Pilar Barreiro Elorza

List of Publications by Year
in descending order

89 papers	2,928 citations	159525 30 h-index	175177 52 g-index
92 all docs	92 docs citations	92 times ranked	3048 citing authors

#	Article	IF	Citations
1	A Review of Wireless Sensor Technologies and Applications in Agriculture and Food Industry: State of the Art and Current Trends. Sensors, 2009, 9, 4728-4750.	2.1	567
2	Performance of ZigBee-Based wireless sensor nodes for real-time monitoring of fruit logistics. Journal of Food Engineering, 2008, 87, 405-415.	2.7	128
3	Grapevine Yield and Leaf Area Estimation Using Supervised Classification Methodology on RGB Images Taken under Field Conditions. Sensors, 2012, 12, 16988-17006.	2.1	113
4	High voltage electrification of tractor and agricultural machinery â€“ A review. Energy Conversion and Management, 2016, 115, 117-131.	4.4	104
5	Olive classification according to external damage using image analysis. Journal of Food Engineering, 2008, 87, 371-379.	2.7	103
6	Comparison of X-ray CT and MRI of watercore disorder of different apple cultivars. Postharvest Biology and Technology, 2014, 87, 42-50.	2.9	103
7	Multispectral images of peach related to firmness and maturity at harvest. Journal of Food Engineering, 2009, 93, 229-235.	2.7	82
8	COMPARISON BETWEEN SENSORY AND INSTRUMENTAL MEASUREMENTS FOR MEALINESS ASSESSMENT IN APPLES. A COLLABORATIVE TEST. Journal of Texture Studies, 1998, 29, 509-525.	1.1	80
9	Factors Influencing Mechanical Properties and Bruise Susceptibility of Apples and Pears. Biosystems Engineering, 1995, 61, 11-17.	0.4	78
10	Detection of Internal Quality in Seedless Watermelon by Acoustic Impulse Response. Biosystems Engineering, 2004, 88, 221-230.	1.9	77
11	An NMR study on internal browning in pears. Postharvest Biology and Technology, 2007, 44, 260-270.	2.9	75
12	Thermal study of a transport container. Journal of Food Engineering, 2007, 80, 517-527.	2.7	69
13	Mealiness assessment in apples and peaches using MRI techniques. Magnetic Resonance Imaging, 2000, 18, 1175-1181.	1.0	66
14	Application of independent components analysis with the JADE algorithm and NIR hyperspectral imaging for revealing food adulteration. Journal of Food Engineering, 2016, 168, 7-15.	2.7	61
15	Comparison of multispectral indexes extracted from hyperspectral images for the assessment of fruit ripening. Journal of Food Engineering, 2011, 104, 612-620.	2.7	57
16	Review. Monitoring the intermodal, refrigerated transport of fruit using sensor networks. Spanish Journal of Agricultural Research, 2007, 5, 142.	0.3	57
17	Testing ZigBee Motes for Monitoring Refrigerated Vegetable Transportation under Real Conditions. Sensors, 2010, 10, 4968-4982.	2.1	55
18	A novel R-package graphic user interface for the analysis of metabonomic profiles. BMC Bioinformatics, 2009, 10, 363.	1.2	54

