

Fazlollah Soleymani

List of Publications by Year in descending order

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147
papers

2,174
citations

257101

24
h-index

344852

36
g-index

148
all docs

148
docs citations

148
times ranked

929
citing authors

#	ARTICLE	IF	CITATIONS
1	A real-time mathematical computer method for potato inspection using machine vision. Computers and Mathematics With Applications, 2012, 63, 268-279.	1.4	119
2	A new Bernoulli matrix method for solving high-order linear and nonlinear Fredholm integro-differential equations with piecewise intervals. Applied Mathematics and Computation, 2012, 219, 482-497.	1.4	84
3	Finding the solution of nonlinear equations by a class of optimal methods. Computers and Mathematics With Applications, 2012, 63, 764-774.	1.4	70
4	A multi-step class of iterative methods for nonlinear systems. Optimization Letters, 2014, 8, 1001-1015.	0.9	69
5	A hybrid neural network Imperialist Competitive Algorithm for skin color segmentation. Mathematical and Computer Modelling, 2013, 57, 848-856.	2.0	59
6	On a numerical technique for finding multiple zeros and its dynamic. Journal of the Egyptian Mathematical Society, 2013, 21, 346-353.	0.6	48
7	A computer-aided diagnosis system for malignant melanomas. Neural Computing and Applications, 2013, 23, 2059-2071.	3.2	47
8	On a New Method for Computing the Numerical Solution of Systems of Nonlinear Equations. Journal of Applied Mathematics, 2012, 2012, 1-15.	0.4	46
9	Two new classes of optimal Jarratt-type fourth-order methods. Applied Mathematics Letters, 2012, 25, 847-853.	1.5	43
10	Computing multiple zeros using a class of quartically convergent methods. AEJ - Alexandria Engineering Journal, 2013, 52, 531-541.	3.4	43
11	Optimal Steffensen-type methods with eighth order of convergence. Computers and Mathematics With Applications, 2011, 62, 4619-4626.	1.4	41
12	A class of numerical algorithms for computing outer inverses. Journal of Computational and Applied Mathematics, 2014, 263, 236-245.	1.1	38
13	An Improvement of Ostrowski's and King's Techniques with Optimal Convergence Order Eight. Journal of Optimization Theory and Applications, 2012, 153, 225-236.	0.8	36
14	Semantic image classification by genetic algorithm using optimised fuzzy system based on Zernike moments. Signal, Image and Video Processing, 2014, 8, 831-842.	1.7	30
15	Dynamical analysis of iterative methods for nonlinear systems or how to deal with the dimension?. Applied Mathematics and Computation, 2014, 244, 398-412.	1.4	30
16	Some Iterative Methods Free from Derivatives and Their Basins of Attraction for Nonlinear Equations. Discrete Dynamics in Nature and Society, 2013, 2013, 1-10.	0.5	27
17	On a Novel Fourth-Order Algorithm for Solving Systems of Nonlinear Equations. Journal of Applied Mathematics, 2012, 2012, 1-12.	0.4	26
18	An optimized derivative-free form of the Potra's method. Mathematical and Computer Modelling, 2012, 56, 97-104.	2.0	26

