



## Fatemeh Zabihi

Assistant Professor

College: Faculty of Mathematics

Department: Applied Mathematics

### Education

Degree	Graduated in	Major	University
BSc		Applied Mathematics	University of Kashan
MSc		Applied Mathematics-Numerical Analysis	Sharif University of Technology
Ph.D		Applied Mathematics-Numerical Analysis	Imam Khomeini International University

### Employment Information

Faculty/Department	Position/Rank	Employment Type	Cooperation Type	Grade
University of Kashan	Member of Academic Board	Tenure Track	Full Time	

### Papers in Conferences

1. F. Zabihi, N. Bastegani ,A MUNTZ-COLLOCATION METHOD FOR SYSTEMS OF LINEAR WEAKLY SINGULAR VOLTERRA INTEGRAL EQUATIONS ,55th Annual Iranian Mathematics Conference ,14-16August 2024.
2. F. Zabihi, S. Abedof ,NUMERICAL SOLUTIONS OF FREDHOLM INTEGRAL EQUATIONS OF THE SECOND KIND BY CHELYSHKOV POLYNOMIALS ,55th Annual Iranian Mathematics Conference ,14-16August 2024.
3. F. Zabihi ,A new computational method based on Vieta-Lucas polynomials to solve fractional-order Riccati differential equations ,The 4th Conf. Comput. Algebra, Comput. Theo. Nums. Appl. (Prof. A.R. Ashrafi Memorial) ,4July 2023.
4. F. Zabihi ,Legendre wavelet operational scheme for solving the model of pollution for a system of lakes ,The 4th Conf. Comput. Algebra, Comput. Theo. Nums. Appl. (Prof. A.R. Ashrafi Memorial) ,4July 2023.
5. F. Zabihi, S. Hajiolv ,Approximate solution of nonlinear time-fractional Burgers'equation using radial

- basis functions ,54th Annual Iranian Mathematics Conference ,23-25August 2023.
6. F. Zabihi, S. Abedof ,NUMERICAL SOLUTIONS OF FRACTIONAL DELAY DIFFERENTIAL EQUATIONS BY SHIFTED VIETA-LUCAS POLYNOMIALS ,54th Annual Iranian Mathematics Conference ,23-25August 2023.
  7. A. Haji Olov, F. Zabihi and J. Amani Rad.Two-dimensional inverse Stefan problem via radial basis functions.۴th Iranian Conference on Mathematical Physics.۲January ۲۰۲۰.
  8. F. Zabihi, A. Vali ,A numerical approach for the MHD nano boundary-layer flows over stretching surfaces in a porous medium by rational Chebyshev collocation method ,49th Annual Iranian Mathematics conference ,Tehran ,23-26 August 2018.
  9. A. Haji Olov Zarnagh ۹ F. Zabihi.Collocation method based on shifted Chebyshev and radial basis functions in approximating a parabolic equation with nonlocal initial condition.۵۱st Annual Iranian Mathematics Conference.۱۵-۲۰February ۲۰۲۱.
  10. F. Zabihi ,An approximate solution for the axisymmetric stagnation flow on a circular cylinder by rational Legendre collocation method ,50th Annual Iranian Mathematics Conference ,Shiraz ,26-29 August 2019.
  11. F. Zabihi, K. Karimi ,Application of variational iteration method for system of pantograph equations ,2st National Industrial Mathematics Conference ,Tabriz ,27 May 2015.
  12. F. Zabihi ,A numerical method based on rational Gegenbauer functions for solving the steady flow of a third grade fluid in a porous half space ,50th Annual Iranian Mathematics Conference ,Shiraz ,26-29 August 2019.
  13. F. Zabihi, M. Saffarian ,A Meshless Method Using the Radial Basis Functions for Numerical Solution of the Gilson-Pickering Equation ,46th Annual Iranian Mathematics Conferenc ,Yazd ,25-28 Agust 2015.
  14. F. Zabihi, S. Abedof ,A new approach for numerical solution of fractional Fisher equation using the Bernstein polynomial method ,48th Annual Iranian Mathematics Conference ,Hamedan ,22-25 Agust 2017.
  15. F. Zabihi, S. Abedof ,A numerical approach for the approximated solution of fractional Fitzhugh-Nagumo equation ,Dynamical Systems and Applications ,Zanjan ,17-19 2018July.
  16. F. Zabihi, M. Saffarian ,A numerical method for solving the two-dimensional ZK-BBM equation ,13th International Seminar on Differential Equations, Dynamical Systems ,Isfahan ,13-15 July 2016.
  17. F. Zabihi ,Numerical solutions for the space-fractional foam drainage equation ,7th Conference and Workshop on Mathematical-Chemistry ,Saveh ,4-6 February 2015.
  18. D. Rostamy and F. Zabihi ,A posteriori error estimates for the mass-spring system ,23nd International Conference of Jangjeon Mathematical Society ,Ahvaz ,8-10 February 2010.
  19. F. Zabihi and D. Rostamy ,Streamline diffusion scheme for a coupled wave system with a local damping ,42nd Annual Iranian Mathematics Conference ,Rafsanjan ,5-8 September 2011.
  20. D. Rostamy, F. Zabihi, K. Karimi and M. Alipour ,KdV-Burger solutions with convergence analysis ,41nd Annual Iranian Mathematics Conference ,Urmia ,12-15 September 2010.
  21. F. Zabihi and D. Rostamy ,Application streamline diffusion method for linear telegraph equation ,International Conference on Applied Analysis and Algebra ,Turkey ,29th June-2nd July 2011.
  22. D. Rostamy and F. Zabihi ,A priori error estimate for SD-methods of a strongly damped wave equation ,41nd Annual Iranian Mathematics Conference ,Urmia ,12-15 September 2010.

