

Mahmood Khalid Jasim Al Shammari, PhD

Professor of Mathematics (DMPS)

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A1. EDUCATION AND EMPLOYMENT INFORMATION

EDUCATION:

- Ph.D. Applied Mathematics (Mathematical Physics), Indian Institute of Technology Roorkee (IITR) (formerly University of Roorkee), India, 1999
- M. Sc. Applied Mathematics, Indian Institute of Technology (IITK), Kanpur, India, 1990
- B. Sc. Mathematics, Baghdad University, Baghdad, Iraq, 1982
- Credential Evaluation and Authentication Report, WES, USA, Ref# 2116997/aag dated 31/01/2008” USA Equivalency: Earned doctorate (Ph. D.) in **Mathematical Physics** from regionally accredited institution.

Employment Information:

- Professor of Mathematics, DMPS, College of Arts and Sciences, University of Nizwa, Oman, November 2022 – till date
- Associate Professor of Mathematics, DMPS, College of Arts and Sciences, University of Nizwa, Oman, September 2008 – 2022
- Department Quality Officer 2021- till date
- Oman Qualifications Framework External Reviewer (OQFER). The OAAAQA CEO has approved my appointment and inclusion in the National Register of External Reviewers (National ER Register), effective from 17 April 2024-till date
- Assistant Dean, Graduate Studies and Research, College of Arts & Sciences, University of Nizwa September 2014 – January 22, 2017

- Head of Department, Mathematics and Physical Sciences, College of Arts and Sciences, University of Nizwa, December 2012 - September 2014
- College Academic Advisor, College of Arts and Sciences, University of Nizwa, November 2011 – December 2016
- Adjunct Professor, George Mason University, American University, RAK, UAE, Spring 2008
- Associate Professor, Mathematics, GED, Dubai University, UAE, 2007-2008
- Associate Professor, Mathematics, College of Engineering, Al-Mustansiryha University, 2005-2007
- Associate Professor, Mathematics, College of Science, Al-Mustansiryha University, 2003-2005
- Head of Department, Mathematics, College of Science, Al-Mustansiryha University, 2002-2003
- Assistant Dean, Students' Welfare, College of Engineering, Al-Mustansiryha University, 2001-2002
- Manger of Scientific Affairs, College of Engineering, Al-Mustansiryha University, 2000-2001
- Assistant Professor, College of Engineering, Al-Mustansiryha University, 1992-2002

A2. TEACHING

A2.1 Instruction and Project supervisors

(a) Credit courses at University of Nizwa

No.	Course Code	Course Name	Credit Hours	No of registered students	Semester
1.	MATH221	Foundation of Mathematics	3	14	Fall 2008-2009
2.	MATH492	Topic in Math II	3	9	Fall 2008-2009
3.	MATH315	Partial Diff. Equations	3	3	Spring 2008-2009
4.	MATH354	Numerical Analysis	3	4	Spring 2008-2009
5.	LOGI100	Introduction to logic	3	35	Spring 2008-2009

6.	MATH312	Differential Equations for Engineering	3	10	Summer 2009
7.	MATH330	Introduction to Mathematical Modeling	3	5	Summer 2009
8.	MATH365	Linear Algebra II	3	7	Summer 2009
9.	LOGI100	Introduction to logic (2 sec.)	3	197	Fall 2009-2010
10.	MATH312	Differential Equations for Engineering	3	15	Fall 2009-2010
11.	MATH354	Numerical Analysis	3	2	Fall 2009-2010
12.	MATH492	Topic in Math II	3	1	Fall 2009-2010
13.	LOGI100	Introduction to logic (3 sec.)	3	243	Spring 2009-2010
14.	MATH215	Ordinary Differential Equations	3	10	Spring 2009-2010
15.	MATH312	Differential Equations for Engineering	3	18	Spring 2010
16.	LOGI100	Introduction to logic (2 sec.)	3	85	Summer 2010
17.	MATH215	Ordinary Differential Equations	3	8	Summer 2010
18.	MATH325	Linear Algebra & Multi variant Calculus	3	10	Summer 2010
19.	LOGI100	Introduction to logic (2 sec.)	3	179	Fall 2010-2011
20.	MATH145	Linear Algebra I	3	20	Fall 2010-2011
21.	MATH312	Differential Equations for Engineering	3	23	Fall 2010-2011
22.	MATH325	Linear Algebra & Multi variant Calculus	3	3	Fall 2010-2011
23.	MATH354	Numerical Analysis	3	10	Fall 2010-2011

24.	LOGI100	Introduction to logic (3 sec.)	3	210	Spring 2010-2011
25.	MATH325	Linear Algebra & Multi variant Calculus	3	11	Spring 2010-2011
26.	MATH312	Differential Equations for Engineering	3	28	Spring 2010-2011
27.	LOGI100	Introduction to logic	3	45	Summer 2011
28.	MATH259	Calculus III	3	19	Summer 2011
29.	MATH312	Differential Equations for Engineering	3	9	Summer 2011
30.	MATH365	Linear Algebra II	3	10	Summer 2011
31.	MATH472	Mathematical Methods	3	2	Summer 2011
32.	MATH421	Project in Mathematics	6	2	Summer 2011
33.	LOGI100	Introduction to logic (2 sec.)	3	125	Fall 2011-2012
34.	MATH145	Linear Algebra I	3	24	Fall 2011-2012
35.	MATH312	Differential Equations for Engineering	3	9	Fall 2011-2012
36.	MATH259	Calculus III	3	1	Fall 2011-2012
37.	LOGI100	Introduction to logic (2 sec.)	3	115	Spring 2011-2012
38.	MATH145	Linear Algebra I	3	10	Spring 2011-2012
39.	MATH312	Differential Equations for Engineering	3	20	Spring 2011-2012
40.	LOGI100	Introduction to logic	3	22	Summer 2012
41.	MATH145	Linear Algebra I	3	6	Summer 2012
42.	MATH312	Differential Equations for Engineering	3	2	Summer 2012
43.	MATH365	Linear Algebra II	3	3	Summer 2012

44.	MATH325	Linear Algebra & Multi variant Calculus	3	18	Summer 2012
45.	MATH421	Project in Mathematics	6	3	2009, 2012-2013
46.	LOGI100	Introduction to logic (2 sec.)	3	109	Fall 2012-2013
47.	MATH312	Differential Equations for Engineering	3	14	Fall 2012-2013
48.	MATH221	Foundation of Mathematics	3	3	Fall 2012-2013
49.	MATH325	Linear Algebra & Multi variant Calculus	3	9	Fall 2012-2013
50.	COMP388	Project in Computer Sciences	3	2	Fall 2012-2013
51.	LOGI100	Introduction to logic	3	125	Spring 2012-2013
52.	STAT420	Operation research	3	2	Spring 2012-2013
53.	MATH325	Linear Algebra & Multivariate Calculus	3	28	Spring 2012-2013
54.	MATH354	Numerical Analysis	3	11	Spring 2012-2013
55.	LOGI100	Introduction to logic	3	41	Summer 2013
56.	MATH222	Discrete Mathematics	3	37	Summer 2013
57.	MATH211	Calculus I	4	43	Summer 2013
58.	MATH330	Introduction to Mathematical Modeling	3	2	Summer 2013
59.	LOGI100	Introduction to logic	3	127	Fall 2013-2014
60.	MATH259	Calculus III	3	3	Fall 2013-2014
61.	MATH325	Linear Algebra & Multi variant Calculus	3	9	Fall 2013-2014
62.	MATH116	Pre-calculus	4	60	Spring 2013-2014
63.	MATH365	Linear Algebra II	3	4	Spring 2013-2014

64.	MATH354	Numerical Analysis	3	5	Summer 2014
65.	MATH116	Pre-calculus	4	15	Summer 2014
66.	MATH312	Differential Equations for Engineering	3	15	Summer 2014
67.	MATH212	Calculus II	3	11	Summer 2014
68.	MATH312	Differential Equations for Engineering	3	35	Fall 2014-2015
69.	MATH212	Calculus II	3	6	Spring 2014-2015
70.	MATH312	Differential Equations for Engineering	3	9	Spring 2014-2015
71.	MATH354/ CHPE403	Numerical Analysis	3	9	Summer 2015
72.	MATH312	Differential Equations for Engineering	3	28	Summer 2015
73.	MATH325	Linear Algebra& Multi variant Calculus	3	18	Summer 2015
74.	MATH215	Ordinary Differential Equation	3	8	Fall 2015-2016
75.	MATH325	Linear Algebra& Multi variant Calculus	3	28	Fall 2015-2016
76.	MATH325	Linear Algebra& Multi variant Calculus	3	16	Spring 2015-2016
77.	LOGI100	Introduction to logic	3	5	Spring 2015-2016
78.	MATH259	Calculus III	3	13	Spring 2015-2016
79.	MATH420	Project in Mathematics	2	1	Spring 2015-2016
80.	MATH354/ CHPE403	Numerical Analysis	3	18	Summer 2016
81.	MATH325	Linear Algebra & Multi variant Calculus	3	17	Summer 2016

