

# MarÃ-a Ãngeles Gil Ãlvarez

## List of Publications by Year in descending order

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117  
papers

2,875  
citations

159358

30  
h-index

197535

49  
g-index

129  
all docs

129  
docs citations

129  
times ranked

699  
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview on the development of fuzzy random variables. Fuzzy Sets and Systems, 2006, 157, 2546-2557.	1.6	196
2	Fuzzy data treated as functional data: A one-way ANOVA test approach. Computational Statistics and Data Analysis, 2012, 56, 943-955.	0.7	143
3	A new family of metrics for compact, convex (fuzzy) sets based on a generalized concept of mid and spread. Information Sciences, 2009, 179, 3964-3972.	4.0	118
4	Asymptotic and Bootstrap techniques for testing the expected value of a fuzzy random variable. Metrika, 2004, 59, 31-49.	0.5	103
5	A generalized strong law of large numbers. Probability Theory and Related Fields, 1999, 114, 401-417.	0.9	97
6	Bootstrap approach to the multi-sample test of means with imprecise data. Computational Statistics and Data Analysis, 2006, 51, 148-162.	0.7	91
7	The fuzzy approach to statistical analysis. Computational Statistics and Data Analysis, 2006, 51, 1-14.	0.7	91
8	Two-sample hypothesis tests of means of a fuzzy random variable. Information Sciences, 2001, 133, 89-100.	4.0	88
9	Bootstrap techniques and fuzzy random variables: Synergy in hypothesis testing with fuzzy data. Fuzzy Sets and Systems, 2006, 157, 2608-2613.	1.6	84
10	Fuzzy Rating Scale-Based Questionnaires and Their Statistical Analysis. IEEE Transactions on Fuzzy Systems, 2015, 23, 111-126.	6.5	77
11	Least squares fitting of an affine function and strength of association for interval-valued data. Metrika, 2002, 56, 97-111.	0.5	76
12	On the use of zadeh's probabilistic definition for testing statistical hypotheses from fuzzy information. Fuzzy Sets and Systems, 1986, 20, 175-190.	1.6	75
13	The fuzzy decision problem: An approach to the problem of testing statistical hypotheses with fuzzy information. European Journal of Operational Research, 1986, 27, 371-382.	3.5	66
14	A distance-based statistical analysis of fuzzy number-valued data. International Journal of Approximate Reasoning, 2014, 55, 1487-1501.	1.9	63
15	The median of a random fuzzy number. The 1-norm distance approach. Fuzzy Sets and Systems, 2012, 200, 99-115.	1.6	62
16	Constructive definitions of fuzzy random variables. Statistics and Probability Letters, 1997, 36, 135-143.	0.4	57
17	Testing linear independence in linear models with interval-valued data. Computational Statistics and Data Analysis, 2007, 51, 3002-3015.	0.7	54
18	The $\sigma$ -mean squared dispersion associated with a fuzzy random variable. Fuzzy Sets and Systems, 2000, 111, 307-317.	1.6	51

#	ARTICLE	IF	CITATIONS
19	Simulation of random fuzzy variables: an empirical approach to statistical/probabilistic studies with fuzzy experimental data. IEEE Transactions on Fuzzy Systems, 2002, 10, 384-390.	6.5	50
20	The $\hat{\mu}$ -average value and the fuzzy expectation of a fuzzy random variable. Fuzzy Sets and Systems, 1998, 99, 347-352.	1.6	44
21	The fuzzy decision problem: An approach to the point estimation problem with fuzzy information. European Journal of Operational Research, 1985, 22, 26-34.	3.5	41
22	Fundamentals and Bayesian analyses of decision problems with fuzzy-valued utilities. International Journal of Approximate Reasoning, 1996, 15, 203-224.	1.9	41
23	A fuzzy representation of random variables: An operational tool in exploratory analysis and hypothesis testing. Computational Statistics and Data Analysis, 2006, 51, 163-176.	0.7	40
24	Hypothesis testing for means in connection with fuzzy rating scale-based data: algorithms and applications. European Journal of Operational Research, 2016, 251, 918-929.	3.5	35
25	Descriptive analysis of responses to items in questionnaires. Why not using a fuzzy rating scale?. Information Sciences, 2016, 360, 131-148.	4.0	34
26	The minimum inaccuracy estimates in $\chi^2$ tests for goodness of fit with fuzzy observations. Journal of Statistical Planning and Inference, 1988, 19, 95-115.	0.4	33
27	One-sample tests for a generalized Fréchet variance of a fuzzy random variable. Metrika, 2010, 71, 185-202.	0.5	31
28	Interval arithmetic-based simple linear regression between interval data: Discussion and sensitivity analysis on the choice of the metric. Information Sciences, 2012, 199, 109-124.	4.0	31
29	The gini-simpson index of diversity: estimation in the stratified sampling. Communications in Statistics - Theory and Methods, 1988, 17, 2981-2995.	0.6	30
30	Reversing the order of integration in iterated expectations of fuzzy random variables, and statistical applications. Journal of Statistical Planning and Inference, 1998, 74, 11-29.	0.4	30
31	Regression and correlation analyses of a linear relation between random intervals. Test, 2001, 10, 183-201.	0.7	30
32	Estimating the expected value of fuzzy random variables in random samplings from finite populations. Statistical Papers, 1999, 40, 277-295.	0.7	27
33	Fuzziness and loss of information in statistical problems. IEEE Transactions on Systems, Man, and Cybernetics, 1987, 17, 1016-1025.	0.9	26
34	Comparison of experiments in statistical decision problems with fuzzy utilities. IEEE Transactions on Systems, Man, and Cybernetics, 1992, 22, 662-670.	0.9	26
35	Fuzzy vs. Likert Scale in Statistics. Studies in Fuzziness and Soft Computing, 2012, , 407-420.	0.6	25
36	Quantity of information; Comparison between information systems: 1. Non-fuzzy states. Fuzzy Sets and Systems, 1985, 15, 65-78.	1.6	24

