Bortolino Saggin

List of Publications by Year
in descending order

135 papers	2,649 citations	236925 25 h-index	197818 49 g-index
135 all docs	135 docs citations	135 times ranked	1957 citing authors

#	Article	IF	Citations
1	The current weather and climate of Mars: 12â€¯years of atmospheric monitoring by the Planetary Fourier Spectrometer on Mars Express. Icarus, 2021, 353, 113406.	2.5	34
2	Measurement of Stress Waves Propagation in Percussive Drilling. Sensors, 2021, 21, 3677.	3.8	5
3	Comparison of candidate mechanism concepts for a deployable space telescope. , 2021, , .		2
4	Development of a device to impose medio-lateral whole-body vibration while walking. , 2021, , .		0
5	Design of 3D printed holder for quartz crystal microbalances. , 2021, , .		2
6	Preliminary structural design of PANCAM, a bifocal panoramic camera for planetary observation. , 2021, , .		2
7	Performance analysis of the â€œMicroMEDâ€•Optical Particle Counter in windy conditions. , 2021, , .		2
8	Topology optimization of the optical bench for the MicroMED dust analyzer. , 2021, , .		3
9	Design and testing of selective laser melted structural component in AlSi9Cu3 alloy for a space dust analyser. Acta Astronautica, 2021, 184, 193-207.	3.2	3
10	Calibration in cryogenic conditions of deposited thin-film thermometers on quartz crystal microbalances. Sensors and Actuators A: Physical, 2021, 330, 112878.	4.1	4
11	Techniques to verify the sampling system and flow characteristics of the sensor MicroMED for the ExoMars 2022 Mission. Measurement: Journal of the International Measurement Confederation, 2021, 185, 110075.	5.0	2
12	Smart Solar Panels for Space Applications. , 2021, , .		1
13	Enhancement of the Damping Behavior of Ti₆Al₄V Alloy through the Use of Trabecular Structure Produced by Selective Laser Melting. Advanced Engineering Materials, 2020, 22, 1900722.	3.5	21
14	Development and characterization of a volume flow measurement system for low-pressure gases. Measurement: Journal of the International Measurement Confederation, 2020, 166, 108230.	5.0	1
15	Compensation of Temperature Effects on an Automatic System for Diameter Measurement. , 2020, , .		2
16	Measurement Method for Quality Control of Cylinders in Roll-to-Roll Printing Machines. Machines, 2020, 8, 16.	2.2	2
17	â€œMicroMEDâ€•Optical Particle Counter: From Design to Flight Model. Sensors, 2020, 20, 611.	3.8	12
18	Modulating the damping capacity of SLMed AlSi10Mg trough stress-relieving thermal treatments. Theoretical and Applied Fracture Mechanics, 2020, 107, 102537.	4.7	17

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19	CFD analysis and optimization of the sensor â€œMicroMEDâ€•for the ExoMars 2020 mission. Measurement: Journal of the International Measurement Confederation, 2019, 147, 106824.	5.0	13
20	Optimization of the sensor "MicroMED" for the ExoMars 2020 mission: the Flight Model design. , 2019, , .		8
21	Qualification of MEMS differential pressure sensors in Martian-like environment. , 2019, , .		2
22	Design validation of MicroMED, a particle analyzer for ExoMars 2020. , 2019, , .		5
23	Design and CFD Analysis of the Fluid Dynamic Sampling System of the â€œMicroMEDâ€•Optical Particle Counter. Sensors, 2019, 19, 5037.	3.8	14
24	A review of quartz crystal microbalances for space applications. Sensors and Actuators A: Physical, 2019, 287, 48-75.	4.1	44
25	Non-contact measurement of the temperature profile of PET preforms. Measurement: Journal of the International Measurement Confederation, 2019, 133, 412-420.	5.0	7
26	Automatic fall monitoring using the floor vibration. Acta IMEKO (2012), 2019, 8, 40.	0.7	1
27	MicroMED, design of a particle analyzer for Mars. Measurement: Journal of the International Measurement Confederation, 2018, 122, 466-472.	5.0	25
28	Characterization of dust activity on Mars from MY27 to MY32 by PFS-MEX observations. Icarus, 2018, 310, 32-47.	2.5	28
29	VISTA Instrument: A PCM-Based Sensor for Organics and Volatiles Characterization by Using Thermogravimetric Technique. , 2018, , .		4
30	The Advanced Optical and Thermomechanical Design of the JUICE/MAJIS Spectrometer. , 2018, , .		0
31	Temperature Sensitivity of a Quartz Crystal Microbalance for TGA in Space. , 2018, , .		6
32	Optimization of the Fluid Dynamic Design of the Dust Suite-MicroMED Sensor for the ExoMars 2020 Mission. , 2018, , .		8
33	Specific Damping Capacity of CuZn and CuZnAl Metal Foams, a Preliminary Study. , 2018, , .		0
34	Design of a Flowrate Measurement System for Low-Pressure Gases. , 2018, , .		2
35	The optical design of the MAJIS instrument on board of the JUICE mission. , 2018, , .		2
36	Mechanical alignment of optical system: CMMs forces and damages on optical elements. , 2018, , .		0