82.	MATH312	Differential Equations for Engineering	3	53	Summer 2016
83.	MATH215	Ordinary Differential Equation	3	4	Fall 2016-2017
84.	MATH325	Linear Algebra & Multi variant Calculus	3	15	Fall 2016-2017
85.	MATH354/ CHPE403	Numerical Analysis	3	22	Spring 2016-2017
86.	MATH325	Linear Algebra & Multivariate calculus	3	8	Spring 2016-2017
87.	MATH212	Calculus II	3	59	Spring 2016-2017
88.	MATH354/ CHPE403	Numerical Analysis	3	10	Summer 2016-2017
89.	MATH116	Pre-calculus	4	27	Summer 2016-2017
90.	MATH325	Linear Algebra & Multivariate calculus	3	7	Fall 2017-2018
91.	MATH212	Calculus II	3	65	Fall 2017-2018
92.	MATH354/ CHPE403	Numerical Analysis	3	6	Fall 2017-2018
93.	MATH325	Linear Algebra & Multivariate calculus	3	5	Spring 2017-2018
94.	MATH212	Calculus II	3	59	Spring 2017-2018
95.	LOGI100	Introduction to the Logic	3	90	Spring 2017-2018
96.	MATH212	Calculus II	3	77	Fall 2018-2019
97.	MATH116	Pre-calculus	4	90	Fall 2018-2019
98.	ECON228	Mathematical Economic	3	5	Fall 2018-2019
99.	ECON503	Mathematical Economic for Master students	3	2	Spring 2018-2019

100.	MATH212	Calculus II	3	79	Spring 2018-2019
101.	MATH211	Calculus I	4	45	Spring 2018-2019
102.	MATH222	Discrete Mathematics	3	27	Spring 2018-2019
103.	MATH212	Calculus II	3	77	Fall 2019-2020
104.	MATH211	Calculus I	4	54	Fall 2019-2020
105.	MATH222	Discrete Mathematics	3	57	Fall 2019-2020
106.	ECON228	Intermediate Mathematical Economics	3	9	Fall 2019-2020
107.	MATH212	Calculus II	3	60	Spring 2019-2020
108.	MATH211	Calculus I	4	86	Spring 2019-2020
109.	MATH222	Discrete Mathematics	3	69	Spring 2019-2020
110.	MATH211	Calculus I	4	39	Summer 2019-2020
111.	MATH312	Differential Equation for Engineering	3	23	Summer 2019- 2020
112.	MATH212	Calculus II	3	75	FALL 2020-2021
113.	MATH211	Calculus I	4	46	FALL 2020-2021
114.	MATH222	Discrete Mathematics	3	70	FALL 2020-2021
115.	MATH492	Topic in Mathematics II (Numerical Modeling)	3	11	FALL 2020-2021
116.	MATH212	Calculus II	3	75	Spring 2020-2021
117.	MATH211	Calculus I	4	37	Spring 2020-2021
118.	MATH222	Discrete Mathematics	3	54	Spring 2020-2021
119.	MATH492	Topic in Mathematics III (Tensor Calculus)	3	22	Spring 2020-2021

120.	MATH211	Calculus I	4	42	Summer 2020-2021
121.	MATH222	Discrete Mathematics	3	44	Summer 2020-2021
122.	LOGI100	Introduction to logic	3	48	Summer 2020-2021
123.	MATH211	Calculus I	4	30	Fall 2021-2022
124.	MATH222	Discrete Mathematics	3	45	Fall 2021-2022
125.	MATH212	Calculus II	3	57	Fall 2021-2022
126.	MATH212	Calculus II	3	40	Spring 2021-2022
127.	MATH211	Calculus I	4	87	Spring 2021-2022
128.	MATH222	Discrete Mathematics	3	67	Spring 2021-2022
129.	MATH211	Calculus I	4	28	Summer 2021-2022
130.	MATH222	Discrete Mathematics	3	47	Summer 2021-2022
131.	MATH211	Calculus I	4	106	Fall 2022-2023
132.	MATH222	Discrete Mathematics	3	79	Fall 2022-2023
133.	MATH212	Calculus II	3	107	Fall 2022-2023
134.	MATH211	Calculus I	4	86	Spring 2022-2023
135.	MATH222	Discrete Mathematics	3	87	Spring 2022-2023
136.	MATH212	Calculus II	3	61	Spring 2022-2023
137.	MATH600	Modelling I (M. Sc.)	3	1	Spring 2022-2023
138.	MATH211	Calculus I	4	61	Summer 2022-2023
139.	MATH222	Discrete Mathematics	3	40	Summer 2022-2023
140.	MATH493	Topics in Mathematics III	3	25	Fall 2023-2024

141.	MATH222	Discrete Mathematics	3	106	Fall 2023-2024
142.	MATH212	Calculus II	3	64	Fall 2023-2024
143.	MATH222	Discrete Mathematics	3	97	Spring 2023-2024
144.	MATH212	Calculus II	3	60	Spring 2023-2024
145.	MATH491	Topics in Mathematics I	3	47	Spring 2023-2024
146.	MATH211	Calculus I	4	61	Summer 2023-2024
147.	MATH222	Discrete Mathematics	3	40	Summer 2023-2024
148.	MATH212	Calculus II	3	60	Summer 2023-2024
149.	MATH222	Discrete Mathematics	3	45	Fall 2024-2025
150.	MATH212	Calculus II	3	87	Fall 2024-2025
151.	MATH493	Topics in Mathematics III	3	55	Fall 2024-2025
152.	MATH614	Special Topics in Mathematics II (Tensor Analysis & General Theory of Relativity) (M. Sc.)	3	1	Fall 2024-2025
153.	MATH222	Discrete Mathematics	3	60	Spring 2024-2025
154.	MATH212	Calculus II	3	93	Spring 2024-2025
155.	MATH493	Topics in Mathematics I	3	76	Spring 2024-2025
156.	MATH600	Modelling I (M. Sc.)	3	6	Spring 2024-2025
157.	MATH421	Graduate Project	6	12	Spring 2024-2025
158.	MATH222	Discrete Mathematics	3	67	Fall 2025-2026
159.	MATH212	Calculus II	3	89	Fall 2025-2026
160.	MATH493	Topics in Mathematics III	3	102	Fall 2025-2026

161.	MATH421	Graduate Project	6	14	Fall 2025-2026
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(b) Non-credit courses and workshops

- As a community services, several workshops and school visits have been conducted to several schools at Nizwa, Ibra and Snaoo.
- Basic Mathematics (coordinator)
- Reviewer to several national and international programs and research projects.
- Workshops

No	Title of Workshops	Date	Venue
1	Teaching Skill Improvement Workshop- Nizwa University	January 2010	Al-Shaba UON
2	On Knots and Manifolds	29 February, 2012	15L, UON, OMAN
3	Solutions of Differential Equations from Transforms Techniques (SDET ²)	30 January- 1 st February, 2014	COMSTECH, Pakistan
4	On Knots and Manifolds	15 May, 2014	15L, UON, OMAN
5	The use of OER to Enhance the Quality of Teaching and Learning	20/April, 2017	Higher College of Technology (HCT), Muscat, Oman
6.	A three-day Capacity <u>Building workshop for Listing and Alignment Panels</u> _ Oman Qualifications Framework External Reviewer (OQFER)	15-17 January 2024	at Holiday Inn Hotel, Alseeb, Muscat from 8:00 am to 3:00 pm.
7.	QS Higher Ed Summit: Asia Pacific 2024	Nov 5 – 7, 2024 Online	Macau University of Science and Technology (MUST), Macau SAR, China

**(C) Postgraduate students at the University of Nizwa/
Supervisor**

Guided more than 50 Master students at UoN as a 3rd supervisor

Supervised Graduation Projects at UON

No.	Name of the Student	Name of the Project	Year
1.	May Suleem Hamdan Al-Abri	<i>On Similarity Transformation Method with an Application to Shallow Water Equations</i>	2009
2.	Aisha Rashid Mohammed Al-Hashmi	<i>Monge's Method: Theory and Application</i>	2011
3.	Ashwaq Mahfoodh Hamed Al-Rwahi	<i>Monge's Method: Theory and Application</i>	2011
4.	<i>Maythaa Salim Mubarak AL-Shauli</i>	<i>Numerical Methods: Theory and Application</i>	2012
5.	Badriya Amer Yassir AL-Salmi	<i>Numerical Methods: Theory and Application</i>	2013
6.	Hiba Abdullah Suhail Qatamim Al-Marhoun	On Similarity Transformation method: Theory and Application	2014
7.	Hala Abdullah Suhail Qatamim Al-Marhoun	On Similarity Transformation method: Theory and Application	2014
8.	Zahra said Ali AL.Amri	Mathematical Modeling of Muscat's Population Growth	2016
9.	Aisha said Salim AL Harmi – ID:20189631	<i>A Mathematical Model for Tourism Growth at Salalaha</i>	2019
10.	Marwa Hunaid Saud Al Bassami – ID:25417799	A Mathematical Model for Tourism Growth at Salalaha	2019