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19	Detection and Quantification of Peanut Traces in Wheat Flour by near Infrared Hyperspectral Imaging Spectroscopy Using Principal-Component Analysis. Journal of Near Infrared Spectroscopy, 2015, 23, 15-22.	0.8	52
20	Collision-free inverse kinematics of the redundant seven-link manipulator used in a cucumber picking robot. Biosystems Engineering, 2010, 106, 112-124.	1.9	51
21	Mealiness assessment in apples using MRI techniques. Magnetic Resonance Imaging, 1999, 17, 275-281.	1.0	47
22	Determination of Mealiness in Apples using Ultrasonic Measurements. Biosystems Engineering, 2005, 91, 329-334.	1.9	45
23	Sensors for Fruit Firmness Assessment: Comparison and Fusion. Biosystems Engineering, 1996, 64, 15-27.	0.4	44
24	Assessment of watercore development in apples with MRI: Effect of fruit location in the canopy. Postharvest Biology and Technology, 2013, 86, 125-133.	2.9	44
25	Prospects for the rapid detection of mealiness in apples by nondestructive NMR relaxometry. Applied Magnetic Resonance, 2002, 22, 387-400.	0.6	41
26	Non-destructive seed detection in mandarins: Comparison of automatic threshold methods in FLASH and COMSPIRA MRIs. Postharvest Biology and Technology, 2008, 47, 189-198.	2.9	39
27	Assessing the dynamic behavior of WSN motes and RFID semi-passive tags for temperature monitoring. Computers and Electronics in Agriculture, 2014, 103, 11-16.	3.7	37
28	Detection of freeze injury in oranges by magnetic resonance imaging of moving samples. Applied Magnetic Resonance, 2004, 26, 431-445.	0.6	34
29	A mathematical model for the development of mealiness in apples. Postharvest Biology and Technology, 2002, 25, 273-291.	2.9	31
30	On-line Identification of Seeds in Mandarins with Magnetic Resonance Imaging. Biosystems Engineering, 2006, 95, 529-536.	1.9	31
31	PHâ€"Postharvest technology. Biosystems Engineering, 2001, 78, 281-289.	0.4	28
32	Effect of fibers and whole grain content on quality attributes of extruded cereals. Procedia Food Science, 2011, 1, 17-23.	0.6	28
33	Effect of reservoir tillage on rainwater harvesting and soil erosion control under a developed rainfall simulator. Catena, 2014, 113, 353-362.	2.2	28
34	MEALINESS DETECTION IN APPLES USING TIME RESOLVED REFLECTANCE SPECTROSCOPY. Journal of Texture Studies, 2005, 36, 439-458.	1.1	26
35	Addressing potential sources of variation in several non-destructive techniques for measuring firmness in apples. Biosystems Engineering, 2009, 104, 33-46.	1.9	24
36	Computer-assisted enhanced volumetric segmentation magnetic resonance imaging data using a mixture of artificial neural networks. Magnetic Resonance Imaging, 2003, 21, 901-912.	1.0	23

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37	Detection of seeds in citrus using MRI under motion conditions and improvement with motion correction. Concepts in Magnetic Resonance Part B, 2005, 26B, 81-92.	0.3	22
38	Effect of Impacting Mass on Firmness Sensing of Fruits. Transactions of the American Society of Agricultural Engineers, 1996, 39, 1019-1023.	0.9	21
39	Discrimination of peanuts from bulk cereals and nuts by near infrared reflectance spectroscopy. Biosystems Engineering, 2016, 151, 178-186.	1.9	19
40	Neural bruise prediction models for fruit handling and machinery evaluation. Computers and Electronics in Agriculture, 1997, 18, 91-103.	3.7	18
41	Time derivatives in air temperature and enthalpy as non-invasive welfare indicators during long distance animal transport. Biosystems Engineering, 2011, 110, 253-260.	1.9	18
42	Advanced Characterisation of a Coffee Fermenting Tank by Multi-distributed Wireless Sensors: Spatial Interpolation and Phase Space Graphs. Food and Bioprocess Technology, 2014, 7, 3166-3174.	2.6	15
43	A simple mathematical model that describes the growth of the area and the number of total and viable cells in yeast colonies. Letters in Applied Microbiology, 2014, 59, 594-603.	1.0	14
44	The Phase Space as a New Representation of the Dynamical Behaviour of Temperature and Enthalpy in a Reefer monitored with a Multidistributed Sensors Network. Food and Bioprocess Technology, 2014, 7, 1793-1806.	2.6	14
45	Non-Destructive Global and Localized 2D T1/T2 NMR Relaxometry to Resolve Microstructure in Apples Affected by Watercore. Food and Bioprocess Technology, 2015, 8, 88-99.	2.6	14
46	Logistic regression for simulating damage occurrence on a fruit grading line. Computers and Electronics in Agriculture, 2003, 39, 95-113.	3.7	13
47	Low-cost irradiance sensors for irradiation assessments inside tree canopies. Solar Energy, 2014, 103, 143-153.	2.9	13
48	Interpolation of spatial temperature profiles by sensor networks. , 2011, , .		11
49	A partial study of vertical distribution of conventional no-till seeders and spatial variability of seed depth placement of maize in the Alentejo region, Portugal. Precision Agriculture, 2016, 17, 36-52.	3.1	11
50	Optimal management of oil content variability in olive mill batches by NIR spectroscopy. Scientific Reports, 2019, 9, 13974.	1.6	11
51	CALIBRATION TRANSFER BETWEEN PORTABLE AND LABORATORY NIR SPECTROPHOTOMETERS. Acta Horticulturae, 2008, , 373-378.	0.1	10
52	Quantitative analysis of morphological changes in yeast colonies growing on solid medium: the eccentricity and Fourier indices. Yeast, 2014, 31, 431-440.	0.8	10
53	Feature extraction on vineyard by Gustafson Kessel FCM and K-means. , 2012, , .		9
54	Discrete element analysis for the assessment of the accuracy of load cell-based dynamic weighing systems in grape harvesters under different ground conditions. Computers and Electronics in Agriculture, 2014, 100, 13-23.	3.7	9

