Aldo Minardo

List of Publications by Year
in descending order

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135	2,381	236833	254106
papers	citations	25 h-index	43 g-index

139	139	139	1488
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamic strain measurement in optical fibers by stimulated Brillouin scattering. Optics Letters, 2009, 34, 2613.	1.7	229
2	Response of fiber Bragg gratings to longitudinal ultrasonic waves. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 304-312.	1.7	114
3	Distributed Sensing at Centimeter-Scale Spatial Resolution by BOFDA: Measurements and Signal Processing. IEEE Photonics Journal, 2012, 4, 48-56.	1.0	110
4	Distributed Temperature Sensing in Polymer Optical Fiber by BOFDA. IEEE Photonics Technology Letters, 2014, 26, 387-390.	1.3	89
5	A Simple Technique for Reducing Pump Depletion in Long-Range Distributed Brillouin Fiber Sensors. IEEE Sensors Journal, 2009, 9, 633-634.	2.4	81
6	Brillouin optical time-domain analysis for geotechnical monitoring. Journal of Rock Mechanics and Geotechnical Engineering, 2015, 7, 458-462.	3.7	73
7	Proposal of Brillouin optical frequency-domain reflectometry (BOFDR). Optics Express, 2016, 24, 29994.	1.7	72
8	A reconstruction technique for long-range stimulated Brillouin scattering distributed fibre-optic sensors: experimental results. Measurement Science and Technology, 2005, 16, 900-908.	1.4	66
9	Bridge Monitoring Using Brillouin Fiber-Optic Sensors. IEEE Sensors Journal, 2012, 12, 145-150.	2.4	61
10	Real-time monitoring of railway traffic using slope-assisted Brillouin distributed sensors. Applied Optics, 2013, 52, 3770.	0.9	58
11	Low distortion Brillouin slow light in optical fibers using AM modulation. Optics Express, 2006, 14, 5866.	1.7	52
12	Distributed Fiber Optic Sensors for the Monitoring of a Tunnel Crossing a Landslide. Remote Sensing, 2018, 10, 1291.	1.8	42
13	Planar Waveguides for Fluorescence-Based Biosensing: Optimization and Analysis. IEEE Sensors Journal, 2006, 6, 1218-1226.	2.4	37
14	Experimental and numerical study on stimulated Brillouin scattering in a graded-index multimode fiber. Optics Express, 2014, 22, 17480.	1.7	37
15	A Laboratory Study on the Use of Optical Fibers for Early Detection of Pre-Failure Slope Movements in Shallow Granular Soil Deposits. Geotechnical Testing Journal, 2017, 40, 20160107.	0.5	36
16	Development and characterization of an integrated silicon micro flow cytometer. Analytical and Bioanalytical Chemistry, 2006, 386, 1267-1272.	1.9	34
17	Long-range distributed Brillouin fiber sensors by use of an unbalanced double sideband probe. Optics Express, 2011, 19, 23845.	1.7	34
18	Long term structural health monitoring by Brillouin fibre-optic sensing: a real case. Journal of Geophysics and Engineering, 2012, 9, S64-S69.	0.7	31

