Dr. Radwan Ahmad Abu-Gdairi

rgdairi@zu.edu.jo
radwan_gdairi@yahoo.com

Pure Mathematics/ Topology

Academic Rank: Associate Professor

Membership:

Member of the Science Faculty Council (Many times)
Member of the Quality Committee - Science Faculty (Many times)
Member of the Organizing Committee of International Arab Conference on Mathematics and Computations (Many times)
Head of the Organizing Committee of The 7th International Arab Conference on Mathematics and Computations (2022)
Coordinator of the 8th International Arab Conference on Mathematics and Computations (2023)
Head of Mathematics Department, Faculty of Science, Zarqa University. Sep. 2017 to Sep. 2018
Head of Mathematics Department, Faculty of Science, Zarqa University. Sep. 2020 to Sep. 2024
Vice Dean of Faculty of Science, Zarqa University. Sep. 2024 to Present.

Qualifications:

Ph. D, Pure Mathematics (Topology), Tanta University, Egypt, 2011.
The Ph.D. Thesis Title: New Approaches for Topological Generalizations.
M. Sc., Mathematics, Mu'tah University, Jordan, 2006.
The Master Thesis Title: On b-Open Sets and Certain Forms of Continuity.
B. Sc., Mu'tah University, Jordan, 1993.

Teaching Experience:

	From	To
Associate Professor, Department of Mathematics, Faculty of Science, Zarqa University/ Jordan.	December 2022	Present
Assistant Professor, Department of Mathematics, Faculty of Science, Zarqa University/ Jordan.	September 2014	December 2022
Assistant Professor, Department of Mathematics & Computer Science, Faculty of Science, Tafila Technical University/ Jordan	2012	2014
Assistant Professor, Department of Mathematics, Faculty of Science, Jerash University/ Jordan.	2011	2012
Full Time Lecturer, Jerash University/ Jordan.	2009	2011

Taught Subjects:
Undergraduate courses:
General Topology (I), General Topology (II), Abstract Algebra (I), Linear Algebra (I), Introduction to Functional Analysis, Logic and Set Theory, Vector Analysis, Calculus (I), Calculus(II), Applied Statistics for engineering, Introduction to statistics, Probability Theory, Biostatistics, Mathematical Statistics, Linear Algebra (II), Euclidian Geometry, Mathematical Programming, Numerical Analysis (I), Real Analysis (I), Number Theory.

Graduate courses:
General Topology (1), Real Analysis (Measure Theory & Integration), Mathematical Statistics.

Publications:

#	Year	Title	Publisher
1	(2010)	New Approaches for Generalized Closed Sets	Institute of Mathematics and Computer Science
2	(2010)	New Approaches for generalized Continuous Functions	International Journal of Mathematical Analysis
3	(2011)	Generalized Near Rough Probability in Topological Spaces	International Journal of Contemporary Mathematical Sciences
4	(2011)	Generalized Rough Probability in Topological Spaces	International Journal of Mathematical Archive
5	(2011)	Generalized Near Approximations in Topological Spaces	International Journal of Mathematical Archive
6	(2013)	An Efficient Computational Method for 4th-order Boundary Value Problems of Fredholm IDEs	Applied Mathematical Sciences
7	(2013)	Approximate Solution of Second-Order Integrodifferential Equation of Volterra Type in RKHS Method	Int. Journal of Math. Analysis
8	(2015)	An Expansion Iterative Technique for Handling Fractional Differential Equations Using Fractional Power Series Scheme	Journal of Mathematics and statistics
9	(2016)	Fitted Reproducing Kernel Method for Solving a Class of third-Order Periodic Boundary Value Problems	American Journal of Applied Sciences
10	(2017)	Generalized Near Rough Connected Topologized Approximation Spaces	Global Journal of Pure and Applied Mathematics
11	(2019)	Generalized b- Approximations in Topological Spaces	Far East Journal of Mathematical Sciences
12	(2021)	Generating fuzzy sets and fuzzy relations based on information,	WSEAS Transactions on Mathematics