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55	An Identification Procedure for Woolly Soft-flesh Peaches by Instrumental Assessment. Biosystems Engineering, 2000, 76, 355-362.	0.4	8
56	COMPARISON OF ROBUST MODELING TECHNIQUES ON NIR SPECTRA USED TO ESTIMATE GRAPE QUALITY. Acta Horticulturae, 2008, , 367-372.	0.1	8
57	Mid- infrared uncooled sensor for the identification of pure fuel, additives and adulterants in gasoline. Fuel Processing Technology, 2018, 171, 287-292.	3.7	8
58	Long-Distance Transport of Finisher Pigs in the Iberian Peninsula: Effects of Season on Thermal and Enthalpy Conditions, Welfare Indicators and Meat pH. Animals, 2021, 11, 2410.	1.0	8
59	Fruit Postharvest Technology: Instrumental Measurement of Ripeness and Quality. , 2004, , 321-340.		8
60	OPTICAL DETECTION OF MEALINESS IN APPLES BY LASER TDRS. Acta Horticulturae, 2001, , 513-518.	0.1	8
61	A hybrid genetic algorithm for route optimization in the bale collecting problem. Spanish Journal of Agricultural Research, 2013, 11, 603.	0.3	7
62	Development of model based sensors for the supervision of a solar dryer. Computers and Electronics in Agriculture, 2011, 78, 167-175.	3.7	6
63	Multi-distributed wireless sensors for monitoring a long distance transport in a reefer container. International Journal of Postharvest Technology and Innovation, 2015, 5, 149.	0.1	4
64	Impact of local conditions and machine management on grape harvest quality. Scientia Agricola, 2019, 76, 353-361.	0.6	4
65	MODELING PSYCHROMETRIC DATA IN REAL-TIME FRUIT LOGISTICS MONITORING. Acta Horticulturae, 2008, , 385-390.	0.1	3
66	A general procedure for predicting the remaining shelf life of nectarines and peaches for virtualization of the value chain. Postharvest Biology and Technology, 2021, 181, 111677.	2.9	3
67	Segregation of soft olives using Durofel and on-line rebound. Spanish Journal of Agricultural Research, 2004, 2, 493.	0.3	3
68	MODELING OVOPRODUCT SPOILAGE WITH RED LED LIGHT. Acta Horticulturae, 2008, , 265-272.	0.1	2
69	A PROCEDURE FOR TESTING PADDING MATERIALS IN FRUIT PACKING LINES USING MULTIPLE LOGISTIC REGRESSION. Transactions of the American Society of Agricultural Engineers, 2002, 45, .	0.9	1
70	MRI texture analysis as means for addressing rehydration and milk diffusion in cereals. Procedia Food Science, 2011, 1, 625-631.	0.6	1
71	Undergraduate Design Experiences in the Trans-Atlantic Biosystems Engineering Network (TABE.NET). , 2011, , .		1
72	CUTTING EDGE TECHNOLOGIES IN POSTHARVEST RESEARCH: JOURNEY TO THE CENTRE OF THE FRUIT. Acta Horticulturae, 2012, , 173-180.	0.1	1