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19	Identification of defects and strain error estimation for bending steel beams using time domain Brillouin distributed optical fiber sensors. Smart Materials and Structures, 2006, 15, 612-622.	1.8	30
20	Stimulated Brillouin scattering frequency-domain analysis in a single-mode optical fiber for distributed sensing. Optics Letters, 2004, 29, 1977.	1.7	29
21	Stimulated Brillouin scattering modeling for high-resolution, time-domain distributed sensing. Optics Express, 2007, 15, 10397.	1.7	29
22	Accuracy Enhancement in Brillouin Distributed Fiber-Optic Temperature Sensors Using Signal Processing Techniques. IEEE Photonics Technology Letters, 2004, 16, 1143-1145.	1.3	27
23	Accurate high-resolution fiber-optic distributed strain measurements for structural health monitoring. Sensors and Actuators A: Physical, 2007, 134, 389-395.	2.0	26
24	Automatic traffic monitoring by Ï•-OTDR data and Hough transform in a real-field environment. Applied Optics, 2021, 60, 3579.	0.9	26
25	Reconstruction technique for stimulated Brillouin scattering distributed fiber-optic sensors. Optical Engineering, 2002, 41, 2186.	0.5	25
26	Vectorial dislocation monitoring of pipelines by use of Brillouin-based fiber-optics sensors. Smart Materials and Structures, 2008, 17, 015006.	1.8	25
27	Numerical analysis of single pulse and differential pulse-width pair BOTDA systems in the high spatial resolution regime. Optics Express, 2011, 19, 19233.	1.7	25
28	Performance of slope behavior indicators in unsaturated pyroclastic soils. Journal of Mountain Science, 2015, 12, 1434-1447.	0.8	24
29	All frequency domain distributed fiber-optic brillouin sensing. IEEE Sensors Journal, 2003, 3, 36-43.	2.4	23
30	Dynamic loading of overhead lines by adaptive learning techniques and distributed temperature sensing. IET Generation, Transmission and Distribution, 2007, 1, 912.	1.4	23
31	Refractive Index Sensing through Surface Plasmon Resonance in Light-Diffusing Fibers. Applied Sciences (Switzerland), 2018, 8, 1172.	1.3	23
32	Analysis of feasibility on the use of fiber Bragg grating sensors as ultrasound detectors. , 2001, , .		22
33	Bend-Induced Brillouin Frequency Shift Variation in a Single-Mode Fiber. IEEE Photonics Technology Letters, 2013, 25, 2362-2364.	1.3	22
34	Experimental Characterization of Plasmonic Sensors Based on Lab-Built Tapered Plastic Optical Fibers. Applied Sciences (Switzerland), 2020, 10, 4389.	1.3	22
35	Liquid-core/liquid-cladding integrated silicon ARROW waveguides. Optics Communications, 2008, 281, 2062-2066.	1.0	21
36	Refractive index sensing by Brillouin scattering in side-polished optical fibers. Optics Letters, 2018, 43, 2280.	1.7	21

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37	Two-wavelength phase-sensitive OTDR sensor using perfect periodic correlation codes for measurement range enhancement, noise reduction and fading compensation. Optics Express, 2021, 29, 6021.	1.7	20
38	An Instrumented Flume to Investigate the Mechanics of Rainfall-Induced Landslides in Unsaturated Granular Soils. Geotechnical Testing Journal, 2009, 32, 101366.	0.5	20
39	Modal analysis of a cantilever beam by use of Brillouin based distributed dynamic strain measurements. Smart Materials and Structures, 2012, 21, 125022.	1.8	19
40	An accurate high-resolution technique for distributed sensing based on frequency-domain Brillouin scattering. IEEE Photonics Technology Letters, 2006, 18, 280-282.	1.3	18
41	Numerical study of a ferrule-top cantilever optical fiber sensor for wind-tunnel applications and comparison with experimental results. Sensors and Actuators A: Physical, 2012, 178, 17-25.	2.0	18
42	Wind Turbine Blade Monitoring with Brillouin-Based Fiber-Optic Sensors. Journal of Sensors, 2017, 2017, 1-5.	0.6	17
43	An Experimental Investigation on the Progressive Failure of Unsaturated Granular Slopes. Geosciences (Switzerland), 2019, 9, 63.	1.0	17
44	Heterodyne slope-assisted Brillouin optical time-domain analysis for dynamic strain measurements. Journal of Optics (United Kingdom), 2016, 18, 025606.	1.0	16
45	Biosensors exploiting unconventional platforms: The case of plasmonic light-diffusing fibers. Sensors and Actuators B: Chemical, 2021, 337, 129771.	4.0	16
46	Bovine Serum Albumin Protein Detection by a Removable SPR Chip Combined with a Specific MIP Receptor. Chemosensors, 2021, 9, 218.	1.8	16
47	Automated and Cost Effective Maintenance for Railway (ACEMâ€“Rail). Procedia, Social and Behavioral Sciences, 2012, 48, 1058-1067.	0.5	15
48	Distributed-Temperature-Sensing Using Optical Methods: A First Application in the Offshore Area of Campi Flegrei Caldera (Southern Italy) for Volcano Monitoring. Remote Sensing, 2016, 8, 674.	1.8	15
49	Hybrid Brillouin/Rayleigh sensor for multiparameter measurements in optical fibers. Optics Express, 2021, 29, 24025.	1.7	15
50	Theoretical and Experimental Analysis of Brillouin Scattering in Single-Mode Optical Fiber Excited by an Intensity- and Phase-Modulated Pump. Journal of Lightwave Technology, 2010, 28, 193-200.	2.7	14
51	Non-invasive water content estimation in a tuff wall by DTS. Construction and Building Materials, 2019, 197, 821-829.	3.2	14
52	Distributed Dynamic Strain Sensing Based on Brillouin Scattering in Optical Fibers. Sensors, 2020, 20, 5629.	2.1	14
53	Frequency-domain approach to distributed fiber-optic Brillouin sensing. Optics Letters, 2002, 27, 288.	1.7	13
54	Damage detection in bending beams through Brillouin distributed optic-fibre sensor. Bridge Structures, 2005, 1, 355-363.	0.2	13