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37	COMPARISON BETWEEN FUZZY INFORMATION SYSTEMS. <i>Kybernetes</i> , 1984, 13, 245-251.	1.2	23
38	Solving influence diagrams with fuzzy chance and value nodes. <i>European Journal of Operational Research</i> , 2005, 167, 444-460.	3.5	23
39	A generalized L1-type metric between fuzzy numbers for an approach to central tendency of fuzzy data. <i>Information Sciences</i> , 2013, 242, 22-34.	4.0	23
40	Analyzing data from a fuzzy rating scale-based questionnaire. A case study. <i>Psicothema</i> , 2015, 27, 182-91.	0.7	23
41	Nonparametric criteria for supervised classification of fuzzy data. <i>International Journal of Approximate Reasoning</i> , 2011, 52, 1272-1282.	1.9	22
42	Fuzzy Set-Theoretic Methods in Statistics. <i>The Handbooks of Fuzzy Sets Series</i> , 1998, , 311-347.	0.5	22
43	A note on the operativenss of Neyman-Pearson tests with fuzzy information. <i>Fuzzy Sets and Systems</i> , 1989, 30, 215-220.	1.6	21
44	Rejoinder on "A distance-based statistical analysis of fuzzy number-valued data". <i>International Journal of Approximate Reasoning</i> , 2014, 55, 1601-1605.	1.9	21
45	The likelihood ratio test for goodness of fit with fuzzy experimental observations. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 1989, 19, 771-779.	0.9	19
46	On the loss of information due to fuzziness in experimental observations. <i>Annals of the Institute of Statistical Mathematics</i> , 1988, 40, 627-639.	0.5	18
47	Introduction to ANOVA with Fuzzy Random Variables. , 2004, , 487-494.		18
48	A note on interval estimation with fuzzy data. <i>Fuzzy Sets and Systems</i> , 1988, 28, 209-215.	1.6	17
49	A note on the connection between fuzzy numbers and random intervals. <i>Statistics and Probability Letters</i> , 1992, 13, 311-319.	0.4	17
50	Approximating integrably bounded fuzzy random variables in terms of the "generalized" Hausdorff metric. <i>Information Sciences</i> , 1998, 104, 279-291.	4.0	17
51	Fuzzy random variables. <i>Information Sciences</i> , 2001, 133, 1-2.	4.0	17
52	M-Estimates of Location for the Robust Central Tendency of Fuzzy Data. <i>IEEE Transactions on Fuzzy Systems</i> , 2016, 24, 945-956.	6.5	17
53	Hypothesis testing-based comparative analysis between rating scales for intrinsically imprecise data. <i>International Journal of Approximate Reasoning</i> , 2017, 88, 128-147.	1.9	16
54	An operative extension of the likelihood ratio test from fuzzy data. <i>Statistical Papers</i> , 1988, 29, 191-203.	0.7	15

