption. Europhysics Letters, 2017, 120, 30008.	0.7	8
56	Characterization of complex states for friction-excited systems. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 45-46.	0.2	3
57	Continuation techniques for analysis of whole aeroengine dynamics with imperfect bifurcations and isolated solutions. Nonlinear Dynamics, 2016, 86, 1897-1911.	2.7	38
58	Capturing rogue waves by multi-point statistics. New Journal of Physics, 2016, 18, 013017.	1.2	13
59	Travelling and standing envelope solitons in discrete non-linear cyclic structures. Mechanical Systems and Signal Processing, 2016, 81, 75-87.	4.4	8
60	On vibrations in non-linear, forced, friction-excited systems. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 267-268.	0.2	1
61	The influence of joints on friction induced vibration in brake squeal. Journal of Sound and Vibration, 2015, 340, 239-252.	2.1	54
62	Dominant damping effects in friction brake noise, vibration and harshness: the relevance of joints. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2015, 229, 728-734.	1.1	15
63	Rogue wave spectra of the Sasa-Satsuma equation. Physica D: Nonlinear Phenomena, 2015, 294, 37-42.	1.3	42
64	Initial wave breaking dynamics of Peregrine-type rogue waves: A numerical and experimental study. European Journal of Mechanics, B/Fluids, 2015, 49, 71-76.	1.2	42
65	Nonlinearities in Friction Brake NVH - Experimental and Numerical Studies. , 2014, , .		12
66	A simple model for friction detachment at an interface of finite size mimicking Fineberg's experiments on uneven loading. Physical Mesomechanics, 2014, 17, 311-320.	1.0	3
67	Friction induced dynamics of ball joints: Instability and post bifurcation behavior. European Journal of Mechanics, A/Solids, 2014, 45, 161-173.	2.1	15
68	Gray solitons on the surface of water. Physical Review E, 2014, 89, 011002.	0.8	16
69	Nonlinear time series analysis of vibration data from a friction brake: SSA, PCA, and MFDFA. Chaos, Solitons and Fractals, 2014, 69, 90-99.	2.5	41
70	Rogue waves of the Sasa-Satsuma equation in a chaotic wave field. Physical Review E, 2014, 90, 032902.	0.8	45
71	Stochastic analysis of ocean wave states with and without rogue waves. New Journal of Physics, 2014, 16, 053037.	1.2	14
72	Dynamics of Unstable Stokes Waves: A Numerical and Experimental Study. , 2014, , .		0

#	ARTICLE	IF	CITATIONS
73	Test Method Development for Nonlinear Damping Extraction of Dovetail Joints. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 229-237.	0.3	6
74	The Influence of Loading Conditions on the Static Coefficient of Friction: A Study on Brake Creep Groan. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 149-160.	0.3	3
75	Super-rogue waves in simulations based on weakly nonlinear and fully nonlinear hydrodynamic equations. Physical Review E, 2013, 88, 012909.	0.8	65
76	Hydrodynamic Supercontinuum. Physical Review Letters, 2013, 111, 054104.	2.9	57
77	Experiments on wind-perturbed rogue wave hydrodynamics using the Peregrine breather model. Physics of Fluids, 2013, 25, .	1.6	59
78	Deep-Water Waves: on the Nonlinear Schrödinger Equation and its Solutions. Journal of Theoretical and Applied Mechanics (Bulgaria), 2013, 43, .	0.6	10
79	Vibration transfer in the ballâ€“stem contact interface of artificial hips. Medical Engineering and Physics, 2013, 35, 1513-1517.	0.8	7
80	Experimental Observation of Dark Solitons on the Surface of Water. Physical Review Letters, 2013, 110, 124101.	2.9	87
81	Frictional dissipation in elastically dissimilar oscillating Hertzian contacts. International Journal of Mechanical Sciences, 2013, 72, 55-62.	3.6	10
82	On the Robustness of Instabilities in Frictionâ€“Induced Vibration. Journal of Vibration and Acoustics, Transactions of the ASME, 2013, 135, .	1.0	6
83	The influence of stem design on critical squeaking friction with ceramic bearings. Journal of Orthopaedic Research, 2013, 31, 1627-1632.	1.2	13
84	Experimental study of spatiotemporally localized surface gravity water waves. Physical Review E, 2012, 86, 016311.	0.8	60
85	Super Rogue Waves: Observation of a Higher-Order Breather in Water Waves. Physical Review X, 2012, 2, .	2.8	199
86	Observation of a hierarchy of up to fifth-order rogue waves in a water tank. Physical Review E, 2012, 86, 056601.	0.8	172
87	Friction-induced whirl vibration: Root cause of squeaking in total hip arthroplasty. Journal of Biomechanics, 2012, 45, 297-303.	0.9	21
88	Spectral properties of the Peregrine soliton observed in a water wave tank. Journal of Geophysical Research, 2012, 117, .	3.3	18
89	Observation of rogue wave holes in a water wave tank. Journal of Geophysical Research, 2012, 117, .	3.3	21
90	Recurrence analysis and phase space reconstruction of irregular vibration in friction brakes: Signatures of chaos in steady sliding. Journal of Sound and Vibration, 2012, 331, 3887-3896.	2.1	42

