



Abbas Saadatmandi

Professor

College: Faculty of Mathematics

Department: Applied Mathematics

Education

Degree	Graduated in	Major	University
BSc	1997	Applied Mathematics	Sharif University of Technology
MSc	2000	Numerical Analysis	Amirkabir University of Technology
Ph.D	2004	Numerical Analysis	Amirkabir University of Technology

Employment Information

Faculty/Department	Position/Rank	Employment Type	Cooperation Type	Grade
(not set)	(not set)	Tenured	Full Time	20

Journal Membership

1. Editorial Board Member (2016-present) [Mathematics Interdisciplinary Research](#) (University of Kashan, Islamic Republic of Iran)
2. Editorial Board Member (2013-present) [Computational Methods for Differential Equations](#) (University of Tabriz, Islamic Republic of Iran)
3. Editorial Board Member (2017-present) [Fractional Differential Calculus](#) (Publishing House Element d.o.o., Zagreb, Croatia)

Papers in Conferences

1. M. Pourbabae, A. Saadatmandi. Numerical solution of the distributed-order diffusion-wave equations based on Legendre operational matrix. 1st Annual Iranian Mathematics Conference, Kashan, ۱۴۰۱.
2. M. Pourbabae, A. Saadatmandi. Collocation method based on Legendre polynomials for solving distributed order fractional differential equations. 1st Annual Iranian Mathematics

Conference.Kashan.۲۰۲۱.

3. A . Saadatmandi , M. Dehghan.Bounded solutions of a partial difference equation.۳۰th Iranian International Conference on Mathematics.Ardabil.۱۹۹۹.
4. M. Pourbabae, A. Saadatmandi ,Numerical solution of fractional pantograph differential equation using Chebyshev polynomials ,50th Annual Iranian Mathematics Conference ,Shiraz ,2020.
5. N. Moshtagh, A. Saadatmandi ,Sinc-collocation method for approximate solution of the model of beam-type nano-scale electrostatic actuators ,49th Annual Iranian Mathematics Conference, Tehran ,Tehran ,2019.
6. M. Pourbabae, A. Saadatmandi ,Numerical solution of a singular boundary value problem arising in the theory of shallow membrane caps via Sinc-collocation method ,49th Annual Iranian Mathematics Conference, Tehran ,Tehran ,2019.
7. A. Eftekhari, A. Saadatmandi ,DE sinc collocation method for solving the Bagley-Torvik equation with variable coefficients ,48th Annual Iranian Mathematics Conference ,Hamedan ,2018.
8. A. Eftekhari, A. Saadatmandi ,Application of Double Exponential sinc-collocation method for solving multi-point boundary value problem for optimal bridge design ,International Conference on Architecture and Mathematics, ,Kashan ,2017.
9. A. Saadatmandi ,Computational method for variational problems ,The Second Conference on Computational Group Theory, Computational Number Theory and Applications ,Kashan ,2015.
10. E. Babolian, A. Eftekhari, A. Saadatmandi ,A sinc-collocation method for solving a nonlinear system of second order boundary value problems ,44th Annual Iranian Mathematics Conference ,Mashhad ,2013.
11. N. Nafar, A. Saadatmandi ,Projected differential transform method for solving Burgers' equation ,4th Conference on Mathematical Analysis and its Applications ,Khansar ,2013.
12. A . Saadatmandi , S.Yeganeh ,The sinc-collocation method for solving a problem arising in Chemical reactor theory ,43th Annual Iranian Mathematics Conference ,Tabriz ,2012.

