



اسم عضوية التدريس: علياء برقان

البريد الإلكتروني: Aliaaburqan@zu.edu.jo

التخصص العام: رياضيات
الجبر (مصفوفات وتحويلات خطية)

الرتبة الأكاديمية: أستاذ دكتور

الأهداف المهنية:

الاسهام في تطوير البحث الرياضي وتحقيق التميز الأكاديمي من خلال تقديم إسهامات مبتكرة في مجالات الجبر، وتحليل المؤثرات، والتحويلات الخطية، والمعادلات التفاضلية. العمل على تعزيز التعاون البحثي وتوجيه طلاب الدراسات العليا. توظيف الخبرة الأكاديمية والإدارية الواسعة لدعم ضمان الجودة، والارتقاء بمستوى التعليم العالي. علاوة على ذلك، الإسهام في تعزيز التعاون العلمي الدولي من خلال تنظيم المؤتمرات العلمية العالمية، وتسهيل تبادل المعرفة، وبناء شراكات أكاديمية بين الباحثين والمؤسسات حول العالم.

المعلومات الشخصية:

05-3821100-2272

الرقم الفرعي:

أردنية

الجنسية:

العضويات:	
(1)	09/2026 - 09/2024 عميد كلية العلوم/ جامعة الزرقاء
(2)	09/2018 - 02/2024 عميد كلية العلوم/ جامعة الزرقاء
(3)	09/2017 - 09/2018 نائب عميد كلية العلوم/ جامعة الزرقاء
(4)	05/2015 - 09/2017 رئيس قسم وحدة المساقات الخدمية/ جامعة الزرقاء
(5)	عضو مجلس الجامعة / جامعة الزرقاء 2025/2026
(6)	عضو مجلس العمداء/ جامعة الزرقاء (عدة مرات)
(7)	عضو لجنة التعيين والترقية / جامعة الزرقاء 2025/2026
(8)	عضو مجلس الاعتماد و ضمان الجودة / جامعة الزرقاء (عدة مرات)
(9)	عضو لجنة التدقيق الداخلي/ جامعة الزرقاء (عدة مرات)
(10)	عضو مجلس كلية العلوم/ جامعة الزرقاء (عدة مرات)
(11)	رئيس اللجنة التنظيمية للمؤتمر العربي الدولي السادس لعلوم الرياضيات، جامعة الزرقاء، 2019
(12)	رئيس اللجنة التنظيمية للمؤتمر العربي الدولي السابع لعلوم الرياضيات، جامعة الزرقاء، 2022
(13)	رئيس اللجنة التنظيمية للمؤتمر العربي الدولي الثامن لعلوم الرياضيات، جامعة الزرقاء، 2023
(14)	رئيس اللجنة التنظيمية للمؤتمر العربي الدولي التاسع لعلوم الرياضيات، جامعة الزرقاء، 2025
(15)	رئيس اللجنة التنظيمية للمؤتمر العربي الدولي العاشر لعلوم الرياضيات، جامعة الزرقاء، 2027

المؤهلات:

(1)	الدكتورة في الرياضيات، الجامعة الأردنية، الأردن (2009-2013)
(2)	ماجستير رياضيات ، الجامعة الأردنية، الأردن (2002-2005)
(3)	بكالوريوس رياضيات، الجامعة الأردنية، الأردن (1998-2002)

الخبرات التدريسية:

(1)	أستاذ دكتور، كلية العلوم- جامعة الزرقاء 2025- الان
(2)	أستاذ مشارك، كلية العلوم- جامعة الزرقاء 2020-2025
(3)	أستاذ مساعد، كلية العلوم- جامعة الزرقاء 2013-2020
(4)	محاضر متفرغ، كلية العلوم- جامعة الزرقاء 2006-2013
(5)	محاضر غير متفرغ في الجامعة الأردنية (عدة مرات)

المواد الدراسية:

مقررات البكالوريوس:

التفاضل والتكامل، الجبر الخطي، تحليل المصفوفات، التحليل الحقيقي، نظرية الأعداد، الجبر المجرد، المعادلات التفاضلية العادية، المعادلات التفاضلية الجزئية، مواضيع خاصة في الرياضيات.

مقررات الدراسات العليا:

تحليل المصفوفات، الجبر المجرد، مواضيع خاصة في الرياضيات.

