

# Bortolino Saggin

## List of Publications by Year in descending order

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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	In situ measurements of the physical characteristics of Titan's environment. <i>Nature</i> , 2005, 438, 785-791.	27.8	620
2	Virtis: An Imaging Spectrometer for the Rosetta Mission. <i>Space Science Reviews</i> , 2007, 128, 529-559.	8.1	181
3	Scientific goals for the observation of Venus by VIRTIS on ESA/Venus express mission. <i>Planetary and Space Science</i> , 2007, 55, 1653-1672.	1.7	155
4	The Planetary Fourier Spectrometer (PFS) onboard the European Mars Express mission. <i>Planetary and Space Science</i> , 2005, 53, 963-974.	1.7	151
5	South-polar features on Venus similar to those near the north pole. <i>Nature</i> , 2007, 450, 637-640.	27.8	110
6	A dynamic upper atmosphere of Venus as revealed by VIRTIS on Venus Express. <i>Nature</i> , 2007, 450, 641-645.	27.8	95
7	Science objectives and performances of NOMAD, a spectrometer suite for the ExoMars TGO mission. <i>Planetary and Space Science</i> , 2015, 119, 233-249.	1.7	77
8	Virtis : an imaging spectrometer for the rosetta mission. <i>Planetary and Space Science</i> , 1998, 46, 1291-1304.	1.7	72
9	A review of quartz crystal microbalances for space applications. <i>Sensors and Actuators A: Physical</i> , 2019, 287, 48-75.	4.1	44
10	Calibration of the Planetary Fourier Spectrometer short wavelength channel. <i>Planetary and Space Science</i> , 2005, 53, 975-991.	1.7	43
11	Calibration of the Planetary Fourier Spectrometer long wavelength channel. <i>Planetary and Space Science</i> , 2005, 53, 993-1007.	1.7	43
12	The planetary fourier spectrometer (PFS) onboard the European Venus Express mission. <i>Planetary and Space Science</i> , 2006, 54, 1298-1314.	1.7	39
13	The current weather and climate of Mars: 12 years of atmospheric monitoring by the Planetary Fourier Spectrometer on Mars Express. <i>Icarus</i> , 2021, 353, 113406.	2.5	34
14	Water clouds and dust aerosols observations with PFS MEX at Mars. <i>Planetary and Space Science</i> , 2005, 53, 1065-1077.	1.7	32
15	The potential of micro-electro-mechanical accelerometers in human vibration measurements. <i>Journal of Sound and Vibration</i> , 2012, 331, 487-499.	3.9	31
16	Expected performances of the NOMAD/ExoMars instrument. <i>Planetary and Space Science</i> , 2016, 124, 94-104.	1.7	31
17	Metrological Performances of a Plantar Pressure Measurement System. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2013, 62, 766-776.	4.7	30
18	A Device for the Skin Contact Thermal Resistance Measurement. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2012, 61, 489-495.	4.7	29

