

Omar Abu Arqub

List of Publications by Year in descending order

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108
papers

8,610
citations

34105

52
h-index

45317

90
g-index

110
all docs

110
docs citations

110
times ranked

3811
citing authors

#	ARTICLE	IF	CITATIONS
1	A Genetic Algorithm Approach for Prediction of Linear Dynamical Systems. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-12.	1.1	1,476
2	Numerical solution of systems of second-order boundary value problems using continuous genetic algorithm. <i>Information Sciences</i> , 2014, 279, 396-415.	6.9	386
3	Adaptation of reproducing kernel algorithm for solving fuzzy Fredholm-Volterra integrodifferential equations. <i>Neural Computing and Applications</i> , 2017, 28, 1591-1610.	5.6	308
4	Numerical solutions of fuzzy differential equations using reproducing kernel Hilbert space method. <i>Soft Computing</i> , 2016, 20, 3283-3302.	3.6	292
5	Application of reproducing kernel algorithm for solving second-order, two-point fuzzy boundary value problems. <i>Soft Computing</i> , 2017, 21, 7191-7206.	3.6	263
6	Approximate analytical solution of the nonlinear fractional KdV-Burgers equation: A new iterative algorithm. <i>Journal of Computational Physics</i> , 2015, 293, 81-95.	3.8	212
7	Series Solution of Fuzzy Differential Equations under Strongly Generalized Differentiability. <i>Journal of Advanced Research in Applied Mathematics</i> , 2013, 5, 31-52.	0.1	174
8	New Results on Fractional Power Series: Theories and Applications. <i>Entropy</i> , 2013, 15, 5305-5323.	2.2	161
9	Numerical solutions for the Robin time-fractional partial differential equations of heat and fluid flows based on the reproducing kernel algorithm. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2018, 28, 828-856.	2.8	159
10	Application of Residual Power Series Method for the Solution of Time-fractional Schrödinger Equations in One-dimensional Space. <i>Fundamenta Informaticae</i> , 2019, 166, 87-110.	0.4	152
11	Computational algorithm for solving fredholm time-fractional partial integrodifferential equations of dirichlet functions type with error estimates. <i>Applied Mathematics and Computation</i> , 2019, 342, 280-294.	2.2	148
12	Fuzzy conformable fractional differential equations: novel extended approach and new numerical solutions. <i>Soft Computing</i> , 2020, 24, 12501-12522.	3.6	146
13	Atangana-Baleanu fractional approach to the solutions of Bagley-Torvik and Painlevé equations in Hilbert space. <i>Chaos, Solitons and Fractals</i> , 2018, 117, 161-167.	5.1	141
14	Solution of the fractional epidemic model by homotopy analysis method. <i>Journal of King Saud University - Science</i> , 2013, 25, 73-81.	3.5	132
15	Fitted reproducing kernel Hilbert space method for the solutions of some certain classes of time-fractional partial differential equations subject to initial and Neumann boundary conditions. <i>Computers and Mathematics With Applications</i> , 2017, 73, 1243-1261.	2.7	128
16	Numerical solutions of integrodifferential equations of Fredholm operator type in the sense of the Atangana-Baleanu fractional operator. <i>Chaos, Solitons and Fractals</i> , 2018, 117, 117-124.	5.1	128
17	Optimization Solution of Troesch's and Bratu's Problems of Ordinary Type Using Novel Continuous Genetic Algorithm. <i>Discrete Dynamics in Nature and Society</i> , 2014, 2014, 1-15.	0.9	126
18	Constructing and predicting solitary pattern solutions for nonlinear time-fractional dispersive partial differential equations. <i>Journal of Computational Physics</i> , 2015, 293, 385-399.	3.8	126

