MarÃ-a Dolores RosellÃ³

List of Publications by Year
in descending order

73 papers	674 citations	623734 14 h-index	642732 23 g-index
73 all docs	73 docs citations	73 times ranked	391 citing authors

#	Article	IF	Citations
1	Validation of a code for modeling cavitation phenomena in Diesel injector nozzles. Mathematical and Computer Modelling, 2010, 52, 1123-1132.	2.0	62
2	Computational study of the cavitation phenomenon and its interaction with the turbulence developed in diesel injector nozzles by Large Eddy Simulation (LES). Mathematical and Computer Modelling, 2013, 57, 1656-1662.	2.0	57
3	A comprehensive probabilistic solution of random SIS-type epidemiological models using the random variable transformation technique. Communications in Nonlinear Science and Numerical Simulation, 2016, 32, 199-210.	3.3	45
4	Numerical simulation of primary atomization in diesel spray at low injection pressure. Journal of Computational and Applied Mathematics, 2016, 291, 94-102.	2.0	40
5	Probabilistic solution of random SI-type epidemiological models using the Random Variable Transformation technique. Communications in Nonlinear Science and Numerical Simulation, 2015, 24, 86-97.	3.3	34
6	Using a homogeneous equilibrium model for the study of the inner nozzle flow and cavitation pattern in convergentâ€“divergent nozzles of diesel injectors. Journal of Computational and Applied Mathematics, 2017, 309, 630-641.	2.0	28
7	Influence of biofuels on the internal flow in diesel injector nozzles. Mathematical and Computer Modelling, 2011, 54, 1699-1705.	2.0	22
8	Full solution of random autonomous first-order linear systems of difference equations. Application to construct random phase portrait for planar systems. Applied Mathematics Letters, 2017, 68, 150-156.	2.7	22
9	Probabilistic solution of random homogeneous linear second-order difference equations. Applied Mathematics Letters, 2014, 34, 27-32.	2.7	20
10	Study of the influence of the needle eccentricity on the internal flow in diesel injector nozzles by computational fluid dynamics calculations. International Journal of Computer Mathematics, 2014, 91, 24-31.	1.8	18
11	Computing probabilistic solutions of the Bernoulli random differential equation. Journal of Computational and Applied Mathematics, 2017, 309, 396-407.	2.0	17
12	A semi-implicit space-time CE-SE method to improve mass conservation through tapered ducts in internal combustion engines. Mathematical and Computer Modelling, 2004, 40, 941-951.	2.0	16
13	Solving Random Homogeneous Linear Second-Order Differential Equations: A Full Probabilistic Description. Mediterranean Journal of Mathematics, 2016, 13, 3817-3836.	0.8	16
14	Determining the First Probability Density Function of Linear Random Initial Value Problems by the Random Variable Transformation (RVT) Technique: A Comprehensive Study. Abstract and Applied Analysis, 2014, 2014, 1-25.	0.7	15
15	Solving initial and two-point boundary value linear random differential equations: A mean square approach. Applied Mathematics and Computation, 2012, 219, 2204-2211.	2.2	14
16	Improving adaptive generalized polynomial chaos method to solve nonlinear random differential equations by the random variable transformation technique. Communications in Nonlinear Science and Numerical Simulation, 2017, 50, 1-15.	3.3	12
17	Randomizing the parameters of a Markov chain to model the stroke disease: A technical generalization of established computational methodologies towards improving real applications. Journal of Computational and Applied Mathematics, 2017, 324, 225-240.	2.0	12
18	Dynamical Continuous Discrete Assessment of Competencies Achievement: An Approach to Continuous Assessment. Mathematics, 2021, 9, 2082.	2.2	12