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19	PFS: A fourier spectrometer for the study of Martian atmosphere. <i>Advances in Space Research</i> , 1997, 19, 1277-1280.	2.6	28
20	Characterization of dust activity on Mars from MY27 to MY32 by PFS-MEX observations. <i>Icarus</i> , 2018, 310, 32-47.	2.5	28
21	Apparent mass distribution at the feet of standing subjects exposed to whole-body vibration. <i>Ergonomics</i> , 2013, 56, 842-855.	2.1	27
22	Analysis of non-linear response of the human body to vertical whole-body vibration. <i>Ergonomics</i> , 2014, 57, 1711-1723.	2.1	27
23	Optical and radiometric models of the NOMAD instrument part I: the UVIS channel. <i>Optics Express</i> , 2015, 23, 30028.	3.4	26
24	Optical and radiometric models of the NOMAD instrument part II: the infrared channels - SO and LNO. <i>Optics Express</i> , 2016, 24, 3790.	3.4	25
25	MicroMED, design of a particle analyzer for Mars. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 122, 466-472.	5.0	25
26	PFS-MEX observation of ices in the residual south polar cap of Mars. <i>Planetary and Space Science</i> , 2005, 53, 1089-1095.	1.7	22
27	Thermo-mechanical design and testing of a microbalance for space applications. <i>Advances in Space Research</i> , 2014, 54, 2386-2397.	2.6	22
28	Infrared optical element mounting techniques for wide temperature ranges. <i>Applied Optics</i> , 2010, 49, 542.	2.1	21
29	Design and testing of a roto-translational shutter mechanism for planetary operation. <i>Acta Astronautica</i> , 2014, 93, 207-216.	3.2	21
30	Enhancement of the Damping Behavior of Ti <sub>6</sub> Al <sub>4</sub> V Alloy through the Use of Trabecular Structure Produced by Selective Laser Melting. <i>Advanced Engineering Materials</i> , 2020, 22, 1900722.	3.5	21
31	3-D Sound Intensity Measurements: Accuracy Enhancements With Virtual-Instrument-Based Technology. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2008, 57, 1820-1829.	4.7	20
32	Whole-body vibration exposure in sport: four relevant cases. <i>Ergonomics</i> , 2015, 58, 1143-1150.	2.1	20
33	Dynamic error correction of a thermometer for atmospheric measurements. <i>Measurement: Journal of the International Measurement Confederation</i> , 2001, 30, 223-230.	5.0	18
34	<title>VIRTIS: Visible Infrared Thermal Imaging Spectrometer for the Rosetta mission</title>. , 1996, , .		17
35	Modulating the damping capacity of SLMed AlSi10Mg trough stress-relieving thermal treatments. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 107, 102537.	4.7	17
36	Infrared spectrometer PFS for the Mars 94 orbiter. <i>Advances in Space Research</i> , 1996, 17, 61-64.	2.6	15

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37	Evaluation of the sensitivity to mechanical vibrations of an IR Fourier spectrometer. Review of Scientific Instruments, 2005, 76, 123112.	1.3	15
38	Mechanical disturbances in Fourier spectrometers. Applied Optics, 2007, 46, 5248.	2.1	15
39	Instrumental phase-based method for Fourier transform spectrometer measurements processing. Applied Optics, 2011, 50, 1717.	2.1	15
40	Prediction of data variability in hand-arm vibration measurements. Measurement: Journal of the International Measurement Confederation, 2011, 44, 1679-1690.	5.0	14
41	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
42	Design and CFD Analysis of the Fluid Dynamic Sampling System of the "MicroMED" Optical Particle Counter. Sensors, 2019, 19, 5037.	3.8	14
43	Whole body vibration in mountain-rescue operations. Journal of Sound and Vibration, 2006, 298, 580-593.	3.9	13
44	CFD analysis and optimization of the sensor "MicroMED" for the ExoMars 2020 mission. Measurement: Journal of the International Measurement Confederation, 2019, 147, 106824.	5.0	13
45	"MicroMED" Optical Particle Counter: From Design to Flight Model. Sensors, 2020, 20, 611.	3.8	12
46	Acceleration fields induced by hypervelocity impacts on spacecraft structures. International Journal of Impact Engineering, 2006, 33, 580-591.	5.0	11
47	Unattended acoustic events classification at the vicinity of airports. Applied Acoustics, 2014, 84, 91-98.	3.3	11
48	Setup for the Measurement of Apparent Mass Matrix of Standing Subjects. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1856-1864.	4.7	11
49	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
50	Sound Source Identification Using Coherence- and Intensity-Based Methods. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 2478-2485.	4.7	10
51	Analysis of disturbances in the Planetary Fourier Spectrometer through numerical modeling. Planetary and Space Science, 2010, 58, 864-874.	1.7	10
52	MicroMIMA FTS: design of spectrometer for Mars atmosphere investigation. Proceedings of SPIE, 2013, , .	0.8	10
53	Apparent mass matrix of standing subjects exposed to multi-axial whole-body vibration. Ergonomics, 2016, 59, 1038-1049.	2.1	10
54	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