11.	AFRA SAIF SAID ALSHABIBI – ID: 23448142	On Numerical Solutions of Ordinary Differential Equations: Theory and Applications	2020
12.	AMANI SAUD HAMDAN AL SAADI –ID: 15492599	On Numerical Solutions of Ordinary Differential Equations: Theory and Applications	2020
13.	KHOULA JUMA ALSENADI – ID: 20808347	On Numerical Solutions of Ordinary Differential Equations: Theory and Applications	2020
14.	AMAL AHMED SALIM ALSABARI - ID:13045069	On Numerical Integration Techniques: Theory and Applications	2020
15.	FATEMA AHMED MOHAMMED AL MAKHMARI – ID: 10106956	On Numerical Integration Techniques: Theory and Applications	2020
16.	IMAN 'ABDULLAH MOHAMMED AL HABSI, ID: 15709712	Numerical Techniques for Solving Ordinary Differential Equations: Initial Value Problems Runge - Kutta Methods	2021
17.	MARYAM HUMAID NASSER AL QASSAB, ID: 9342202	Numerical Techniques for Solving Ordinary Differential Equations: Runge - Kutta Methods Theory and Application	2021
18.	AFRAH HUMAID KHAMIS AL AAMRI, ID: 07818626	Numerical Techniques for Solving Ordinary Differential Equations: Runge - Kutta Methods Theory and Application	2021
19.	TAFLOUL SALIM JUMA AL RUTALI, ID: 19410492	Numerical Techniques for Solving Ordinary Differential Equations: Initial Value Problems Multistep Methods	2021
20.	HIFAA SALIM RASHID AL MUZAINI, ID: 19427635	Numerical Techniques for Solving Ordinary Differential Equations: Initial Value Problems Multistep Methods	2021
21.	MARYAM SULAIMAN SALEEM AL AMRI, ID: 26680197	Numerical Techniques for Solving Ordinary Differential Equations: Initial Value Problems Multistep Methods	2021

22.	Fatema Ahmed Mohammed Al-Makhmari_ID: 10106956	Symmetry Transformations Approach to Identify and Solve a Water Shallow Model	2022
23.	Aaisha Hamdan Saqer Al Shamsi_ID: 12860854	On the Use of Similarity Transformations Method to Solve Ordinary Differential Equations	2022
24.	Rahma Said Hamed Al Shauibia_ID: 20866954	On the Use of Similarity Transformations Method to Solve Ordinary Differential Equations	2022
25.	Iman Mohammed Awadh Al Alawi_ID: 13394774	On the Use of Similarity Transformations Method to Solve Ordinary Differential Equations	2022
26.	Asmaa Hamed Abdullah Al Jaradi_ID: 22116664	On the Use of Similarity Transformations Method to Solve Ordinary Differential Equations	2022
27.	Ghalia Obied Alhajri_ID: 10525961	Similarity Transformations Method: An inviting and efficient method for solving partial differential equations.	2022
28.	Hanan Azan Said Al Handhali_ID: 18716293	Similarity Transformations Method: An inviting and efficient method for solving partial differential equations.	2022
29.	Maryam Jaffer Mohammed Al Ajmi_ID: 7464104	Similarity Transformations Method: An inviting and efficient method for solving partial differential equations.	2022
30.	Miytha Said Mohammed Al Sinaidi_ID: 22829646	Similarity Transformations Method: An inviting and efficient method for solving partial differential equations.	2022
31.	Siham Hamed Saif Al Busaidi_ID: 7621171	Similarity Transformations Method: An inviting and efficient method for solving partial differential equations.	2022
32.	HUDA SAID ABDULLAH AL HABSI ID: 26090321	Theory and Applications of Numerical Methods for Solving Systems of Nonlinear Equations	2023
33.	ANWAR NASSER ABDULLAH AL ADAWANI ID: 10060297	Theory and Applications of Numerical Methods for Solving Systems of Nonlinear Equations	2023

34.	NADA SAID ALI AL GHAFRI ID: 22024126	Theory and Applications of Numerical Methods for Solving Systems of Nonlinear Equations	2023
35.	JOKHA SULAIMAN SAID AL ABRI ID: 9662723	Theory and Applications of Numerical Methods for Solving Systems of Nonlinear Equations	2023
36.	MAISA NASSER MOHAMMED AL HAMIMI ID: 18098128	Theory and Applications of Numerical Methods for Solving Systems of Nonlinear Equations	2023
37.	WADIMA MUBARAK ALI AL JABRI ID: 13685501	Theory and Applications of Numerical Methods for Solving Systems of Nonlinear Equations	2023
38.	AMAL ALI SALIM AL HINAI ID: 18086726	Interpolation Concept and Applications in Numerical Computation	2023
39.	BADRIYA ALI HAMOOD AL HINAI ID: 25386954	Interpolation Concept and Applications in Numerical Computation	2023
40.	RUQAYA SAID SALIM AL KHAYARI ID: 10361693	Interpolation Concept and Applications in Numerical Computation	2023
41.	AAISHA ABDALLAH KHALFAN AL KHARUSI ID: 12002117	Interpolation Concept and Applications in Numerical Computation	2023
42.	KHAWLA ABDULLAH KHTIR AL NOFALI ID: 18964529	Interpolation Concept and Applications in Numerical Computation	2023
43.	MARWA MOHAMED SULAIMAN AL ADAWI ID: 10515409	Interpolation Concept and Applications in Numerical Computation	2023
44.	SIMA MASAAOD TALIB AL HUSAINI ID: 19496037	ON EIGENVALUES AND EIGENVECTORS OF A MATRICIES: THEORY AND APPLICATIONS	2024

45.	SALAMA RASHID TARESH AL BADI ID: 12575291	ON EIGENVALUES AND EIGENVECTORS OF A MATRICIES: THEORY AND APPLICATIONS	2024
46.	INTISAR HAMDOON SAID AL QANNUBI ID: 18918937	ON EIGENVALUES AND EIGENVECTORS OF A MATRICIES: THEORY AND APPLICATIONS	2024
47.	AL KHATAB YAQOOB SAOUD AL HANDHALI, ID: 29027811	ON EIGENVALUES AND EIGENVECTORS OF A MATRICIES: THEORY AND APPLICATIONS	2024
48.	HAMMAD ALI HAMMAD AL-AAMRI, ID:20230657	ON EIGENVALUES AND EIGENVECTORS OF A MATRICIES: THEORY AND APPLICATIONS	2024
49.	OSAMA ZAHIR SALIM AL ABDALI, ID: 14032918	ON EIGENVALUES AND EIGENVECTORS OF A MATRICIES: THEORY AND APPLICATIONS	2024
50.	AMANI SAID MAHIL AL KHATRI, ID: 9915116	A COMPREHENSIVE INVESTIGATION OF THE GAUSSIAN AND NEWTON- COTES NUMERICAL INTEGRATION TECHNIQUES	2024
51.	AMNA SAID ABDULLAH ALAMRI, ID: 22893896	A COMPREHENSIVE INVESTIGATION OF THE GAUSSIAN AND NEWTON- COTES NUMERICAL INTEGRATION TECHNIQUES	2024
52.	FATEMA HAMAD MOHAMMED ALHAJRI, ID: 26396924	A COMPREHENSIVE INVESTIGATION OF THE GAUSSIAN AND NEWTON- COTES NUMERICAL INTEGRATION TECHNIQUES	2024
53.	NAWAR ALI MOHAMMED AL MAKTUMI, ID: 9058039	A COMPREHENSIVE INVESTIGATION OF THE GAUSSIAN AND NEWTON- COTES NUMERICAL INTEGRATION TECHNIQUES	2024
54.	NOURA MOHAMMED SAID AL QANUBI, ID: 22981642	A COMPREHENSIVE INVESTIGATION OF THE GAUSSIAN AND NEWTON- COTES NUMERICAL INTEGRATION TECHNIQUES	2024