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55	Pulsing the Probe Wave to Reduce Nonlocal Effects in Brillouin Optical Time-Domain Analysis (BOTDA) Sensors. IEEE Sensors Journal, 2011, 11, 1067-1068.	2.4	13
56	Analysis of the energy extracted by a harvester based on a piezoelectric tile. Current Applied Physics, 2018, 18, 905-911.	1.1	13
57	A Novel Approach to Realizing Low-Cost Plasmonic Optical Fiber Sensors: Light-Diffusing Fibers Covered by Thin Metal Films. Fibers, 2019, 7, 34.	1.8	13
58	Distributed Optical Fiber Sensor Applications in Geotechnical Monitoring. Sensors, 2021, 21, 7514.	2.1	13
59	Quasi-Distributed Refractive Index Sensing by Stimulated Brillouin Scattering in Tapered Optical Fibers. Journal of Lightwave Technology, 2022, 40, 2619-2624.	2.7	13
60	Integrated silicon optical sensors based on hollow core waveguide. , 2007, , .		12
61	Active vibration control by a smart auxiliary mass damper equipped with a fiber Bragg grating sensor. Sensors and Actuators A: Physical, 2009, 153, 180-186.	2.0	12
62	High-Spatial Resolution DPP-BOTDA by Real-Time Balanced Detection. IEEE Photonics Technology Letters, 2014, 26, 1251-1254.	1.3	12
63	Structural Damage Identification in an Aluminum Composite Plate by Brillouin Sensing. IEEE Sensors Journal, 2015, 15, 659-660.	2.4	11
64	Cost-effective method for fast Brillouin optical time-domain analysis. Optics Express, 2016, 24, 25424.	1.7	11
65	Analysis of SNR penalty in Brillouin optical time-domain analysis sensors induced by laser source phase noise. Journal of Optics (United Kingdom), 2016, 18, 025601.	1.0	11
66	Simultaneous Strain and Temperature Measurements by Dual Wavelength Brillouin Sensors. IEEE Sensors Journal, 2017, 17, 3714-3719.	2.4	11
67	An Fiber Bragg Grating-Based Monitoring System for Slope Deformation Studies in Geotechnical Centrifuges. Sensors, 2019, 19, 1591.	2.1	11
68	Long-Term Monitoring with Fiber Optics Distributed Temperature Sensing at Campi Flegrei: The Campi Flegrei Deep Drilling Project. Sensors, 2019, 19, 1009.	2.1	11
69	A Simple and Efficient Plasmonic Sensor in Light Diffusive Polymer Fibers. IEEE Sensors Journal, 2021, 21, 16054-16060.	2.4	11
70	Distributed fiber-optic frequency-domain Brillouin sensing. Sensors and Actuators A: Physical, 2005, 123-124, 337-342.	2.0	10
71	Distributed Strain Measurement along a Concrete Beam via Stimulated Brillouin Scattering in Optical Fibers. International Journal of Geophysics, 2011, 2011, 1-5.	0.4	10
72	2-D MMI Devices Based on Integrated Hollow ARROW Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 194-201.	1.9	9

