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Education

- ✓ B.Sc, Applied Mathematics,Semnan University - 2000
- ✓ MS, Applied Mathematics - Numerical Analysis,Sistan and Baluchestan University - 2003
- ✓ PhD, Applied Mathematics - Numerical Analysis,Sistan and Baluchestan University - 2008
- ✓ PhD, Applied Mathematics - Numerical Analysis,Sistan and Baluchestan University - 2008

Courses

Journals Papers

2026

1. Compact finite difference scheme for numerical solution of Caputo-Fabrizio fractional Riccati differential equations

Mansooreh Sattari bonjar, Maryam Arab-Ameri

Computational Methods for Differential Equations Volume: (14) 81 - 94

2025

2. The method of phi-Laplace Adomian decomposition for phi-Caputo fractional Bloch equations

Maliheh Shahrezaee, Maryam Arab-Ameri, Ali Ahmadian Hosseini

PHYSICA SCRIPTA Volume: (100) 1 - 15

3. Combination of Laplace Transform and Runge-Kutta Methods for Solving the Fractional Riccati Differential Equation

Zahra Sahraei, Maryam Arab-Ameri, Ali Ahmadian

caspian journal of mathematical sciences Volume: (14) 357 - 374

2024

4. Fuzzy polynomials to solve fuzzy multi-choice goal programming (in Persian)

Zahra Arami, Maryam Arab-Ameri, Hassan Mishmast Nehi

Journal of Fuzzy Systems and Applications Volume: (6) 51 - 64

5. On the ψ -Caputo fractional Bloch equations and analytical solutions

Maliheh Shahrezaee, Maryam Arab-Ameri, Ali Ahmadian

Results in Physics Volume: (60) 1 - 9

6. A nonstandard compact finite difference method for a truncated Bratu-Picard model

Maryam Arab-Ameri, Raziye Gharechahi, Taher Nofal, Hijaz Ahmad

AIMS Mathematics Volume: (9) 27557 - 27576

7. Solving the fully fuzzy multi-choice linear programming model (in Persian)

Zahra Arami, Maryam Arab-Ameri, Hassan Mishmast Nehi

Tasmimgiri va Tahqiq dar Amaliyyat Volume: (9) 419 - 434

2023

8. Solving the fractional order integro-differential equations using fractional Jacobi functions

Zahra Delkhosh, Maryam Arab-Ameri

Volume: (8) 74 - 93

9. A Semi-Discretization Method Based on Finite Difference and Differential Transform Methods to Solve the Time-Fractional Telegraph Equation

Zahra Sahraei, Maryam Arab-Ameri

Symmetry-Basel Volume: (15) 1 - 16

10. Fuzzy approximating functions and its application in solving fuzzy multi-choice linear programming models

Zahra Arami, Maryam Arab-Ameri, Hassan Mishmast Nehi

Journal of Mathematical Modeling Volume: (11) 649 - 663

2022

11. Numerical solution of space-time variable fractional order advection-dispersion equation using radial basis functions

Abolfazl Soltanpour, Maryam Arab-Ameri, Mahdiar Barfeie

Journal of Mathematical Modeling Volume: (10) 549 - 562

12. Numerical solution of nonlinear fractional Riccati differential equations using compact finite difference method

HOMAYOUN PORKI, Maryam Arab-Ameri, Raziye Gharechahi

Iranian Journal of Numerical Analysis and Optimization Volume: (12) 585 - 606

2021

13. Numerical Solution of Fractional Bratus Initial Value Problem Using Compact Finite Difference Scheme

Raziye Gharechahi, Maryam Arab-Ameri, Morteza Bishe-Niasar

Progress in Fractional Differentiation and Applications Volume: (7) 103 - 115

2020

14. Numerical solution of variable fractional order advection-dispersion equation using Bernoulli wavelet method and new operational matrix of fractional order derivative