55.	RAZAN HAMID DARWISH AL BALUSHI, ID: 14633311	A COMPREHENSIVE INVESTIGATION OF THE GAUSSIAN AND NEWTON-COTES NUMERICAL INTEGRATION TECHNIQUES	2024
56.	Amira Atiyah Khalfan Al Wahshi ID: 11421112	An In-Depth Investigation of Numerical Solution for Ordinary Differential Equation (Theory and Applications)	2024
57.	Asala Hamed Saif AL Mahrizi ID: 22972205	An In-Depth Investigation of Numerical Solution for Ordinary Differential Equation (Theory and Applications)	2024
58.	Doaa Khalifa Mubarak Al Noufali ID:13243551	An In-Depth Investigation of Numerical Solution for Ordinary Differential Equation (Theory and Applications)	2024
59.	Fatma Nasser Khalfan Al Yahyai ID: 10651081	An In-Depth Investigation of Numerical Solution for Ordinary Differential Equation (Theory and Applications)	2024
60.	Shatha Said Humaid AL Rawahi ID: 27757646	An In-Depth Investigation of Numerical Solution for Ordinary Differential Equation (Theory and Applications)	2024
61.	SUMAIYA MASAAOD SAID AL ALAWI	On Ordinary Differential Equations and Their Numerical Solutions: Methods and Their Applications	Spring 2025
62.	NASRA AWADH SALOUM AL NASSERI	On Ordinary Differential Equations and Their Numerical Solutions: Methods and Their Applications	Spring 2025
63.	WAFI HAMMAR ZAHIR AL MAQBALI	On Ordinary Differential Equations and Their Numerical Solutions: Methods and Their Applications	Spring 2025
64.	DALAL SAID QAMSH AL AMRI	On Ordinary Differential Equations and Their Numerical Solutions: Methods and Their Applications	Spring 2025
65.	THARWA SAID ABDULLAH AL SHUKAILI	On Ordinary Differential Equations and Their Numerical Solutions: Methods and Their Applications	Spring 2025

66.	ASMAHAN SULTAN SALEH AL MAQBALI	On Ordinary Differential Equations and Their Numerical Solutions: Methods and Their Applications	Spring 2025
67.	BUTHAINA SAIF SALIM ALHINAI	On Tensor Calculus and It's Applications in General Theory of Relativity	Spring 2025
68.	KHALOUD ABDULLAH SAID AL LAMKI	On Tensor Calculus and It's Applications in General Theory of Relativity	Spring 2025
69.	SHEIKHA OBAID MUSABAH SHIYADI	On Tensor Calculus and It's Applications in General Theory of Relativity	Spring 2025
70.	AYA DHAHI BAKHIT AL-YAARIBI	On Tensor Calculus and It's Applications in General Theory of Relativity	Spring 2025
71.	RAZAN YAHYA KHALFAN AL ZAKWANI	On Tensor Calculus and It's Applications in General Theory of Relativity	Spring 2025
72.	BUTHAINA YAHYA KHALFAN AL-ZAKWANI	On Tensor Calculus and It's Applications in General Theory of Relativity	Spring 2025
73.	SAFA SALIM NASSER AL SUBHI	A Comparative Study of Numerical Integration Techniques: Trapezoidal, Simpson's, Boole's, and Weddle's	Fall 2025-26
74.	TAIMA SAUD AMUR AL TAMIMI	A Comparative Study of Numerical Integration Techniques: Trapezoidal, Simpson's, Boole's, and Weddle's	Fall 2025-26
75.	BALAQIS SAID ABDALLAH AL MAQBALI	A Comparative Study of Numerical Integration Techniques: Trapezoidal, Simpson's, Boole's, and Weddle's	Fall 2025-26
76.	MARWA MAHFOODH SALIM AL RAWAHI	A Comparative Study of Numerical Integration Techniques: Trapezoidal, Simpson's, Boole's, and Weddle's	Fall 2025-26

77.	AFRAH HAMOOD ZAHIR AL HARTHI	A Comparative Study of Numerical Integration Techniques: Trapezoidal, Simpson's, Boole's, and Weddle's	Fall 2025-26
78.	ESRAA SULAIMAN KHALAF AL HOSNI	A Comparative Study of Numerical Integration Techniques: Trapezoidal, Simpson's, Boole's, and Weddle's	Fall 2025-26
79.	MARWA ALI AI SAB'A AI HINAI	A Comparative Study of Numerical Integration Techniques: Trapezoidal, Simpson's, Boole's, and Weddle's	Fall 2025-26
80.	AL BALJAA ABDULLAH ALI AL RASHDI	An Investigation at Different Iterative Methods for Solving Linear and Nonlinear Equations	Fall 2025-26
81.	FATEMA AHMED ABDULLAH ALBALUSHI	An Investigation at Different Iterative Methods for Solving Linear and Nonlinear Equations	Fall 2025-26
82.	NDA AHMED MOHAMMED AL RIYAMI	An Investigation at Different Iterative Methods for Solving Linear and Nonlinear Equations	Fall 2025-26
83.	ARWA FAHAD SALIM AL KHADHURI	An Investigation at Different Iterative Methods for Solving Linear and Nonlinear Equations	Fall 2025-26
84.	HAFISA ALI RASHID AL-SAAADI	An Investigation at Different Iterative Methods for Solving Linear and Nonlinear Equations	Fall 2025-26
85.	TASNIM SULAIMAN MOHAMMED AL NAABI	An Investigation at Different Iterative Methods for Solving Linear and Nonlinear Equations	Fall 2025-26
86.	DOAA SALIM SAID AL HINAI	An Investigation at Different Iterative Methods for Solving Linear and Nonlinear Equations	Fall 2025-26
87.			

(d) Team or collaborative efforts at the University of Nizwa

- Delivering several jointly seminars
- Development the curriculum of the mathematics degree plan
- Proposed and actively involved in the volunteer projects to the University of Nizwa.
- Actively involved in the culture week
- Chairing sessions of Education conferences at University of Nizwa
- Program Chair of ACIT2014 conferences.
- Development of strategic plan of Mathematical & physical Sciences Department and Asst. Dean for Graduate Studies & Research at University of Nizwa.
- Proposed two new programs for education department (B.Ed. basic education).
- Prepare a new Master program in Applied Mathematics at University of Nizwa (Approved 2020 by Ministry of Higher Education)
- Preparing an ADRI reports for the quality purposes since 2021 till date.
- Chairing and member of several committees at different levels at UoN.

(e) Experience prior to joining Nizwa University

A- Dubai University/UAE

- 1- Teaching (Pre Math I- Pre Math II, Math's for business I , Math for business II, Math for sciences)
- 2- Academic Advisor for students
- 3- Member of the General education department board.

B- University of Al-Mustansiryha - College of Engineering & Sciences / IRAQ

1. Associate Prof. of Mathematics, College of Engineering, Al-Mustansiryha University, 2005-2007
2. Associate Prof. of Mathematics, College of Science, Al-Mustansiryha University, 2003-2005
3. Head of Mathematics Department, college of Science, Al-Mustansiryha University, 2002-2003
4. Asst. Dean, College of Engineering, Al-Mustansiryha University, 2001-2002

5. Manger of Scientific Affairs, College of Engineering, Al-Mustansiryha University, 2000-2001
6. Lecturer then Asst. Prof., College of Engineering, Al-Mustansiryha University, 1992-2002
7. Chairing several committees at Department, College and University level as well as at the Ministry level.
8. Teaching many courses for undergraduate as well as postgraduate like(Tensor analysis, Differential equation for engineering, ODE and PDE, Mathematical physics, Mathematical modeling, Mathematical methods, etc)
9. **Supervised Ph. D students at Baghdad University, Al-Mustansiryha University, Iraq and MANONMANIAM SUNDARANAR UNIVERISY, India:**
 - i. "Some relativistic models of charged fluid spheres in terms of differential equations", Athraa Ausama Kawam Al-Klldaar, Baghdad University, 2004.
 - ii. "Some exact spherical symmetric fields and core solutions in general relativity" Dhuha Majeed Saleh Al-Yassiri, College of Science, Al-Mustansiryha University, 2005.
 - iii. "Some Exact Solutions for Fluid Spheres in General Relativity", Smitha TT, MANONMANIAM SUNDARANAR UNIVERISY, India, 2014
10. Supervised several M Sc thesis at Al-Mustansiryha University, and Babylon University, Iraq:
 - i. "Some exact solution for the spherically symmetric four-fold of Class one" Farah Yaseen, Al Mustansiryha University, Baghdad, IRAQ,(2006- 2009)
 - ii. "SERIES SOLUTION METHOD WITH APPLICATION TO SPHERICAL SYMMETRIC MODEL OF CLASS TWO" Arwa A Abdul Malik, Al Mustansiryha University, Baghdad, IRAQ, (2006- 2009)
 - iii. "Handwritten Numeral Recognition using Fuzzy Logic", Anwar Hassan Mahdy, College of Science, Al-Mustansiryha University, 2005
 - iv. "Monge's Methods with its application to radiating fluid spheres in general relativity", Mohammed A. H. Sarhan Al-Ani, College of Science, Al-Mustansiryha University, 2005

- v. "Artificial Neural Networks for face recognition application", Muna Abdul Al-Hussain, College of Science, Al-Mustansiryha University, 2004
- vi. "Symmetry methods for solving second order ordinary differential equations", Abdul Hakim Abdullah Ahmed (On leave study, Yemen), College of Science, Al-Mustansiryha University, 2004
- vii. "On similarity solutions of second order differential equations", Ahmed Najim Abdullah, College of Education, Babylon University, 2003
- viii. New Solutions to Einstein's Field Equations in General Relativity and Modified Gravity Theory for Dense Stellar Objects under various situations, DMPS, College of Arts & Sciences, University of Nizwa, 2025

A2.2 CURRICULUM DEVELOPMENT AND CONFERENCES MANAGING

- 1- Developed the curriculum of the mathematics section plan degree at UON. (2009, 2010, 2012, 2013, 2014, 2020)
- 2- Proposed Master degree and revised its curriculum, 2020.
- 3- Program chair of International Arab Conference on Information Technology (ACIT2014) Dec. 9-11, 2014, University of Nizwa, OMAN.
- 4- Vice chair of the *4th International Conference of the Department of Education and Cultural Studies* in Collaboration with the Scientific Society of Colleges of Education in Arab Universities. Conference Title: The Teacher: preparation and lifelong learning in a changing world, 1-3/March, 2016, University of Nizwa, Oman
- 5- Vice chair of the *1st International Conference of the Department of Arabic Languages*, 28th-30th of Nov., 2016, University of Nizwa, Oman

A2.3 SCHOLARSHIP IN TEACHING

- Several lecture notes have been prepared for several courses.
- Actively involved in teaching and research.
- The evaluations of teaching quality achieve an average of more than 80%

A2.4 Teaching outside of the course/ classroom

- I have assigned office hours for the students as well as assign some extra hours for help and support our students.
- Actively involved in advising my students as well as support others. In addition, I served as college academic advisor from 2011-2016.
- Actively involved in all DMPS, College as well as University activities.
- Conduct several workshops, lectures and seminars to the community.