## Papers in Journals

- 
1. F. Zabihi,The use of Sinc-collocation method for solving steady–state concentrations of carbon dioxide absorbed into phenyl glycidyl ether,Comput. Meth. Diff. Eqs,2024.
  2. A. Hajjollow, F. Zabihi,The effect of radial basis functions (RBFs) method in solving coupled Lane–Emden boundary value problems in Catalytic Diffusion Reactions,Iranian J. Math. Chem,Vol. 12,No. 4,pp. 239-261,2021.

3. F. Zabihi, Chebyshev Finite Difference Method for Steady-State Concentrations of Carbon Dioxide Absorbed Into Phenyl Glycidyl Ether, *MATCH Commun. Math. Comput. Chem.*, 2020.
4. F. Zabihi & M. Saffarian, A Meshless Method Using Radial Basis Functions for the Numerical Solution of Two-Dimensional ZK–BBM Equation, *Int. J. Appl. Comput. Math*, Vol. 3, pp. 4001-4013, 2017.
5. F. Zabihi & M. Saffarian, A meshless method using radial basis functions for numerical solution of the two-dimensional KdV-Burgers equation, *EUR PHYS J PLUS*, Vol. 131, pp. 1-10, 2016.
6. F. Zabihi & M. Saffarian, A not-a-knot meshless method with radial basis functions for numerical solutions of Gilson–Pickering equation, *Engineering with Computers*, Vol. 34, pp. 37-44, 2017.
7. D. Rostamy, F. Zabihi, A posteriori  $L_2(L_2)$ -error estimates with the new version of streamline diffusion method for the wave equation, *Bull. Iranian Math. Soc.*, Vol. 41, pp. 647-664, 2015.
8. M. Asadzadeh, D. Rostamy and F. Zabihi, On discontinuous Galerkin multiscale variational scheme for a coupled damped nonlinear Schrödinger equation, *Numerical Methods for Partial Differential Equation*, Vol. 29, pp. 1912-1945, 2013.
9. D. Rostamy and F. Zabihi, The general analytical and numerical solutions for the modified Kdv equation with convergence analysis, *Mathematical Methods in the Applied Sciences*, Vol. 36, pp. 896-907, 2013.
10. D. Rostamy, F. Zabihi, K. Karimi and M. Alipour, Numerical solution of Electrodynamic flow by using Pseudo-Spectral Collocation method, *Vietnam Journal of Mathematics*, Vol. 41, pp. 43-49, 2013.
11. D. Rostamy, F. Zabihi, A. Niroomand, and A. Mollazeynal, New finite element method for solving a wave equation with a nonlocal conversation condition for Solving a Wave Equation, *Transport Theory and Statistical Physics*, Vol. 42, pp. 41–62, 2013.
12. D. Rostamy and F. Zabihi, A priori error estimates for the multidimensional system of coupled wave system, *Journal of Basic and Applied Scientific Research*, Vol. 2, pp. 9797-9806, 2012.
13. D. Rostamy and F. Zabihi, Exact solution for coupled nonlinear Maccari's system, *Nonlinear Studies*, Vol. 2, pp. 229-239, 2012.
14. D. Rostamy and F. Zabihi, A posteriori error estimates for the telegraph equation with a local damping in mobile phones, *Journal of Basic and Applied Scientific Research*, Vol. 2, pp. 7938-7948, 2012.
15. D. Rostamy, F. Zabihi, K. Karimi, New general solution for nonlinear coupled Klein-Gordon equation, *Nonlinear Studies*, Vol. 19, pp. 1-12, 2012.
16. D. Rostamy and F. Zabihi, Streamline diffusion scheme for the hyperbolic boundary-value problem, *Journal of Numerical and Applied Mathematics*, Vol. 109, pp. 89-104, 2012.
17. M. Asadzadeh, D. Rostamy and F. Zabihi, A posteriori error estimates for a coupled wave system with a local damping, *Journal of Mathematical Sciences*, Vol. 175, pp. 228-248, 2011.
18. D. Rostamy, F. Zabihi, K. Karimi and S. Khalehghli, The First Integral Method for Solving Maccari's System, *Applied Mathematics*, Vol. 2, pp. 258-263, 2011.
19. D. Rostamy, F. Zabihi and K. Karimi, The application of the homotopy analysis method for solving the prey and predator problem, *Applied Mathematics Sciences*, Vol. 5, pp. 639-650, 2011.
20. D. Rostamy and F. Zabihi, A posteriori error estimate for streamline diffusion method in solving a hyperbolic equation, *Applied Mathematics*, Vol. 2, pp. 981-986, 2011.
21. D. Rostamy and F. Zabihi, A streamline diffusion method for the mass-spring system, *Journal of Numerical Mathematics and Stochastic*, Vol. 2, pp. 76-89, 2010.