

## عباس سعادتمندی

استاد

دانشکده: دانشکده علوم ریاضی

گروه: ریاضی کاربردی



### سوابق تحصیلی

دانشگاه	رشته و گرایش تحصیلی	سال اخذ مدرک	مقطع تحصیلی
دانشگاه صنعتی شریف	ریاضی-کاربرد در کامپیوتر	۱۳۷۵	کارشناسی
دانشگاه صنعتی امیرکبیر	ریاضی کاربردی-آنالیز عددی	۱۳۷۸	کارشناسی ارشد
دانشگاه صنعتی امیرکبیر	ریاضی کاربردی-آنالیز عددی و کنترل	۱۳۸۳	دکترا تخصصی

### اطلاعات استخدامی

پایه	نوع همکاری	نوع استخدام	عنوان سمت	محل خدمت
۲۰	تمام وقت	رسمی قطعی	عضو هیئت علمی	کاشان

### سوابق اجرایی

عضو کمیسیون تخصصی ریاضی

### جوایز و تقدير نامه ها

- پژوهشگر نمونه دانشگاه کاشان در سال های ۱۳۹۹، ۱۳۹۵، ۱۳۹۳، ۱۳۹۱، ۱۳۸۹
- استاد نمونه آموزشی دانشگاه کاشان در سال ۱۳۹۱
- انتخاب به عنوان دانشمند بین المللی و در ردیف یک درصد برتر پژوهشگران و نخبگان علمی جهان بنا بر IAI ارزیابی در سال های ۱۳۹۷، ۱۳۹۹، ۱۳۹۴

### موضوعات تدریس تخصصی

- روشهای طیفی
- توابع سینک
- محاسبات کسری
- حل عددی معادلات دیفرانسیل و معادلات انتگرال

## زمینه های تدریس

آنالیز عددی

محاسبات عددی

معادلات دیفرانسیل

## عضویت در هیات تحریریه مجلات علمی و پژوهشی

Editorial Board Member (۲۰۱۶-present) [Mathematics Interdisciplinary Research](#) (University of Kashan, .۱ Islamic Republic of Iran)

Editorial Board Member (۲۰۱۳-present) [Computational Methods for Differential Equations](#) (University .۲ of Tabriz, Islamic Republic of Iran)

Editorial Board Member (۲۰۱۷-present) [Fractional Differential Calculus](#) (Publishing House Element .۳ (d.o.o., Zagreb, Croatia

Editorial Board Member (۲۰۲۱-present) [Iranian Journal of Mathematical Chemistry](#) (University of .۴ Kashan, Islamic Republic of Iran)

## مقالات در همایش ها

.۱. عباس سعادتمدی, دومین کنفرانس جبر محاسباتی .Computational method for variational problems.

نظریه محاسباتی اعداد و کاربردها، کاشان، ۱۰ ۲۰۱۵

M. Pourbabaee, A. Saadatmandi.Numerical solution of the distributed-order diffusion-wave .۲ equations based on Legendre operational matrix.۵۱st Annual Iranian Mathematics Conference.Kashan, ۲۰۲۱

M. Pourbabaee, A. Saadatmandi.Collocation method based on Legendre polynomials for .۳ solving distributed order fractional differential equations.۵۱st Annual Iranian Mathematics Conference.Kashan, ۲۰۲۱

.۴. علی افتخاری, عباس سعادتمدی,DE sinc collocation method for solving the Bagley-Torvik equation.

