



**Dr. Rania Saadeh**

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Mathematics/ Applied Math

## Academic Rank: Associate Professor

### Membership:

	Member of the quality council - Zarqa University (Many times)
	Member of the efficiency committee – Zarqa University (Many times)
	Member of the science faculty council (Many times)
	Member of the organizing committee for the Conferences on Mathematical Sciences that were held at Zarqa University: IACMC 2014, 2016 and 2019
	Co-Chair of The 6 <sup>th</sup> International Arab Conference on Mathematics and Computations
	Head of Mathematics department 2018 – 2020

### Qualifications:

1.	2016 Programme : Doctor of Philosophy in Science (Ph.D). Programme Structure : Research & Course Work Specialization : Applied Math Institution : Jordan University, Jordan Merit : Excellent Merit ( 3.8)
2.	2008 Programme : Master of Science ( M.Sc.). Programme Structure : Courses & Research. Specialization : Applied Math Institution : Al albayt University, Jordan Merit : Excellent Merit ( 94 %)
3.	2006 Programme : Bachelor of Mathematics ( B.Sc.). Institution : Al albayt University, Jordan Merit : Excellent Merit ( 96 %)



## Teaching Experience:

#	From	to	
1	2011	Now	Zarqa University
2	Part time		Jordan University
3	2008-2011		Al-albays University

### - I taught the following undergraduate courses at Zarqa University:

Calculus (1,2,3,4), Linear Algebra(1,2), , Number Theory, Logic and Set theory, Ordinary Differential Equations (1 & 2), Method in Applied Math , Number Theory, Principles in Applied Math, Partial Differential Equations, Complex Analysis , Advance complex analysis.



## Articles:

#	Article Title	Publisher	Year
1.	Numerical Investigation for Solving Two-Point Fuzzy Boundary Value Problems by Reproducing Kernel Approach	Applied Mathematics & Information Sciences Journal	(2016)
2.	Numerical Approximation of Fractional System of Initial Value Problems by Combining the HAM and RKHSM	IACMC (2016 ) Zarqa University	(2016)
3.	Application of residual Power Series method for Solving Nonlinear Fredholm Integro Equations in Fractional Sense.	IACMC (2019 ) Zarqa University	(2019)
4.	Solving Fractional Volterra Integro Equations of Order 2B using Fractional Power Series Method.	IACMC (2019 ) Zarqa University	(2019)
5.	Solving logistic Equations of Fractional order Using the Reproducing kernel Hilbert Space Method	IACMC (2019) Zarqa University	(2019)
6.	Solving Nonlinear Fuzzy Fractional IVPs Using Fractional Residual Residual power Series Algorithm	IACMC (2019) Zarqa University	(2019)
7.	Application of Fractional Residual Power Series Algorithm to Solve Newell-Whitehead-Segel Equation of Fractional Order	Symmetry Journal	(2019)



8.	A New Integral Transform: ARA Transform and Its Properties and Applications	Symmetry Journal	2020
9.	Solving Time-Space-Fractional Cauchy Problem with Constant Coefficients by Finite-Difference Method	Forum for Interdisciplinary Mathematics Springer, Singapore	2020
10.	Pseudo spherical surfaces of a constant negative curvature	News from journal world Book chapter "Theory and Practice of Mathematics and Computer Science "Vol. 5	2020
11.	Numerical algorithm to solve a coupled system of fractional order using a novel reproducing kernel method	Alexandria Engineering Journal	2021
12.	Numerical solutions of fractional convection-diffusion equation using finite-difference and finite-volume schemes	Journal of Mathematical and Computational Science	2021
13.	A New Efficient Technique Using Laplace Transforms and Smooth Expansions to Construct a Series Solution to the Time-Fractional Navier-Stokes Equations	Alexandria Engineering Journal	2022



