

## FACULTY FULL NAME:

## Amira Fouad Mohammed Daghestani

**POSITION:** Assistant Professor

#### Personal Data

Nationality | Saudi Department | Mathematics (Statistics Track) Official IAU Email | adaghestani@iau.edu.sa Office Phone No. | 0133463640-38716

#### Language Proficiency

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

## Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
21/4/2020	Doctor of Philosophy in Statistics	King Saud University	Riyadh
3/6/2006	Master of Science in Statistics	King Abdul Aziz University	Jeddah
29/1/2003	Bachelor of Science in	King Abdul Aziz	Jeddah
	Statistics/Computer Science	University	

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

PhD	Finite Mixture Models Based on Lindley Distribution	
Master	An Exploration Study of the Saudi Stock Market	
Fellowship		



## Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Assistant	Math. Dept, College of Science and Humanities, Jubail,	8/5/1442 H
Professor	Imam Abdulrahman Bin Faisal University	
Lecturer	Math. Dept College of Education, Jubail, King Faisal	27/7/1430 H
	University	
Demonstrator	Math. Dept College of Education, Jubail, King Faisal	19/10/1429 H
	University	
Teaching	Math. Dept. & CS. Dept College of Education,	First Semester
Assistant	Jubail, King Faisal University	(1428/1429) H

## Administrative Positions Held: (Beginning with the most recent)

Administrative Position	Office	Date
Vice Dean for Scientific	College of Sciences and Human	2-4-1444 H
Research and Innovation	Studies - Jubail	
Head of Department	English & Translation	15-2-1444 H
	Department - College of	
	Sciences and Human Studies -	
	Jubail	
Chair of the Quality Initiatives	College of Sciences and Human	First Semester
Committee	Studies - Jubail	(1443/1444)
Vice Dean for Scientific	College of Sciences and Human	22-6-1443 Н
Research and Graduate Studies	Studies - Jubail	
Head of Department	Computer Science Department -	First Semester
	College of Education - Jubail	(1430/1431) H
Department Vice	Mathematics Department -	First Semester
	College of Education - Jubail	(1429/1430) H

## Scientific Achievements

#### **Published Refereed Scientific Research**

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	Amira F. Daghistani, Ahmed M. T.Abd El-Bar, Ahmed M. Gemeay, Mahmoud A. E. Abdelrahman and Samia Z. Hassan	A Hyperbolic Secant-Squared Distribution via the Nonlinear Evolution Equation and Its Application	Mathematics 2023, 11(20), 4270; 13 October 2023 https://doi.org/10.3390/math11204270



#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
2	A.S. AL-Moisheer, A.F. Daghestani and K. S. Sultan	ESTIMATING AND UPDATING A LINEAR DISCRIMINANT FUNCTION FROM THE MIXTURE OF TWO ONE-PARAMETER LINDLEY DISTRIBUTIONS	Electronic Journal of Applied Statistical Analysis (EJASA), 20 June, 2022
3	A.F. Daghestani, K. S. Sultan and A.S. AL-Moisheer	MIXTURE OF LINDLEY AND WEIBULL DISTRIBUTIONS: PROPERTIES AND ESTIMATION	Journal of Statistics Applications & Probability, 1 Jul. 2021
4	A.S. AL-Moisheer, A.F. Daghestani and K. S. Sultan	MIXTURE OF LINDLEY AND INVERSE WEIBULL DISTRIBUTIONS: PROPERTIES AND ESTIMATION	WSEAS TRANSACTIONS on MATHEMATICS, April 6, 2021
5	A.S. AL-Moisheer, A.F. Daghestani and K. S. Sultan	MIXTURE OF TWO ONE- PARAMETER LINDLEY DISTRIBUTIONS: PROPERTIES AND ESTIMATION	Journal of Statistical Theory and Practice, 17 November 2020

## Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	Scientific Research and Innovation Day	College of Applied Medical Sciences in Dammam – D3 - IAU – October 3, 2023 AD	Participant
2	Scholarship Forum for the year 1445 AH	Vice Deanship for Scholarship Affairs – D3 - IAU – September 20, 2023 AD	Participant
3	The annual scientific meeting of the College of Science	College of Science and Center for Basic and Applied Scientific Research - IAU - June 5, 2023 AD	Participant
4	Early Childhood Department Forum for Scientific Research	Prince Mohammed bin Fahd Hall - Early Childhood Department, College of Sciences and Humanities in Jubail - May 31, 2023 AD	Supervisor
5	A training program entitled "The Researcher's Tuesday"	Vice Deanship for Scientific Research and Innovation at the College of Sciences and Humanities in Jubail - Imam Abdul Rahman bin Faisal University during the period from 2 to 30 May 2023 AD	Supervisor & Coordinator of the workshops



#	Conference Title	Place and Date of the	Extent of
		Conference	Contribution
6	Leap 2023	Riyadh Front - Expo Center - during the period from 6 to 9 February 2023 AD	Participant
7	Scientific meeting entitled "Digital Citizenship – Behavior and Identity"	College of Sciences and Human Studies in Jubail - Imam Abdul Rahman bin Faisal University - February 1, 2023 AD	Participant
8	3 minutes competition	Agency for Scientific Research and Innovation, College of Science and Human Studies in Jubail - Imam Abdul Rahman bin Faisal University during the period from February 16 - March 14, 2023 AD	Supervisor
9	Meeting with His Excellency Prof. Dr. Saeed Al Omar, entitled "Leaders Who Passed From Here," presented by the Leadership Center at IAU	Support Deanships Building D3 - Imam Abdul Rahman bin Faisal University - January 10, 2023 AD	Participant
10	Preparation meeting entitled "My Path to Scholarship" – Deanship of Graduate Studies – IAU	Supporting Deanships Building D3 - Imam Abdul Rahman bin Faisal University - December 6, 2022 AD	Participant
11	Sustainable Partnerships Conference (Research and Innovation to Build a Prosperous Economy)	The Ritz-Carlton Hotel - Riyadh - during the period from 23 to 24 November 2022 AD	Participant
12	Forum entitled "Scientific Research and Innovation Day"	College of Medicine - Imam Abdul Rahman bin Faisal University - November 16, 2022 AD	Participant
13	Training program entitled "Resilient Leadership"	College of Business Administration Building - Imam Abdul Rahman bin Faisal University - October 31, 2022 AD	Supervisor & Presenter
14	Saudi High Performance Computing Conference 2022	Support Deanship Building - Imam Abdul Rahman bin Faisal University - during the period from 27 to 29 September 2022 AD	Participant
15	Research Excellence Forum for Developing the Quality and Impact of Scientific Research 2022	King Faisal Convention Center - King Abdulaziz University in Jeddah - during the period from 16 to 17 May 2022 AD	Participant
16	International Conference and Exhibition for Education 2022	Riyadh International Convention and Exhibition Center - during the period from 8 to 11 May 2022 AD	Participant



#	Conference Title	Place and Date of the	Extent of
		Conference	Contribution
17	The second scientific exhibition for master's students in the Department of Special Education	Zoom platform - College of Science and Human Studies in Jubail - March 31, 2022 AD	Participant
18	Global Entrepreneurship Conference	Riyadh Front - Expo Center - during the period from 27 to 30 March 2022 AD	Participant
19	Forum of Ambassadors of Values	Theater of the College of Science and Human Studies in Jubail - March 9, 2022 AD	Participant
20	Early Childhood Department of Scientific Research Forum	Prince Muhammad bin Fahd Hall - Early Childhood Department, College of Science and Human Studies in Jubail - March 8, 2022 AD	Participant
21	A panel discussion entitled "Leadership with Goodness"	Imam Abdul Rahman bin Faisal University - February 16, 2022 AD	Participant
22	The Ideas Bus Tour is one of Monsha'at Programs	Umm Al-Qura University - February 6, 2022 AD	Consultant
23	International Technical Conference	Riyadh Front - Expo Center - during the period from 1 to 3 February 2022 AD	Participant
24	Arbitration of scientific papers and posters submitted by female students within the scientific research camp	College of Science and Human Studies in Jubail - during the period from 14/4/1442 AH - 16/4/1442 AH	Investigator
25	Presenting a workshop entitled "Writing Research Results, Analysis and Discussion" for female students participating in the scientific research camp	College of Science and Human Studies in Jubail 10/11/2020 AD	Supervisor & Presenter
26	Attending a meeting entitled "Steps of Scientific Research"	College of Sciences and Human Studies in Jubail 10/4/1433 AH	Participant
27	National Olympiad for Scientific Creativity "IBDAA"	Dammam 3/16/1433 AH	Investigator
28	Attending a meeting entitled "Program Description According to Quality Standards and Academic Accreditation"	College of Sciences and Human Studies in Jubail 5/3/1433 AH	Participant
29	National Olympiad for Scientific Creativity "IBDAA"	Al-Khobar 18-22/4/1432 AH	Investigator
30	Attending the "Sixth Conference for a Secure Information Environment"	Riyadh 15-16/11/1430 AH	Participant
31	Attending the second scientific meeting entitled "The Outcome of Scientific Pioneers" - Deanship of Scientific Research for Girls' Colleges in the Eastern Province	Dammam 18-25/5/1430 AH	Participant