#	ARTICLE	IF	CITATIONS
19	APPLICATION OF REPRODUCING KERNEL ALGORITHM FOR SOLVING DIRICHLET TIME-FRACTIONAL DIFFUSION-GORDON TYPES EQUATIONS IN POROUS MEDIA. <i>Journal of Porous Media</i> , 2019, 22, 411-434.	1.9	126
20	Numerical Algorithm for the Solutions of Fractional Order Systems of Dirichlet Function Types with Comparative Analysis. <i>Fundamenta Informaticae</i> , 2019, 166, 111-137.	0.4	125
21	Solving Fredholm integro-differential equations using reproducing kernel Hilbert space method. <i>Applied Mathematics and Computation</i> , 2013, 219, 8938-8948.	2.2	118
22	A novel expansion iterative method for solving linear partial differential equations of fractional order. <i>Applied Mathematics and Computation</i> , 2015, 257, 119-133.	2.2	107
23	The RKHS method for numerical treatment for integrodifferential algebraic systems of temporal two-point BVPs. <i>Neural Computing and Applications</i> , 2018, 30, 2595-2606.	5.6	105
24	Solutions of time-fractional Tricomi and Keldysh equations of Dirichlet functions types in Hilbert space. <i>Numerical Methods for Partial Differential Equations</i> , 2018, 34, 1759-1780.	3.6	98
25	The reproducing kernel algorithm for handling differential algebraic systems of ordinary differential equations. <i>Mathematical Methods in the Applied Sciences</i> , 2016, 39, 4549-4562.	2.3	96
26	Fitted fractional reproducing kernel algorithm for the numerical solutions of ABC Fractional Volterra integro-differential equations. <i>Chaos, Solitons and Fractals</i> , 2019, 126, 394-402.	5.1	96
27	Modulation of reproducing kernel Hilbert space method for numerical solutions of Riccati and Bernoulli equations in the Atangana-Baleanu fractional sense. <i>Chaos, Solitons and Fractals</i> , 2019, 125, 163-170.	5.1	96
28	A Representation of the Exact Solution of Generalized Lane-Emden Equations Using a New Analytical Method. <i>Abstract and Applied Analysis</i> , 2013, 2013, 1-10.	0.7	95
29	Numerical algorithm for solving time-fractional partial integrodifferential equations subject to initial and Dirichlet boundary conditions. <i>Numerical Methods for Partial Differential Equations</i> , 2018, 34, 1577-1597.	3.6	95
30	Numerical computations of coupled fractional resonant Schrödinger equations arising in quantum mechanics under conformable fractional derivative sense. <i>Physica Scripta</i> , 2020, 95, 075218.	2.5	94
31	The Tikhonov regularization method for the inverse source problem of time fractional heat equation in the view of ABC-fractional technique. <i>Physica Scripta</i> , 2021, 96, 094006.	2.5	90
32	PIECEWISE OPTIMAL FRACTIONAL REPRODUCING KERNEL SOLUTION AND CONVERGENCE ANALYSIS FOR THE ATANGANA-BALEANU-CAPUTO MODEL OF THE LIENARD-TSM EQUATION. <i>Fractals</i> , 2020, 28, 2040007.	3.7	90
33	A general form of the generalized Taylor's formula with some applications. <i>Applied Mathematics and Computation</i> , 2015, 256, 851-859.	2.2	88
34	THE REPRODUCING KERNEL ALGORITHM FOR NUMERICAL SOLUTION OF VAN DER POL DAMPING MODEL IN VIEW OF THE ATANGANA-BALEANU FRACTIONAL APPROACH. <i>Fractals</i> , 2020, 28, 2040010.	3.7	88
35	An Optimization Algorithm for Solving Systems of Singular Boundary Value Problems. <i>Applied Mathematics and Information Sciences</i> , 2014, 8, 2809-2821.	0.5	88
36	Approximate solutions of nonlinear fractional Kundu-Eckhaus and coupled fractional massive Thirring equations emerging in quantum field theory using conformable residual power series method. <i>Physica Scripta</i> , 2020, 95, 105205.	2.5	86