#	ARTICLE	IF	CITATIONS
91	Deformation characteristics and eigenfrequencies of press-fit acetabular cups. <i>Clinical Biomechanics</i> , 2011, 26, 46-51.	0.5	28
92	Rogue Wave Observation in a Water Wave Tank. <i>Physical Review Letters</i> , 2011, 106, 204502.	2.9	960
93	Solitary vortex solutions in a sheared and differentially heated vertical fluid layer with stable stratification. <i>European Journal of Mechanics, B/Fluids</i> , 2011, 30, 245-251.	1.2	1
94	A numerical study on stick-slip motion of a brake pad in steady sliding. <i>Journal of Sound and Vibration</i> , 2011, 330, 636-651.	2.1	46
95	The influence of component design, bearing clearance and axial load on the squeaking characteristics of ceramic hip articulations. <i>Journal of Biomechanics</i> , 2011, 44, 837-841.	0.9	56
96	On chaotic friction induced vibration due to rate dependent friction. <i>Mechanics Research Communications</i> , 2010, 37, 92-95.	1.0	17
97	Squeak in hip endoprosthesis systems: An experimental study and a numerical technique to analyze design variants. <i>Medical Engineering and Physics</i> , 2010, 32, 604-609.	0.8	53
98	On transient growth of wear pattern properties. <i>Wear</i> , 2010, 268, 886-892.	1.5	6
99	Experimental Evidence for Breather Type Dynamics in Freak Waves. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2010, 10, 495-496.	0.2	8
100	A Minimal Model to Explore the Influence of Distant Modes on Mode-Coupling Instabilities. <i>AIP Conference Proceedings</i> , 2010, , .	0.3	1
101	Simulation of full-scale ice-structure-interaction by an extended Matlock-model. <i>Cold Regions Science and Technology</i> , 2010, 60, 130-136.	1.6	21
102	Friction-Induced Vibration of Artificial Hip Joints. <i>GAMM Mitteilungen</i> , 2009, 32, 193-204.	2.7	11
103	The effect of long-wavelength stiffness variation on wear pattern generation. <i>Journal of Sound and Vibration</i> , 2009, 322, 785-797.	2.1	4
104	On the role of varying normal load and of randomly distributed relative velocities in the wavelength selection process of wear-pattern generation. <i>International Journal of Solids and Structures</i> , 2007, 44, 8718-8734.	1.3	7
105	Linear stability of steady sliding in point contacts with velocity dependent and LuGre type friction. <i>Journal of Sound and Vibration</i> , 2007, 301, 1023-1034.	2.1	27
106	On wear pattern generation in elastic systems. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007, 7, 4050003-4050004.	0.2	0
107	A stochastic averaging approach for printed circuit boards with nonlinear damping characteristics subjected to random vibration loads. <i>Mechanics Research Communications</i> , 2006, 33, 385-393.	1.0	1
108	Transient Growth and Stick-Slip in Sliding Friction. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2006, 73, 642-647.	1.1	13

#	ARTICLE	IF	CITATIONS
109	Quenching mode-coupling friction-induced instability using high-frequency dither. Journal of Sound and Vibration, 2005, 279, 471-480.	2.1	28
110	Modeling and Simulation of Future Vehicle Powernets. , 2004, , .		1
111	Non-conservative beating in sliding friction affected systems: transient amplification of vibrational energy and a technique to determine optimal initial conditions. Mechanical Systems and Signal Processing, 2004, 18, 611-623.	4.4	12
112	A sufficient criterion for the onset of sprag-slip oscillations. Archive of Applied Mechanics, 2004, 73, 650-660.	1.2	51
113	Effects of damping on mode-coupling instability in friction induced oscillations. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2003, 83, 524-534.	0.9	200
114	A minimal model for studying properties of the mode-coupling type instability in friction induced oscillations. Mechanics Research Communications, 2002, 29, 197-205.	1.0	243
115	Linear instability of Poiseuilleâ€“Couetteâ€“Ekman flows: Local results for flows between differentially rotating disks with throughflow. Physics of Fluids, 2001, 13, 2735-2738.	1.6	7
116	Isolated solitary vortex solutions for the Ekman Couette layer. European Journal of Mechanics, B/Fluids, 2000, 19, 391-402.	1.2	10
117	Instabilities of shear flows between two coaxial differentially rotating cones. Physics of Fluids, 1999, 11, 1676-1678.	1.6	23
118	Upper bounds on energy dissipation in Couetteâ€“Ekman flow. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 255, 277-286.	0.9	19
119	Transitions to complex flows in the Ekmanâ€“Couette layer. Journal of Fluid Mechanics, 1998, 366, 311-331.	1.4	30