14.	Reduction of the Self-dual Yang-Mills Equations to Sinh-Poisson Equation and Exact Solutions	WSEAS Transactions on Mathematics	2021
15.	New Attractive Method in Solving Families of Fractional Differential Equations by a New Transform	Mathematics.	2022
16.	A Novel Numerical Approach in Solving Fractional Neutral Pantograph Equations via the ARA Integral Transform	Symmetry	2022
17.	A new approach on transforms: Formable integral transform and its applications	Axioms	2021
18.	ARA-residual power series method for solving partial fractional differential equations	Alexandria Engineering Journal	2022
19.	Reliable solutions to fractional Lane-Emden equations via Laplace transform and residual error function	Alexandria Engineering Journal	2022
20.	On the Double ARA-Sumudu Transform and Its Applications	Mathematics	2022



21.	New Theorems in Solving Families of Improper Integrals	Axioms	2022
22.	Exact Solutions of Nonlinear Partial Differential Equations via the New Double Integral Transform Combined with Iterative Method	Axioms	2022
23.	Applications on Formable Transform in Solving Integral Equation	IACMC 2022	2022
24.	A New Approach Using Integral Transform to Solve Cancer Models	Fractal Fract	2022
25.	Applications on Double ARA–Sumudu Transform in Solving Fractional Partial Differential Equations	Symmetry	2022
26.	A Hybrid Analytical Technique for Solving Multi-Dimensional Time-Fractional Navier-Stokes System	Aims Mathematics	2022
27.	General Master Theorems of Integrals with Applications	Mathematics	2022



28.	Analytical Solutions of the Nonlinear Time-Fractional Coupled Boussinesq-Burger Equations Using Laplace Residual Power Series Technique	Fractal Fract	2022
29.	A Novel Approach in Solving Improper Integrals	Axioms	2022
30.	Applications of ARA Residual Power Series Method in Solving Systems of Fractional Differential Equations	Mathematical Problems in Engineering	2022
31.	Direct Power Series Method for Solving Fractional Initial Value Problems	International Journal of Mathematics and Mathematical Sciences	Accepted
32.	A Fundamental Criteria to Establish General Formulas of Integrals	Journal of Applied Mathematics	Accepted
33.	Analytical Solutions of the Fractional Riccati Differential Equations Using Laplace Residual Power Series Method	IACMC 2022	2022
34.	An algorithm of the prey and predator struggle to survive as a Random Walk Simulation case study	IACMC 2022	2022



35.	On Time Fractional Partial Differential Equations and Their Solution by Certain Formable Transform Decomposition Method	Computer Modeling in Engineering & Sciences	Accepted
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## Conferences:

#	Conference	Organizing Institution	Paper Title	
1.	The 5 <sup>th</sup> International Arab Conference on Mathematics and Computations	Zarqa University	Organizer	2016 ,2014
2.	The 5 <sup>th</sup> International Arab Conference on Mathematics and Computations	Zarqa University	Participated in one paper	2016
3.	The 6 <sup>th</sup> International Arab Conference on Mathematics and Computations	Zarqa University	Co- Chairman Of the conference	2019
4.	The 6 <sup>th</sup> International Arab Conference on Mathematics and Computations	Zarqa University	Participated in 4 papers	2019
5.	The 7th International Arab Conference on Mathematics and Computations	Zarqa University	Coordinator of the conference	2022
6.	The 7th International Arab Conference on Mathematics and Computations	Zarqa University	Participated in 3 papers	2022

## Supervision of Theses:

#	Student Name	Thesis Title	University	Year
1	Nisreen Wafiq	Solving the Fractional Sawada-Kotera Equation by Homotopy Analysis Method	Zarqa University	2021
2	Walaa Nafez	Conformable Solution of Some Fractional Equations Using Residual Power Series Method	Zarqa University	2021
3	Bayan Ghazal	Formable integral transform and its applications	Zarqa University	2022





## Member of Examinations Committee:

Student Name	Thesis Title	University	Year
Bushra shehap	Mathematical Description of Wave Propagation in Kidney Lithotripsy	Zarqa University	2020
Marah Ababneh	Solving Fractional System of Plasma by the Fractional Sub-Equations Method	Zarqa University	2020
Baraa Ayasrah	Numerical Solutions of Nonlinear Differential Equations Using Cubic B-Spline	Zarqa University	2020
Zainab Abde-Qader	Solving the Handling Stiff Systems of Ordinary Differential Equations by Homotopy Analysis Method	Zarqa University	2021

And others in 2022.

## Personal Information:

Name	Rania Zohair Saadeh		
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