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19	Color image segmentation using neuro-fuzzy system in a novel optimized color space. <i>Neural Computing and Applications</i> , 2013, 23, 1513-1520.	3.2	26
20	On improved three-step schemes with high efficiency index and their dynamics. <i>Numerical Algorithms</i> , 2014, 65, 153-169.	1.1	26
21	Inverse multi-quadric RBF for computing the weights of FD method: Application to American options. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2018, 64, 74-88.	1.7	26
22	Some modifications of King's family with optimal eighth order of convergence. <i>Mathematical and Computer Modelling</i> , 2012, 55, 1373-1380.	2.0	25
23	An iterative method for computing the approximate inverse of a square matrix and the Moore-Penrose inverse of a non-square matrix. <i>Applied Mathematics and Computation</i> , 2013, 224, 671-680.	1.4	25
24	Several iterative methods with memory using self-accelerators. <i>Applied Mathematics and Computation</i> , 2015, 254, 452-458.	1.4	25
25	Accurate fourteenth-order methods for solving nonlinear equations. <i>Numerical Algorithms</i> , 2011, 58, 513-527.	1.1	24
26	Tau approximate solution of weakly singular Volterra integral equations. <i>Mathematical and Computer Modelling</i> , 2013, 57, 494-502.	2.0	24
27	Improved numerical solution of multi-asset option pricing problem: A localized RBF-FD approach. <i>Chaos, Solitons and Fractals</i> , 2019, 119, 298-309.	2.5	24
28	Numerically stable improved Chebyshev-Halley type schemes for matrix sign function. <i>Journal of Computational and Applied Mathematics</i> , 2017, 318, 189-198.	1.1	23
29	A Higher Order Iterative Method for Computing the Drazin Inverse. <i>Scientific World Journal</i> , The, 2013, 2013, 1-11.	0.8	22
30	Basins of Attraction for Various Steffensen-Type Methods. <i>Journal of Applied Mathematics</i> , 2014, 2014, 1-17.	0.4	22
31	Numerical solution of nonlinear systems by a general class of iterative methods with application to nonlinear PDEs. <i>Numerical Algorithms</i> , 2014, 67, 223-242.	1.1	21
32	A fast convergent numerical method for matrix sign function with application in SDEs. <i>Journal of Computational and Applied Mathematics</i> , 2015, 282, 167-178.	1.1	21
33	On hyperpower family of iterations for computing outer inverses possessing high efficiencies. <i>Linear Algebra and Its Applications</i> , 2015, 484, 477-495.	0.4	21
34	An efficient computation of generalized inverse of a matrix. <i>Applied Mathematics and Computation</i> , 2018, 316, 89-101.	1.4	21
35	An accelerated iterative method for computing weighted Moore-Penrose inverse. <i>Applied Mathematics and Computation</i> , 2013, 222, 365-371.	1.4	20
36	On finding robust approximate inverses for large sparse matrices. <i>Linear and Multilinear Algebra</i> , 2014, 62, 1314-1334.	0.5	20

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37	Some Matrix Iterations for Computing Generalized Inverses and Balancing Chemical Equations. Algorithms, 2015, 8, 982-998.	1.2	20
38	On the construction of some tri-parametric iterative methods with memory. Numerical Algorithms, 2015, 70, 835-845.	1.1	20
39	A Rapid Numerical Algorithm to Compute Matrix Inversion. International Journal of Mathematics and Mathematical Sciences, 2012, 2012, 1-11.	0.3	19
40	ON A FAST ITERATIVE METHOD FOR APPROXIMATE INVERSE OF MATRICES. Communications of the Korean Mathematical Society, 2013, 28, 407-418.	0.2	19
41	A Class of Three-Step Derivative-Free Root Solvers with Optimal Convergence Order. Journal of Applied Mathematics, 2012, 2012, 1-15.	0.4	18
42	Higher order derivative-free iterative methods with and without memory for systems of nonlinear equations. Applied Mathematics and Computation, 2017, 314, 199-211.	1.4	18
43	Some optimal iterative methods and their with memory variants. Journal of the Egyptian Mathematical Society, 2013, 21, 133-141.	0.6	17
44	An improved Schulz-type iterative method for matrix inversion with application. Transactions of the Institute of Measurement and Control, 2014, 36, 983-991.	1.1	17
45	A fast convergent iterative solver for approximate inverse of matrices. Numerical Linear Algebra With Applications, 2014, 21, 439-452.	0.9	17
46	Iterative methods for nonlinear systems associated with finite difference approach in stochastic differential equations. Numerical Algorithms, 2016, 71, 89-102.	1.1	17
47	The Laplace Homotopy Analysis Method for Solving a General Fractional Diffusion Equation Arising in Nano-Hydrodynamics. Journal of Computational and Theoretical Nanoscience, 2013, 10, 33-36.	0.4	16
48	Regarding the accuracy of optimal eighth-order methods. Mathematical and Computer Modelling, 2011, 53, 1351-1357.	2.0	15
49	Robustness of Operational Matrices of Differentiation for Solving State-Space Analysis and Optimal Control Problems. Abstract and Applied Analysis, 2013, 2013, 1-9.	0.3	15
50	An efficient and stable Newton-type iterative method for computing generalized inverse $A^T, S(2)$. Numerical Algorithms, 2015, 69, 569-578.	1.1	15
51	A General Three-Step Class of Optimal Iterations for Nonlinear Equations. Mathematical Problems in Engineering, 2011, 2011, 1-10.	0.6	14
52	Construction of Optimal Derivative-Free Techniques without Memory. Journal of Applied Mathematics, 2012, 2012, 1-24.	0.4	14
53	Efficient optimal eighth-order derivative-free methods for nonlinear equations. Japan Journal of Industrial and Applied Mathematics, 2013, 30, 287-306.	0.5	14
54	Some Matrix Iterations for Computing Matrix Sign Function. Journal of Applied Mathematics, 2014, 2014, 1-9.	0.4	14