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37	Numerical algorithm for solving two-point, second-order periodic boundary value problems for mixed integro-differential equations. <i>Applied Mathematics and Computation</i> , 2014, 243, 911-922.	2.2	85
38	Numerical solutions of systems of first-order, two-point BVPs based on the reproducing kernel algorithm. <i>Calcolo</i> , 2018, 55, 1.	1.1	81
39	Computational algorithm for solving singular Fredholm time-fractional partial integrodifferential equations with error estimates. <i>Journal of Applied Mathematics and Computing</i> , 2019, 59, 227-243.	2.5	81
40	An attractive analytical technique for coupled system of fractional partial differential equations in shallow water waves with conformable derivative. <i>Communications in Theoretical Physics</i> , 2020, 72, 085001.	2.5	81
41	Solving Singular Two-Point Boundary Value Problems Using Continuous Genetic Algorithm. <i>Abstract and Applied Analysis</i> , 2012, 2012, 1-25.	0.7	75
42	Numerical simulation of time-fractional partial differential equations arising in fluid flows via reproducing Kernel method. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2020, 30, 4711-4733.	2.8	75
43	A Numerical Algorithm for the Solutions of ABC Singular Lane–Emden Type Models Arising in Astrophysics Using Reproducing Kernel Discretization Method. <i>Mathematics</i> , 2020, 8, 923.	2.2	74
44	Multiple Solutions of Nonlinear Boundary Value Problems of Fractional Order: A New Analytic Iterative Technique. <i>Entropy</i> , 2014, 16, 471-493.	2.2	71
45	Numerical investigations for systems of second-order periodic boundary value problems using reproducing kernel method. <i>Applied Mathematics and Computation</i> , 2016, 291, 137-148.	2.2	71
46	A fractional Tikhonov regularization method for an inverse backward and source problems in the time-space fractional diffusion equations. <i>Chaos, Solitons and Fractals</i> , 2021, 150, 111127.	5.1	69
47	Adaptation of kernel functions–based approach with Atangana–Baleanu–Caputo distributed order derivative for solutions of fuzzy fractional Volterra and Fredholm integrodifferential equations. <i>Mathematical Methods in the Applied Sciences</i> , 2023, 46, 7807-7834.	2.3	68
48	Fuzzy fractional differential equations under the Mittag-Leffler kernel differential operator of the ABC approach: Theorems and applications. <i>Chaos, Solitons and Fractals</i> , 2021, 146, 110891.	5.1	66
49	Numerical solutions of time-fractional partial integrodifferential equations of Robin functions types in Hilbert space with error bounds and error estimates. <i>Nonlinear Dynamics</i> , 2018, 94, 1819-1834.	5.2	64
50	A Computational Method for Two-Point Boundary Value Problems of Fourth-Order Mixed Integrodifferential Equations. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-10.	1.1	63
51	Reproducing kernel approach for numerical solutions of fuzzy fractional initial value problems under the Mittag-Leffler kernel differential operator. <i>Mathematical Methods in the Applied Sciences</i> , 2023, 46, 7965-7986.	2.3	61
52	Solutions of Bagley–Torvik and Painlevé equations of fractional order using iterative reproducing kernel algorithm with error estimates. <i>Neural Computing and Applications</i> , 2018, 29, 1465-1479.	5.6	59
53	A Reliable Analytical Method for Solving Higher-Order Initial Value Problems. <i>Discrete Dynamics in Nature and Society</i> , 2013, 2013, 1-12.	0.9	58
54	Approximate Solutions of DASs with Nonclassical Boundary Conditions using Novel Reproducing Kernel Algorithm. <i>Fundamenta Informaticae</i> , 2016, 146, 231-254.	0.4	52