Abolfazl Soltanpour, Maryam Arab-Ameri, Dumitru Baleanu, Mahdiar Barfeie

MATHEMATICAL METHODS IN THE APPLIED SCIENCES Volume: (43) 3936 - 3953

15. Numerical Solution of Space-time Variable Fractional Order Advection-Dispersion Equation using Jacobi Spectral Collocation Method

Abolfazl Soltanpour, Maryam Arab-Ameri, Mahdiar Barfeie, Dumitru Baleanu

Malaysian Journal of Mathematical Sciences Volume: (14) 139 - 168

2019

16. High order compact finite difference scheme for solving Bratu type equations

Raziyeh Gharechahi, Maryam Arab-Ameri, Morteza Bishe Niasar

Journal of Applied and Computational Mechanics Volume: (5) 91 - 102

2018

17. RBFs Meshless Method of Lines for Time-Dependent PDEs with Decomposition of Interior and Boundary Data Centers

Maryam Arab-Ameri, Ali Reza Soheili, Mahdiar Barfeie

Iranian Journal of Science and Technology Transaction A-Science Volume: (42) 47 - 58

18. Moving Mesh Non-Standard Finite Difference Method for Non-Linear Heat Transfer in a Thin Finite Rod

Morteza Bisheh-Niasar, Maryam Arab-Ameri

Journal of Applied and Computational Mechanics Volume: (4) 161 - 166

2017

19. Numerical Solution of fuzzy Volterra integral equations based on least squares approximation

Maryam Arab-Ameri, Maryam Javadinezhad

ICIC Express Letters Volume: (11) 1451 - 1460

2016

20. solution of Navier Stokes equation by meshless radial basis functions methods

Maryam Arab-Ameri, Mahdiar Barfeie

Volume: (3) 47 - 53

2015

21. Stability of non standard implicit finite difference method for fractional PDEs

Maryam Arab-Ameri, Ehsan Mirmehrabi

Volume: (1) 63 - 74

22. RBFs meshless method of lines based on adaptive nodes for Burger s equations

Alireza Soheili, Maryam Arab Ameri, Mahdiar Barfeie

Iranain Journal of Numerical Analysis and Optimization Volume: (5) 49 - 61

23. RBFs meshless method of lines basedon adaptive nodes for Burgersequations

Ali Reza Soheili, Maryam Arab-Ameri,

Iranian Journal of Numerical Analysis and Optimization Volume: (5) 49 - 61

2014

24. The fifth-order WENO method with non-uniform adaptive mesh

Maryam Arab-Ameri, Raziye Javaheri Afif

ICIC Express Letters Volume: (8) 1527 - 1534

2013

25. Application of variational mesh generation approach for selecting centers of radial basis functions collocation method

Mahdiar Barfeie, Ali Reza Soheili, Maryam Arab-Ameri

ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS Volume: (37) 1567 - 1575

26. A level Set Moving Mesh Method in static form for One Dimensional PDFs

Maryam Arab-Ameri

Iranian Journal of Numerical Analysis and Optimization Volume: (3) 13 - 30

27. A level set moving mesh method in static form for one dimensional PDEs

Maryam Arab-Ameri

Iranian Journal of Numerical Analysis and Optimization Volume: (3) 13 - 30

2009

28. Adaptive Grid Based on Geometric Conservation Law Level Set Method for Time Dependent PDE

Ali reza Soheili, Maryam Arab-Ameri

NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS Volume: (25) 528 - 597

Conferences Papers

2021

1. [solution of Black-Sholes equation with generalized Caputo derivative by homotopy perturbation method](#)

6th Seminar of Mathematics and Humanities (Financial Mathematics)

Ahmad Barani, Maryam Arab-Ameri

2019

2. [Legendre collocation method for the numerical solution of fractional order Riccati differential equation with variable coefficients](#)

50th Annual Iranian Mathematics Conference

Kobri Derakhshan, Maryam Arab-Ameri

2018

3. [Solution of Bagley-Torvik equation by conformable differential transform method](#)

2nd Conference on Dynamical Systems and Geometric Theories

Mohadeseh Sargazi, Maryam Arab-Ameri

4. [Solution of Abel integral equation via approximation of Caputo fractional derivative](#)