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55	An efficient matrix iteration for computing weighted Moore–Penrose inverse. Applied Mathematics and Computation, 2014, 226, 441-454.	1.4	14
56	A mixed derivative terms removing method in multi-asset option pricing problems. Applied Mathematics Letters, 2016, 60, 108-114.	1.5	14
57	A Local Radial Basis Function Method for High-Dimensional American Option Pricing Problems. Mathematical Modelling and Analysis, 2018, 23, 117-138.	0.7	14
58	Revisit of Jarratt method for solving nonlinear equations. Numerical Algorithms, 2011, 57, 377-388.	1.1	13
59	Approximating the Matrix Sign Function Using a Novel Iterative Method. Abstract and Applied Analysis, 2014, 2014, 1-9.	0.3	13
60	A note on the stability of a $\frac{1}{p}$ th order iteration for finding generalized inverses. Applied Mathematics Letters, 2014, 28, 77-81.	1.5	13
61	Pricing multi-asset option problems: a Chebyshev pseudo-spectral method. BIT Numerical Mathematics, 2019, 59, 243-270.	1.0	13
62	On the computation of weighted Moore–Penrose inverse using a high-order matrix method. Computers and Mathematics With Applications, 2013, 66, 2344-2351.	1.4	12
63	A Class of Steffensen-Type Iterative Methods for Nonlinear Systems. Journal of Applied Mathematics, 2014, 2014, 1-9.	0.4	12
64	A computational method to price with transaction costs under the nonlinear Black–Scholes model. Chaos, Solitons and Fractals, 2019, 127, 291-301.	2.5	12
65	Optimal fourth-order iterative method free from derivative. Miskolc Mathematical Notes, 2011, 12, 255.	0.3	12
66	Two Optimal Eighth-Order Derivative-Free Classes of Iterative Methods. Abstract and Applied Analysis, 2012, 2012, 1-14.	0.3	11
67	Novel Computational Iterative Methods with Optimal Order for Nonlinear Equations. Advances in Numerical Analysis, 2011, 2011, 1-10.	0.2	10
68	Finding the Moore–Penrose inverse by a new matrix iteration. Journal of Applied Mathematics and Computing, 2015, 47, 33-48.	1.2	10
69	A multiquadric RBF–FD scheme for simulating the financial HHW equation utilizing exponential integrator. Calcolo, 2018, 55, 1.	0.6	10
70	Pricing options under stochastic volatility jump model: A stable adaptive scheme. Applied Numerical Mathematics, 2019, 145, 69-89.	1.2	10
71	A new method for solving ill-conditioned linear systems. Opuscula Mathematica, 2013, 33, 337.	0.3	10
72	Computing Simple Roots by an Optimal Sixteenth-Order Class. Journal of Applied Mathematics, 2012, 2012, 1-13.	0.4	9