#	Year	Title	Publisher
13	(2021)	Implementation of reproducing kernel Hilbert algorithm for pointwise numerical solvability of fractional Burgers' model in time-dependent variable domain regarding constraint boundary condition of Robin	Results in Physics
14	(2021)	Neutrosophic Logic-Based Document Summarization	Journal of Mathematics
15	(2021)	Two different Views for Generalized Rough Sets with Applications,	Mathematics
16	(2021)	Attractive multistep reproducing kernel approach for solving stiffness differential systems of ordinary differential equations and some error analysis	Computer Modeling in Engineering & Science
17	(2022)	Some Topological Approaches for Generalized Rough Sets and Their Decision-Making Applications	Symmetry
18	(2022)	Nearly Soft β -Open Sets via Soft Ditopological Spaces	European Journal of Pure and Applied Mathematics
19	(2022)	On Categorical Property of Fuzzy Soft Topological Spaces	Applied Mathematics & Information Sciences
20	(2022)	On Structures of Rough Topological Spaces based on Neighborhood Systems	Italian Journal of Pure and Applied Mathematics
21	(2022)	Analytical solution of nonlinear fractional gradient-based system using fractional power series method	International Journal of Analysis and Applications
22	(2022)	Compactness and connectedness via the class of soft somewhat open sets	AIMS Mathematics
23	(2022)	On b-open sets via infra soft topological spaces	European Journal of Pure and Applied Mathematics
24	(2022)	Approximations by Minimal Structures and Ideals with Chemical Applications	Intelligent Automation and Soft Computing
25	2022	On Covering-Based Rough Intuitionistic Fuzzy Sets	Mathematics
26	(2022)	Continuity and Separation Axioms Via Infra-Topological Spaces	Journal of Mathematics and Computer Science (JMCS)
27	(2022)	n^{th} Power Root Fuzzy Sets and Its Topology	International Journal of Fuzzy Logic and Intelligent Systems
28	(2023)	Medical diagnosis for the problem of Chikungunya disease using soft rough sets	AIMS Mathematics

#	Year	Title	Publisher
29	(2023)	A Novel Framework for Generalizations of Soft Open Sets and Its Applications via Soft Topologies	Mathematics
30	(2023)	Economic decision making using rough topological structures	Journal of Mathematics
31	(2023)	On fuzzy points applications of fuzzy topological spaces	International Journal of Fuzzy Logic and Intelligent Systems
32	(2023)	The Relationship between Ordinary and Soft Algebras with an Application	Mathematics
33	(2023)	Generalized π-weak closed sets and some applications on weak structures	Journal of Mathematics and Computer Science
34	(2023)	On Primal Soft Topology	Mathematics
35	(2023)	Further properties of soft somewhere dense continuous functions and soft Baire spaces	Journal of Mathematics and Computer Science
36	(2023)	Modeling of COVID-19 in View of Rough Topology	Axioms
37	(2023)	Fuzzy Soft Sets and Decision Making in Ideal Nutrition	Symmetry
38	(2023)	Generalized Neighborhood Systems Approach for Information Retrieval Systems	Springer Proceedings in Mathematics and Statistics
39	(2023)	Infra Soft β -Open Sets and Their Applications on Infra Soft Topological Spaces	Springer Proceedings in Mathematics and Statistics
40	(2023)	On q-Laplace Transforms	Springer Proceedings in Mathematics and Statistics
41	(2023)	A Recent View of Generalized closed sets	Jokull Journal
42	(2023)	Mutations of Nucleic Acids via Matroidal Structures	Symmetry
43	(2023)	Topological Visualization and Graph Analysis of Rough Sets via Neighborhoods: A Medical Application Using Human Heart Data	Aims Mathematics
44	(2023)	On weakly soft β-open sets and weakly soft β-continuity	Journal of Intelligent and Fuzzy Systems
45	(2023)	Weakly soft b-open sets and their usages via soft topologies: A novel approach	Journal of Intelligent and Fuzzy Systems
46	(2023)	A novel approach to study soft preopen sets inspired by classical topologies	Journal of Intelligent and Fuzzy Systems
47	(2023)	R_i-separation axioms via supra soft topological spaces	Journal of Mathematics and Computer Science

#	السنة	عنوان البحث	جهة النشر
48	(2024)	Extension of topological structures using lattices and rough sets	AIMS Mathematics
49	(2024)	Nano Topology via Idealization	Wseas Transactions on Mathematics
50	(2024)	Enhancing rheumatic fever analysis via tritopological approximation spaces for data reduction	Malaysian Journal of Mathematical Sciences
51	(2024)	On Multi-granulation Rough Sets with its Applications,	Computers, Materials & Continua
52	(2024)	Enhancing Dengue fever diagnosis with generalized rough sets: Utilizing initial-neighborhoods and ideals	Alexandria Engineering Journal
53	(2024)	Soft rough fuzzy sets based on covering	AIMS Mathematics
54	(2024)	Different types of continuous functions and their applications	Applied Mathematics & Information Sciences
55	(2024)	New versions of maps and connected spaces via supra soft SD-operators	PLOS ONE
56	(2024)	Decision-making in Diagnosing Heart Failure Problems Using Basic Rough Sets	AIMS Mathematics
57	(2024)	The accurate diagnosis for COVID-19 variants using nearly initial-rough sets	Heliyon
58	(2024)	Pythagorean Fuzzy Soft Somewhat Continuous Functions	European Journal of Pure and Applied Mathematics
59	(2024)	On Intuitionistic Fuzzy Soft Pretopology	International Journal of Analysis and Applications
60	(2024)	On Some Characteristics of Generalized γ-Closure Spaces	Wseas Transactions on Mathematics
61	(2024)	A Unified theory for particular types of faint continuous multifunction	International Journal of Fuzzy Logic and Intelligent Systems

Conferences:

#	Paper Title	Organizing Institution	Conference	Conference Duration
1	**Coordinator**	Zarqa University	The 8th International Arab Conference on Mathematics and Computations	10-12 May 2023
2	1. Generalized Neighborhood Systems Approach for Information Retrieval Systems. 2. Infra soft Beta-open sets and their applications on infra soft topological spaces. 3. On q-Laplace Transforms. **Head of Organizing Committee**	Zarqa University	The 7th International Arab Conference on Mathematics and Computations	11-13 May 2022
3	**Organizing Committee Member**	Zarqa University	The 6th International Arab Conference on Mathematics and Computations	24-26 April 2019
4	1. A reliable numerical method for solving a certain class of singular initial value problems using reproducing kernel algorithm 2. Fitted Reproducing Kernel Method for Solving a Class of Third-Order Periodic Boundary Value Problems	Zarqa University	The 5th International Arab Conference on Mathematics and Computations	18-20 May 2016
5	Attendance	Assiut University / Egypt	The 23nd International Conference on Topology and Its Applications	23 April 2009
6	Attendance	Helwan University / Egypt	The 22nd International Conference on Topology and Its Applications	7 – 8 July 2008

Supervision of Theses:

#	Student Name	Thesis Title	Year
1	Maha Alsoudi	On Generalized b-Closed Sets and Uncertainty	2017
2	Esraa Rabee	On Fiberwise $\alpha-$ Topology	2018
3	Laila Alqaryouti	Some Topological Generalizations Using b- Open Sets	2021
4	Rasha Abu Shabab	On Some Near Open Sets and Uncertainty	2021
5	Alaa Bader	New Topological Approaches for Some Generalized Rough Sets	2022
6	Doa'a Taher	Topological Approaches to Granular Computing Using Neighborhoods Systems with Applications	2023
7	Hiyam Hammad	On Some Near Open Concepts of Generalized Rough Sets	2023
8	Suhaib Alkhaldi	On Some Topological Rough Structures Via Ideals	2024

Member of Examinations Committee:

#	Student Name	Thesis Title	Year
1	Mohammed Al-Amleh	Robust Methods in Regression Analysis: Comparison and Improvement	2015
2	Ahmad El- Ayasrah	Exact Solution of the Self-Dual Yang-Mills Equations	2016
3	Zaid Al-Homsi	Comparison among some Nonparametric Methods in Estimating Regression Models	2017
4	Khalid Al-Boureeny	New Modification Method for Finding Zeros of Nonlinear Functions	2017
5	Nagah Aisa	Solutions of Conformable Time Fractional Whithmam-Broer-Kaup Equations by Residual Power Series Method	2017
6	Mohammad Alaesa	Comparison Among Some Methods of Estimating the Parameters of Truncated Normal Distribution	2017
7	Asma Khader	The Conformable Laplace Transform of the Fractional Chebyshev and Legendre polynomials	2017
8	Sawsan Farhan	Solving Fourth –Order Singular Boundary Value Problems Using Reproducing Kernal Helbert Space Method	2018
9	Alaa Hamzeh,	Solutions of Nonlinear Volterra-Fredholm Integro-Differential Equations	2018
10	Duaa Alqatanani	A Sinc-Collocation Method for Solving Integro-Differential Equations of Fractional Derivative	2019

11	Marah Ababneh	Solving Fractional System of Plasma by the Fractional Sub-Equation Method	2020
12	Fatima Sa'afin	Inequalities of Means for Numbers and Matrices	2020
13	Walaa Abdullah	Conformable Solution of Some Fractional Equations Using Residual Power Series Method	2021
14	Obada Alghreisy	Solving Ibragimov-Shabat Fractional Partial Differential Equation	2021
15	Lana Alabsi	Solving Hunter – Saxton Fractional Partial Differential Equation	2021
16	Saeed Al-Khalely	New Estimations for the Zeroes of Polynomials Using Refinements of Numerical Radius Inequalities	2022
17	Ola Ramadan	Refinements of Some Classical Inequalities for Scalars and Matrices	2022
18	Baha'aldeen Alnaddaf	Generalizations on Numerical Radius and Some Related Inequalities	2023
19	Mohammad Hussein	Master Generators to Construct and Solve Families of Ordinary Differential Equations	2023
20	Abdallah Al-hamad	Using Sub - Equation Method to Solve Some Fractional Equations	2023
21	Aref Sarhan	The Numerical Radius of Block Matrices and Some Applications	2023
22	Israa Al-Freihart	Some Problems in Accelerated Life Test	2023
23	Rawan Smadi	Singular Value and Norm Inequalities for Functions of Matrices	2024

Community Service Activities:

#	Duration	Activity
1	(17 – 18) /7/2019	Training course in statistical analysis. (for employees of Zarqa University Schools & KG)

Personal Information:

Name	Radwan Ahmad Abu-Gdairi.		
Address	Zarqa – Al Karameh Street - Behind Al-Jawabreh Hotel		
Work Tel No.	+962-5-3821100	Ext.	1503
Mobile	0798212156		
Postal Address	P. O. Box: 132222 – Zarqa 13132 – Jordan.		