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19	Chebyshev polynomial approximations for nonlinear differential initial value problems. Nonlinear Analysis: Theory, Methods & Applications, 2005, 63, e629-e637.	1.1	11
20	Solving random diffusion models with nonlinear perturbations by the Wienerâ€“Hermite expansion method. Computers and Mathematics With Applications, 2011, 61, 1946-1950.	2.7	11
21	Constructing adaptive generalized polynomial chaos method to measure the uncertainty in continuous models: A computational approach. Mathematics and Computers in Simulation, 2015, 109, 113-129.	4.4	11
22	Some recommendations for applying gPC (generalized polynomial chaos) to modeling: An analysis through the Airy random differential equation. Applied Mathematics and Computation, 2013, 219, 4208-4218.	2.2	10
23	The truncation error of the two-variable chebyshev series expansions. Computers and Mathematics With Applications, 2003, 45, 1647-1653.	2.7	9
24	Computing the probability density function of non-autonomous first-order linear homogeneous differential equations with uncertainty. Journal of Computational and Applied Mathematics, 2018, 337, 190-208.	2.0	9
25	Random First-Order Linear Discrete Models and Their Probabilistic Solution: A Comprehensive Study. Abstract and Applied Analysis, 2016, 2016, 1-22.	0.7	8
26	Applying the Wiener-Hermite Random Technique to Study the Evolution of Excess Weight Population in the Region of Valencia (Spain). American Journal of Computational Mathematics, 2012, 02, 274-281.	0.5	8
27	Solving Continuous Models with Dependent Uncertainty: A Computational Approach. Abstract and Applied Analysis, 2013, 2013, 1-10.	0.7	7
28	Probabilistic solution of the homogeneous Riccati differential equation: A case-study by using linearization and transformation techniques. Journal of Computational and Applied Mathematics, 2016, 291, 20-35.	2.0	7
29	Some results about randomized binary Markov chains: theory, computing and applications. International Journal of Computer Mathematics, 2020, 97, 141-156.	1.8	7
30	Analytic-numerical approach to flow calculation in intake and exhaust systems of internal combustion engines. Mathematical and Computer Modelling, 2002, 36, 33-45.	2.0	6
31	A second order numerical method for solving advection-diffusion models. Mathematical and Computer Modelling, 2009, 50, 806-811.	2.0	6
32	(CMMSE2018 paper) Solving the random Pielou logistic equation with the random variable transformation technique: Theory and applications. Mathematical Methods in the Applied Sciences, 2019, 42, 5708-5717.	2.3	6
33	Analysis of random non-autonomous logistic-type differential equations via the Karhunenâ€“LoÃ¨ve expansion and the Random Variable Transformation technique. Communications in Nonlinear Science and Numerical Simulation, 2019, 72, 121-138.	3.3	6
34	Mixed problems for separate variable coefficient wave equations: The non-dirichlet case. Continuous numerical solutions with a priori error bounds. Mathematical and Computer Modelling, 1999, 30, 1-22.	2.0	5
35	Constructing accurate polynomial approximations for nonlinear differential initial value problems. Applied Mathematics and Computation, 2007, 193, 523-534.	2.2	5
36	A stable numerical method for solving variable coefficient advectionâ€“diffusion models. Computers and Mathematics With Applications, 2008, 56, 754-768.	2.7	5

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37	Computing option pricing models under transaction costs. Computers and Mathematics With Applications, 2010, 59, 651-662.	2.7	5
38	Solving second-order linear differential equations with random analytic coefficients about ordinary points: A full probabilistic solution by the first probability density function. Applied Mathematics and Computation, 2018, 331, 33-45.	2.2	5
39	Solving the random Cauchy one-dimensional advectionâ€“diffusion equation: Numerical analysis and computing. Journal of Computational and Applied Mathematics, 2018, 330, 920-936.	2.0	5
40	Full probabilistic solution of a finite dimensional linear control system with random initial and final conditions. Journal of the Franklin Institute, 2020, 357, 8156-8180.	3.4	5
41	Probabilistic analysis of random nonlinear oscillators subject to small perturbations via probability density functions: theory and computing. European Physical Journal Plus, 2021, 136, 1.	2.6	5
42	Polynomial approximate solutions with a priori error bounds of first-order quasi-linear initial-value partial differential problems. Mathematical and Computer Modelling, 2001, 34, 859-871.	2.0	4
43	A nonuniform mesh semi-implicit CEâ€“SE method modelling unsteady flow in tapered ducts. Mathematics and Computers in Simulation, 2007, 76, 94-98.	4.4	4
44	Computing the two first probability density functions of the random Cauchy-Euler differential equation: Study about regular-singular points. Applied Mathematics and Nonlinear Sciences, 2017, 2, 213-224.	1.6	4
45	A collocation method to compute one-dimensional flow models in intake and exhaust systems of internal combustion engines. Mathematical and Computer Modelling, 2004, 40, 995-1008.	2.0	3
46	Work in progress: Blended learning activities development. , 2015, , .		3
47	Introducing randomness in the analysis of chemical reactions: An analysis based on random differential equations and probability density functions. Computational and Mathematical Methods, 2020, , e1141.	0.8	3
48	Solving fully randomized first-order linear control systems: Application to study the dynamics of a damped oscillator with parametric noise under stochastic control. Journal of Computational and Applied Mathematics, 2022, 404, 113389.	2.0	3
49	A full probabilistic analysis of a randomized kinetic model for reactionâ€“deactivation of hydrogen peroxide decomposition with applications to real data. Journal of Mathematical Chemistry, 2021, 59, 1479.	1.5	3
50	Mixed problems for separate variable coefficient diffusion equations: The non-dirichlet case approximate solutions with a priori error bounds. Mathematical and Computer Modelling, 1999, 30, 73-87.	2.0	2
51	An iterative method to obtain analytical-numerical approximation of the one-dimensional gas flow transport solution in conical ducts. Mathematical and Computer Modelling, 2005, 41, 407-416.	2.0	2
52	Do the generalized polynomial chaos and FrÃ¶benius methods retain the statistical moments of random differential equations?. Applied Mathematics Letters, 2013, 26, 553-558.	2.7	2
53	Blended learning at maths with aerospace engineering freshmen. , 2015, , .		2
54	Approximating the Solution Stochastic Process of the Random Cauchy One-Dimensional Heat Model. Abstract and Applied Analysis, 2016, 2016, 1-7.	0.7	2