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55	A Martian PFS average spectrum: Comparison with ISO SWS. Planetary and Space Science, 2005, 53, 1043-1052.	1.7	9
56	Design and Optimization of the Calibration Procedure for a Miniaturized Fourier Transform Spectrometer. Applied Spectroscopy, 2011, 65, 627-633.	2.2	8
57	Optimized design of suspension systems for handâ€‘arm transmitted vibration reduction. Journal of Sound and Vibration, 2012, 331, 2671-2684.	3.9	8
58	VISTA: A 1/4-Thermogravimeter for Investigation of Volatile Compounds in Planetary Environments. Origins of Life and Evolution of Biospheres, 2016, 46, 273-281.	1.9	8
59	Optimization of the Fluid Dynamic Design of the Dust Suite-MicroMED Sensor for the ExoMars 2020 Mission. , 2018, , .		8
60	Optimization of the sensor "MicroMED" for the ExoMars 2020 mission: the Flight Model design. , 2019, , .		8
61	Long-Term Vibration Monitoring Onboard Mars Express Mission. Journal of Spacecraft and Rockets, 2014, 51, 1664-1672.	1.9	7
62	Non-contact measurement of the temperature profile of PET preforms. Measurement: Journal of the International Measurement Confederation, 2019, 133, 412-420.	5.0	7
63	MIMA, a miniaturized infrared spectrometer for Mars ground exploration: Part III. Thermomechanical design. , 2007, , .		6
64	Design of a smart bidirectional actuator for space operation. Smart Materials and Structures, 2017, 26, 035041.	3.5	6
65	Temperature Sensitivity of a Quartz Crystal Microbalance for TGA in Space. , 2018, , .		6
66	<title>First results of performance test of temperature sensors of HASI instrument on Cassini/Huygens mission</title>. , 1996, , .		5
67	MIMA, a miniaturized Fourier infrared spectrometer for Mars ground exploration: Part I. Concept and expected performance. , 2007, , .		5
68	Design validation of MicroMED, a particle analyzer for ExoMars 2020. , 2019, , .		5
69	Measurement of Stress Waves Propagation in Percussive Drilling. Sensors, 2021, 21, 3677.	3.8	5
70	Sound source identification using coherence and intensity based methods. , 0, , .		4
71	MIMA, a miniaturized Fourier spectrometer for Mars ground exploration: Part II. Optical design. Proceedings of SPIE, 2007, , .	0.8	4
72	Experimental characterization of vibration sources. , 2012, , .		4

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73	Estimation of the orthosis-limb contact pressure through thermal imaging. , 2012, , .		4
74	Hand-arm mechanical impedance in presence of unknown vibration direction. International Journal of Industrial Ergonomics, 2013, 43, 52-61.	2.6	4
75	Characterization of a pumping system in Martian-like environment. , 2014, , .		4
76	Falls in older adults: Kinematic analyses with a crash test dummy. , 2016, , .		4
77	QCM-based sensor for volatile organic compounds characterization. , 2017, , .		4
78	Thermo-mechanical design of a particle analyzer for Mars. , 2017, , .		4
79	VISTA Instrument: A PCM-Based Sensor for Organics and Volatiles Characterization by Using Thermogravimetric Technique. , 2018, , .		4
80	Calibration in cryogenic conditions of deposited thin-film thermometers on quartz crystal microbalances. Sensors and Actuators A: Physical, 2021, 330, 112878.	4.1	4
81	First observations of the planetary Fourier spectrometer at Mars. Advances in Space Research, 2005, 36, 1074-1083.	2.6	3
82	3D sound intensity measurements: accuracy enhancements with virtual instrument based technology. , 0, , .		3
83	Long Term WBV Measurements on Vehicles Travelling on Urban Paths. Industrial Health, 2010, 48, 606-614.	1.0	3
84	Uncertainty of array-based measurement of radiated and absorbed sound intensity. Applied Acoustics, 2014, 78, 51-58.	3.3	3
85	Preliminary design of the inlet duct of a dust analyzer for Mars. , 2016, , .		3
86	Infrared thermometers for small wires drawing. Measurement: Journal of the International Measurement Confederation, 2016, 80, 108-114.	5.0	3
87	Characterization of the pseudoelastic damping capacity of shape memory alloy wire. , 2017, , .		3
88	Topology optimization of the optical bench for the MicroMED dust analyzer. , 2021, , .		3
89	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
90	Mechanical alignment of optical systems: practical limits and accuracy estimation. , 2018, , .		3