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55	Residual Series Representation Algorithm for Solving Fuzzy Duffing Oscillator Equations. <i>Symmetry</i> , 2020, 12, 572.	2.2	51
56	Application of Reproducing Kernel Method for Solving Nonlinear Fredholm-Volterra Integrodifferential Equations. <i>Abstract and Applied Analysis</i> , 2012, 2012, 1-16.	0.7	49
57	Numerical simulation of telegraph and Cattaneo fractional-type models using adaptive reproducing kernel framework. <i>Mathematical Methods in the Applied Sciences</i> , 2021, 44, 8472-8489.	2.3	49
58	An adaptive numerical approach for the solutions of fractional advection-diffusion and dispersion equations in singular case under Riesz's derivative operator. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 540, 123257.	2.6	46
59	NUMERICAL SOLUTIONS OF RIESZ FRACTIONAL DIFFUSION AND ADVECTION-DISPERSION EQUATIONS IN POROUS MEDIA USING ITERATIVE REPRODUCING KERNEL ALGORITHM. <i>Journal of Porous Media</i> , 2020, 23, 783-804.	1.9	43
60	An Efficient Analytical Method for Solving Singular Initial Value Problems of Nonlinear Systems. <i>Applied Mathematics and Information Sciences</i> , 2016, 10, 647-656.	0.5	43
61	A computational method for solving periodic boundary value problems for integro-differential equations of Fredholm-Volterra type. <i>Applied Mathematics and Computation</i> , 2014, 240, 229-239.	2.2	41
62	Analytical Solutions of Fuzzy Initial Value Problems by HAM. <i>Applied Mathematics and Information Sciences</i> , 2013, 7, 1903-1919.	0.5	36
63	A novel analytical algorithm for generalized fifth-order time-fractional nonlinear evolution equations with conformable time derivative arising in shallow water waves. <i>AEJ - Alexandria Engineering Journal</i> , 2022, 61, 5753-5769.	6.4	35
64	A Numerical Iterative Method for Solving Systems of First-Order Periodic Boundary Value Problems. <i>Journal of Applied Mathematics</i> , 2014, 2014, 1-10.	0.9	33
65	Solving optimal control problems of Fredholm constraint optimality via the reproducing kernel Hilbert space method with error estimates and convergence analysis. <i>Mathematical Methods in the Applied Sciences</i> , 2021, 44, 7915-7932.	2.3	32
66	Analytical Approximations of Partial Differential Equations of Fractional Order with Multistep Approach. <i>Journal of Computational and Theoretical Nanoscience</i> , 2016, 13, 7793-7801.	0.4	32
67	Homotopy Analysis Method for Second-Order Boundary Value Problems of Integrodifferential Equations. <i>Discrete Dynamics in Nature and Society</i> , 2012, 2012, 1-18.	0.9	29
68	Solving fractional two-point boundary value problems using continuous analytic method. <i>Ain Shams Engineering Journal</i> , 2013, 4, 539-547.	6.1	26
69	Application of Continuous Genetic Algorithm for Nonlinear System of Second-Order Boundary Value Problems. <i>Applied Mathematics and Information Sciences</i> , 2014, 8, 235-248.	0.5	26
70	The Laplace Optimized Decomposition Method for Solving Systems of Partial Differential Equations of Fractional Order. <i>International Journal of Applied and Computational Mathematics</i> , 2022, 8, 1.	1.6	25
71	A numerical algorithm in reproducing kernel-based approach for solving the inverse source problem of the time-space fractional diffusion equation. <i>Partial Differential Equations in Applied Mathematics</i> , 2021, 4, 100164.	2.4	22
72	Well-posedness of the inverse problem of time fractional heat equation in the sense of the Atangana-Baleanu fractional approach. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 2261-2268.	6.4	21

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73	Reproducing Kernel Algorithm for the Analytical-Numerical Solutions of Nonlinear Systems of Singular Periodic Boundary Value Problems. <i>Mathematical Problems in Engineering</i> , 2015, 2015, 1-13.	1.1	19
74	Analysis of Lie Symmetry, Explicit Series Solutions, and Conservation Laws for the Nonlinear Time-Fractional Phi-Four Equation in Two-Dimensional Space. <i>International Journal of Applied and Computational Mathematics</i> , 2022, 8, .	1.6	19
75	Soliton Solutions of a Nonlinear Fractional Sasa-Satsuma Equation in Monomode Optical Fibers. <i>Applied Mathematics and Information Sciences</i> , 2020, 14, 365-374.	0.5	18
76	Development of the reproducing kernel Hilbert space algorithm for numerical pointwise solution of the time-fractional nonlocal reaction-diffusion equation. <i>AEJ - Alexandria Engineering Journal</i> , 2022, 61, 10539-10550.	6.4	18
77	Existence, Uniqueness, and Characterization Theorems for Nonlinear Fuzzy Integrodifferential Equations of Volterra Type. <i>Mathematical Problems in Engineering</i> , 2015, 2015, 1-13.	1.1	16
78	Reproducing kernel Hilbert pointwise numerical solvability of fractional Sine-Gordon model in time-dependent variable with Dirichlet condition. <i>Physica Scripta</i> , 2021, 96, 104005.	2.5	16
79	The cubic B-spline interpolation method for numerical point solutions of conformable boundary value problems. <i>AEJ - Alexandria Engineering Journal</i> , 2022, 61, 1519-1528.	6.4	15
80	Bifurcations of the time-fractional generalized coupled Hirota-Satsuma KdV system. <i>Waves Wavelets and Fractals</i> , 2017, 3, 31-39.	0.4	13
81	A Residual Power Series Technique for Solving Systems of Initial Value Problems. <i>Applied Mathematics and Information Sciences</i> , 2016, 10, 765-775.	0.5	12
82	Iterative Multistep Reproducing Kernel Hilbert Space Method for Solving Strongly Nonlinear Oscillators. <i>Advances in Mathematical Physics</i> , 2014, 2014, 1-7.	0.8	11
83	A numerical method for solving conformable fractional integrodifferential systems of second-order, two-points periodic boundary conditions. <i>AEJ - Alexandria Engineering Journal</i> , 2022, 61, 5699-5711.	6.4	11
84	Adaptation of residual power series method to solve Fredholm fuzzy integro-differential equations. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	10
85	Solving space-fractional Cauchy problem by modified finite-difference discretization scheme. <i>AEJ - Alexandria Engineering Journal</i> , 2020, 59, 2409-2417.	6.4	10
86	Implementation of reproducing kernel Hilbert algorithm for pointwise numerical solvability of fractional Burgers's™ model in time-dependent variable domain regarding constraint boundary condition of Robin. <i>Results in Physics</i> , 2021, 24, 104210.	4.1	9
87	The B-spline collocation method for solving conformable initial value problems of non-singular and singular types. <i>AEJ - Alexandria Engineering Journal</i> , 2022, 61, 963-974.	6.4	9
88	Lie symmetry analysis, explicit solutions, and conservation laws of the time-fractional Fisher equation in two-dimensional space. <i>Journal of Ocean Engineering and Science</i> , 2022, 7, 345-352.	4.3	9
89	Modeling and Analyzing Neural Networks Using Reproducing Kernel Hilbert Space Algorithm. <i>Applied Mathematics and Information Sciences</i> , 2018, 12, 89-99.	0.5	8
90	An Attractive Analytic-Numeric Approach for the Solutions of Uncertain Riccati Differential Equations using Residual Power Series. <i>Applied Mathematics and Information Sciences</i> , 2020, 14, 177-190.	0.5	8

