

Nils Olav Handegard

List of Publications by Year in descending order

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Version: 2024-02-01

66
papers

2,180
citations

257357

24
h-index

243529

44
g-index

68
all docs

68
docs citations

68
times ranked

2560
citing authors

#	ARTICLE	IF	CITATIONS
1	Ecosystem processes are rarely included in tactical fisheries management. <i>Fish and Fisheries</i> , 2016, 17, 165-175.	2.7	220
2	The Dynamics of Coordinated Group Hunting and Collective Information Transfer among Schooling Prey. <i>Current Biology</i> , 2012, 22, 1213-1217.	1.8	215
3	From siphonophores to deep scattering layers: uncertainty ranges for the estimation of global mesopelagic fish biomass. <i>ICES Journal of Marine Science</i> , 2019, 76, 718-733.	1.2	146
4	Fish species identification using a convolutional neural network trained on synthetic data. <i>ICES Journal of Marine Science</i> , 2019, 76, 342-349.	1.2	105
5	Fish avoidance of research vessels and the efficacy of noise-reduced vessels: a review. <i>ICES Journal of Marine Science</i> , 2013, 70, 34-45.	1.2	100
6	Avoidance behaviour in cod (<i>Gadus morhua</i>) to a bottom-trawling vessel. <i>Aquatic Living Resources</i> , 2003, 16, 265-270.	0.5	84
7	Silent research vessels are not quiet. <i>Journal of the Acoustical Society of America</i> , 2007, 121, EL145-EL150.	0.5	82
8	Machine intelligence and the data-driven future of marine science. <i>ICES Journal of Marine Science</i> , 2020, 77, 1274-1285.	1.2	82
9	When fish meet a trawling vessel: examining the behaviour of gadoids using a free-floating buoy and acoustic split-beam tracking. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2005, 62, 2409-2422.	0.7	67
10	Towards an acoustic-based coupled observation and modelling system for monitoring and predicting ecosystem dynamics of the open ocean. <i>Fish and Fisheries</i> , 2013, 14, 605-615.	2.7	66
11	Automated tracking of fish in trawls using the DIDSON (Dual frequency IDentification SONar). <i>ICES Journal of Marine Science</i> , 2008, 65, 636-644.	1.2	56
12	Towards of a firmer explanation of large shoal formation, maintenance and collective reactions in marine fish. <i>Reviews in Fish Biology and Fisheries</i> , 2015, 25, 21-37.	2.4	53
13	Marine ecosystem acoustics (MEA): quantifying processes in the sea at the spatio-temporal scales on which they occur. <i>ICES Journal of Marine Science</i> , 2014, 71, 2357-2369.	1.2	47
14	Behavioral responses of herring (<i>Clupea harengus</i>) to 12 and 67kHz sonar signals and killer whale feeding sounds. <i>Journal of the Acoustical Society of America</i> , 2009, 125, 554-564.	0.5	43
15	School level structural and dynamic adjustments to risk promote information transfer and collective evasion in herring. <i>Animal Behaviour</i> , 2016, 117, 69-78.	0.8	38
16	Tracking individual fish from a moving platform using a split-beam transducer. <i>Journal of the Acoustical Society of America</i> , 2005, 118, 2210-2223.	0.5	36
17	Observing individual fish behavior in fish aggregations: Tracking in dense fish aggregations using a split-beam echosounder. <i>Journal of the Acoustical Society of America</i> , 2007, 122, 177-187.	0.5	34
18	Automatic interpretation of otoliths using deep learning. <i>PLoS ONE</i> , 2018, 13, e0204713.	1.1	34