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37	Mechanical alignment of optical systems: practical limits and accuracy estimation. , 2018, , .		3
38	Design of a smart bidirectional actuator for space operation. Smart Materials and Structures, 2017, 26, 035041.	3.5	6
39	QCM-based sensor for volatile organic compounds characterization. , 2017, , .		4
40	Thermo-mechanical design of a particle analyzer for Mars. , 2017, , .		4
41	Feasibility design of an interface damper for a space borne microbalance. , 2017, , .		0
42	Assessment of TEC suitability for a low temperature QCM. , 2017, , .		0
43	Characterization of the pseudoelastic damping capacity of shape memory alloy wire. , 2017, , .		3
44	Position uncertainty of a system for the localization of a reciprocating drill for geological inspections. , 2017, , .		0
45	Monitoring of train driver's alertness: A feasibility study. , 2017, , .		1
46	Trajectory Identification of a Reciprocating Drill for Geological Inspections. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 79-86.	0.5	0
47	Identification of Eldersâ€™ Fall Using the Floor Vibration. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2017, , 383-391.	0.3	0
48	Measurement of force and pressure distribution in walking for prosthesis design. , 2016, , .		1
49	Preliminary design of the inlet duct of a dust analyzer for Mars. , 2016, , .		3
50	Optical and radiometric models of the NOMAD instrument part II: the infrared channels - SO and LNO. Optics Express, 2016, 24, 3790.	3.4	25
51	Falls in older adults: Kinematic analyses with a crash test dummy. , 2016, , .		4
52	Setup for the Measurement of Apparent Mass Matrix of Standing Subjects. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1856-1864.	4.7	11
53	Expected performances of the NOMAD/ExoMars instrument. Planetary and Space Science, 2016, 124, 94-104.	1.7	31
54	VISTA: A Î¼-Thermogravimeter for Investigation of Volatile Compounds in Planetary Environments. Origins of Life and Evolution of Biospheres, 2016, 46, 273-281.	1.9	8

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55	Infrared thermometers for small wires drawing. Measurement: Journal of the International Measurement Confederation, 2016, 80, 108-114.	5.0	3
56	Apparent mass matrix of standing subjects exposed to multi-axial whole-body vibration. Ergonomics, 2016, 59, 1038-1049.	2.1	10
57	Optical and radiometric models of the NOMAD instrument part I: the UVIS channel. Optics Express, 2015, 23, 30028.	3.4	26
58	Thermo-mechanical design of the optical head for MAJIS experiment. , 2015, , .		0
59	MicroMIMA, a miniaturized spectrometer for planetary observation. , 2015, , .		2
60	Measurement of the Heat Removed by Devices for Skin Tags Treatment. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 3354-3360.	4.7	1
61	Science objectives and performances of NOMAD, a spectrometer suite for the ExoMars TGO mission. Planetary and Space Science, 2015, 119, 233-249.	1.7	77
62	Whole-body vibration exposure in sport: four relevant cases. Ergonomics, 2015, 58, 1143-1150.	2.1	20
63	Long-Term Vibration Monitoring Onboard Mars Express Mission. Journal of Spacecraft and Rockets, 2014, 51, 1664-1672.	1.9	7
64	Thermo-mechanical design feasibility study of an Imaging Spectrometer for the Jovian system. , 2014, , .		1
65	Analysis of non-linear response of the human body to vertical whole-body vibration. Ergonomics, 2014, 57, 1711-1723.	2.1	27
66	Thermal Insulators' Performances in Simulated Mars Environment. Journal of Heat Transfer, 2014, 136, .	2.1	2
67	Characterization of a pumping system in Martian-like environment. , 2014, , .		4
68	Unattended acoustic events classification at the vicinity of airports. Applied Acoustics, 2014, 84, 91-98.	3.3	11
69	Uncertainty of array-based measurement of radiated and absorbed sound intensity. Applied Acoustics, 2014, 78, 51-58.	3.3	3
70	Thermo-mechanical design and testing of a microbalance for space applications. Advances in Space Research, 2014, 54, 2386-2397.	2.6	22
71	About the dynamic characterization of micro-bolometric infrared cameras. Sensors and Actuators A: Physical, 2014, 217, 68-74.	4.1	2
72	Toward a numerical deshaker for PFS. Planetary and Space Science, 2014, 91, 45-51.	1.7	1

