James H Churnside

List of Publications by Year
in descending order

128 papers	3,468 citations	109137 35 h-index	161609 54 g-index
131 all docs	131 docs citations	131 times ranked	2086 citing authors

#	Article	IF	Citations
1	Airborne Lidar Observations of a Spring Phytoplankton Bloom in the Western Arctic Ocean. Remote Sensing, 2021, 13, 2512.	1.8	5
2	Applying Gaussian Mixture Models to Detect Fish from Airborne LiDAR Measurements. , 2021, , .		2
3	Stratification, plankton layers, and mixing measured by airborne lidar in the Chukchi and Beaufort seas. Deep-Sea Research Part II: Topical Studies in Oceanography, 2020, 177, 104742.	0.6	13
4	Lidar measurements of the diffuse attenuation coefficient in Yellowstone Lake. Applied Optics, 2020, 59, 3097.	0.9	8
5	Lidar remote sensing of the aquatic environment: invited. Applied Optics, 2020, 59, C92.	0.9	19
6	Going Beyond Standard Ocean Color Observations: Lidar and Polarimetry. Frontiers in Marine Science, 2019, 6, .	1.2	80
7	Vertical distributions of blooming cyanobacteria populations in a freshwater lake from LIDAR observations. Remote Sensing of Environment, 2019, 225, 347-367.	4.6	35
8	Calibration of an airborne oceanographic lidar using ocean backscattering measurements from space. Optics Express, 2019, 27, A536.	1.7	11
9	Ocean Backscatter Profiling Using High-Spectral-Resolution Lidar and a Perturbation Retrieval. Remote Sensing, 2018, 10, 2003.	1.8	29
10	Airborne lidar detection and mapping of invasive lake trout in Yellowstone Lake. Applied Optics, 2018, 57, 4111.	0.9	21
11	Dual-polarization airborne lidar for freshwater fisheries management and research. Optical Engineering, 2017, 56, 031221.	0.5	23
12	Surveying the distribution and abundance of flying fishes and other epipelagics in the northern Gulf of Mexico using airborne lidar. Bulletin of Marine Science, 2017, 93, 591-609.	0.4	20
13	Optical Backscattering Measured by Airborne Lidar and Underwater Glider. Remote Sensing, 2017, 9, 379.	1.8	25
14	Inversion of oceanographic profiling lidars by a perturbation to a linear regression. Applied Optics, 2017, 56, 5228.	2.1	31
15	Airborne lidar detection of an underwater thermal vent. Journal of Applied Remote Sensing, 2017, 11, 1.	0.6	3
16	Review of profiling oceanographic lidar (erratum). Optical Engineering, 2017, 56, 079802.	0.5	2
17	Airborne lidar estimates of photosynthesis profiles. , 2016, , .		1
18	Hollow aggregations of moon jellyfish (Aureliaspp.). Journal of Plankton Research, 2016, 38, 122-130.	0.8	10

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19	Surveying the distribution and abundance of flying fishes and other epipelagics in the northern Gulf of Mexico using airborne lidar. Bulletin of Marine Science, 2016, , .	0.4	2
20	Subsurface plankton layers in the Arctic Ocean. Geophysical Research Letters, 2015, 42, 4896-4902.	1.5	50
21	Bio-optical model of remote sensing signals in a stratified ocean. , 2015, , .		0
22	Bio-optical model to describe remote sensing signals from a stratified ocean. Journal of Applied Remote Sensing, 2015, 9, 095989.	0.6	5
23	Optical remote sensing of sound in the ocean. Journal of Applied Remote Sensing, 2015, 9, 096038.	0.6	4
24	Ocean subsurface studies with the CALIPSO spaceborne lidar. Journal of Geophysical Research: Oceans, 2014, 119, 4305-4317.	1.0	74
25	Ecosystem studies using profiling polarization LiDAR. , 2014, , .		0
26	Lidar extinction-to-backscatter ratio of the ocean. Optics Express, 2014, 22, 18698.	1.7	38
27	Optical remote sensing of sound in the ocean. Proceedings of SPIE, 2014, , .	0.8	0
28	Effect of surface roughness on lidar overlap function. Proceedings of SPIE, 2013, , .	0.8	1
29	Oceanographic lidar profiles compared with estimates from in situ optical measurements. Applied Optics, 2013, 52, 786.	0.9	51
30	Review of profiling oceanographic lidar. Optical Engineering, 2013, 53, 051405.	0.5	129
31	Subsurface Ocean Signals from an Orbiting Polarization Lidar. Remote Sensing, 2013, 5, 3457-3475.	1.8	36
32	Airborne lidar detection and characterization of internal waves in a shallow fjord. Journal of Applied Remote Sensing, 2012, 6, 063611.	0.6	42
33	Airborne lidar sensing of internal waves in a shallow fjord. , 2012, , .		0
34	Biological thin layers: history, ecological significance and consequences to oceanographic sensing systems. Proceedings of SPIE, 2012, , .	0.8	1
35	Airborne sensors for detecting large marine debris at sea. Marine Pollution Bulletin, 2012, 65, 63-68.	2.3	51
36	GhostNet marine debris survey in the Gulf of Alaska â€“ Satellite guidance and aircraft observations. Marine Pollution Bulletin, 2012, 65, 28-41.	2.3	54