A2.5 STUDENTS EVALUATIONS

The average of student evaluation for the past five years above 80%

A3 SCHOLARSHIP AND CREATIVE ACTIVITY

A3.1 REFERRED JOURNAL PAPERS:

1. Black Holes Surrounded by a Murnaghan-Fluid Scalar Gas in a Global-Monopole Background, (Physics of the Dark Universe Journal), Submitted 14 Oct. 2025
2. Singularity-free solution for charged stellar model in $f(Q, T)$ gravity: Mass-radius behavior and stability analysis (Accepted 13 Sept. 2025, International Journal of Geometric Methods in Modern Physics)
3. Topological Signatures and Geometrothermodynamics of Critical Phenomena in Regularized Maxwell Black Holes (Accepted 10 Oct. 2025, Physics of the Dark Universe)
4. Quasinormal modes, greybody factors, and Hawking radiation sparsity of black holes influenced by a global monopole charge in Kalb-Ramond gravity, Journal of Cosmology and Astroparticle Physics (Impact Factor: 5.9), Q1, **4 July 2025**, DOI 10.1088/1475-7516/2025/08/023
5. Influence of three parameters on decoupled charged compact stars generated by dark matter and their predicted radii in $f(R, T)$ gravity theory, Chinese Journal of Physics (Impact Factor: 4.6), Q1, <https://doi.org/10.1016/j.cjph.2025.05.019> , 4 May 2025
6. Constraining mass-radius limit of gravitationally decoupled binary compact star mergers PSR J0952-0607 and GW200210 generated by dual matter density profiles" **published** in the European Physical Journal C (Impact Factor: 4.8), Q1, Vol 85, No. 321, (2025), 9/2/2025., Springer Nature <https://doi.org/10.1140/epjc/s10052-025-13917-4>

7. Thermodynamics and Phase transition of Anti de Sitter black holes with ModMax nonlinear electrodynamics and perfect fluid dark matter" Published Eur. Phys. J. C (**Impact Factor: 4.8**), **Q1**, (2025) **85:229**, **10/2/2025**, **Springer Nature**, <https://doi.org/10.1140/epjc/s10052-025-13932-5>. **10th Feb. 2025**.
8. Extended phase space thermodynamics and critical behavior of charged AdS black holes surrounded by polytropic scalar field gas, **Published Physics of the Dark Universe**, (**Impact Factor: 6.4**), **Q1**, **8 February 2025**, **101860** <https://doi.org/10.1016/j.dark.2025.101860>
9. Study of self-bound anisotropic model in $f(Q)$ gravity: An exact analytical stellar solution, **Published International Journal of Geometric Methods in Modern Physics**, WSPC/S0219-8878 IJGMMP-J043 2550123- **6/01/2025**, **DOI: 10.1142/S0219887825501233**
10. Quasinormal modes and graybody bounds of black holes endowed with modified Chaplygin gas, **Journal of High Energy Astrophysics**, Published Online **10 December 2024**, <https://doi.org/10.1016/j.jheap.2024.11.020>, Volume 45, March 2025, Pages 200-213
11. Electrically charged black holes in F(R)-Euler–Heisenberg theory, **Physics of the Dark Universe** (Impact Factor: 6.4), **Q1**, <https://doi.org/10.1016/j.dark.2024.101701> , **18 Oct. 2024**.
12. Exploring Tsallis thermodynamics for boundary conformal field theories in gauge/gravity duality, **Chinese Journal of Physics** (Impact Factor: 4.6), **Q1**, <https://www.elsevier.com/locate/cjph>, **31 December 2024**.
13. Bose–Einstein Condensation dark matter models generated by gravitational decoupling, **Physics of the Dark Universe** (Impact Factor: 6.4), **Q1**, <https://doi.org/10.1016/j.dark.2024.101665>, **23 Sept. 2024**
14. New charged anisotropic solution in $f(Q)$ -gravity and effect of non-metricity and electric charge parameters on constraining maximum mass of self-gravitating objects, **European Physical Journal C** (Impact Factor: 4.8), **Q1**, <https://doi.org/10.1140/epjc/s10052-024-13334-z>, **4th, Sept. 2024**, **Springer Nature**
15. Topological AdS black holes surrounded by Chaplygin dark fluid: From stability to geometrothermodynamic analysis, **Physics of the Dark Universe**, **46**, **101567**, **2024** (Elsevier’s journals), **Scopus**, **Impact No. 5**, **2024**.

16. Phase transitions and structure of 5DAdS black holes immersed in Chaplygin-like dark fluid from Kaniadakis statistics, Journal of High Energy Astrophysics (Impact Factor: 10.5), Q1, <https://doi.org/10.1016/j.jheap.2024.09.004>, 12 Sept.. 2024.
17. Modeling self-bound binary compact object with a slow rotation effect and effect of electric field gradient on the mass-radius limit and moment of inertia, Journal of High Energy Astrophysics (Impact Factor: 10.5), Q1, <https://doi.org/10.1016/j.jheap.2024.09.002> , 4th Sept.2024.
18. Physical Properties And Maximum Allowable Mass-Radius Relation of Complexity-Free Compact Stellar Objects Within Modified $F(R, T)$ Gravity Formalism, Chinese Physics C Vol. 48, No. 8 (2024).
19. Singularity free charged compact stars model under $F(Q)$ gravity theory, Fortschritte der Physik - Progress of Physics (Wiley publication), Vol. 72, pp. 2300229, Scopus, Impact Factor: 3.9, H-index: 68 (Germany) <https://doi.org/10.1002/prop.202300229>, Feb. (2024).
20. Complexity-free Vaidya-Tikekar model describing self-bound compact objects by gravitational decoupling, published Physica Scripta journal, IOP publishing (2023) DOI 10.1088/1402-4896/acd442
21. Complexity-free solution generated by gravitational decoupling for anisotropic self-gravitating star in symmetric teleparallel $f(Q)$ -gravity theory, Published Eur. Phys. J. C (2023) 83:317, <https://doi.org/10.1140/epjc/s10052-023-11447-5> (Springer- Verlag), Impact factor – 4.991, H index – 183 (Germany).
22. Study of minimally deformed anisotropic solution for compact objects with massive scalar field in Brans-Dicke gravity admitting Karmarkar condition, published Universe Journal, Universe 2023, 9, 208. <https://doi.org/10.3390/universe9050208>, (MDPI, SCIE, Scopus, Impact Factor: 2.813).
23. Minimally deformed anisotropic solution generated by vanishing complexity factor condition in $f(Q)$ -gravity theory, Published Physica Scripta journal, 1Vol 98, issue 4, Pp 045305, IOP publishing (2023), DOI 10.1088/1402-4896/acbfeb
24. A simple protocol for anisotropic generalization of Finch–Skea model by gravitational decoupling satisfying vanishing complexity factor condition, Published Eur. Phys. J. C (2022) 82:1173 <https://doi.org/10.1140/epjc/s10052-022-11139-6> (Springer- Verlag), Impact factor – 4.991, H index – 183 (Germany).
25. Study on anisotropic star in extended teleparallel gravity with minimal matter coupling, Chinese Journal of Physics, 77 (2022) 1742–1754, (Elsevier journal, Scopus, Impact No. 3.237), 2022
26. Structural properties of charged compact stars with color-flavour-locked quarks matter, Published Modern Physics Letters A Vol. 36, No. 32, 2150227 (2021) (Word Scientific

Publishing Company, SCOPUS, SCI), (Impact Factor: 2.066)
<https://doi.org/10.1142/S0217732321502278>

