

Mutaz Tawfiq Al-Sabbagh

Rank: Assistant professor

Position: Faculty member

Personal Data

Department: Basic Sciences and Humanities

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Office Phone No. : 31689

Links: google scholar

Language Proficiency

Language	Read	Write	Speak
Arabic	Excellent	Excellent	Excellent
English	Very good	Very good	Very good
Others			

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2/2002	Ph.D	USA	Oklahoma State University
12/1991	Master	Jordan	Yarmouk University
6/1989	B.S.C	Jordan	Yarmouk University

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Equivariant Cohomology of a B-variety and Betti Numbers with Application
Master	Riemann Surfaces and Theta Functions

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work		Date
Assistant Professor	College of Engineering	Imam Abdulrahman Bin Faisal University	fall 2009 till now
Assistant Professor	Dept. of Mathematics and Statistics	Jordan University of Science and Technology	2002 till 2009

Scientific Achievements

Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
	Al-Zhour Z. & Sabbagh M.	The Approximate Solutions of Coupled Matrix Riccati Convolution Differential Equations	Vol. 2 , No. 4 , April (2011), 1-13. Available Online at http://www.ijma.info/index.php/ijma/issue/current
	Alsabbagh, mutaz	On T-equivariant Rational Equivalence of Equivariant cycles	Vol. 7 , Oct (2009), 83-94, Journal of the Association of Arab Universities for Basic and Applied Sciences

Refereed Scientific Research Papers Accepted for Publication

#	Name of Investigator(s)	Research Title	Journal	Acceptance Date
1	Hassan Al-Zoubi, Mutaz Al-Sabbagh and Stylianos Stamatakis	On Surfaces of Finite Chen III-Type	Bulletin of the Belgian Mathematical Society	Sep 2018
2	Hassan Al-Zoubi, Amer Dababneh and Mutaz Al-Sabbagh	Ruled Surfaces of Finite II-Type	The 3rd International Conference on Applied Mathematics and Computer Sciences(AMACS 2018) in London, UK October 26-28, 2018	Oct 2018

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	Hassan Al-Zoubi, Amer Dababneh and Mutaz Al-Sabbagh	RULED SURFACES OF FINITE II-TYPE	The 3rd International Conference on Applied Mathematics and Computer Sciences(AMACS 2018) in London, UK October 26-28, 2018

Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
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1	Mutaz Al-sabbagh & Zeyad Al-zhour	A COMPUTATIONAL ALGORITHM FOR THE K-TH CHOW RING OF A T-VARIETY AND SOME APPLICATIONS	May 2014
2	Zeyad Al-zhour & Mutaz Al-sabbagh	THE TRACY-SINGH AND KHATRI-RAO PRODUCTS OF MATRICES AND SOME APPLICATIONS	December 2012

Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	Third conference on mathematical sciences (CM'S 2011)	Zarqa University, Jordan, 2011	Al-Zhour Z. & Sabbagh M., Generalization of Ando's geometric mean on positive matrices and some related inequalities

Membership of Scientific and Professional Societies and Organizations

Member of Jordan Society for Scientific Research

Teaching Activities

Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Calculus I	MATH261	5 contact hours/week
2	Calculus II	MATH262	5 contact hours/week
3	Differential Equations	MATH331	3 contact hours/week
4	Linear Algebra	MATH302	3 contact hours/week
5	Probability & Statistics	MATH411	3 contact hours/week
6	Numerical Methods	MATH472	3 contact hours/week

Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

1	Calculus I- MATH261: Functions, Continuity and Limits, The Derivative, Chain Rule and the General Power Rule, Higher-Order Derivatives, Derivatives of Trigonometric and Inverse Trigonometric Functions, Logarithmic and Exponential Functions, Hyperbolic Functions, Implicit differentiation, and L'Hopital's rule, Increasing and Decreasing Functions, Relative Maxima and Minima, Absolute Maxima and Minima, and Applications, Integration Concept / Formulas and Integration Techniques, Integration by Substitution, Integration by Parts, Trigonometric Integrals, Trigonometric Substitutions, Partial Fractions, Improper Integrals, Application (Areas between curves, volumes)
2	Calculus II- MATH262: Polar Coordinates, Tangent Lines, Arc Length, Area in Polar Coordinates, Conic Sections, Rectangular Coordinates in 3-Space, Vectors, Parametric Equations of Lines, Planes in 3-Space, Quadric Surfaces, Cylindrical and Spherical Coordinates, Calculus of Vector-Valued Functions, Change of Parameter and Arc Length, Unit Tangent, Normal and Binormal Vectors, Curvature, Functions of two or More Variables, Limits and Continuity, Partial Derivatives, Chain Rule, Directional Derivatives and Gradients, Tangent Planes, Maxima and Minima of Functions of Two Variables, Lagrange Multipliers, Integration Concept / Formulas and Integration Techniques, Double Integrals, Parametric Surfaces and Surface Area, Triple Integrals, Application (Plane Area, Areas Between Curves, and volumes)
3	Differential Equations - MATH331: Definition and Classifications of Differential Equations (D.E.), Order Degree of a D.E. / Linearity, Solution of a D.E. (General and Particular), Solution of Some 1st Order, 1st Degree D.E., Separable, Homogeneous, Exact, Linear D.E.'s, and Bernoulli's Equation, Linear D.E. of Order n, Standard Form of a Linear D.E., Linear Independence of a Set of Functions, Differential