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37	Relationships between water attenuation coefficients derived from active and passive remote sensing: a case study from two coastal environments. Applied Optics, 2011, 50, 2990.	2.1	18
38	Lidar as a tool for fisheries management. , 2011, , .		2
39	Ocean color patterns help to predict depth of optical layers in stratified coastal waters. Journal of Applied Remote Sensing, 2011, 5, 053548.	0.6	6
40	Epipelagic fish distributions in relation to thermal fronts in a coastal upwelling system using high-resolution remote-sensing techniques. ICES Journal of Marine Science, 2011, 68, 1865-1874.	1.2	27
41	Aerial surveys of fish in estuaries: a case study in Chesapeake Bay. ICES Journal of Marine Science, 2011, 68, 239-244.	1.2	20
42	Airborne Remote Sensing of a Biological Hot Spot in the Southeastern Bering Sea. Remote Sensing, 2011, 3, 621-637.	1.8	20
43	Spatial coherence between remotely sensed ocean color data and vertical distribution of lidar backscattering in coastal stratified waters. Remote Sensing of Environment, 2010, 114, 2584-2593.	4.6	11
44	Lidar signature from bubbles in the sea. Optics Express, 2010, 18, 8294.	1.7	27
45	Thermal Footprints of Whales. Oceanography, 2009, 22, 206-209.	0.5	56
46	Comparison of data-processing algorithms for the lidar detection of mackerel in the Norwegian Sea. ICES Journal of Marine Science, 2009, 66, 1023-1028.	1.2	12
47	Thin scattering layers observed by airborne lidar. ICES Journal of Marine Science, 2009, 66, 778-789.	1.2	108
48	Combining Techniques for Remotely Assessing Pelagic Nekton: Getting the Whole Picture. , 2009, , 345-356.		2
49	Effects of underwater sound and surface ripples on scattered laser light. Acoustical Physics, 2008, 54, 204-209.	0.2	6
50	Polarization effects on oceanographic lidar. Optics Express, 2008, 16, 1196.	1.7	62
51	Ocean Color Inferred from Radiometers on Low-Flying Aircraft. Sensors, 2008, 8, 860-876.	2.1	6
52	LIDAR detection of plankton in the ocean. , 2007, , .		5
53	Marine debris collects within the North Pacific Subtropical Convergence Zone. Marine Pollution Bulletin, 2007, 54, 1207-1211.	2.3	149
54	Altair unmanned aircraft system achieves demonstration goals. Eos, 2006, 87, 197.	0.1	12