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73	Design and testing of a roto-translational shutter mechanism for planetary operation. Acta Astronautica, 2014, 93, 207-216.	3.2	21
74	Use of design of experiments and Monte Carlo method for instruments optimal design. Measurement: Journal of the International Measurement Confederation, 2013, 46, 976-984.	5.0	14
75	Hand-arm mechanical impedance in presence of unknown vibration direction. International Journal of Industrial Ergonomics, 2013, 43, 52-61.	2.6	4
76	A technique for the measurement of elastic moduli in thermo-vacuum environment. Measurement Science and Technology, 2013, 24, 045003.	2.6	0
77	Metrological Performances of a Plantar Pressure Measurement System. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 766-776.	4.7	30
78	Apparent mass distribution at the feet of standing subjects exposed to whole-body vibration. Ergonomics, 2013, 56, 842-855.	2.1	27
79	Analytical model and spectral correction of vibration effects on Fourier transform spectrometer. Proceedings of SPIE, 2013, , .	0.8	0
80	MicroMIMA FTS: design of spectrometer for Mars atmosphere investigation. Proceedings of SPIE, 2013, , .	0.8	10
81	Experimental characterization of vibration sources. , 2012, , .		4
82	The instrument control unit of SPICA SAFARI: a macro-unit to host all the digital control functionalities of the spectrometer. Proceedings of SPIE, 2012, , .	0.8	0
83	Estimation of the orthosis-limb contact pressure through thermal imaging. , 2012, , .		4
84	The potential of micro-electro-mechanical accelerometers in human vibration measurements. Journal of Sound and Vibration, 2012, 331, 487-499.	3.9	31
85	Optimized design of suspension systems for handâ€“arm transmitted vibration reduction. Journal of Sound and Vibration, 2012, 331, 2671-2684.	3.9	8
86	A Device for the Skinâ€“Contact Thermal Resistance Measurement. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 489-495.	4.7	29
87	Instrumental phase-based method for Fourier transform spectrometer measurements processing. Applied Optics, 2011, 50, 1717.	2.1	15
88	Design and Optimization of the Calibration Procedure for a Miniaturized Fourier Transform Spectrometer. Applied Spectroscopy, 2011, 65, 627-633.	2.2	8
89	Prediction of data variability in hand-arm vibration measurements. Measurement: Journal of the International Measurement Confederation, 2011, 44, 1679-1690.	5.0	14
90	Analysis of disturbances in the Planetary Fourier Spectrometer through numerical modeling. Planetary and Space Science, 2010, 58, 864-874.	1.7	10

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91	Long Term WBV Measurements on Vehicles Travelling on Urban Paths. Industrial Health, 2010, 48, 606-614.	1.0	3
92	Infrared optical element mounting techniques for wide temperature ranges. Applied Optics, 2010, 49, 542.	2.1	21
93	3-D Sound Intensity Measurements: Accuracy Enhancements With Virtual-Instrument-Based Technology. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 1820-1829.	4.7	20
94	MIMA, a miniaturized infrared spectrometer for Mars ground exploration: Part III. Thermomechanical design. , 2007, , .		6
95	MIMA, a miniaturized Fourier infrared spectrometer for Mars ground exploration: Part I. Concept and expected performance. , 2007, , .		5
96	MIMA, a miniaturized Fourier spectrometer for Mars ground exploration: Part II. Optical design. Proceedings of SPIE, 2007, , .	0.8	4
97	Mechanical disturbances in Fourier spectrometers. Applied Optics, 2007, 46, 5248.	2.1	15
98	Scientific goals for the observation of Venus by VIRTIS on ESA/Venus express mission. Planetary and Space Science, 2007, 55, 1653-1672.	1.7	155
99	A dynamic upper atmosphere of Venus as revealed by VIRTIS on Venus Express. Nature, 2007, 450, 641-645.	27.8	95
100	South-polar features on Venus similar to those near the north pole. Nature, 2007, 450, 637-640.	27.8	110
101	Sound Source Identification Using Coherence- and Intensity-Based Methods. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 2478-2485.	4.7	10
102	Virtis: An Imaging Spectrometer for the Rosetta Mission. Space Science Reviews, 2007, 128, 529-559.	8.1	181
103	Results of measurements with the Planetary Fourier Spectrometer onboard Mars Express: Clouds and dust at the end of southern summer. A comparison with OMEGA images. Cosmic Research, 2006, 44, 305-316.	0.6	10
104	Acceleration fields induced by hypervelocity impacts on spacecraft structures. International Journal of Impact Engineering, 2006, 33, 580-591.	5.0	11
105	Whole body vibration in mountain-rescue operations. Journal of Sound and Vibration, 2006, 298, 580-593.	3.9	13
106	The planetary fourier spectrometer (PFS) onboard the European Venus Express mission. Planetary and Space Science, 2006, 54, 1298-1314.	1.7	39
107	Mechanical Filters for Accelerometers: Design and Metrological Characterization. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	2
108	Mechanical Filters for Accelerometers: Design and Metrological Characterization. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	1