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91	Computing bifurcations behavior of mixed type singular time-fractional partial integrodifferential equations of Dirichlet functions types in hilbert space with error analysis. Filomat, 2019, 33, 3845-3853.	0.5	6
92	A Novel Iterative Numerical Algorithm for the Solutions of Systems of Fuzzy Initial Value Problems. Applied Mathematics and Information Sciences, 2017, 11, 1059-1074.	0.5	5
93	Analytical Simulation of Singular Second-Order, Three Points Boundary Value Problems for Fredholm Operator Using Computational Kernel Algorithm. Journal of Computational and Theoretical Nanoscience, 2016, 13, 7816-7824.	0.4	4
94	An Efficient Computational Method for Handling Singular Second-Order, Three Points Volterra Integrodifferential Equations. Journal of Computational and Theoretical Nanoscience, 2016, 13, 7807-7815.	0.4	3
95	Analytic-numeric treatment for handling system of second-order, three-point BVPs. AIP Conference Proceedings, 2017, , .	0.4	2
96	Solving Fuzzy Fractional IVPs of order $2\hat{1}^2$ by Residual Power Series Algorithm. , 2019, , .		2
97	Residual Power Series Approach for Solving Linear Fractional Swift-Hohenberg Problems. Lecture Notes in Networks and Systems, 2020, , 33-43.	0.7	2
98	Analytical Solutions of Fuzzy Fractional Boundary Value Problem of Order $2\hat{1}\pm$ by Using RKHS Algorithm. Applied Mathematics and Information Sciences, 2019, 13, 523-533.	0.5	2
99	Fitted Spectral Tau Jacobi Technique for Solving Certain Classes of Fractional Differential Equations,. Applied Mathematics and Information Sciences, 2019, 13, 979-987.	0.5	2
100	Numerical Solutions of Linear Time-fractional Klein-Gordon Equation by Using Power Series Approach. SSRN Electronic Journal, 2018, , .	0.4	1
101	Soft Numerical Algorithm with Convergence Analysis for Time-Fractional Partial IDEs Constrained by Neumann Conditions. Springer Proceedings in Mathematics and Statistics, 2019, , 107-119.	0.2	1
102	Numerical Simulation for Fuzzy Fredholm Integral Equations Using Reproducing Kernel Algorithm. , 2015, , .		1
103	Solutions of Volterra Singular Time-Fractional PIDEs. SSRN Electronic Journal, 0, , .	0.4	0
104	Fuzzy Calculus Theory and Its Applications. Complexity, 2018, 2018, 1-2.	1.6	0
105	Application of Power Series Method for Solving Obstacle Problem of Fractional Order. , 2019, , .		0
106	Multistep Approach for Nonlinear Fractional Bloch System Using Adomian Decomposition Techniques. Springer Proceedings in Mathematics and Statistics, 2019, , 153-171.	0.2	0
107	Numerical solutions of singular time-fractional PDEs. , 2019, , 43-54.		0
108	Solutions of Fractional Verhulst Model by Modified Analytical and Numerical Approaches. Forum for Interdisciplinary Mathematics, 2020, , 233-260.	1.6	0