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55	Power spectrum and fractal dimension of laser backscattering from the ocean. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 2829.	0.8	7
56	Comparison of airborne lidar with echosounders: a case study in the coastal Atlantic waters of southern Europe. ICES Journal of Marine Science, 2006, 63, 1736-1750.	1.2	37
57	Lidar target-strength measurements on Northeast Atlantic mackerel (Scomber scombrus). ICES Journal of Marine Science, 2006, 63, 677-682.	1.2	11
58	Polarization lidar measurements of honeybees for locating buried landmines. , 2005, , .		1
59	Visual demonstration of three-scale sea-surface roughness under light wind conditions. IEEE Transactions on Geoscience and Remote Sensing, 2005, 43, 1751-1762.	2.7	7
60	Lidar observation of a strongly nonlinear internal wave train in the Gulf of Alaska. International Journal of Remote Sensing, 2005, 26, 167-177.	1.3	52
61	Comparison of airborne lidar measurements with 420 kHz echo-sounder measurements of zooplankton. Applied Optics, 2005, 44, 5504.	2.1	43
62	Polarization lidar measurements of honey bees in flight for locating land mines. Optics Express, 2005, 13, 5853.	1.7	94
63	Airborne lidar imaging of salmon. Applied Optics, 2004, 43, 1416.	2.1	16
64	Air temperature profile and air/sea temperature difference measurements by infrared and microwave scanning radiometers. Radio Science, 2003, 38, n/a-n/a.	0.8	9
65	A comparison of lidar and echosounder measurements of fish schools in the Gulf of Mexico. ICES Journal of Marine Science, 2003, 60, 147-154.	1.2	43
66	Remote sensing of capelin and other biological features in the North Pacific using lidar and video technology. ICES Journal of Marine Science, 2002, 59, 1120-1130.	1.2	37
67	Scanning infrared radiometer for measuring the airâ€“sea temperature difference. Applied Optics, 2001, 40, 4807.	2.1	5
68	Airborne lidar for fisheries applications. Optical Engineering, 2001, 40, 406.	0.5	80
69	LASER SAFETY THRESHOLDS FOR CETACEANS AND PINNIPEDS. Marine Mammal Science, 2000, 16, 186-200.	0.9	27
70	Observations of downwelling infrared spectral radiance at Mauna Loa, Hawaii during the 1997-1998 ENSO event. Geophysical Research Letters, 1999, 26, 1727-1730.	1.5	10
71	Transient radiative transfer equation applied to oceanographic lidar. Applied Optics, 1999, 38, 889.	2.1	38
72	Ground-Based Remote Sensor Observations during PROBE in the Tropical Western Pacific. Bulletin of the American Meteorological Society, 1999, 80, 257-270.	1.7	13

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73	<title>Can we see fish from an airplane?</title>. , 1999, , .		2
74	Oceanographic lidar attenuation coefficients and signal fluctuations measured from a ship in the Southern California Bight. Applied Optics, 1998, 37, 3105.	2.1	40
75	<title>Infrared laser-glint sensor for measuring fractal sea-surface roughness</title>. , 1998, , .		1
76	<title>Calculation of signals for oceanographic lidar</title>. , 1998, 3382, 134.		0
77	The Optical Properties of Equatorial Cirrus from Observations in the ARM Pilot Radiation Observation Experiment. Journals of the Atmospheric Sciences, 1998, 55, 1977-1996.	0.6	79
78	Laser-glint techniques for sensing sea-surface roughness. , 1997, , .		1
79	Scanning-laser glint measurements of sea-surface slope statistics. Applied Optics, 1997, 36, 4202.	2.1	119
80	Lidar profiles of fish schools. Applied Optics, 1997, 36, 6011.	2.1	50
81	Fractal laser glints from the ocean surface. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1997, 14, 1144.	0.8	12
82	Infrared spectral radiance measurements in the tropical Pacific atmosphere. Journal of Geophysical Research, 1997, 102, 4353-4356.	3.3	50
83	Measurements of the attenuation coefficient of a lidar in the Southern California Bight. Proceedings of SPIE, 1997, , .	0.8	0
84	Comparison of Infrared Atmospheric Brightness Temperatures Measured by a Fourier Transform Spectrometer and a Filter Radiometer. Journal of Atmospheric and Oceanic Technology, 1995, 12, 1124-1128.	0.5	7
85	Determination of ocean wave spectra from images of backscattered incoherent light. Applied Optics, 1995, 34, 962.	2.1	3
86	Effect of penetration depth and swell-generated tilt on delta-k lidar performance. Applied Optics, 1994, 33, 2363.	2.1	3
87	Remote sensing of wind velocity and strength of refractive turbulence using a two-spatial-filter receiver. Applied Optics, 1994, 33, 5859.	2.1	2
88	Temperature Profiling with Neural Network Inversion of Microwave Radiometer Data. Journal of Atmospheric and Oceanic Technology, 1994, 11, 105-109.	0.5	62
89	Image Jitter, Blur, and Scintillation Regarding the Retinal Hazards of Lasers. Health Physics, 1994, 66, 159-162.	0.3	4
90	Inner-scale effect on irradiance variance measured for weak-to-strong atmospheric scintillation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1993, 10, 2354.	0.8	66