الأبحاث المنشورة:

الرقم	عنوان البحث المنشور أو المقبول للنشر	المجلة	السنة
(1)	Reverses of Young Type Inequalities	Journal of Mathematical Inequalities	(2015)
(2)	Improved Cauchy-Schwarz Norm Inequality for Operators	Journal of Mathematical Inequalities	(2016)
(3)	Simultaneous Approximation in Banach -Best ∞ Lattice Function Spaces	Journal of Mathematical and Computational Science	(2016)
(4)	Singular Value and Norm Inequalities Associated with 2×2 Positive Semidefinite Block Matrices	Electronic Journal of Linear Algebra	(2017)
(5)	Semidefinite Further Results Involving Positive Block Matrices	Far East Journal of Mathematical Sciences	(2018)
(6)	Comparisons of Heinz Operator Means with Different Parameters	Malaysian Journal of Science	(2019)
(7)	Generalizations of numerical radius inequalities related to block matrices	Filomat	(2019)
(8)	Results on Sequential Conformable Fractional Derivatives with Applications	Journal of Computational Analysis and Applications	(2021)
(9)	A New Integral Transform: ARA Transform and Its Properties and Applications	Symmetry	(2020)
(10)	Best Simultaneous Approximation on Metric Spaces via Monotonous Norms	Filomat	(2021)
(11)	A New Attractive Method in Solving Families of Fractional Differential Equations by a New Transform	Mathematics	(2021)
(12)	A Novel Numerical Approach in Solving Fractional Neutral Pantograph Equations via the ARA Integral Transform	Symmetry	(2022)
(13)	New Results for Arithmetic-Geometric Mean Inequality and Singular Values of Matrices	Wseas Transactions on Mathematics	(2022)
(14)	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)
(15)	New ordering relations for the Heinz means via hyperbolic functions.	Journal of Mathematical Inequalities	(2022)

(2022)	Alexandria Engineering Journal	Reliable solutions to fractional Lane-Emden equations via Laplace transform and residual error function	(16)
(2022)	Axioms	New Theorems in Solving Families of Improper Integrals	(17)
(2022)	Mathematics	On the Double ARA-Sumudu Transform and Its Applications	(18)
(2022)	Symmetry	Applications on Double ARA-Sumudu Transform in Solving Fractional Partial Differential Equations	(19)
(2022)	Mathematical Problems in Engineering	Application of ARA-Residual Power Series Method in Solving Systems of Fractional Differential Equations	(20)
(2022)	Alexandria Engineering Journal	ARA-residual power series method for solving partial fractional differential equations	(21)
(2022)	Fractal and Fractional	Analytical Solutions of the Nonlinear Time-Fractional Coupled Boussinesq-Burger Equations Using Laplace Residual Power Series Technique	(22)
(2022)	Fractal and Fractional	Constructing Analytical Solutions of the Fractional Riccati Differential Equations Using Laplace Residual Power Series Method	(23)
(2023)	Filomat	New efficient and accurate bounds for zeros of a polynomial based on similarity of companion complex matrices	(24)
(2023)	Filomat	Some generalizations of numerical radius inequalities including the off-diagonal parts of block matrices	(25)
(2023)	Journal of Applied Mathematics	Improvements of Logarithmic and Identric Mean Inequalities for Scalars and Operators	(26)
(2023)	In The Implementation of Smart Technologies for Business Success and Sustainability	The Effectiveness Degree of Distance Learning at Zarqa University in Light of Corona Pandemic from Faculty Members' and Students' Point of View	(27)
(2023)	CMES-Computer Modeling in Engineering & Sciences	On Time Fractional Partial Differential Equations and Their Solution by Certain Formable Transform Decomposition Method	(28)
(2023)	Fractal and Fractional	Using Laplace Residual Power Series Method in Solving Coupled Fractional Neutron Diffusion Equations with Delayed Neutrons System	(29)
(2023)	Fractal and Fractional	A Novel Scheme of the ARA Transform for Solving Systems of Partial Fractional Differential Equations	(30)