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73	A Numerical Method for Computing the Principal Square Root of a Matrix. <i>Abstract and Applied Analysis</i> , 2014, 2014, 1-7.	0.3	9
74	RBF-FD solution for a financial partial-integro differential equation utilizing the generalized multiquadric function. <i>Computers and Mathematics With Applications</i> , 2021, 82, 161-178.	1.4	9
75	New Third- and Sixth-Order Derivative-Free Techniques for Nonlinear Equations. <i>Journal of Mathematics Research</i> , 2011, 3, .	0.1	8
76	Interval Ostrowski-type methods with guaranteed convergence. <i>Annali Dell'Universita Di Ferrara</i> , 2013, 59, 221-234.	0.7	8
77	A three-step iterative method for non-linear systems with sixth order of convergence. <i>International Journal of Computing Science and Mathematics</i> , 2013, 4, 363.	0.2	8
78	Multipoint Iterative Methods for Finding All the Simple Zeros in an Interval. <i>Journal of Applied Mathematics</i> , 2014, 2014, 1-13.	0.4	8
79	Constructing two-step iterative methods with and without memory. <i>Computational Mathematics and Mathematical Physics</i> , 2015, 55, 183-193.	0.2	8
80	On a fourth-order matrix method for computing polar decomposition. <i>Computational and Applied Mathematics</i> , 2015, 34, 389-399.	1.3	8
81	A family of Kurchatov-type methods and its stability. <i>Applied Mathematics and Computation</i> , 2017, 294, 264-279.	1.4	8
82	A Legendre-based computational method for solving a class of Itô stochastic delay differential equations. <i>Numerical Algorithms</i> , 2019, 80, 1267-1282.	1.1	8
83	A radial basis function Hermite finite difference approach to tackle cash-or-nothing and asset-or-nothing options. <i>Journal of Computational and Applied Mathematics</i> , 2020, 368, 112523.	1.1	8
84	Efficient portfolio construction by means of CVaR and k-means++ clustering analysis: Evidence from the NYSE. <i>International Journal of Finance and Economics</i> , 2022, 27, 3679-3693.	1.9	8
85	On novel classes of iterative methods for solving nonlinear equations. <i>Computational Mathematics and Mathematical Physics</i> , 2012, 52, 203-210.	0.2	7
86	A Taylor-type numerical method for solving nonlinear ordinary differential equations. <i>AEJ - Alexandria Engineering Journal</i> , 2013, 52, 543-550.	3.4	7
87	Solution of the heat equation in the cast mould heterogeneous domain using a weighted algorithm based on the homotopy perturbation method. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2013, 23, 451-459.	1.6	7
88	New Mono- and Biaccelerator Iterative Methods with Memory for Nonlinear Equations. <i>Abstract and Applied Analysis</i> , 2014, 2014, 1-8.	0.3	7
89	Several numerical methods for computing unitary polar factor of a matrix. <i>Advances in Difference Equations</i> , 2016, 2016, .	3.5	7
90	A Class of Kung-Traub-Type Iterative Algorithms for Matrix Inversion. <i>International Journal of Applied and Computational Mathematics</i> , 2016, 2, 641-648.	0.9	7