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91	Î”k Lidar sensing of surface waves in a wave tank. Applied Optics, 1993, 32, 339.	2.1	11
92	Enhanced backscatter of a reflected beam in atmospheric turbulence. Applied Optics, 1993, 32, 2651.	2.1	14
93	Possibilities of using IR spectrometer data for sizing cirrus cloud particles. , 1993, 1934, 381.		0
94	Two-color correlation of atmospheric scintillation. Applied Optics, 1992, 31, 4285.	2.1	8
95	Aperture averaging of optical scintillations in the turbulent atmosphere. Applied Optics, 1991, 30, 1982.	2.1	166
96	Optical properties of several Pacific fishes. Applied Optics, 1991, 30, 2925.	2.1	14
97	Infrared spectrometer for ground-based profiling of atmospheric temperature and humidity. , 1991, 1540, 681.		4
98	A Spectrum of Refractive Turbulence in the Turbulent Atmosphere. Journal of Modern Optics, 1990, 37, 13-16.	0.6	29
99	Wander of an optical beam in the turbulent atmosphere. Applied Optics, 1990, 29, 926.	2.1	78
100	Aperture size and bandwidth requirements for measuring strong scintillation in the atmosphere. Applied Optics, 1989, 28, 4126.	2.1	11
101	Angle-of-arrival fluctuations of retroreflected light in the turbulent atmosphere. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1989, 6, 275.	0.8	13
102	Experimental evaluation of log-normally modulated Rician and IK models of optical scintillation in the atmosphere. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1989, 6, 1760.	0.8	50
103	Joint probability-density function of irradiance scintillations in the turbulent atmosphere. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1989, 6, 1931.	0.8	8
104	Statistical Properties of Estimates of the Moments of Laser Scintillation. Journal of Modern Optics, 1989, 36, 1645-1659.	0.6	8
105	Observational challenges of strong scintillations of irradiance. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1988, 5, 445.	0.8	15
106	Localized measurements of refractive turbulence using spatial filtering of scintillations. Applied Optics, 1988, 27, 2199.	2.1	9
107	Refractive turbulence profiling using stellar scintillation and radar wind profiles. Applied Optics, 1988, 27, 4884.	2.1	4
108	Measured Statistics of Laser Beam Scintillation in Strong Refractive Turbulence Relevant to Eye Safety. Health Physics, 1987, 53, 639-647.	0.3	15

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109	Probability density of irradiance scintillations for strong path-integrated refractive turbulence. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1987, 4, 727.	0.8	99
110	Angle-of-arrival fluctuations of a reflected beam in atmospheric turbulence. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1987, 4, 1264.	0.8	35
111	Log-normal Rician probability-density function of optical scintillations in the turbulent atmosphere. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1987, 4, 1923.	0.8	125
112	Refractive turbulence profiling using synthetic aperture spatial filtering of scintillation. Applied Optics, 1987, 26, 1295.	2.1	11
113	Speckle correlation measurements using clipped intensity signals. Applied Optics, 1985, 24, 2488.	2.1	6
114	Zernike-polynomial expansion of turbulence-induced centroid anisoplanatism. Optics Letters, 1985, 10, 258.	1.7	9
115	Second harmonic generation using partially coherent light. Optics Communications, 1984, 51, 207-212.	1.0	19
116	Laser Doppler velocimetry by modulating a CO_2 laser with backscattered light. Applied Optics, 1984, 23, 61.	2.1	66
117	Signal-to-noise in a backscatter-modulated Doppler velocimeter. Applied Optics, 1984, 23, 2097.	2.1	33
118	Speckle from a rotating diffuse object. Journal of the Optical Society of America, 1982, 72, 1464.	1.2	53
119	Optical communications through a dispersive medium: a performance bound for photocounting. Applied Optics, 1981, 20, 573.	2.1	0
120	Velocity measurement using laser speckle statistics. Applied Optics, 1981, 20, 3539.	2.1	28
121	Statistics of irradiance scattered from a diffuse target containing multiple glints. Journal of the Optical Society of America, 1980, 70, 1084.	1.2	15
122	Heterodyne receivers for atmospheric optical communications. Applied Optics, 1980, 19, 582.	2.1	9
123	Joint signal current probability distribution for optical heterodyne receiver arrays in the turbulent atmosphere. Applied Optics, 1979, 18, 2315.	2.1	1
124	Enhanced variance of irradiance from target glint. Applied Optics, 1979, 18, 3211.	2.1	9
125	Partial tracking optical heterodyne receiver arrays. Journal of the Optical Society of America, 1978, 68, 1672.	1.2	2
126	Signal current probability distribution for optical heterodyne receivers in the turbulent atmosphere 1: Theory. Applied Optics, 1978, 17, 2141.	2.1	18

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127	Signal current probability distribution for optical heterodyne receivers in the turbulent atmosphere 2: Experiment. Applied Optics, 1978, 17, 2148.	2.1	8
128	Averaged threshold receiver for direct detection of optical communications through the lognormal atmospheric channel. Applied Optics, 1977, 16, 2669.	2.1	9