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55	EvaluaciÃ³n continua, clase inversa y cooperaciÃ³n activa en MatemÃ¡ticas para ingenieros. Pi-InnovaMath, 2018, , .	0.0	2
56	A probabilistic analysis of a Beverton-Holt-type discrete model: Theoretical and computing analysis. Computational and Mathematical Methods, 2019, 1, e1013.	0.8	2
57	Solving random boundary heat model using the finite difference method under mean square convergence. Computational and Mathematical Methods, 2019, 1, e1026.	0.8	2
58	A comparative study of the numerical approximation of the random Airy differential equation. Computers and Mathematics With Applications, 2011, 62, 3411-3417.	2.7	1
59	Dealing with Dependent Uncertainty in Modelling: A Comparative Study Case through the Airy Equation. Abstract and Applied Analysis, 2013, 2013, 1-12.	0.7	1
60	Mathematics micro flipped and micro collaborative learning with sophomore Aerospace Engineering students. , 2018, , .		1
61	Probabilistic Study of the Effect of Anti-Epileptic Drugs Under Uncertainty: Cost-Effectiveness Analysis. Mathematics, 2020, 8, 1120.	2.2	1
62	Solving fully randomized higherâ€order linear control differential equations: Application to study the dynamics of an oscillator. Computational and Mathematical Methods, 0, , e1163.	0.8	1
63	Approximating the Density of Random Differential Equations with Weak Nonlinearities via Perturbation Techniques. Mathematics, 2021, 9, 204.	2.2	1
64	Some Tools to Study Random Fractional Differential Equations and Applications. Lecture Notes in Mechanical Engineering, 2021, , 18-34.	0.4	1
65	A quantitative measure of well-conditioning for linear two-point boundary value problems. Mathematical and Computer Modelling, 2001, 34, 711-723.	2.0	0
66	Analyticâ€“numerical solutions with a priori error bounds of initial value problems for the continuous coefficient wave equation. Applied Numerical Mathematics, 2002, 40, 151-166.	2.1	0
67	An algorithm for solving variable coefficient hyperbolic problems in a semi-infinite medium. Applied Mathematics Letters, 2004, 17, 145-151.	2.7	0
68	Mathematics competences assessment at lab sessions of aerospace engineering freshmen. , 2014, , .		0
69	Whole mathematics competences assessment at aerospace engineering sophomore. , 2014, , .		0
70	Is there a gender difference in Maths competencies achievement between Aerospace Engineering students in Spain?. , 2015, , .		0
71	Probabilistic calibration and shortâ€term prediction of the prevalence herpes simplex type 2: A transmission dynamics modelling approach. Mathematical Methods in the Applied Sciences, 2022, 45, 3345-3359.	2.3	0
72	First-order linear differential equations whose data are complex random variables: Probabilistic solution and stability analysis via densities. AIMS Mathematics, 2021, 7, 1486-1506.	1.6	0

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73	Solving Second-Order Linear Differential Equations with Random Analytic Coefficients about Regular-Singular Points. Mathematics, 2020, 8, 230.	2.2	0