(2023)	European Journal of Pure and Applied Mathematics	New bounds for the Eigenvalues of Matrix Polynomials	(31)
(2023)	Journal of Mathematical Inequalities	Generalization of Some Unitarily Invariant Norm Inequalities for Matrices	(32)
(2023)	Mathematical Methods in the Applied Sciences	Adapting a new formula to generalize multidimensional transforms	(33)
(2023)	Mathematical Methods in the Applied Sciences	A study of double general transform for solving fractional partial differential equations	(34)
(2023)	Appl. Math	Applications of the ARA-Residual Power Series Technique to Physical Phenomena	(35)
(2023)	Mathematics and Computation	Estimations of the Bounds for the Zeros of Polynomials Using Matrices	(36)
(2023)	Mathematics and Computation	New Estimations for Zeros of Polynomials Using Numerical Radius and Similarity of Matrices	(37)
(2023)	AIMS Mathematics	Analytical Solutions to The Coupled Fractional Neutron Diffusion Equations with Delayed Neutrons System Using Laplace Transform Method	(38)
(2023)	Journal of Mathematical Inequalities	Generalized Numerical Radius Inequalities Involving Positive Semidefinite Block Matrices	(39)
(2023)	European Journal of Pure and Applied Mathematics	Adapting Integral Transforms to Create Solitary Solutions for Partial Differential Equations Via A New Approach	(40)
(2023)	Frontiers in Physics	A Solution for the Neutron Diffusion Equation in the Spherical and Hemispherical Reactors Using the Residual Power Series	(41)
(2023)	Applied and Computational Mathematics	Trustworthy Analytical Technique for Generating Multiple Solutions to Fractional Boundary Value Problems	(42)
(2024)	Journal of Applied Mathematics	Analytical Approximate Solutions of Caputo Fractional KdV-Burgers Equations Using Laplace Residual Power Series Technique	(43)
(2024)	Fractals	A Modern Traveling Wave Solution for Caputo Fractional Klein–Gordon Equations	(44)
(2024)	Atoms	The Optical Model Absorption Term in the Frame of Fractional Derivatives	(45)
(2024)	Fractals	A New Algorithm for Generating Power Series Solutions for A Broad Class of Fractional Pdes: Applications to Interesting Problems	(46)

(2024)	Journal of Mathematical Inequalities	Some Singular Value Inequalities for Matrices	(47)
(2024)	Filomat	Interpolating Numerical Radius Inequalities for Positive Semidefinite Block Matrices.	(48)
(2024)	Mathematical Analysis and Numerical Methods	Matrix Inequalities for the Difference Between Arithmetic and Heinz Means	(49)
(2024)	Mathematical Analysis and Numerical Methods	New Bounds for Generalized of Logarithmic and Identric Means	(50)
(2024)	Mathematical Analysis and Numerical Methods	New Refinements of Generalized Numerical Radius Inequalities	(51)
(2024)	Mathematical Analysis and Numerical Methods	Solving Partial Integro Differential Equations Via Double ARA-Formable Transform	(52)
(2024)	AIP Conference Proceedings	New Algebraic Insights to the Goldbach Conjecture	(53)
(2025)	Progress in Fractional Differentiation and Applications	Semi-Analytical Technique for Solving the Time-Fractional Kaup-Kupershmidt Equation	(54)
(2025)	European Journal of Pure and Applied Mathematics,	Refinements of Reverse Young Inequality for Scalars and Matrices	(55)
(2025)	The European Physical Journal Plus	Limit residual function method and applications to PDE models	(56)
(2025)	Partial Differential Equations in Applied Mathematics	An Analytical Solution to the Fractional Fredholm–Volterra Integro-Differential Equation Using the Limit Residual Function Technique	(57)
(2025)	Singular Value Inequalities for Matrix Sums and Products. European Journal of Pure and Applied Mathematics	Employing the Limit Residual Function Method to Solve Systems of Fractional Differential Equations	(58)
(2025)	Alexandria Engineering Journal	A professional semi-analytical method to construct series solution to singular and nonsingular differential equations	(59)
(2025)	Progress in Fractional Differentiation and Applications	Limit-Residual Function Method: A New Approach to Creating a Power Series Solution for Fractional Differential Equations	(60)
(2025)	Fractals	An Innovative Analytical Method for Solving the Fractional Caudrey Dodd Gibbon Equation	(61)
(2025)	Journal of Mathematics and Computer Science	Constructing Series Approximate Solutions of Ordinary Differential Equations Using the Limit Residual Function Method	(62)

(2025)	European Journal of Pure and Applied Mathematics	Singular Value Inequalities for Matrix Sums and Products	(63)
(2026)	Algebra and Differential Equations with Applications	Norm Inequalities Involving Accretive-Dissipative Matrices	(64)
(2026)	Fractals	Wave Soliton Solutions for Conformable-Fractional Partial Differential Equations	(65)
(2026)	Acta Scientiarum Mathematicarum	Refinements of Young and Heinz inequalities with applications to matrix inequalities	(66)
(2026)	Communications in Partial Differential Equations	Double-series expansion of the LRF method for fast-converging solutions of higher-order fractional PDEs with classical initial conditions	(67)

الكتب:			
الرقم	عنوان الكتاب	الناشر	السنة
(1)	Computational Mathematics and Applications	Springer Nature	2020
(2)	Mathematics and Computation	Springer Nature	2023
(3)	Mathematical Analysis and Numerical Methods	Springer Nature	2024