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19	Acoustic classification in multifrequency echosounder data using deep convolutional neural networks. ICES Journal of Marine Science, 2020, 77, 1391-1400.	1.2	33
20	Behavior of captive herring exposed to naval sonar transmissions (1.0–1.6 kHz) throughout a yearly cycle. Journal of the Acoustical Society of America, 2012, 131, 1632-1642.	0.5	30
21	Feeding herring schools do not react to seismic air gun surveys. ICES Journal of Marine Science, 2013, 70, 1174-1180.	1.2	30
22	Vortex formation and foraging in polyphenic spadefoot toad tadpoles. Behavioral Ecology and Sociobiology, 2012, 66, 879-889.	0.6	28
23	Acoustic surveys of euphausiids and models of baleen whale distribution in the Barents Sea. Marine Ecology - Progress Series, 2015, 527, 13-29.	0.9	28
24	Simulations of multi-beam sonar echos from schooling individual fish in a quiet environment. Journal of the Acoustical Society of America, 2012, 132, 3720-3734.	0.5	27
25	Temporal–spatial, spectral, and source level distributions of fin whale vocalizations in the Norwegian Sea observed with a coherent hydrophone array. ICES Journal of Marine Science, 2019, 76, 268-283.	1.2	26
26	Guidelines Towards an Integrated Ocean Observation System for Ecosystems and Biogeochemical Cycles. , 2010, , .		26
27	Harmful routines? Uncertainty in science and conflicting views on routine petroleum operations in Norway. Marine Policy, 2014, 43, 313-320.	1.5	25
28	Possible vessel avoidance behaviour of capelin in a feeding area and on a spawning ground. Fisheries Research, 2004, 69, 251-261.	0.9	24
29	School density affects the strength of collective avoidance responses in wild-caught Atlantic herring (<i>Clupea harengus</i>): a simulated predator encounter experiment. Journal of Fish Biology, 2014, 85, 1650-1664.	0.7	24
30	Experimental Evidence of Threat-Sensitive Collective Avoidance Responses in a Large Wild-Caught Herring School. PLoS ONE, 2014, 9, e86726.	1.1	24
31	Estimating tail-beat frequency using split-beam echosounders. ICES Journal of Marine Science, 2009, 66, 1252-1258.	1.2	23
32	Correcting for vessel avoidance in acoustic-abundance estimates for herring. ICES Journal of Marine Science, 2008, 65, 1036-1045.	1.2	22
33	Detection, Localization and Classification of Multiple Mechanized Ocean Vessels over Continental-Shelf Scale Regions with Passive Ocean Acoustic Waveguide Remote Sensing. Remote Sensing, 2018, 10, 1699.	1.8	20
34	Airgun blasts used in marine seismic surveys have limited effects on mortality, and no sublethal effects on behaviour or gene expression, in the copepod <i>Calanus finmarchicus</i> . ICES Journal of Marine Science, 2019, 76, 2033-2044.	1.2	18
35	Environmental context elicits behavioural modification of collective state in schooling fish. Animal Behaviour, 2020, 165, 107-116.	0.8	18
36	Lateral-aspect, target-strength measurements of in situ herring (<i>Clupea harengus</i>). ICES Journal of Marine Science, 2009, 66, 1191-1196.	1.2	17