27. Embedding Class I solution in 5D Einstein-Gauss-Bonnet gravity, Published Modern Physics Letters A VOL. 36, NO. 32, (Word Scientific Publishing Company, SCOPUS, SCI), 2150231, 2021, (Impact Factor: 2.066) <https://doi.org/10.1142/S021773232150231X>
28. Anisotropic Strange Star in 5D Einstein-Gauss-Bonnet Gravity, published *Entropy* 2021, 23, 1015 (MDPI, SCIE, Scopus, Impact Factor: 2.524).
29. Wormholes in $f(R, T)$ gravity satisfying the null energy condition with isotropic pressure, Published *Annals of Physics Journal*, 433, 2021, 168575. <https://doi.org/10.1016/j.aop.2021.168575> , (Elsevier journal, Scopus, SCI, Impact No. 2.73)
30. Anisotropic quark stars in R^2 gravity, published in *Physics letter B Journal*, Volume 817, 10 June 2021, 136330, (Elsevier journal, Scopus, Impact No. 4.384) 2021 <https://doi.org/10.1016/j.physletb.2021.136330>.
31. Isotropic compact stars in 4D Einstein-Gauss-Bonnet gravity, *Classical and Quantum Gravity*, Volume 38, Number 3 035002, 2021, Published 17 December 2020 (ISI, Scopus, Impact No. 3.487)
32. Charged strange star model with Tolman V metric potential in the Einstein-Maxwell space time, *Results in Physics Journal* <https://doi.org/10.1016/j.rinp.2020.103648>, **2021**. (ISI, Scopus, (Elsevier's Journals), Impact Factor: 4.476)
33. An EGD model in the background of embedding class I space—time, *Eur. Phys. J. C* (2020) 80 (10) 1-17: 918 (Springer- Verlag), Impact factor – 4.59, H index – 198 (Germany), 2020, 2020 <https://doi.org/10.1140/epjc/s10052-020-08491-w>
34. Conformally symmetric traversable wormholes in $f(R, T)$ gravity, *Annals of Physics Journal* 422 168295, 2020 (Elsevier journal, Scopus, Impact No. 2.73)
35. Conformally symmetric traversable wormholes in modified teleparallel gravity, *Phys. Rev. D* 101 (8), 084012 (2020) (American Physical Society, H Index: 395, United states) Impact Factor: 5.296, (SCI , Scopus)
36. Cytotoxic and antimicrobial potential of different leaves extracts of *R. fruticosus* used traditionally to treat diabetes, *Toxicology Reports* (Elsevier's journals), 7 (**2020**) 183–187, (impact no 4.81).

37. A generalised embedding class one static solution describing anisotropic fluid sphere, published *Astrophysics and Space Science* (Springer- Verlag), 365 (1) 1-14, 9 January 2020 (Impact Factor: 1.83).
38. Analytical model of dark energy stars, published *MPLA Journal* (Word Scientific Publishing Company), Vol. 35 (10), 2050071, 2020, (Impact factor: 2.066).
39. Anisotropic Compact stars in the Buchdahl model: A comprehensive study, *PHYSICAL REVIEW D* 99, 044029 (2019) (Impact Factor: 5.296, H-index 396, United States, American Physical Society)
40. Minimally deformed anisotropic model of class one space-time by gravitational decoupling, *Eur. Phys. Journal C (EPJC)* (2019) 79:851, <https://doi.org/10.1140/epjc/s10052-019-7377-0> Impact factor – 4.59, H index – 198 (Germany), **Nature Indexed**
41. Anisotropic strange stars in Tolman–Kuchowicz spacetime, *Eur. Phys. J. C* (2018) 78:603, <https://doi.org/10.1140/epjc/s10052-018-6072-x>, (Springer- Verlag), Impact factor: 4.59, H index – 198 (Germany), **Nature Indexed**
42. Relativistic anisotropic models for compact star with equation of state $p=f(\rho)$, *International Journal of Modern Physics D*, Vol. 26 (2017) 1750002 (22 pages), (Impact Factor: 2.46), World Scientific Publishing Company, DOI: 10.1142/S021827181750002X
43. Well-behaved Anisotropic Compact Star Models in General Relativity, *Astrophysics and Space Sci* (2016) 361:352, Springer. (Impact Factor: 1.83), DOI 10.1007/s10509-016-2940-8
44. A New Model for Charged Anisotropic Compact Star, *Astrophysics and Space Sci* (2016) 361:163 Springer, (Impact Factor: 1.83), DOI 10.1007/s10509-016-2747-7
45. Relativistic Modelling of Stable Anisotropic Super-Dense Star, *Reports on Mathematical Physics Journal Elsevier*, Vol. 76 (2015), *REPORTS ON MATHEMATICAL PHYSICS* , Elsevier, (Impact No. 0.72)
46. Some New Similarity Solutions of Einstein Field Equations for Spherical Symmetric Fluid Spheres Model of Class Two, *Applied Mathematics and Computation* 253 (2015) 242–247, Elsevier (Impact Factor: 4.019)
47. Two New Exact Solutions for Relativistic Perfect Fluid Spheres through Lake’s Algorithm, *Astrophysics Space Sci* (2014) 355:2171, Springer. (Impact Factor: 1.83), DOI 10.1007/s10509-014-2171-9

48. Quasi-Compactness in Quasi-Banach Spaces ℓ_p , for $0 < p < 1$, Journal of Advances in Mathematics, Vol. 4, No 1, Pp 325-341, Council for Innovative Research, India Nov. 2013
49. A Fuzzy Logic based Handwritten Numeral Recognition System, International Journal of Computer Applications, (ISSN: 0975-8887), Vol. 83 – No. 10, Dec. 2013.
50. Invariant Solutions of Einstein Field Equation for Conformally Flat Fluid Spheres of Embedding Class One”, International Journal of Theoretical Physics, DOI 10.1007/s10773-013-1708-y, Springer, 2013
51. Dynamic Stability of Charged Isentropic Super-dense Star Model, Journal of Mathematical and Computational Sciences, Vol. 3, No. 1, 266-277, ISSN: 1927-5307 UK, 2013.
52. A fuzzy Based Feature Extraction Approach for Handwritten Characters, IJCSI International Journal of Computer Science Issues, Vol. 10, Issue 4, No 1, ISSN (Print): 1694-0814 | ISSN (Online): 1694-0784, www.IJCSI.org , 2013.
53. Applications of Lie Group Analysis to a Core Group Model for Isentropic Super-dense stars, Journal of Mathematical and Computational Sciences, Vol. 3, No. 1, 22-31, ISSN: 1927-5307 UK, 2013.
54. Mathematical Modeling of Radon Concentrations in Soil, Journal of Mathematical and Computational Sciences, Vol. 3, No. 3, 755-763 ISSN: 1927-5307 UK, 2013
55. Regional Strategic Sensors Characterizations”, Journal of Mathematical and Computational Sciences, Vol. 3, No. 2, 401-418, ISSN: 1927-5307, UK, 2013.
56. On Most General Exact Solution of Plasma Sheath Model for a Negatively Biased Probe, Advance Studies in Theoretical Physics, Vol. 6, No. 9, 447-455, 2012
57. A Plasma Emission Controller for Reactive Magnetron Sputtering of Titanium Dioxide Films, Advances in Theoretical and Applied Mechanics journal, Vol. 5, no. 1, 1 – 10, 2012
58. Generalized Exact Solution for a Spherical Symmetric Perfect Fluid Model of Embedding Class Two, Applied Mathematical Sciences, Vol. 5, no. 16, 763 – 774, 2011
59. A non-linear Supervised ANN Algorithm for Face Recognition Model using Delphi Languages", Contemporary Engineering Sciences Journal, Vol. 4, no. 4, 177 – 186, 2011
60. A New Generating Solution of a Relativistic Radiating Fluid Spheres Model, Applied Mathematical Sciences, Vol. 5, no. 80, 4005 – 4014, 2011

61. An Extensive Study of Mathematical Wastewater Flow Model over Slime Layers", Applied Mathematical Sciences, Vol. 5, no. 80, 3971 – 3979, 2011
62. On Lie's Reduction Theorem through an Application for a Relativistic Radiating Fluid Spheres Model", International Journal of Algorithms, Computing and Mathematics, Vol.4, No.1, Feb. 2011
63. Similarity Solutions for Relativistic Accelerating Fluid Plates of Embedding Class One Using Symbolic Computation", Advances in Theoretical Physics Journal, Vol. 4, no. 10, 449 – 466, 2010
64. On the Monge's method with its Application to the Conformally Space-time Metric", Babylon University Journal, Vol. 12, No.3, 2006
65. On the Exact Solution of a Space-time Metric Conformal to Mainkoskian Manifold", Journal of Al-Nahrain University, ISSN:1814-5922, Vol. 8(1), pp 60-62, 2005
66. On the Stability of Isentropic Fluid Spheres", Al-Nahrain University Journal, ISSN: 1814-5922, Vol. 8(1), pp 57-59, 2005
67. On the Most General Accurate Solutions for Buchdal's fluid Spheres", Astrophysics and Space Science Journal, Vol. 283, No. 3, Page 337-346, Kluwer Academic Publisher, Netherlands, 2003. (Impact no. 1.96).
68. On Most General Exact Solution for Vaidya-Tikekar Isentropic Super-dense Star", Astrophysics and Space Science Journal, Vol. 272, 403-415, Kluwer Academic Publisher, Netherlands, 2000. (Impact no. 1.96)
69. On the Lie's Reduction Theorem with an Application to Isentropic Fluid Spheres", Al-Nahrain University Journal, Vol. 8, 2006
70. On Artificial Neural Network for Face Recognition Application", College of Education Journal, Vol. 2, 2006
71. Mathematical Model of Fixed Growth Biological System", College of Education Journal, Vol. 1, 2006
72. New Charged Model Representing the Situation between the Gravitation Attraction and Electrostatic Repulsion", Engineering and Development Journal, Vol.6, No.1, Iraq, 2002