المؤتمرات:			
الرقم	عنوان البحث المقدم (ضع إشارة (-) في حال الحضور فقط)	الجهة المنظمة	المؤتمر/السنة
(1)	Refinements of the Heinz Inequality for Operators via the Hermite-Hadamard Inequality	جامعة الزرقاء	International Arab Conference on Mathematics and Computations 23-25/04/2014
(2)	Comparison of Heinz Operators Means with Different Parameters	جامعة بتر المايزية	International Conference on Mathematical Sciences and Statistics 60-08/02/2018

The 6 th International Arab Conference on Mathematics and Computations 24-26/04/2019	جامعة الزرقاء	Conference Chair	(3)
The 7 th International Arab Conference on Mathematics and Computations 11-13/05/2022	جامعة الزرقاء	Conference Chair	(4)
The 8th International Arab Conference on Mathematics and Computations 10-12/05/2023	جامعة الزرقاء	Conference Chair	(5)
The 5th International Conference on Mathematical Sciences 2023 16-17/05/2023	جامعة ماليزيا الوطنية	New Algebraic Insights to the Gold Bach Conjecture	(6)
The 4th International Conference on Mathematics and Statistics 20-22/02/2025	الجامعة الأمريكية في الشارقة	Further Results Related to the Numerical Radius of Block Matrices	(7)
The 9th International Arab Conference on Mathematics and Computations 07-09/05/2025	جامعة الزرقاء	Conference Chair	(8)
The 8th International conference on Advances in Natural and Applied Sciences 28-31/11/2025	جامعة أغري إبراهيم تشينشن	Efficient Implementation of the Residual Function for Solving Systems of Ordinary Differential Equations	(9)
The 10th International Arab Conference on Mathematics and Computations 21-23/04/2027	جامعة الزرقاء	Conference Chair	(10)

الإشراف على طلبة الدراسات العليا:			
الرقم	عنوان الرسالة أو الأطروحة	الجامعة	السنة
(1)	Spectral radius, numerical radius and unitarily invariant norm inequalities in Hilbert space/ Doaa Al-Saafin	جامعة الزرقاء	2016
(2)	Comparison of various means for numbers and matrices/ Wafa' Al- Murshid	جامعة الزرقاء	2017

2018	جامعة الزرقاء	Inequalities related to positive semidefinite block matrices/ Ahmad Abu- Rahma	(3)
2020	جامعة الزرقاء	Inequalities of means for numbers and matrices/ Fatima Al-Saafin	(4)
2020	جامعة الزرقاء	Bounds for zeros of polynomials/ Ahmad Al-Sawaftah	(5)
2022	جامعة الزرقاء	New Estimation for the Zeros of Polynomials Using Refinements of Numerical Radius Inequalities/ Saeed AlKhalely	(6)
2022	جامعة الزرقاء	Location Eigenvalues of Matrix Polynomials/ Hamdan Dbabesh	(7)
2022	جامعة الزرقاء	Generalized Hyperbolic Function and Matrix Means/ Abeer Abu_Snainah	(8)
2023	جامعة الزرقاء	Generalizations on Numerical Radius and Some Related Inequalities/ Baha'aldeen Alnaddaf	(9)
2023	جامعة الزرقاء	Refinements of Some Classical Inequalities for Scalars and Matrices/ Ola Ramadan	(10)
2023	جامعة الزرقاء	The Numerical Radius of Block Matrices and Some Applications/ Aref Sarhan	(11)
2023	جامعة الزرقاء	Application on Singular Value Decomposition of Matrices/ Rawan Abu-Hafiza	(12)
2024	جامعة الزرقاء	Singular Value and Norm Inequalities for Functions of Matrices/ Rawan Smadi	(13)
2025	جامعة الزرقاء	Adapting The Cartesian Decomposition Of Matrices To Locate The Zeros Of Polynomials/ Mohammad Abusaif	(14)
2025	جامعة الزرقاء	On Cauchy-Schwarz Inequality and Applications/ Suhaib Ali Jaber	(15)
2025	جامعة الزرقاء	Constructing An Analytical Method to Determine the Coefficients in a Power Series Solution/ Malek Abu Kharrob	(16)
2026	جامعة الزرقاء	Generating Coefficients of Fractional Power Series Solutions using an Analytical Technique/Eman Rajeh	(17)
2026	الجامعة الأردنية	Generating New Families of Distributions with Better Fitting Data/ Hamdan Dbabesh	(18)

أنشطة خدمة المجتمع:			
الرقم	عنوان النشاط	مكان إقامة النشاط	السنة
(1)	مبادرات خيرية	جمعية عمر بن الخطاب	2018-2026
(2)	مبادرات خيرية	جمعية بيت الخير	2018-2026
(3)	مبادرة "يد تعلم"	جمعية عمر بن الخطاب	2026