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37	Collective responses of a large mackerel school depend on the size and speed of a robotic fish but not on tail motion. <i>Bioinspiration and Biomimetics</i> , 2016, 11, 056020.	1.5	17
38	Pre-spawning herring in a protected area showed only moderate reaction to a surveying vessel. <i>Fisheries Research</i> , 2006, 78, 359-367.	0.9	16
39	Effects on schooling function in mackerel of sub-lethal capture related stressors: Crowding and hypoxia. <i>PLoS ONE</i> , 2017, 12, e0190259.	1.1	14
40	A deep learning-based method to identify and count pelagic and mesopelagic fishes from trawl camera images. <i>ICES Journal of Marine Science</i> , 2021, 78, 3780-3792.	1.2	14
41	Behaviour of herring (<i>Clupea harengus</i> L.) towards an approaching autonomous underwater vehicle. <i>ICES Journal of Marine Science</i> , 2004, 61, 1044-1049.	1.2	13
42	Data Interoperability Between Elements of the Global Ocean Observing System. <i>Frontiers in Marine Science</i> , 2019, 6, .	1.2	13
43	Impact of naval sonar signals on Atlantic herring (<i>Clupea harengus</i>) during summer feeding. <i>ICES Journal of Marine Science</i> , 2012, 69, 1078-1085.	1.2	12
44	StoX: An open source software for marine survey analyses. <i>Methods in Ecology and Evolution</i> , 2019, 10, 1523-1528.	2.2	12
45	The sampling volume of trawl and acoustics: estimating availability probabilities from observations of tracked individual fish. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2009, 66, 425-437.	0.7	11
46	Herring perform stronger collective evasive reactions when previously exposed to killer whales calls. <i>Behavioral Ecology</i> , 2016, 27, 538-544.	1.0	11
47	Automatic interpretation of salmon scales using deep learning. <i>Ecological Informatics</i> , 2021, 63, 101322.	2.3	10
48	A method to automatically detect fish aggregations using horizontally scanning sonar. <i>ICES Journal of Marine Science</i> , 2018, 75, 1803-1812.	1.2	9
49	Evaluating the effect of seismic surveys on fish – the efficacy of different exposure metrics to explain disturbance. <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 2013, 70, 1271-1277.	0.7	8
50	Method to observe large scale behavioural waves propagating through fish schools using 4D sonar. <i>ICES Journal of Marine Science</i> , 2017, 74, 804-812.	1.2	7
51	Effects on individual level behaviour in mackerel (<i>Scomber scombrus</i>) of sub-lethal capture related stressors: Crowding and hypoxia. <i>PLoS ONE</i> , 2019, 14, e0213709.	1.1	7
52	Observing the ocean interior in support of integrated management. <i>ICES Journal of Marine Science</i> , 2016, 73, 1947-1954.	1.2	6
53	Estimating purse seine volume during capture: implications for fish densities and survival of released unwanted catches. <i>ICES Journal of Marine Science</i> , 2019, 76, 2481-2488.	1.2	6
54	Semi-supervised target classification in multi-frequency echosounder data. <i>ICES Journal of Marine Science</i> , 2021, 78, 2615-2627.	1.2	6

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55	Evaluation of echosounder data preparation strategies for modern machine learning models. Fisheries Research, 2022, 254, 106411.	0.9	6
56	The reaction of a captive herring school to playbacks of a noise-reduced and a conventional research vessel. Canadian Journal of Fisheries and Aquatic Sciences, 2015, 72, 491-499.	0.7	5
57	A real-world dataset and data simulation algorithm for automated fish species identification. Geoscience Data Journal, 2021, 8, 199-209.	1.8	5
58	An overview of underwater acoustics applied to observe fish behaviour at the Institute of Marine Research. , 2013, , .		4
59	Long Range Passive Ocean Acoustic Waveguide Remote Sensing (POAWRS) of Seismo-acoustic Airgun Signals Received on a Coherent Hydrophone Array. , 2019, , .		4
60	Anthropogenic Marsh Impoundments Alter Collective Tendency in Schooling Fish. Estuaries and Coasts, 2022, 45, 856-865.	1.0	4
61	Evaluating acoustic-trawl survey strategies using an end-to-end ecosystem model. ICES Journal of Marine Science, 2020, 77, 2590-2599.	1.2	3
62	Echo integration using non-vertical sonar beams: The bias caused by non-uniform distribution of fish within the echo beam. Journal of the Acoustical Society of America, 2018, 144, 2160-2165.	0.5	2
63	Investigating the Effect of Tones and Frequency Sweeps on the Collective Behavior of Pinned Herring (Clupea harengus). Advances in Experimental Medicine and Biology, 2016, 875, 391-398.	0.8	2
64	OBSERVATIONS OF THE BEHAVIOUR OF HERRING EXPOSED TO LOW- (1-2 KHZ) AND MID- (6-7 KHZ) FREQUENCY SONAR SIGNALS. Bioacoustics, 2008, 17, 199-201.	0.7	0
65	An efficient protocol and data set for automated otolith image analysis. Geoscience Data Journal, 2020, 7, 80-88.	1.8	0
66	Behavioral Responses of Captive Herring to Sonar Signals (1-1.6 kHz) of a Naval Frigate Throughout a Yearly Cycle. Advances in Experimental Medicine and Biology, 2012, 730, 379-381.	0.8	0