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73	Stimulated Brillouin scattering in highly birefringent microstructure fiber: experimental analysis. Optics Letters, 2008, 33, 2329.	1.7	9
74	Experimental modal analysis of an aluminum rectangular plate by use of the slope-assisted BOTDA method. Smart Materials and Structures, 2013, 22, 125035.	1.8	9
75	High-Pass Filtering for Accurate Reconstruction of the Brillouin Frequency Shift Profile From Brillouin Optical Frequency Domain Analysis Data. IEEE Sensors Journal, 2018, 18, 185-192.	2.4	9
76	A Nanoplasmonic-Based Biosensing Approach for Wide-Range and Highly Sensitive Detection of Chemicals. Nanomaterials, 2021, 11, 1961.	1.9	8
77	Differential Techniques for High-Resolution BOTDA: An Analytical Approach. IEEE Photonics Technology Letters, 2012, 24, 1295-1297.	1.3	7
78	Self-Demodulated Heterodyne Frequency Domain Distributed Brillouin Fiber Sensor. IEEE Photonics Technology Letters, 2007, 19, 447-449.	1.3	6
79	Brillouin Optical Frequency-Domain Single-Ended Distributed Fiber Sensor. IEEE Sensors Journal, 2009, 9, 221-222.	2.4	6
80	Brillouin Optical Time Domain Analysis in Silica Fibers at 850-nm Wavelength. IEEE Photonics Technology Letters, 2016, 28, 2577-2580.	1.3	6
81	Study on slope failure evolution under surcharge loading and toe cutting with BOTDA technology. Optical Fiber Technology, 2021, 66, 102644.	1.4	6
82	Long-Term Monitoring of a Tunnel in a Landslide Prone Area by Brillouin-Based Distributed Optical Fiber Sensors. Sensors, 2021, 21, 7032.	2.1	6
83	Fiber Bragg grating as ultrasonic wave sensors. , 2004, 5502, 84.		5
84	Optimization of metal-clad waveguides for sensitive fluorescence detection. Optics Express, 2006, 14, 3512.	1.7	5
85	Dynamic strain measurements on a cantilever beam using stimulated Brillouin scattering. Smart Materials and Structures, 2010, 19, 045024.	1.8	5
86	Spatial Resolution Enhancement in Preactivated BOTDA Schemes by Numerical Processing. IEEE Photonics Technology Letters, 2012, 24, 1003-1005.	1.3	5
87	Fiber optic based inclinometer for remote monitoring of landslides: On site comparison with traditional inclinometers. , 2014, , .		5
88	Soil slope monitoring by use of a Brillouin distributed sensor. , 2015, , .		5
89	Measurement of Moisture Content in Masonry Materials by Active Distributed Optical Fiber Sensors. , 2016, , .		5
90	Distributed Static and Dynamic Strain Measurements in Polymer Optical Fibers by Rayleigh Scattering. Sensors, 2021, 21, 5049.	2.1	5

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91	Modelling and control of a smart auxiliary mass damper equipped with a bragg grating. , 2007, , .		4
92	High-Spatial- and Spectral-Resolution Time-Domain Brillouin Distributed Sensing by Use of Two Frequency-Shifted Optical Beam Pairs. IEEE Photonics Journal, 2012, 4, 1900-1908.	1.0	4
93	Distributed optical fiber sensors for integrated monitoring of railway infrastructures. , 2014, , .		4
94	A C-OTDR Sensor for Liquid Detection Based on Optically Heated Co²⁺-Doped Fibers. IEEE Sensors Journal, 2020, 20, 10154-10158.	2.4	4
95	A Dual-Wavelength Scheme for Brillouin Temperature Sensing in Optically Heated Co²⁺-Doped Fibers. IEEE Sensors Journal, 2020, 20, 1349-1354.	2.4	4
96	The Role of Tapered Light-Diffusing Fibers in Plasmonic Sensor Configurations. Sensors, 2021, 21, 6333.	2.1	4
97	Theoretical and experimental comparison of a distributed acoustic sensor at 850- and 1550-nm wavelengths. Applied Optics, 2020, 59, 2219.	0.9	4
98	Pump depletion reduction technique for extended-range distributed Brillouin fiber sensors. , 2009, , .		3
99	Railway traffic monitoring using Brillouin distributed sensors. , 2013, , .		3
100	Limitations and strategies to improve measurement accuracy in differential pulse-width pair Brillouin optical time-domain analysis sensing. Applied Optics, 2013, 52, 3020.	0.9	3
101	High-Pass Filtering for Accuracy Enhancement in Dark-Pulse Brillouin Optical Time Domain Analysis. IEEE Photonics Technology Letters, 2019, 31, 1213-1216.	1.3	3
102	Distributed Liquid Level Sensor Based on Brillouin Optical Frequency-Domain Analysis. IEEE Sensors Journal, 2022, 22, 6601-6605.	2.4	3
103	<title>Novel data analysis approach for temperature and strain profile reconstruction in distributed fiber optics sensors based on stimulated Brillouin scattering</title>. , 2002, 4576, 108.		2
104	Design, fabrication and characterization of integrated antiresonant hollow core waveguides for photonics integrated circuits. , 0, , .		2
105	Extension of the maximum measuring range in distributed Brillouin fiber sensors by tuning the Stokes/anti-Stokes power ratio. , 2010, , .		2
106	Analysis of the Brillouin gain spectrum in a graded-index multimode fiber. , 2014, , .		2
107	Experimental demonstration of a Brillouin optical frequency-domain reflectometry (BOFDR) sensor. , 2017, , .		2
108	Centimeter-range spatial resolution distributed sensing by BOFDA. Proceedings of SPIE, 2011, , .	0.8	1