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109	Experimental characterisation and modelling of a pyroelectric sensor. , 2005, 5978, 416.		1
110	First observations of the planetary Fourier spectrometer at Mars. Advances in Space Research, 2005, 36, 1074-1083.	2.6	3
111	The Planetary Fourier Spectrometer (PFS) onboard the European Mars Express mission. Planetary and Space Science, 2005, 53, 963-974.	1.7	151
112	Calibration of the Planetary Fourier Spectrometer short wavelength channel. Planetary and Space Science, 2005, 53, 975-991.	1.7	43
113	Water clouds and dust aerosols observations with PFS MEX at Mars. Planetary and Space Science, 2005, 53, 1065-1077.	1.7	32
114	PFS-MEX observation of ices in the residual south polar cap of Mars. Planetary and Space Science, 2005, 53, 1089-1095.	1.7	22
115	Calibration of the Planetary Fourier Spectrometer long wavelength channel. Planetary and Space Science, 2005, 53, 993-1007.	1.7	43
116	A Martian PFS average spectrum: Comparison with ISO SWS. Planetary and Space Science, 2005, 53, 1043-1052.	1.7	9
117	In situ measurements of the physical characteristics of Titan's environment. Nature, 2005, 438, 785-791.	27.8	620
118	Evaluation of the sensitivity to mechanical vibrations of an IR Fourier spectrometer. Review of Scientific Instruments, 2005, 76, 123112.	1.3	15
119	Thermal Design of the Wide Angle Camera for ROSETTA. , 2003, , .		0
120	Thermomechanical design optimization and acceptance of the Wide-Angle Camera for the Rosetta mission. , 2003, 4854, 425.		1
121	Dynamic error correction of a thermometer for atmospheric measurements. Measurement: Journal of the International Measurement Confederation, 2001, 30, 223-230.	5.0	18
122	<title>Ultraviolet Italian Sky Surveyor (UVISS) on the International Space Station (ISS): study report</title>. , 2000, 4139, 199.		0
123	Analysis of dynamic performances of hasi temperature sensor during the entry in the Titan atmosphere. Planetary and Space Science, 1998, 46, 1325-1332.	1.7	9
124	Virtis : an imaging spectrometer for the rosetta mission. Planetary and Space Science, 1998, 46, 1291-1304.	1.7	72
125	PFS: A fourier spectrometer for the study of Martian atmosphere. Advances in Space Research, 1997, 19, 1277-1280.	2.6	28
126	<title>VIRTIS: Visible Infrared Thermal Imaging Spectrometer for the Rosetta mission</title>. , 1996, , .		17

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127	<title>First results of performance test of temperature sensors of HASI instrument on Cassini/Huygens mission</title>. , 1996, , .		5
128	Qualifying and testing HASI-STUB for Huygens-Cassini Mission. , 1996, , .		0
129	Infrared spectrometer PFS for the Mars 94 orbiter. Advances in Space Research, 1996, 17, 61-64.	2.6	15
130	Uncertainty in end-point tension measurement in wires subject to high-velocity impact. Measurement: Journal of the International Measurement Confederation, 1995, 16, 11-20.	5.0	0
131	Analysis of thermal disturbances on the long-wavelength channel of a double pendulum IR spectrometer for space research. , 1994, 2266, 36.		1
132	A high resolution virtual AD converter. , 0, , .		0
133	Sound source identification using coherence and intensity based methods. , 0, , .		4
134	A new method for measurement of acoustic efficiency of classic guitars. , 0, , .		0
135	3D sound intensity measurements: accuracy enhancements with virtual instrument based technology. , 0, , .		3