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91	Mechanical Filters for Accelerometers: Design and Metrological Characterization. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	2
92	Thermal Insulators' Performances in Simulated Mars Environment. Journal of Heat Transfer, 2014, 136, .	2.1	2
93	About the dynamic characterization of micro-bolometric infrared cameras. Sensors and Actuators A: Physical, 2014, 217, 68-74.	4.1	2
94	MicroMIMA, a miniaturized spectrometer for planetary observation. , 2015, , .		2
95	Design of a Flowrate Measurement System for Low-Pressure Gases. , 2018, , .		2
96	Qualification of MEMS differential pressure sensors in Martian-like environment. , 2019, , .		2
97	Compensation of Temperature Effects on an Automatic System for Diameter Measurement. , 2020, , .		2
98	Measurement Method for Quality Control of Cylinders in Roll-to-Roll Printing Machines. Machines, 2020, 8, 16.	2.2	2
99	Comparison of candidate mechanism concepts for a deployable space telescope. , 2021, , .		2
100	Design of 3D printed holder for quartz crystal microbalances. , 2021, , .		2
101	Preliminary structural design of PANCAM, a bifocal panoramic camera for planetary observation. , 2021, , .		2
102	Performance analysis of the "MicroMED" Optical Particle Counter in windy conditions. , 2021, , .		2
103	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
104	The optical design of the MAJIS instrument on board of the JUICE mission. , 2018, , .		2
105	Analysis of thermal disturbances on the long-wavelength channel of a double pendulum IR spectrometer for space research. , 1994, 2266, 36.		1
106	Thermomechanical design optimization and acceptance of the Wide-Angle Camera for the Rosetta mission. , 2003, 4854, 425.		1
107	Experimental characterisation and modelling of a pyroelectric sensor. , 2005, 5978, 416.		1
108	Thermo-mechanical design feasibility study of an Imaging Spectrometer for the Jovian system. , 2014, , .		1

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109	Toward a numerical deshaker for PFS. Planetary and Space Science, 2014, 91, 45-51.	1.7	1
110	Measurement of the Heat Removed by Devices for Skin Tags Treatment. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 3354-3360.	4.7	1
111	Measurement of force and pressure distribution in walking for prosthesis design. , 2016, , .		1
112	Monitoring of train driver's alertness: A feasibility study. , 2017, , .		1
113	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
114	Mechanical Filters for Accelerometers: Design and Metrological Characterization. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	1
115	Automatic fall monitoring using the floor vibration. Acta IMEKO (2012), 2019, 8, 40.	0.7	1
116	Smart Solar Panels for Space Applications. , 2021, , .		1
117	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
118	Qualifying and testing HASI-STUB for Huygens-Cassini Mission. , 1996, , .		0
119	<title>Ultraviolet Italian Sky Surveyor (LIVISS) on the International Space Station (ISS): study report</title>. , 2000, 4139, 199.		0
120	A high resolution virtual AD converter. , 0, , .		0
121	Thermal Design of the Wide Angle Camera for ROSETTA. , 2003, , .		0
122	A new method for measurement of acoustic efficiency of classic guitars. , 0, , .		0
123	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
124	A technique for the measurement of elastic moduli in thermo-vacuum environment. Measurement Science and Technology, 2013, 24, 045003.	2.6	0
125	Analytical model and spectral correction of vibration effects on Fourier transform spectrometer. Proceedings of SPIE, 2013, , .	0.8	0
126	Thermo-mechanical design of the optical head for MAJIS experiment. , 2015, , .		0



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127	Feasibility design of an interface damper for a space borne microbalance. , 2017, , .		0
128	Assessment of TEC suitability for a low temperature QCM. , 2017, , .		0
129	Position uncertainty of a system for the localization of a reciprocating drill for geological inspections. , 2017, , .		0
130	The Advanced Optical and Thermomechanical Design of the JUICE/MAJIS Spectrometer. , 2018, , .		0
131	Specific Damping Capacity of CuZn and CuZnAl Metal Foams, a Preliminary Study. , 2018, , .		0
132	Development of a device to impose medio-lateral whole-body vibration while walking. , 2021, , .		0
133	Trajectory Identification of a Reciprocating Drill for Geological Inspections. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 79-86.	0.5	0
134	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
135	Mechanical alignment of optical system: CMMs forces and damages on optical elements. , 2018, , .		0