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91	Pricing foreign exchange options under stochastic volatility and interest rates using an RBFâ€‘FD method. <i>Journal of Computational Science</i> , 2019, 37, 101028.	1.5	7
92	A fourth-order method for computing the sign function of a matrix with application in the Yangâ€‘Baxter-like matrix equation. <i>Computational and Applied Mathematics</i> , 2019, 38, 1.	1.0	7
93	A family of Chaplygin-type solvers for ItÃ‘ stochastic differential equations. <i>Applied Mathematics and Computation</i> , 2019, 340, 296-304.	1.4	7
94	Asset pricing for an affine jumpâ€‘diffusion model using an FD method of lines on nonuniform meshes. <i>Mathematical Methods in the Applied Sciences</i> , 2019, 42, 578-591.	1.2	7
95	A family of high order iterations for calculating the sign of a matrix. <i>Mathematical Methods in the Applied Sciences</i> , 2020, 43, 8192-8203.	1.2	7
96	Classifying a Lending Portfolio of Loans with Dynamic Updates via a Machine Learning Technique. <i>Mathematics</i> , 2021, 9, 17.	1.1	7
97	An extension of the Tau numerical algorithm for the solution of linear and nonlinear Laneâ€‘Emden equations. <i>Mathematical Methods in the Applied Sciences</i> , 2013, 36, 674-682.	1.2	6
98	Numerical solution of nonlinear equations by an optimal eighth-order class of iterative methods. <i>Annali Dell'Universita Di Ferrara</i> , 2013, 59, 159-171.	0.7	6
99	Iterative Methods for Nonlinear Equations or Systems and Their Applications. <i>Journal of Applied Mathematics</i> , 2013, 2013, 1-2.	0.4	6
100	A New High-Order Stable Numerical Method for Matrix Inversion. <i>Scientific World Journal</i> , The, 2014, 2014, 1-10.	0.8	6
101	A super-fast tri-parametric iterative method with memory. <i>Applied Mathematics and Computation</i> , 2016, 289, 486-491.	1.4	6
102	Four-factor model of Quanto CDS with jumps-at-default and stochastic recovery. <i>Journal of Computational Science</i> , 2021, 54, 101434.	1.5	6
103	Two Classes of Iterative Schemes for Approximating Simple Roots. <i>Journal of Applied Sciences</i> , 2011, 11, 3442-3446.	0.1	6
104	The existence and uniqueness of solution for linear system of mixed Volterra-Fredholm integral equations in Banach space. <i>AIMS Mathematics</i> , 2020, 5, 226-235.	0.7	6
105	Application of the Homotopy Perturbation Method to the Burgers Equation with Delay. <i>Chinese Physics Letters</i> , 2012, 29, 030202.	1.3	5
106	Efficient Iterative Methods with and without Memory Possessing High Efficiency Indices. <i>Discrete Dynamics in Nature and Society</i> , 2014, 2014, 1-9.	0.5	5
107	An Algorithm for Computing Geometric Mean of Two Hermitian Positive Definite Matrices via Matrix Sign. <i>Abstract and Applied Analysis</i> , 2014, 2014, 1-6.	0.3	5
108	A Matrix Iteration for Finding Drazin Inverse with Ninth-Order Convergence. <i>Abstract and Applied Analysis</i> , 2014, 2014, 1-7.	0.3	5

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109	Some derivative-free solvers for numerical solution of SODEs. <i>SeMA Journal</i> , 2015, 68, 17-27.	1.0	5
110	Computing outer inverses by scaled matrix iterations. <i>Journal of Computational and Applied Mathematics</i> , 2016, 296, 89-101.	1.1	5
111	A new solution method for stochastic differential equations via collocation approach. <i>International Journal of Computer Mathematics</i> , 2016, 93, 2079-2091.	1.0	5
112	Improving the Computational Efficiency of a Variant of Steffensen's Method for Nonlinear Equations. <i>Mathematics</i> , 2019, 7, 306.	1.1	5
113	Pricing the financial Heston's Hull's White model with arbitrary correlation factors via an adaptive FDM. <i>Computers and Mathematics With Applications</i> , 2019, 77, 1107-1123.	1.4	5
114	European option valuation under the Bates PIDE in finance: A numerical implementation of the Gaussian scheme. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2020, 13, 889-909.	0.6	5
115	On a high-order Gaussian radial basis function generated Hermite finite difference method and its application. <i>Calcolo</i> , 2021, 58, 1.	0.6	5
116	Robust cubically and quartically iterative techniques free from derivative. <i>Proyecciones</i> , 2011, 30, 149-161.	0.1	4
117	Optimized Steffensen-Type Methods with Eighth-Order Convergence and High Efficiency Index. <i>International Journal of Mathematics and Mathematical Sciences</i> , 2012, 2012, 1-18.	0.3	4
118	An efficient twelfth-order iterative method for finding all the solutions of nonlinear equations. <i>Journal of Computational Methods in Sciences and Engineering</i> , 2013, 13, 309-320.	0.1	4
119	An Iterative Solver in the Presence and Absence of Multiplicity for Nonlinear Equations. <i>Scientific World Journal</i> , The, 2013, 2013, 1-9.	0.8	4
120	Two novel classes of two-step optimal methods for all the zeros in an interval. <i>Afrika Matematika</i> , 2014, 25, 307-321.	0.4	4
121	On the extension of Householder's method for weighted Moore's Penrose inverse. <i>Applied Mathematics and Computation</i> , 2014, 231, 407-413.	1.4	4
122	A Quartically Convergent Jarratt-Type Method for Nonlinear System of Equations. <i>Algorithms</i> , 2015, 8, 415-423.	1.2	4
123	Some efficient seventh-order derivative-free families in root-finding. <i>Opuscula Mathematica</i> , 2013, 33, 163.	0.3	4
124	Letter to the editor regarding the article by Khattri: derivative free algorithm for solving nonlinear equations. <i>Computing (Vienna/New York)</i> , 2013, 95, 159-162.	3.2	3
125	Approximating the Inverse of a Square Matrix with Application in Computation of the Moore-Penrose Inverse. <i>Journal of Applied Mathematics</i> , 2014, 2014, 1-8.	0.4	3
126	A Novel Iterative Method for Polar Decomposition and Matrix Sign Function. <i>Discrete Dynamics in Nature and Society</i> , 2015, 2015, 1-11.	0.5	3