2nd Conference on Dynamical Systems and Geometric Theories

Motahare Ghaznavi, Maryam Arab-Ameri

5. [Linear finite difference method for solving fractional integro-differential equations](#)

The 7th Seminar on Numerical Analysis and its Applications

Maryam Arab-Ameri, Motahare Ghaznavi

6. [Some new finite difference method for approximating fractional integral and derivative](#)

49 Annual Iranian Mathematics Conference

Motahare Ghaznavi, Maryam Arab-Ameri

2016

7. [Compact finite difference method for numerical solution of fractional sub-diffusion equation](#)

3rd National Industrial Mathematics Conference

Maryam Arab-Ameri,

8. [Box-type scheme for fractional sub-diffusion equations](#)

6th seminar of numerical analysis and applications

Maryam Arab-Ameri, Nadia Mirshekari

9. Stability and convergence of compact scheme for fractional sub-diffusion equations

13th international seminar of differential equations dynamic systems applications

Maryam Arab-Ameri,

10. Analytical approach for solution of linear fractional partial differential equations

6th seminar on numerical analysis and applications

Maryam Arab-Ameri,

11. The variational method for fractional partial differential equations

13th international seminar on differential equations and dynamic systems

Maryam Arab-Ameri,

2015

12. A method based on Harr wavelet for integro-differential equations

12th seminar on differential equations and dynamical systems

Maryam Arab-Ameri,

13. Solving of the heat transfer equation by fuzzy parameters

12th seminar on differential equations and dynamical systems

Maryam Arab-Ameri,

14. Approximate solution of fuzzy Fredholm integral equation by Simpsons rule

2th conference on Industrial Mathematics

Maryam Arab-Ameri, Malihe Shahrezaei

15. successive approximation methods for numerical solution of fuzzy Hammerstein-Volterra delay integral equations

4th Iranian Joint Congress on Fuzzy and Intelligent Systems

Maryam Arab-Ameri, Malihe Shahrezaei

16. Least square method for fuzzy Volterra integral equations

46th Annual Iranian Mathematics Conference

Maryam Arab-Ameri,

17. Solving of fuzzy Volterra integral equation by fuzzy differential transform method

2th conference on Industrial Mathematics

Maryam Arab-Ameri,

18. Solution of fuzzy Volterra integral equation based on Bernstein polynomials

4th Iranian Joint Congress on Fuzzy and Intelligent Systems

Maryam Arab-Ameri,

2014

19. An adaptive nodes generation technique for radial basis functions meshfree method

45th Annual Iranian Mathematics Conference

Mahdiar Barfeie, Ali Reza Soheili, Maryam Arab-Ameri

20. Approximate solution of linear fuzzy Hammerstein integral equations

45th Annual Iranian Mathematics Conference

Maryam Arab-Ameri, Malihe Shahrezaei

2013

21. NUMERICAL IMPLICIT METHOD AND ANALYSIS OF STABILITY FOR A FRACTIONAL PDE

44th Annual Iranian Mathematics Conference

Maryam Arab-Ameri, Ehsan Mirmehrabi

22. Stability of implicit finite difference scheme for solving of fractional dispersion equation

44th Annual Iranian Mathematics Conference

Maryam Arab-Ameri, Rasool Kabiri

2012

23. Godonov scheme on moving mesh for heat transfer equation

43rd Iranian Annual Mathematics conference

Maryam Arab-Ameri, Neda Yazdanpanahi

24. An adaptive method for solving Mong-Amper equation

9th seminar on differential equations and dynamical systems

Maryam Arab-Ameri, Zobaide Aroom

25. Strange splitting method for partial differential equations

9th seminar on differential equations and dynamical systems

Maryam Arab-Ameri, Somayeh Jalalpor

2008

26. Moving Mesh Based on Level Set Method for Time Dependent Partial Differential Equations

Fifth European Congress of Mathematics

Ali Reza Soheili, Maryam Arab-Ameri