#### Membership of Scientific and Professional Societies and Organizations

- Head of the Specific Initiatives Committee at the College of Sciences and Humanities in Jubail.
- Member of the Excellence and Creativity Committee at the College of Sciences and Humanities in Jubail.
- Member of the subcommittee to control student behavior at the College of Sciences and Humanities in Jubail.
- Member of the joint scientific committee between the College of Science in Dammam and the College of Science and Human Studies in Jubail.
- Member of the Internal Scholarship Committee at the College of Sciences and Humanities in Jubail.
- Member of the Scientific Committee of the Statistics and Data Science Program, College of Science in Dammam.
- Member of the Saudi Society for Mathematical Sciences King Saud University Riyadh.
- Coordinator of the Alumni Committee of the Mathematics Department College of Science and Human Studies in Jubail.
- Coordinator of the Active Learning Committee, Department of Mathematics College of Science and Human Studies in Jubail.
- Member of the Academic Guidance Committee (formerly).
- Member of the Schedules Committee (formerly).
- Member of the Social Committee (formerly).
- Member of the Equivalency Committee (formerly).
- Member of Banner Monitor (formerly).

#### **Teaching Activities**

#### **Undergraduate** (New Plan)

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Applied Statistics	STAT 211	
2	Discrete Mathematics	MATH 301	
3	Intro to Stat. and Prob. Theory	MATH 374 NR	
4	Probability I	STAT 306	Preparation of the Course Specifications and
5	Intro to Stat. and Prob.	STAT 207	Course Report files. Teaching all lectures and
6	Statistical Inference	STAT 404	tutorials of the course (15 weeks)
7	Probability II	STAT 411	
8	Research Seminar	MATH 506	
9	Non-Parametric Statistics	STAT 505	

جامعة الإمام عبد الرحمن بن فيصل IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY



#### **Undergraduate (Old Plan)**

#	Course/Rotation Title	Level	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Word processing and desktop publishing	1 <sup>st</sup> – CS Dept.	
2	Statistics	1st – Phys Dept.	
3	Intro to Stat. and Prob. Theory	4 <sup>th</sup> – MATH & CS Dept.	
4	Probability Theory	5 <sup>th</sup> – MATH Dept.	Preparation of the Course Specifications and
5	Principles of educational statistics	1st – Preparatory year.	Course Report files. Teaching all lectures and tutorials of the course
6	CS Project	9 <sup>th</sup> – CS Dept.	
7	Introduction to computer science	1st – CS Dept.	
8	Introduction to operating systems	9 <sup>th</sup> – CS Dept.	
9	Computer programming	4 <sup>th</sup> – MATH Dept.	
10	Analytical and stereoscopic engineering	1st – MATH Dept.	Exercises
11	Computer Mathematics	3 <sup>rd</sup> – CS Dept.	