چهل و هشتین کنفرانس سالانه ریاضی ایران, همدان, ۸ ۲۰۱۷

A . Saadatmandi , M. Dehghan.Bounded solutions of a partial difference equation.۳۰th Iranian .۵ International Conference on Mathematics.Ardabil, ۱۹۹۹

M. Pourbabaee, A. Saadatmandi ,Numerical solution of fractional pantograph differential .۶ equation using Chebyshev polynomials ,50th Annual Iranian Mathematics Conference ,Shiraz ,2020

N. Moshtaghi, A. Saadatmandi ,Sinc-collocation method for approximate solution of the model .۷ of beam-type nano-scale electrostatic actuators ,49th Annual Iranian Mathematics Conference, Tehran ,Tehran ,2019

M. Pourbabaee, A. Saadatmandi ,Numerical solution of a singular boundary value problem .۸ arising in the theory of shallow membrane caps via Sinc-collocation method ,49th Annual Iranian Mathematics Conference, Tehran ,Tehran ,2019

A. Eftekhari, A. Saadatmandi ,DE sinc collocation method for solving the Bagley-Torvik .۹ equation with variable coefficients ,48th Annual Iranian Mathematics Conference ,Hamedan

- A. Eftekhari, A. Saadatmandi ,Application of Double Exponential sinc-collocation method for .10 solving multi-point boundary value problem for optimal bridge design ,International Conference .on Architecture and Mathematics, ,Kashan ,2017
- A. Saadatmandi ,Computational method for variational problems ,The Second Conference on .11 .Computational Group Theory, Computational Number Theory and Applications ,Kashan ,2015
- E. Babolian, A. Eftekhari, A. Saadatmandi ,A sinc-collocation method for solving a nonlinear .12 system of second order boundary value problems ,44th Annual Iranian Mathematics Conference .,Mashhad ,2013
- N. Nafar, A. Saadatmandi ,Projected differential transform method for solving Burgers' .13 .equation ,4th Conference on Mathematical Analysis and its Applications ,Khansar ,2013
- A . Saadatmandi , S.Yeganeh ,The sinc-collocation method for solving a problem arising in .14 .Chemical reactor theory ,43th Annual Iranian Mathematics Conference ,Tabriz ,2012

### مقالات در نشریات

۱. عباس سعادتمندی,Bernstein operational matrix of fractional derivatives and its,SCOPUS ,JCR,1365,۳۹۲/۱۱/۲۶,شماره صفحات ۳۸,مجلد ۳۸,applications,Applied Mathematical Modelling In Memory of Professor Ali,Modjtaba Ghorbani,Saeid Alikhani .2 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
۲. عباس سعادتمندی,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
۳. عباس سعادتمندی,علی افتخاری,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
۴. عباس سعادتمندی,نفیسه نفر,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
۵. عباس سعادتمندی,عبداللهاب کادم,MATCH Communications in Mathematical and in Computer Chemistry,Vol. 71,pp. 681,2014 01 01,SCOPUS ,JCR
۶. عباس سعادتمندی,علی افتخاری,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
۷. سمیه یگانه,عباس سعادتمندی,فهیمه سلطانیان,Mehdi Dehghan,The numerical solution of differential-algebraic equations by sinc-collocation method,Computational and Applied Mathematics,Vol. 32,pp. 343,2013 07 01,SCOPUS ,JCR
۸. دیمیتریو بالنوا,عباس سعادتمندی,عبداللهاب کادم,Mehdi Dehghan,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
۹. عباس سعادتمندی,مهدی دهقان,محمد رضا عزیزی,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
۱۰. مهدی دهقان,جلیل منافیان,عباس سعادتمندی,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
۱۱. عباس سعادتمندی,مهدی 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
۱۲. عباس سعادتمندی,مهدی 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  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,Mohamed-Saad 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
- .13  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 A Legendre collocation method for fractional integro-differential equations,Journal of Vibration and Control,Vol. 17,pp. 2050,2011 11 01,SCOPUS ,JCR
- .14  
 مهدی دهقان,جلیل منافیان هریس,عباس سعادتمندی,JCR  
 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
- .15  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 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
- .16  
 مهدی دهقان,جلیل منافیان هریس,عباس سعادتمندی,JCR  
 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
- .17  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 Computation of two time-dependent coefficients in a parabolic partial differential equation subject to additional specifications,International Journal of Computer Mathematics,Vol. 8,pp. 997,2010 04 01,SCOPUS ,JCR
- .18  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 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
- .19  
 مهدی دهقان,جلیل منافیان,عباس سعادتمندی,JCR  
 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
- .20  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 A new operational matrix for solving fractional-order differential equations,Computers and Mathematics with Applications,Vol. 59,pp. 1326,2010 02 01,SCOPUS ,JCR
- .21  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 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
- .22  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 Variational iteration method for solving a generalized pantograph equation,Computers and Mathematics with Applications,Vol. 58,pp. 2190,2009 12 01,SCOPUS ,JCR
- .23  
 مهدی دهقان,عباس سعادتمندی,JCR  
 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
- .24  
 عباس سعادتمندی,مهدی دهقان,علی افتخاری,عباس سعادتمندی,JCR  
 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
- .25  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 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
- .26  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 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
- .27  
 عباس سعادتمندی,مهدی دهقان,عباس سعادتمندی,JCR  
 The numerical solution of problems in calculus of variation using Chebyshev finite difference method,Physics Letters A,Vol. 372,pp. 4037,2008 06 25,SCOPUS ,JCR
- .28  
 مهدی دهقان,عباس سعادتمندی,JCR  
 The numerical solution of a nonlinear system of second-order boundary value problems using the sinc-collocation method,Mathematical and Computer
- .29