Papers in Journals

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1. عباس سعادتمندي,Bernstein operational matrix of fractional derivatives and its applications.Applied Mathematical Modelling.۱۳۶۵.۱۳۹۲/۱۱/۲۶,مجلد ۳۸,شماره صفحات ۳۶۵-۳۹۲,SCOPUS ,JCR.
 2. اعظم قاسمی نصرابادی, عباس سعادتمندي,A Bernoulli-reproducing kernel method for a class of nonlinear singular boundary value problems,Journal of Applied Analysis and Computation,Vol. 14,pp. 3260,2024 12 01,SCOPUS ,JCR.
 3. Saeid Alikhani,مرضيه پوربابائي,Modjtaba Ghorbani,In Memory of Professor Ali Reza Ashrafi (1964-2023): A Matchless Role Model in Mathematical Chemistry in Iran,Iranian Journal of Mathematical Chemistry,Vol. 14,pp. 1,2023 06 07,SCOPUS ,ISC ,ISI-Listed.
 4. عباس سعادتمندي,فاطمه مشهدی فینی,A pseudospectral method for nonlinear Duffing equation involving both integral and non-integral forcing terms,Mathematical Methods in the Applied Sciences,Vol. 38,pp. 1265,2015 05 15,SCOPUS ,JCR.
 5. اسماعيل بابليان,علي افتخاري, عباس سعادتمندي,A Sinc-Galerkin technique for the numerical solution of a class of singular boundary value problems,Computational and Applied Mathematics,Vol. 34,pp. 45,2015 04 01,SCOPUS ,JCR.
 6. عباس سعادتمندي,فيسه نفر,سيد پندار توفيقى,Numerical study on the reaction cum diffusion process in a spherical biocatalyst,Iranian Journal of Mathematical Chemistry,Vol. 5,pp. 47,2014 04 01,SCOPUS .
 7. اسماعيل بابليان,علي افتخاري, عباس سعادتمندي,A Sinc-Galerkin Approximate Solution of the Reaction-Diffusion Process in an Immobilized Biocatalyst Pellet,MATCH Communications in Mathematical and in Computer Chemistry,Vol. 71,pp. 681,2014 01 01,SCOPUS ,JCR.
 8. سميه يگانه, عباس سعادتمندي, فهيمه سلطانيان, مهدى دهقان ,The numerical solution of differential-algebraic equations by sinc-collocation method,Computational and Applied Mathematics,Vol. 32,pp. 343,2013 07 01,SCOPUS ,JCR.

9. عباس سعادتمندي,مهدي دهقان,ديميتريو بالنوا,The fractional linear systems of equations within an operational approach,Journal of Computational and Nonlinear Dynamics,Vol. 8,pp. 1,2013 04 01,SCOPUS ,JCR.
10. عباس سعادتمندي,مهدي دهقان,محمد رضا عزيزي,The Sinc-Legendre collocation method for a class of fractional convection-diffusion equations with variable coefficients,Communications in Nonlinear Science and Numerical Simulation,Vol. 17,pp. 4125,2012 11 01,SCOPUS ,JCR.
11. عباس سعادتمندي,مهدي دهقان,جليل منافيان,عباس سعادتمندي,Application of semi-analytical methods for solving the Rosenau-Hyman equation arising in the pattern formation in liquid drops,International Journal of Numerical Methods for Heat & Fluid Flow,Vol. 22,pp. 777,2012 08 03,SCOPUS ,JCR.
12. عباس سعادتمندي,مهدي دهقان,A method based on the tau approach for the identification of a time-dependent coefficient in the heat equation subject to an extra measurement,Journal of Vibration and Control,Vol. 18,pp. 1125,2012 07 01,SCOPUS ,JCR.
13. عباس سعادتمندي,محمد رضا عزيزي,Chebyshev finite difference method for a two-point boundary value problems with applications to chemical reactor theory,Iranian Journal of Mathematical Chemistry,Vol. 3,pp. 1,2012 02 01,SCOPUS ,ISC.
14. عباس سعادتمندي,مهدي دهقان,The use of Sinc-collocation method for solving multi-point boundary value problems,Communications in Nonlinear Science and Numerical Simulation,Vol. 17,pp. 593,2012 02 01,SCOPUS ,JCR.
15. عباس سعادتمندي,مهدي دهقان,A Legendre collocation method for fractional integro-differential equations,Journal of Vibration and Control,Vol. 17,pp. 2050,2011 11 01,SCOPUS ,JCR.
16. عباس سعادتمندي,مهدي دهقان,جليل منافيان هريس,عباس سعادتمندي,Application of the Exp-function method for solving a partial differential equation arising in biology and population genetics,International Journal of Numerical Methods for Heat and Fluid Flow,Vol. 21,pp. 736,2011 08 09,SCOPUS ,JCR.
17. عباس سعادتمندي,مهدي دهقان,A tau approach for solution of the space fractional diffusion equation,Computers and Mathematics with Applications,Vol. 62,pp. 1135,2011 08 01,SCOPUS ,JCR.
18. عباس سعادتمندي,مهدي دهقان,جليل منافيان هريس,عباس سعادتمندي,Application of semi- analytic methods for the Fitzhugh-Nagumo equation which models the transmission of nerve impulses,Mathematical Methods in the Applied Sciences,Vol. 33,pp. 1384,2010 07 30,SCOPUS ,JCR.
19. عباس سعادتمندي,مهدي دهقان,Numerical solution of the higher-order linear Fredholm integro-differential-difference equation with variable coefficients,Computational and Applied Mathematics,Vol. 59,pp. 2296,2010 04 01,SCOPUS ,JCR.
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21. عباس سعادتمندي,مهدي دهقان,جليل منافيان,عباس سعادتمندي,Solving nonlinear fractional partial differential equations using the homotopy analysis method,Numerical Methods for Partial Differential Equations,Vol. 26,pp. 448,2010 03 01,SCOPUS ,JCR.
22. عباس سعادتمندي,مهدي دهقان,A new operational matrix for solving fractional-order differential equations,Computers and Mathematics with Applications,Vol. 59,pp. 1326,2010 02 01,SCOPUS ,JCR.
23. عباس سعادتمندي,مهدي دهقان,Numerical solution of hyperbolic telegraph equation using the Chebyshev tau method,Numerical Methods for Partial Differential Equations,Vol. 26,pp. 239,2010 01 01,SCOPUS ,JCR.
24. عباس سعادتمندي,مهدي دهقان,Variational iteration method for solving a generalized pantograph equation,Computers and Mathematics with Applications,Vol. 58,pp. 2190,2009 12 01,SCOPUS ,JCR.
25. عباس سعادتمندي,مهدي دهقان,Variational iteration method for solving the wave equation subject to an integral conservation condition,Chaos, Solitons and Fractals,Vol. 41,pp. 1448,2009 08 15,SCOPUS ,JCR.
26. عباس سعادتمندي,مهدي دهقان,علي افتخاري,Application of He's homotopy perturbation method for non-linear system of second-order boundary value problems,Nonlinear Analysis: Real World Applications,Vol. 10,pp. 1912,2009 06 01,SCOPUS ,JCR.