73. On the Most General Exact Solutions for Buchdal's Spheres", Tata McGraw-Hill, www.tatamcgrawhill.com, 2001.
74. On $G_3(2,S)$ Perfect Fluid Distribution of Embedding Class One with Non-vanishing Curvature Tensor", Progress of Mathematics journal, Vol. 32, No.2 Pp. 63-74, 1998

A3.4 CONFERENCE PROCEEDINGS

1. V. International Conference on Mathematics and its Applications in Science and Engineering [ICMASE 2024], Coimbra, Portugal
2. Keynote Speaker the 10-th International Scientific Conference on Mathematics and its Applications (ISCMA-2024) 28th - 29th August 2024, Baghdad, Iraq
3. International Conference on Mathematics, Computation and Complex Systems (ICMCCS - 2024) on 14th -15th, UAE, 2024.
4. Keynote Speaker on Mathematical Modeling in the social, Health, and applied physical sciences, Haryana University, India, 22-26, May 2023.
5. Keynote speaker of 6th Scientific Engineering conference and 3rd sustainable Engineering, Al Mustansiryha University, Baghdad, Iraq, 25-26, June 2023.
6. Keynote speaker of 5th scientific Engineering conference and 2nd sustainable Engineering, Al Mustansiryha University, Baghdad, Iraq, June 2022.
7. Benchmarking Framework for Online, Open, Smart, and Technology-Enhanced Higher Education: Sharing Best Practices of Asian Universities, Nov 10, 2022 11:00 AM Dubai, Hamdan Bin Mohammed Smart University
8. Mahmood K Jasim, "Numerical simulations of charged analogues of isentropic super-dense star model" The 2nd International Conference on Numerical analysis and Optimization (NAO11), 3-6/ Jan. 2011.
9. Mahmood K Jasim, "On Lie's reduction theorem through an application non-conformal accelerating and shearing fluid spheres" presented at international conference on Analysis and Applications (ICAA2010), Muscat, OMAN.
<http://llwww.squ.edu.om/portals/87/conference/ICAA10/conference2010/ICAA10.html>.
10. Dhuha M Salih, Mahmood K Jasim, Smitha T, "On Lie's reduction theorem through an application for a relativistic radiating fluid spheres model" presented at international

conference on computing organized by advanced computing research society at IDSA, New Delhi, India, 27th-28th Dec. 2010.

11. Mahmood K Jasim," A generalized exact solution for a spherical symmetric perfect fluid model of embedding class two "poster at 3rd Astrophysics of Neutron stars workshop, August 31st – Sept. 4th, 2009, Istanbul, Turkey.
12. M K Jasim, Arwa A , "Some exact solution of fluid spheres model of class two", presented in the 3rd international conference, Al Ain, UAE, 2008.
13. Mahmood K Jasim, Shatha Sami,"On the symmetry solution of Vaidya-Tikekar isentropic super dense star" Published in the proceeding of Six Jordanian International congress of Mathematics (SJICM), 2004.
14. Dhiaa Wajid Abood, M K Jasim , "On the internal design of controlled heating of building" published in the proceeding of the second symposium on scientific research outlook in the Arab World, 24-27 March, Sharjha, UAE, 2002.
15. M K Jasim,"On hyperboloid models for super dense star" published in the proceeding of the national conference on recent development in math's, Sep. 28-29, Al-Mustansiryha University, Iraq, 2001.
16. Gupta Y K, M K Jasim , "Some non-conformally perfect fluid solutions of imbedding class one" published in the proceeding of the national conference on recent development in gravitation and cosmology, Aug. 31-Sep. 2, AMU, India, 1999
17. Gupta Y K, M K Jasim, "Some similarity solutions for accelerating fluid plates of imbedding class one" published in the proceeding of the national symposium on current trends in gravitation and cosmology, Jan.20-21, DDU, India, 1999
18. Gupta Y K, M K Jasim, "On conformally flat radiating fluid spheres" published in the proceeding of the international conference GR15, Dec.16-21, Pune, India, 1997.
19. Gupta Y K, M K Jasim, "Most general exact solution for V-T isentropic super dense star" published in the proceeding of the international conference GR15, Dec.16-21, Pune, India, 1997

A3.5 CONFERENCES ATTENDANCE

1. The IIT Kanpur conference, India, 1989
2. Iraqi conference on math's, Iraq, 1993

3. Iraqi conference on Engineering, Iraq, 1995
4. Math's conference, Roorkee, India, 1996
5. Recent development of math's analysis in industrial problems, BHU, India, 1998
6. Recent development of Relativity and cosmology, AMU, India, 1999
7. National Symposium on current trends in Gravitation and Cosmology, India, 1999
8. Summer University, Lebanon, 2001
9. Iraqi conference on math's, Iraq, 2001, 2002
10. The Six Jordanian International congress of Mathematics (SJICM), 2004
11. The 3rd international conference, Al Ain, UAE, 2008
12. International Conference on Analysis and Applications (ICAA2010) at Sultan Qaboos University (Muscat, Oman, January 24-26, 2010)
13. International Conference on Numerical Analysis and Optimization (NAO11) at Sultan Qaboos University (Muscat, Oman, January 03-06, 2011)
14. International Workshop on Solution of Differential Equations from Transform Techniques SDETT-2014 (30 Jan - 1 Feb' 2014) Islamabad, PAKISTAN
15. Program chair of International Arab Conference on Information Technology (ACIT2014) Dec. 9-11, 2014, University of Nizwa, OMAN.
16. International Arab Conference on Information Technology (ACIT2015), Dec. 15-17, 2015, Isra University/ Jordan.
17. National Conference on Information System Trends (NIST 2016), 11th Feb. 2016, University of Nizwa, Oman.
18. Vice chair of *The 4th International Conference of the Department of Education and Cultural Studies* in Collaboration with the Scientific Society of Colleges of Education in Arab Universities. Conference Title: The Teacher: preparation and lifelong learning in a changing world, 1-3/March, 2016, University of Nizwa, Oman
19. Vice chair of *the 1st International Conference of the Department of Arabic Languages*, 28th-30th of Nov., 2016, University of Nizwa, Oman
20. Virtual international seminar (VIS 2020), 1-2, September, 2020
21. Keynote speaker of 3rd Al-Noor International Conference for Science and Technology (3NICST2021), Technology University, 12, August 2021

22. Keynote speaker of 5th International Conference for Science and Engineering, Al Mustansiryha University, 2022
23. International Conference on Mathematics, Computations and Complex System, 14-15, March, 2024

A3.6 GRANT AND CONTRACT SUPPORT

Research Proposals Accepted/ Submitted		
Research Project Title	Funding Agency	Reference
1. A comprehensive study of exact solutions of Einstein's field equations in certain stellar models: An Astrophysical implication, total amount: 3800OR	TRC/PI, Finished and its outcome 6 published papers, plus 2 conference papers.	BFP/RGP/CBS/22/014
2. An extensive study of exact solutions of Einstein's field equations with antigravity and dark matter contributions" total amount: 2000 OR	UoN/PI Finished and its outcome 3 published papers	URC-No 6/2/F2015
3. New Solutions to Einstein Field Equations in General relativity and Modified Gravity Theory in the Context of Stellar Structures	TRC, Supervisor	BFP/GRG/CBS/24/030
4. Astrophysical and Cosmological Models in Modified Gravity Theory using Theoretical and Observational Techniques	TRC/Co PI	BFP/RGP/CBS/24/203

A3.7 Published Book

1. Morphology Dynamics in Estuary Models, LPU Publication House, Lovely Professional, International www.lpu.co.in Dec. 2024 LPU (Book), ISBN:978-93-48362-51-3, 2024
2. Book: Solving Differential Equations A Computational Approach Book Chapter: Single-Type Population Models in Mathematica I Ecology Chapter 9 of BOOK International Accepted Aug, 2025, Taylor and Francis, Publication.