## **Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)** (New Plan)

## 1 STAT 211

## **Course Description**

Descriptive statistics, Charting the data, Sampling Distributions, Application of statistics in other fields, Estimation, Hypothesis tests of one and two sample means, Chi-square tests: goodness of fit tests, test for independence and homogeneity, Some nonparametric tests, Correlation, Regression, Use Statistical packages to analyze data and to solve statistical problems, Interpret and represent results of analyses in reports

## 2 MATH 301

#### **Course Description**

The purpose of this course is to introduce the essential mathematical concepts and ideas in discrete mathematics, which are required for rigorous studies in most areas of computer science including Logic and Proof Techniques, Analysis of Algorithm, Digital Circuit, Network, Software Engineering, and Artificial Intelligence. Topics include: Propositional logic, logical equivalence, Quantifiers; Set theory, Mathematical induction; vector and matrices; Relations, Equivalence Relations, Partial Ordering Relations; Functions, Sequences, Indexed Classes of Sets, Recurrence Relations, Recursively defined functions, algorithms and complexity of algorithm; Properties of integers; Basic counting techniques, Binomial coefficients and Pascal triangle, Pigeonhole Principle; Graph theory, Tree graphs, Directed graphs; Boolean Algebra. Emphasis will be placed on providing a context for the application of discrete mathematics within computer science.



## 3 MATH 374 NR

#### **Course Description**

This course provides an elementary introduction to probability and statistics with applications. Topics include graphical and numerical representation of data; Random variables; Introduction to probability; Conditional probability and statistical independence; Bayes theorem; Mathematical expectation; Variance; Covariance and the correlation coefficient for two random variables; Some important discrete and continuous statistical distributions.

### 4 STAT 306

#### **Course Description**

Basic classical models of probability, Random experiment, Sample space, Events, Axioms of probability, definition of probability, Conditional probability ,Bayes theorem, Random variables and their types, Mathematical expectation , Independent random variables, central and noncentral moments ,measures of skewness and kurtosis, Distributions of function of one and two random variable, moment generating functions , probability generating function , Special discrete and continuous distribution, Random vectors and their distributions, Marginal and conditional distributions ,Transformations, law of large numbers and the central limit theorem.

## 5 STAT 207

## **Course Description**

This course provides an elementary introduction to probability and statistics with applications. Topics include graphical and numerical representation of data; Random variables; Introduction to probability; Conditional probability and statistical independence; Bayes theorem; Mathematical expectation; Variance; Covariance and the correlation coefficient for two random variables; Regression analysis; Some important discrete and continuous statistical distributions; hypothesis testing; confidence intervals. Statistical software (Minitab and SPSS) will be used to facilitate the analysis of data sets and understand statistical concepts. Emphasis will be placed on how to collect, analyze, and interpret data correctly. Students will also be trained on how to clearly and accurately present data to others.

## 6 STAT 404

#### **Course Description**

In this course students will learn the fundamentals of statistical inference such as point estimation, interval estimation and test of hypothesis. Also, the student will learn an introduction about Bayesian estimation.

## 7 STAT 411

## **Course Description**

Sequence of events and concepts of convergence, Random vector, Limit theorems for sums of random variables, the principles of stochastic processes, the elements of convergence and integration based on stochastic processes, Poisson process, Markov chains and their applications, order statistics, queues.

#### 8 MATH 506

#### **Course Description**

Students undertake a detailed study under the guidance of a supervisor and document their work in the form of a written report or thesis. The topic of the project is decided by the supervisor faculty member in conjunction with the student. Students not only increase their discipline knowledge but develop critical analysis and technical writing skills that are highly useful for many occupations and essential for postgraduate research degrees. The projects will demonstrate the students' ability to apply, analyze, synthesize, evaluate information, and communicate significant knowledge and comprehension.



## 9 STAT 505

## **Course Description**

This course contains: Order statistics and their probability distributions, Distribution of the median, limiting distribution, Point and interval estimation for median using order statistics, Sign, signed rank (Wilcoxon) tests for one sample and paired data, Kolmogrov-Smirnov test for one and two samples, Mann-Whitney-Wilcoxon test for two samples, Spearman's rank correlation, Kendall's tau and tests of association based on them, Kreskas - Walls test and Friedman test.