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55	A family of measures of uncertainty involving utilities: Definition, properties, applications and statistical inferences. <i>Metrika</i> , 1989, 36, 129-147.	0.5	15
56	Fuzzy data analysis and classification. <i>Advances in Data Analysis and Classification</i> , 2017, 11, 645-657.	0.9	15
57	A hypothesis testing-based discussion on the sensitivity of means of fuzzy data with respect to data shape. <i>Fuzzy Sets and Systems</i> , 2017, 328, 54-69.	1.6	15
58	Quantity of information; comparison between information systems: 2. Fuzzy states. <i>Fuzzy Sets and Systems</i> , 1985, 15, 129-145.	1.6	13
59	A note on stratification and gain in precision in estimating diversity from large samples. <i>Communications in Statistics - Theory and Methods</i> , 1989, 18, 1521-1526.	0.6	13
60	A parameterized metric between fuzzy numbers and its parameter interpretation. <i>Fuzzy Sets and Systems</i> , 2014, 245, 101-115.	1.6	13
61	ESTIMATING THE UNCERTAINTY ASSOCIATED WITH A VARIABLE IN A FINITE POPULATION. <i>Kybernetes</i> , 1986, 15, 251-256.	1.2	12
62	Probabilistic-Possibilistic Approach to Some Statistical Problems with Fuzzy Experimental Observations. <i>Lecture Notes in Economics and Mathematical Systems</i> , 1988, , 286-306.	0.3	12
63	The Median of a Random Interval. <i>Advances in Intelligent and Soft Computing</i> , 2010, , 575-583.	0.2	11
64	The choice of sample size in estimating mutual information. <i>Applied Mathematics and Computation</i> , 1988, 27, 201-216.	1.4	10
65	The fuzzy hyperbolic inequality index associated with fuzzy random variables. <i>European Journal of Operational Research</i> , 1998, 110, 377-391.	3.5	10
66	Unbiased estimation of income inequality. <i>Statistische Hefte</i> , 1986, 27, 227-237.	0.4	9
67	The s-differentiability of a fuzzy-valued mapping. <i>Information Sciences</i> , 2003, 151, 283-299.	4.0	9
68	An improvement of a comparison of experiments in statistical decision problems with fuzzy utilities. <i>IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans</i> , 1998, 28, 856-864.	3.4	8
69	An extension of Fubini's theorem for fuzzy random variables. <i>Information Sciences</i> , 1999, 115, 29-41.	4.0	8
70	Fuzzy Rating vs. Fuzzy Conversion Scales: An Empirical Comparison through the MSE. <i>Advances in Intelligent Systems and Computing</i> , 2013, , 135-143.	0.5	8
71	Estudio de una medida para la incertidumbre correspondiente a las utilidades. <i>Trabajos De Estadística Y De Investigación Operativa</i> , 1981, 32, 45-66.	0.1	6
72	An extensive-form analysis for comparing fuzzy information systems by means of the worth and quietness of information. <i>Fuzzy Sets and Systems</i> , 1987, 23, 239-255.	1.6	6

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73	On some information measures of degree $\hat{I}^2 = 2$ : estimation in simple-stage cluster sampling. <i>Statistics and Probability Letters</i> , 1989, 8, 157-162.	0.4	6
74	Fuzziness in the experimental outcomes: comparing experiments and removing the loss of information. <i>Journal of Statistical Planning and Inference</i> , 1992, 31, 93-111.	0.4	6
75	Interval-valued quantification of the inequality associated with a random set. <i>Statistics and Probability Letters</i> , 2000, 46, 149-159.	0.4	6
76	The fuzzy characterizing function of the distribution of a random fuzzy number. <i>Applied Mathematical Modelling</i> , 2015, 39, 4044-4056.	2.2	6
77	Arithmetic and Distance-Based Approach to the Statistical Analysis of Imprecisely Valued Data. <i>Studies in Fuzziness and Soft Computing</i> , 2013, , 1-18.	0.6	6
78	THE MINIMUM INACCURACY PRINCIPLE IN ESTIMATING POPULATION PARAMETERS FROM GROUPED DATA. <i>Kybernetes</i> , 1987, 16, 43-49.	1.2	5
79	Connections between some criteria to compare fuzzy information systems. <i>Fuzzy Sets and Systems</i> , 1990, 37, 183-192.	1.6	5
80	Central tendency for symmetric random fuzzy numbers. <i>Information Sciences</i> , 2014, 278, 599-613.	4.0	5
81	Location-Free Robust Scale Estimates for Fuzzy Data. <i>IEEE Transactions on Fuzzy Systems</i> , 2021, 29, 1682-1694.	6.5	5
82	Fuzzy rating scales: Does internal consistency of a measurement scale benefit from coping with imprecision and individual differences in psychological rating?. <i>Information Sciences</i> , 2021, 550, 91-108.	4.0	5
83	Testing "Two-Sided" Hypothesis about the Mean of an Interval-Valued Random Set. <i>Advances in Soft Computing</i> , 2008, , 133-139.	0.4	5
84	A note on the choice of sample size in estimating the mutual information. <i>Applied Mathematics and Computation</i> , 1989, 30, 125-132.	1.4	4
85	A procedure to test the suitability of a factor for stratification in estimating diversity. <i>Applied Mathematics and Computation</i> , 1991, 43, 221-229.	1.4	4
86	Statistical management of fuzzy elements in random experiments. Part 1: A discussion on treating fuzziness as a kind of randomness. <i>Information Sciences</i> , 1993, 69, 229-242.	4.0	4
87	Differentiating random upper semicontinuous functions under the integral sign. <i>Test</i> , 2003, 12, 241-258.	0.7	4
88	A new way of quantifying the symmetry of a random variable: Estimation and hypothesis testing. <i>Journal of Statistical Planning and Inference</i> , 2012, 142, 3061-3072.	0.4	4
89	An Overview on the Statistical Central Tendency for Fuzzy Data Sets. <i>International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems</i> , 2015, 23, 105-132.	0.9	4
90	Interval and Fuzzy-Valued Approaches to the Statistical Management of Imprecise Data. <i>Understanding Complex Systems</i> , 2011, , 453-468.	0.3	4