- .Modelling,Vol. 46,pp. 1434,2007 12 01,SCOPUS ,JCR  
 عباس سعادتمندی, جلال عسگری فرسنگی, Chebyshev finite difference method for a nonlinear system of second-order boundary value problems, Applied Mathematics and Computation, Vol. 192,pp. 586,2007 09 15,SCOPUS ,JCR
- . عباس سعادتمندی, محسن رزاقی, The numerical solution of third-order boundary value problems, Communications in numerical methods in engineering, Vol. 23,pp. 681,2007 07 01,SCOPUS ,JCR
- . عباس سعادتمندی, مهدی دهقان, Numerical solution of the one-dimensional wave equation with, an integral condition, Numerical Methods for Partial Differential Equations, Vol. 23,pp. 282,2007 03 01,SCOPUS ,JCR
- . مهدی دهقان, عباس سعادتمندی, A tau method for the one-dimensional parabolic inverse problem, subject to temperature overspecification, Computers and Mathematics with Applications, Vol. 52,pp. 933,2006 09 01,SCOPUS ,JCR
- . اعظم قاسمی نصربادی, عباس سعادتمندی, A new Bernstein-reproducing kernel method for solving forced Duffing equations with integral boundary conditions, Computational Methods for Differential Equations, 0000 00 00,SCOPUS ,ISC ,ISI-Listed
- M. Pourbabaee, A. Saadatmandi, A new operational matrix based on Müntz-Legendre polynomials for solving distributed order fractional differential equations, Mathematics and Computers in Simulation, Vol. 194,pp. 210-235,2022,JCR
- M. Pourbabaee, 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
- N. Moshtagh, A. Saadatmandi, Numerical Solution of Time Fractional Cable Equation via the Sinc-Bernoulli Collocation Method, Journal of Applied and Computational Mechanics, Vol. 7,pp. 1916-1924,2021
- A. Eftekhari, A. Saadatmandi, DE Sinc-collocation method for solving a class of second-order nonlinear BVPs, Mathematics Interdisciplinary Research, 2021
- N. Moshtagh, A. Saadatmandi, Polynomial-Sinc collocation method combined with the Legendre-Gauss quadrature rule for numerical solution of distributed order fractional differential equations,, Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas, 2021
- M. Bisheh ,& Niasar, A. Saadatmandi, Some Novel Newton-Type Methods for Solving Nonlinear Equations, Boletim da Sociedade Paranaense de Matemática, 2020
- A. Saadatmandi, A. Khani, M. R. Azizi, Numerical calculation of fractional derivatives for the Sinc functions via Legendre polynomials, Mathematics Interdisciplinary Research, 2020
- N. Moshtagh, A. Saadatmandi, Numerical solution for diffusion equations with distributed-order in time based on Sinc-Legendre collocation method, Applied and Computational Mathematics, 2020
- M. Pourbabaee, A. Saadatmandi, Collocation method based on Chebyshev polynomials for solving distributed order fractional differential equations, Computational Methods for Differential Equations, 2020
- 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
- M. Pourbabaee, A. Saadatmandi, A novel Legendre operational matrix for distributed order fractional differential equations, Applied Mathematics and Computation, 2019
- Abbas Saadatmandi , Ali Khani, Mohammad-Reza Azizi, A sinc-Gauss-Jacobi collocation method for solving Volterra's population growth model with fractional order, Tbilisi Mathematical Journal, Vol. 11,pp. 123-137,2018,ISI
- Morteza Bisheh-Niasar, Abbas Saadatmandi, Mostafa Akrami-Arani, A new family of high-