#### **Course Coordination**

#	Course Title and Code	Coordin ation	Co- coordination	Undergr ad.	Postgr ad.	From	То
1	Applied Statistics – STAT 211	$\checkmark$		$\checkmark$		20/21	21/22
2	Discrete Mathematics – MATH 301	$\checkmark$		√		20/21	21/22
3	Intro to Stat. and Prob. Theory – MATH 374 NR	$\checkmark$		$\checkmark$		20/21	20/21
4	Probability I – STAT 306	$\checkmark$		$\checkmark$		20/21	21/22
5	Intro to Stat. and Prob. – STAT 207	✓		~		20/21	20/21
6	Statistical Inference – STAT 404	$\checkmark$		~		21/22	22/23
7	Probability II – STAT 411	$\checkmark$		√		22/23	22/23
8	Research Seminar – MATH 506	√		√		22/23	22/23
9	Non-Parametric Statistics – STAT 505	$\checkmark$		✓		23/24	23/24

#### **Student Academic Supervision and Mentoring**

#	Level	Number of Students	From	То
	Fourth level	25 Students	First semester of the academic year 2020/2021	Second semester of the academic year 2020/2021



# Administrative Responsibilities, Committee and Community Service (Beginning with the most recent)

## Administrative Responsibilities

#	From	То	Position	Organization
1	2-4-1444	2-4-1445	Vice Dean for Scientific Research and Innovation	College of Science and Humanities, Jubail - IAU
2	1 <sup>st</sup> semester (1443 / 1444)	Until Today	Chair of the Quality Initiatives Committee	College of Science and Humanities, Jubail - IAU
3	1432	1433	E-Learning Unit Coordinator	College of Sciences and Human Studies – Jubail - KFU
4	1429	1430	External Supervision in the Practical Education Office	Mathematics Department, College of Education – Jubail - KFU

## **Committee Membership**

#	From To Position		Position	Organization
1	1443/1	emester of 444 AH today	Member of the Excellence and Creativity Award Committee	College of Sciences and Human Studies – Jubail - IAU
2	(1443 / 1	emester 444) until ow	Member of the Student Conduct Subcommittee	College of Sciences and Human Studies – Jubail - IAU
3	(1443 / 1	semester 444) until ow	Member of the Internal Scholarship Committee	College of Sciences and Human Studies – Jubail - IAU
4		emester / 1444)	Member of the Scientific Committee of the Statistics and Data Science Program	College of Science – Dammam - IAU
5		semester / 1443)	Member of the Joint Scientific Committee	The joint committee between the College of Science and Human Studies in Jubail and the College of Science in Dammam - IAU



#### **Volunteer Work**

#	From	То	Type of Volunteer	Organization
1	7 May 2023	7 June 2023	Preparing an electronic folder for research projects for college students	College of
2	30 April 2023	5 May 2023	Muzn al-Ataa	College of Sciences and
3	27 March 2023	28 March 2023	"Damy Watany" campaign	
4	26 March 2023	28 March 2023	3-minute challenge competition for graduation projects	Human Studies – Jubail - IAU
5	26 March 2023	30 March 2023	"Nala" initiative	
6	13 December 2022	15 December 2022	"Fena Khair"campaign	

#### Awards

#	Award Name	Award Entity Granting	Date
1	Head of Department	College of Sciences and	End of 1432/1433 AH
	Award	Humanities in Jubail - IAU	

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

$\checkmark$	Use R packages	software	professionally.	
--------------	----------------	----------	-----------------	--

- ✓ Ability to use C ++ programming language.
- ✓ Use SPSS software, Matlab, S-Plus and Microsoft Office programs professionally.
- ✓ Ability to manage matters and take responsibility.
- ✓ Initiative, organization, and accuracy in completing work.
- ✓ Cooperate with the department members to raise the efficiency of work and try to find appropriate solutions to serve the interested work.
- ✓ Ability to plan and set priorities.
- ✓ Motivation to learn and serve the community.
- ✓ Provide encouragement and support the team members.

#### Last Update

5/11/2023