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109	Development of fiber optic ferrule-top cantilevers for sensing and beam-steering applications. Proceedings of SPIE, 2012, , .	0.8	1
110	Distributed Strain and Temperature Sensing at CM-Scale Spatial Resolution by BOFDA. Lecture Notes in Electrical Engineering, 2012, , 235-239.	0.3	1
111	Modal analysis of a cantilever beam by use of the slope-assisted BOTDA method for damage identification. Proceedings of SPIE, 2013, , .	0.8	1
112	Distributed Fibre Optic Sensing Techniques for Soil Slope Monitoring. , 2014, , .		1
113	Influence of laser phase noise on Brillouin optical time-domain analysis sensors. , 2016, , .		1
114	Practical limitations of the slope assisted BOTDA method in dynamic strain sensing. Proceedings of SPIE, 2016, , .	0.8	1
115	Simultaneous strain and temperature measurements using dual-wavelength BOTDA. Proceedings of SPIE, 2017, , .	0.8	1
116	Sweep BOTDA for fast distributed sensing. , 2017, , .		1
117	Dual Wavelength Botda for Strain/Temperature Discrimination. Lecture Notes in Electrical Engineering, 2018, , 25-28.	0.3	1
118	Brillouin sensing in optically heated Co2+-doped fibers. , 2019, , .		1
119	Distributed fiber optic Brillouin sensing in the frequency domain. , 2004, 5502, 500.		0
120	Polymer-on-glass waveguide structure for efficient fluorescence-based optical biosensors. , 2005, , .		0
121	High-resolution distributed fiber-optic frequency-domain Brillouin sensing. , 2005, , .		0
122	Frequency-domain analysis of stimulated brillouin scattering in single-mode optical fibers. , 0, , .		0
123	Dynamic strain measurement at randomly addressed optical fiber positions using a time-domain Brillouin sensing system. Proceedings of SPIE, 2009, , .	0.8	0
124	Bridge monitoring by Brillouin-based distributed strain measurements. Proceedings of SPIE, 2010, , .	0.8	0
125	Comment on: â€œSlow Lightâ€•in stimulated Brillouin scattering: on the influence of the spectral width of pump radiation on the group index. Optics Express, 2010, 18, 1788.	1.7	0
126	Differential pulse-width pair BOTDA with fast fall-time pulses. , 2011, , .		0

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127	Novel Approaches for CM-Scale Resolution and Long-Range Sensing by Stimulated Brillouin Scattering in Optical Fibers. Lecture Notes in Electrical Engineering, 2014, , 333-336.	0.3	0
128	Brillouin optical frequency domain analysis in polymer optical fiber. , 2014, , .		0
129	Modal analysis of an aluminum rectangular plate by use of the balanced-detection DPP-BOTDA method. , 2014, , .		0
130	Brillouin Optical Time Domain Analysis Sensor for Active Vibration Control of a Cantilever Beam. Journal of Sensors, 2016, 2016, 1-6.	0.6	0
131	Performance of Ground Anchors Built in a Flysch Deposit. Procedia Earth and Planetary Science, 2016, 16, 71-80.	0.6	0
132	Exploiting Brillouin Sensors for Refractive Index Measurements. Proceedings (mdpi), 2017, 1, 818.	0.2	0
133	Distributed Acoustic Sensor for Liquid Detection Based on Optically Heated CO2+-Doped Fibers. Lecture Notes in Electrical Engineering, 2021, , 101-105.	0.3	0
134	Numerical and Experimental Characterization of a Ferrule-Top Cantilever Optical Fiber Sensor for Flow Velocity Measurements. Lecture Notes in Electrical Engineering, 2014, , 337-341.	0.3	0
135	High-Resolution Distributed Liquid Level Sensor Based on a Self-Heating Approach. , 2021, 11, .		0