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73	MRI and Bidimensional Relaxometry Sequences for Macro and Microstructure Assessment in Food Models. Special Publication - Royal Society of Chemistry, 2013, , 130-137.	0.0	1
74	Understanding the Inventor's Mind Through Patent Analysis: A CLIL Team-teaching Experience at the Technical University of Madrid. Procedia, Social and Behavioral Sciences, 2015, 212, 283-291.	0.5	1
75	Detection of Biological CO2 and 1,3-Pentadiene Using Non-refrigerated Low-Cost MWIR Detectors. Food Analytical Methods, 2016, 9, 1451-1460.	1.3	1
76	Front-face and right-angle fluorescence spectroscopy for monitoring extra virgin olive oil spectrum evolution. Acta Horticulturae, 2018, , 497-504.	0.1	1
77	Applicability of Ammonia Sensors for Controlling Environmental Parameters in Accommodations for Lamb Fattening. Journal of Sensors, 2018, 2018, 1-8.	0.6	1
78	Hyperspectral to multispectral imaging for detection of tree nuts and peanut traces in wheat flour. Journal of Spectral Imaging, 0, , .	0.0	1
79	MULTIPHYSICS DURING BREAD MAKING: NUMERICAL MODELLING AND TECHNOLOGICAL TEACHINGS FROM SIMULATIONS. Acta Horticulturae, 2008, , 147-154.	0.1	1
80	Mejorando la formaciÃ³n en nuevas tecnologÃas para una agricultura digital: Proyecto Sparkle. , 2019, , .		1
81	EFFECTS OF 1-METHYLCYCLOPROPENE TREATMENTS ON MEALINESS OF EARLY RED ONE APPLES. Acta Horticulturae, 2005, , 639-644.	0.1	1
82	COLLISION-FREE INVERSE KINEMATICS OF A 7 LINK CUCUMBER PICKING ROBOT. Acta Horticulturae, 2008, , 579-586.	0.1	1
83	Prospective of the Use of Compact/Low Cost Mwir Spectrometer for FoodTo-Fuel Assessment. , 2021, 2021, .		0
84	Estimation of the Remaining Value for Grape Harvesters Based on Second-Hand European Market Online Data. Agronomy, 2021, 11, 1802.	1.3	0
85	SIMULATION OF GASES IN FRUIT STORAGE CHAMBERS WITH LATTICE BOLTZMAN. Acta Horticulturae, 2003, , 413-419.	0.1	0
86	Multivariate diagnosis of the variability of NIR spectrometers under industrial applications. Spanish Journal of Agricultural Research, 2004, 2, 485.	0.3	0
87	MODELLING PHASE-SHIFT FOR MOTION CORRECTION IN MRI ON-LINE APPLICATIONS. Acta Horticulturae, 2005, , 173-179.	0.1	0
88	DISTRIBUTION OF TEMPERATURE, RELATIVE HUMIDITY AND FLOW RATE WITHIN A SCALED CONTAINER USING UNFORCED AND FORCED AIRFLOWS. Acta Horticulturae, 2005, , 297-304.	0.1	0
89	MODELING FOR METABONOMIC FINGERPRINT ASSIGNMENT IN OLIVE FRUITS. Acta Horticulturae, 2008, , 393-400.	0.1	0