27. عباس سعادتمندي, مهدى دهقان, Numerical solution of a mathematical model for capillary formation in tumor angiogenesis via the tau method, Communications in numerical methods in engineering, Vol. 24, pp. 1467, 2008 11 01, SCOPUS, JCR.
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39. M. Pourbabae, A. Saadatmandi, The construction of a new operational matrix of the distributed-order fractional derivative using Chebyshev polynomials and its applications, International Journal of Computer Mathematics, Vol. 98, pp. 2310–2329, 2021, JCR.
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41. M. Bisheh , & Niasar, A. Saadatmandi, Some Novel Newton-Type Methods for Solving Nonlinear Equations, Boletim da Sociedade Paranaense de Matemática, 2020.
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44. M. Pourbabae, A. Saadatmandi, Collocation method based on Chebyshev polynomials for solving distributed order fractional differential equations, Computational Methods for Differential Equations, 2020.

45. A. Saadatmandi, S. Shateri,Sinc-collocation method for solving sodium alginate (SA) non-Newtonian nanofluid flow between two vertical flat plates,, Journal of the Brazilian Society of Mechanical Sciences and Engineering,2019.
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52. Abbas Saadatmandi,Hartley series direct method for variational problems,Mathematics Interdisciplinary Research,Vol. 2,pp. 23-31,2017.
53. Abbas Saadatmandi, Somayye Yeganeh,New approach for the Duffing equation involving both integral and non-integral forcing terms,U POLITEH BUCH SER A,Vol. 79,pp. 43-52,2017,ISI ,SCOPUS.
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58. Abbas Saadatmandi, Afsaneh Asadi, Ali Eftekhar,Collocation method using quintic B-spline and Sinc functions for solving a model of squeezing flow between two infinite plates,International Journal of Computer Mathematics,Vol. 63,pp. 1921-1936,2016,ISI ,SCOPUS.
59. Abbas Saadatmandi, Tahereh Abdolahi Niasar,Numerical solution of Troesch's problem using Christov rational functions,Computational Methods for Differential Equations,Vol. 3,pp. 247-257,2016,ISC.
60. Abbas Saadatmandi, Tahereh Abdolahi Niasar,An analytic study on the Euler-Lagrange equation arising in calculus of variations,Computational Methods for Differential Equations,Vol. 2,pp. 140-152,2015.
61. Abbas Saadatmandi, Mohadeseh Mohabbati,Numerical solution of fractional telegraph equation via the Tau method,Mathematical Reports,Vol. 17,pp. 155-166,2015,ISI ,SCOPUS.
62. A. Saadatmandi, M. Razzaghi, M. Dehghan,Sinc-Galerkin solution for nonlinear two-point boundary value problems with applications to Chemical reactor theory,Mathematical and Computer Modelling,Vol. 42,pp. 1237-1244,2005.

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