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91	Estudio asintotico de una clase de indices de desigualdad muestrales. Trabajos De Estadística, 1989, 4, 95-109.	0.1	3
92	Bertoluzza et al.'s metric as a basis for analyzing fuzzy data. Metron, 2013, 71, 307-322.	0.6	3
93	Editorial of the special issue "Statistics with Imperfect Data". Information Sciences, 2013, 245, 1-3.	4.0	3
94	The mean square error of a random fuzzy vector based on the support function and the Steiner point. Fuzzy Sets and Systems, 2016, 292, 347-363.	1.6	3
95	Fuzzy Random Variables À la Kruse & Meyer and À la Puri & Ralescu: Key Differences and Coincidences. Studies in Computational Intelligence, 2018, , 21-29.	0.7	3
96	Empirical Sensitivity Analysis on the Influence of the Shape of Fuzzy Data on the Estimation of Some Statistical Measures. Advances in Intelligent Systems and Computing, 2015, , 123-131.	0.5	3
97	Statistical management of fuzzy elements in random experiments. Part 2: The fisher information associated with a fuzzy information system. Information Sciences, 1993, 69, 243-257.	4.0	2
98	Comments on "Statistical reasoning with set-valued information: Ontic vs. epistemic views". International Journal of Approximate Reasoning, 2014, 55, 1580-1582.	1.9	2
99	The choice of sample size in estimating entropy according to a stratified sampling. Lecture Notes in Computer Science, 1988, , 102-111.	1.0	2
100	Analysis of mutual information measures in cluster sampling. Applied Mathematics and Computation, 1992, 52, 389-402.	1.4	1
101	Fuzzy Statistical Analysis: methods and applications. Metron, 2013, 71, 197-199.	0.6	1
102	Statistics with Imprecise Data. , 2012, , 3052-3063.		1
103	On a principle of choice among Bayes actions and its application for comparing experiments. RAIRO - Operations Research, 1987, 21, 259-279.	1.0	1
104	Quantifying the Correlation between Two Interval-Valued Random Sets. Studies in Fuzziness and Soft Computing, 2002, , 99-108.	0.6	1
105	f-inequality indices for fuzzy random variables. Studies in Fuzziness and Soft Computing, 2002, , 43-63.	0.6	1
106	Bootstrap Approach to Test the Linear Independence between Interval-valued Random Sets. , 2004, , 431-438.		1
107	Descriptive Comparison of the Rating Scales Through Different Scale Estimates: Simulation-Based Analysis. Advances in Intelligent Systems and Computing, 2019, , 9-16.	0.5	1
108	Caracterizacion axiomática para la varianza. Trabajos De Estadística Y De Investigación Operativa, 1983, 34, 40-51.	0.1	0

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109	Convergence criteria for interval-valued inequality indices. <i>Statistics</i> , 2004, 38, 59-66.	0.3	0
110	An asymmetry coefficient for random variables based on fuzzification. <i>IEEE International Conference on Fuzzy Systems</i> , 2007, , .	0.0	0
111	Power analysis of the one sample test for fuzzy random variables. <i>IEEE International Conference on Fuzzy Systems</i> , 2007, , .	0.0	0
112	Reversing the Order of Integration in Iterated Expectations of Compact Convex Random Sets. <i>Advances in Intelligent and Soft Computing</i> , 2002, , 140-145.	0.2	0
113	Analyzing the Meaning of Fuzziness in Random Experiments. , 1993, , 429-439.		0
114	Approximation aspects of fuzzy models. , 1998, , .		0
115	Fuzzy Random Variables: Modeling Linguistic Statistical Data. <i>Studies in Fuzziness and Soft Computing</i> , 1999, , 137-157.	0.6	0
116	On the Robustness of Absolute Deviations with Fuzzy Data. <i>Advances in Intelligent Systems and Computing</i> , 2015, , 133-141.	0.5	0
117	Case Study-Based Sensitivity Analysis of Scale Estimates w.r.t. the Shape of Fuzzy Data. <i>Advances in Intelligent Systems and Computing</i> , 2019, , 157-165.	0.5	0