- order difference schemes for the solution of second order boundary value problems,Iranian .Journal of Mathematical Chemistry,Vol. 9,pp. 187-199,2018,ISI,ISC
- Abbas Saadatmandi, Samaneh Fayyaz,Numerical study of oxygen and carbon substrate .48 concentrations in excess sludge production using sinc-collocation method,MATCH Communications in Mathematical and in Computer Chemistry,Vol. 80,pp. 355-368,2018,ISI ,SCOPUS
- Abbas Saadatmandi, Samaneh Fayyaz,Chebyshev finite difference method for solving a .49 mathematical model arising in wastewater treatment plants,Computational Methods for Differential Equations,Vol. 6,pp. 448-455,2018,ISI, ISC
- Abbas Saadatmandi, Zeinab Sanatkar,Collocation method based on rational Legendre .50 functions for solving the magneto-hydrodynamic flow over a nonlinear stretching sheet,Applied Mathematics and Computation,Vol. 323,pp. 193-203,2018,ISI ,SCOPUS
- Abbas Saadatmandi,Hartley series direct method for variational problems,Mathematics .51 .Interdisciplinary Research,Vol. 2,pp. 23-31,2017
- Abbas Saadatmandi, Somayye Yeganeh,New approach for the Duffing equation involving .52 both integral and non-integral forcing terms,U POLITEH BUCH SER A,Vol. 79,pp. 43-52,2017,ISI ,SCOPUS
- Mohammadreza Ahmadi Darani, Abbas Saadatmandi,The operational matrix of fractional .53 derivative of the fractional-order Chebyshev functions and its applications,Computational Methods for Differential Equations,Vol. 5,pp. 67-87,2017,ISC
- Abbas Saadatmandi, Zeinab Sanatkar, Seyed Pendar Toufighi,Computational methods for .54 solving the steady flow of a third grade fluid in a porous half space,Applied Mathematics and Computation,Vol. 298,pp. 133-140,2017,ISI ,SCOPUS
- Abbas Saadatmandi, Zeinab Akbari,Transformed Hermite functions on a finite interval and .55 their applications to a class of singular boundary value problems,Computational and Applied Mathematics,Vol. 36,pp. 1085-1098,2017,ISI ,SCOPUS
- Abbas Saadatmandi, Zeinab Sanatkar,An approximate solution of the MHD flows of UCM .56 fluids over porous stretching sheets by rational Legendre collocation method,International Journal of Numerical Methods for Heat & Fluid Flow,Vol. 26,pp. 2218-2234,2016,ISI ,SCOPUS
- Abbas Saadatmandi, Tahereh Abdolahi Niasar,Numerical solution of Troesch's problem using .57 Christov rational functions,Computational Methods for Differential Equations,Vol. 3,pp. .247-257,2016,ISC
- Abbas Saadatmandi, Afsaneh Asadi, Ali Eftekhari,Collocation method using quintic B-spline .58 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
- Abbas Saadatmandi, Mohadeseh Mohabbati,Numerical solution of fractional telegraph .59 equation via the Tau method,Mathematical Reports,Vol. 17,pp. 155-166,2015,ISI ,SCOPUS
- Abbas Saadatmandi, Tahereh Abdolahi Niasar,An analytic study on the Euler-Lagrange .60 equation arising in calculus of variations,Computational Methods for Differential Equations,Vol. 2,pp. 140-152,2015