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127	Factorizations of hyperpower family of iterative methods via least squares approach. Computational and Applied Mathematics, 2018, 37, 3226-3240.	1.3	3
128	Efficient Semi-Discretization Techniques for Pricing European and American Basket Options. Computational Economics, 2019, 53, 1487-1508.	1.5	3
129	How to construct a fourth-order scheme for Heston-Hull-White equation?. AIP Conference Proceedings, 2019, , .	0.3	3
130	An optimized Steffensen-type iterative method with memory associated with annuity calculation. European Physical Journal Plus, 2019, 134, 1.	1.2	3
131	A revisit of stochastic theta method with some improvements. Filomat, 2017, 31, 585-596.	0.2	3
132	On an improved computational solution for the 3D HCIR PDE in finance. Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica, 2019, 27, 207-230.	0.1	3
133	A Numerical Algorithm for Solving Nonlinear Delay Volterra Integral Equations by Means of Homotopy Perturbation Method. International Journal of Nonlinear Sciences and Numerical Simulation, 2011, 12, 15-21.	0.4	2
134	An Inversion-Free Method for Finding Positive Definite Solution of a Rational Matrix Equation. Scientific World Journal, The, 2014, 2014, 1-5.	0.8	2
135	New class of eighth-order iterative zero-finders and their basins of attraction. Afrika Matematika, 2014, 25, 67-79.	0.4	2
136	Recent Theories and Applications in Approximation Theory. Scientific World Journal, The, 2015, 2015, 1-2.	0.8	2
137	Construction of some accelerated methods for solving scalar stochastic differential equations. International Journal of Computing Science and Mathematics, 2016, 7, 537.	0.2	2
138	A stable local radial basis function method for option pricing problem under the Bates model. Numerical Methods for Partial Differential Equations, 2019, 35, 1035-1055.	2.0	2
139	Managing the risk based on entropic value-at-risk under a normal-Rayleigh distribution. Applied Mathematics and Computation, 2021, 402, 126129.	1.4	2
140	Numerical Analysis of Novel Finite Difference Methods. Mathematics in Industry, 2017, , 171-214.	0.1	2
141	A new Analytical Solution Procedure for the Motion of a Spherical Particle in a Plane Couette Flow. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2013, 68, 319-326.	0.7	1
142	Construction of some accelerated methods for solving scalar stochastic differential equations. International Journal of Computing Science and Mathematics, 2016, 7, 537.	0.2	1
143	An Efficient Numerical Scheme for the Solution of a Stochastic Volatility Model Including Contemporaneous Jumps in Finance. International Journal of Computational Methods, 0, , .	0.8	1
144	Exploiting higher computational efficiency index for computing outer generalized inverses. Applied Numerical Mathematics, 2022, 175, 18-28.	1.2	1

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145	On an inversion-free algorithm for the nonlinear matrix problem $\ A^* \hat{x}^2 + B^* \hat{x}^3 - A - B\ = I$. International Journal of Computer Mathematics, 0, , 1-0.	1.0	1
146	Iterative Methods and Dynamics for Nonlinear Problems. Discrete Dynamics in Nature and Society, 2017, 2017, 1-1.	0.5	0
147	Option pricing under a financial model with stochastic interest rate. AIP Conference Proceedings, 2019, , .	0.3	0