	Operators, Differential Operator Form of a Linear D.E., Homogeneous Linear D.E. with Constant Coefficients, General Solution, Auxiliary Equation, Non-Homogeneous D.E. with Constant-Coefficients, Form of the General Solution, Solution by Method of Undetermined Coefficients, Solution by Variation of Parameters, Solving D.E. Using Laplace Transform, Solving D.E. Using Power series method, Solving Linear systems of D.E's, Numerical Methods for solving differential equations
4	Linear Algebra- MATH302: Introduction to Linear Systems, Row Reduction, Echelon Forms, and Vector Equations, The Matrix Equation $Ax = b$, Solution Sets of Linear Systems, Linear Independence and Linear Transformations, Matrix Operations: Sums, Scalar Multiples, Multiplication, and Transpose, Elementary Matrices and a Method for Finding the Inverse of a square Matrix, Further Results on Systems of equations and Inevitability, Diagonal, Triangular, Symmetric Matrices, Characterization of Invertible Matrices, Partitioned Matrices and Matrix Factorization: LU Factorization Algorithm, Subspaces of the Euclidean n -Space, Basis for a subspace, Row Space, Column Space and Null Space of a Matrix, Dimension and Rank, Vector Spaces and Subspaces, Determinants, Cofactor Expansion: Cramer's Rule, Eigen Values and Eigen Vectors, The Characteristic Equation, Diagonalization, Inner product, Length, and Orthogonality, Orthogonal Sets, Gram-Schmidt Process.
5	Probability & Statistics- MATH411: 1- Descriptive Statistics: Treatment of data, Statistical data, and Types of data, Frequency table, Graphical presentation (discrete, continuous), Measure of arithmetic mean, median, mode, percentiles, quartiles, variance, and standard deviation. 2- Introduction to Probability: Sample Space; Events, Counting Techniques, Probability Axioms, Finite sample spaces, Some Particular Probability Problems, Conditional Probability, Independence Events, Discrete and Continuous Sample Spaces. 3- Random Variables and Distribution Functions: Concept of Random Variables, Discrete Probability Distributions, Continuous Probability Distributions. 4- Mathematical Expectation: Mean of Random Variable, Variance of Random Variable. 5- Probability Distributions: Discrete Uniform Distribution, Binomial Distribution, Poisson Distribution, Normal Distribution. 6- Random Sampling: Sampling Distribution of Means, Chi-Squared and t-Distributions, Sampling Distribution of Variance. 7- Estimation of Parameters: One Point Estimation, Interval Estimation, Estimating the Mean, Estimating the Variance. 8- Hypothesis Testing: Testing a statistical Hypothesis, Tests Concerning a Single Mean, Tests Concerning a Variance. 9- Regression and Correlation.
6	Numerical Methods-MATH472: Taylor Series, Errors Propagation, Total Numerical Error, The Bisection Method, Fixed-Point Iteration, Newton's Method and its Extensions, Divided Differences, Interpolation and the Lagrange Polynomials, Spline Interpolation, Numerical Differentiation, Element of Numerical Integration, Composite Numerical Integration, The Elementary Theory of I.V.P., Euler' Methods, Runge – Kutta Methods, Linear systems of Equation, Techniques for Improving Solutions, Matrix Factorization: LU Decomposition, The Jacobi and Gauss-Siedel Iterative Techniques, Linear Regression, and Finite-Difference Methods for Linear Problems.

Course Coordination

#	Course Title and Code	Coordination	Co-coordination	Undergrad.	Postgrad.	From	to
	Differential Equations- MATH331	X		X			

Student Academic Supervision and Mentoring

#	Level	Number of Students	From	to
	Second year	20		

Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	
2	

Last Update

...14/1/2019