3. Book: Semi-Analytical and Numerical Approximations of Fractional Partial Differential Equations, Book Chapter: The Evolution of Fractional Calculus and Its Impact in Modern Science and Technology

<https://www.appleacademicpress.com/semi-analytical-and-numerical-approximations-of-fractional-partial-differential-equations-/9781779645715>

In Production

Pub Date: Forthcoming November 2026

Hardback Price: \$190 USD | £150 UK

Hard ISBN: 9781779645715

E-Book ISBN: 978-1-77964-572-2

Pages: Est. 276 pp w index

Binding Type: Hardback / ebook

Notes: 17 color and 21 b/w illustrations

A3.8 RESEARCH ACTIVITIES:

- Member, Iraqi Society of Mathematics and Physics
- Member, Iraqi Society of Teachers
- Member, GRG International Society
- Member, American Association for Science and Technology (AASCIT)
- Member, Editorial Board of the *American Journal of Applied Mathematics (AJAM)*, <http://www.sciencepublishinggroup.com/j/ajam>
- Reviewer, Springer Journals
- Reviewer, The International Arab Conference of Information Technology (ACIT'2014)
- Reviewer, several of Elsevier Journals
- Reviewer, Measurements Elsevier Journal
- Reviewer for Malaysian journal of mathematical sciences, Institute for Mathematical Research (INSPEM), UPM, Malaysian
- Reviewer of Mathematics and System Science Journal, ISSN 2159-5291, USA
- Referee for Ph.D. thesis to award of Ph.D. Degree in Mathematics, IIT Roorkee, INDIA, 2012

- Editorial Board of the American Journal of Applied Mathematics (AJAM), <http://www.sciencepublishinggroup.com/j/ajam>
- Editorial Board of the IJMCF, <http://www.ijmcf.com>

CONFERENCE/ SEMINAR /WORKSHOP/ SHORT COURSE/TRAINING

No.	Title	Date
1	Solving a second –order hypergeometric different equation by two-step method	International webinar (Al-Mustansiryha University, Baghdad, Iraq), 19/10/2020
2	Gupta-Jasim Two-Step Method: Innovation, theory and application	UoN, 2020-2021
3	Anisotropic Compact Stars Model Using Two Steps Method	UoN, 2020-2021(4/3/2021)
4	Shadow of charged wormholes in Einstein-Maxwell-Dilaton theory	UoN, 2020-2021(15/4/2021)
5	From the Possibility to the Certainty of a Supermassive Black Hole	The National Academy of Sciences, India (NASI) - Delhi Chapter, 22/3/2021
6	Anisotropic Compact Stars Model Using Two Steps Method	International webinar Organized by the Department of Mathematics, The Islamia University of Bahawalpur, Pakistan, 4/3/2021
7	Participation in a workshop “Statistics using IBM SPSS”	6-9, March, 2023, University of Nizwa
8.	Workshop Oman Qualifications Framework External Reviewer (OQFER), OQF Capacity Building Workshop	15th of January -Wednesday 17th of January 2024, OAAA, Oman
9	6 th International Conference on 'Recent Advances in Fundamental and Applied Sciences' (RAFAS-2025), scheduled to take place on April 18-19, 2025, in a hybrid format (onsite/online) at Lovely Professional University, Phagwara, Punjab, India.	April 18-19, 2025
10	The international conference for Mathematics, AI Information and Communication Technology	June 22-23, 2025, College of Computer Science and Mathematics, Tikrit University, Tikrit, Iraq.

11	V International Conference on Mathematics and its Applications in Science and Engineering, organized by Polytechnical Institute of Coimbra in Coimbra/Portugal	September 16-18, 2024 in Coimbra, Portugal.
12	6 th International Conference on 'Recent Advances in Fundamental and Applied Sciences' (RAFAS-2025), scheduled to take place on April 18-19, 2025, in a hybrid format (onsite/online) at Lovely Professional University, Phagwara, Punjab, India.	April 18-19, 2025
13	Workshop on Mathematical Modeling in the <i>On Wormhole through a Modified Theory of Gravity</i> , Mustansiriyah University, Iraq, 9 th , April 2025.	Mustansiriyah University, Iraq, 9 th , April 2025.
14	Judging SCUDEM for Mathematical Modeling competition, USA	Dec. 2024
15	<i>The Wolfram Compiler Combining Interpreted and Compiled Computation, Wolfram Research Europe, 30/07/2025</i>	30/07/2025
16	External Examiner for an Academic Program Specification College of Engineering, Mustansiriyah <i>University, Baghdad, Iraq</i>	7-8, April, 2025
17	QS Higher Ed Summit: Asia Pacific 2024, Macau University of Science and Technology (MUST), Macau SAR, China, 5-7 November, 2024	5-7 November, 2024
18	Participation in CHETL, Fall, 2025, University of Nizwa	Fall 2025

A4. SERVICES

A4.1 UNIVERSITY ADMINISTRATION AND COMMITTEES

- Associate Professor, Mathematics, College of Arts and Sciences, University of Nizwa, Oman, September 2008 – present
- Department Quality Officer 2021-present
- Assistant Dean, Graduate Studies and Research, College of Arts & Sciences, University of Nizwa September 2014 – January 22, 2017
- Head of Department, Mathematics and Physics, College of Arts and Sciences, University of Nizwa, December 2012 - September 2014
- College Academic Advisor, College of Arts and Sciences, University of Nizwa, November 2011 – December 2016
- Participation and Contribution in Committees at University, College and Department Levels

➤ No.	Title	Level
1	Redesign the M Sc. Mathematics Program and follow up the progress of program till approval	UoN/ 65 /2019 University level
2	DMPS Quality Assurance Officer: Following all issues related to QA and prepare almost all the related ADRI reports and following OP and its action plan.	Department Level
3	Department Graduate studies and Research Committee	Department Level
4	DMPS promotion committee	Department Level
5	Member of Cultural week and open day organized committee at mathematics section	Department Level
6	Member of DMPS- Curriculum Review Committee	Department Level
7	Member of DMPS- Peer Review Committee	Department Level
8	Member of CAS Quality Assurance committee	College level
9	CEMIS college promotion committee	University level
10	More than 28 ADRI reports relevant to different OAAA standards were written, as well as an action plan for the department and the college, which was highly praised by the Dean and CAS QAC.	Department and College level
11	Preparing a draft of the DMP OP and all of the ADRI reports that go with it.	Department Level

A4.2 PROFESSIONAL SERVICE

Conduct several meetings with Oman Astronomical Society to setup a possibility of research cooperation and center of research at university of Nizwa.

A5 AWARDS AND RECOGNITIONS

No.	Title of Award	Awarded by
1	Nominate for Abdul Hameed Shoman Arab Researchers Award 2021	<i>Jordan 2021</i>
2	Nominate for TRC awards for the best published research paper	<i>TRC, Sultanate of Oman</i>
3.	A Certificate of Appreciation in recognition of the valuable contribution as the Keynote speaker at 3rd Al-Noor International Conference for Science and Technology (3NICST2021).	University of Technology, Iraq, 11-12 August 2021
4	Certificate of Appreciation in the field of Academic and Educational Excellence	<i>The Chancellor/UON, 2023</i>
5	Certificate of Appreciation in the 5 th Scientific Engineering Conference and 2 nd in Sustainable Engineering as a keynote speaker	<i>Dean College of Engineering, Mustansiryha University, Iraq, 1-2, June, 2022</i>
6	Certificate of Appreciation for delivering a lecture in a workshop entitled” Mathematical Modeling in the Social, Health, and Applied Sciences”	<i>Central University of Haryana, 22-23, May 2023</i>
7	Certificate of Appreciation for Judging SCUDEM VII 2022, <i>a systemic imitative for modeling & opportunities with differential equation</i>	<i>SIMIODE, SCUDEM, USA, 2023</i>
8	Certificate of Appreciation for outstanding contribution and participation as a keynote speaker in the 6 th Scientific Engineering Conference and 2 nd in Sustainable Engineering	<i>Dean College of Engineering, Mustansiryha University, Iraq, 25-26, June, 2023</i>

9	Certificate of Appreciation for reviewing a new program: Bachelor of Science in Mathematics	<i>A'SHARQIYAH UNIVERSITY, 2, JAN, 2023</i>
10	Certificate of Appreciation for delivering a lecture	<i>Dean College of Sciences, Mustansiryha University, Iraq, 9, April, 2025</i>
11	Certificate of Appreciation for External Examiner for specifics programs	<i>Dean College of Engineering, Mustansiryha University, Iraq, 7-8, April, 2025</i>
12	Certificate of Appreciation for outstanding contribution and participation as a keynote speaker in 6 th International Conference on 'Recent Advances in Fundamental and Applied Sciences' (RAFAS-2025), scheduled to take place on April 18-19, 2025, in a hybrid format (onsite/online) at Lovely Professional University, Phagwara, Punjab, India	<i>LPU chancellor, India, April 18-19, 2025</i>
13	Certificate of Appreciation for Judging SCUDEM VII 2024, <i>a systemic imitative for modeling & opportunities with differential equation</i>	<i>SIMIODE, SCUDEM, USA, 2024</i>