



# Fatema Faisal Kareem

📍 Baghdad, Iraq

☎ 009647813746559

✉ fatema.f.kareem@gmail.com

## Summary

I have supervised sixty B.Sc. students (graduation project). c) Head of mathematics department from 2021-2023 V) CONFERENCES Conference of Ain Shams University, 2014. Egypt Ibn Al-Haitham International Scientific Conference, 2017. Iraq The First International Conference of Pure Sciences 2018 in university of Babylon. Iraq The First International Conference of Iraqi Al-Khwarizmi Society 2018. Iraq. The second International Conference of Pure Sciences 2019 in university of Kerbala. Iraq. The second International Conference of Pure Sciences 2020 in university of Babylon. Iraq.

## Work History

01.2022 - Current

### **Professor**

University of Baghdad Iraq

- Lectured classes using exceptional communication techniques to enhance engagement.
- Scheduled regular meetings with students to discuss short-term and long-term goals.
- Followed safeguarding principles to maximise student health and wellbeing.
- Collaborated with lecturers to enhance teaching procedures.

01.2020 - Current

### **Chairman**

Department of Mathematics University of Baghdad - Iraq

- Catered to different learning styles using diverse teaching methods and formats.
- Implemented Assessment for Learning strategies and encouraged self-assessment.
- Identified clear teaching and learning objectives and determined appropriate delivery methods.
- Set high expectations for academic progress and classroom behaviour through well-focused teaching and discipline.
- Built comprehensive understanding of mathematical concepts, methods, and vocabulary.
- Raised standards and attainment levels with test-centric approach.
- Drafted lectures and interactive lessons to enhance literacy and numeracy.
- Directed staffing requirements, managed priorities and coordinated workflows to uphold productivity objectives.

01.2012 - 01.2022

### **Assistant Professor**

University of Baghdad Iraq - Iraq

- Worked closely with professors to support collaborative research for course progression.

01.2015 - 01.2020

- Developed multidisciplinary approaches to education, ensuring high-quality teaching, research and student experiences.
- Built confidence levels among students through empowerment practices.
- Supported students with various learning difficulties to understand key concepts in core subjects.

**Member, Department Council and Scientific Committee**

Department of Mathematics University of Baghdad - Iraq

01.2001 - 01.2016

**Examinations Committee**

Department of Mathematics University of Baghdad - Baghdad , Iraq

- Advised on improvement opportunities to streamline operations.
- Led monthly meetings to assess service performance and viability.
- Supported committee chair to follow mission of organisation.

01.2008 - 01.2012

**Lecturer**

University of Baghdad Iraq

01.2000 - 01.2008

**Assistant Lecturer**

University of Baghdad Iraq

01.1990 - 01.2001

**Mathematics Program Committee Member**

Department of Mathematics University of Baghdad - Iraq

01.1990 - 01.2001

**Mathematics Program Committee Member**

Department of Mathematics

01.1997 - 01.1998

**Academic Planning Committee Member**

Department of Mathematics University of Baghdad - Iraq

**Education**

2015

Ph.D., Algebra, Ain Shams University - Egypt

Thesis Title: Folding of Geometric Figures and Some Applications in Algebra

2000

M.Sc., Geometry, University of Baghdad Iraq - Algebraic

1991

B.Sc., Mathematics, University of Baghdad Iraq

**Accomplishments**

**TEACHING AND ADVISING ACTIVITIES**

A) COURSES TAUGHT (undergraduate/graduate) Courses taught at Department of Mathematics

- Linear Algebra (Fall 2001/2002)
- Calculus II (Fall 2002/2008)
- Ordinary Differential Equations ((Fall 2008/2011)
- Group Theory (Fall 2015/2022)
- BCK-algebra (2018-2022) (Master courses)

B) SUPERVISING UNDERGRADUATE & POSTGRADUATE STUDENTS:

- I have been a supervisor for (6) M.Sc
- Students and (2) PhD students; the area of studies is BCK-algebra and graph theory.

**Professional Summary**

**IV) TEACHING AND ADVISING ACTIVITIES**

**A) COURSES TAUGHT (undergraduate/graduate)**

**Courses taught at Department of Mathematics**

1. Linear Algebra (Fall 2001/2002)
2. Calculus II (Fall 2002/2008)

3. Ordinary Differential Equations ((Fall 2008/2011)

4. Group Theory (Fall 2015/2022)

5. BCK-algebra (2018-2022) (Master courses).

**B) SUPERVISING UNDERGRADUATE and POSTGRADUATE STUDENTS:**

• I have been a supervisor for (6) M.Sc. students and (2) PhD students; the area of studies is BCK-algebra and graph theory.

• I have supervised sixty B.Sc. students (graduation project).

**c) Head of mathematics department from 2021-2023**

**V) CONFERENCES**

1. Conference of Ain Shams University, 2014. Egypt

2. Ibn Al-Haitham International Scientific Conference, 2017. Iraq

3. The First International Conference of Pure Sciences 2018 in university of Babylon. Iraq

4. The First International Conference of Iraqi Al-Khwarizmi Society 2018. Iraq.

5. The second International Conference of Pure Sciences 2019 in university of Kerbala. Iraq.

6. The second International Conference of Pure Sciences 2020 in university of Babylon. Iraq.

7. University of Karbala/ College of Education for Pure Sciences. Third International Conference of Pure Sciences 2021.

**LIST OF PUBLICATIONS**

**A) Papers published (or accepted for publication) in JOURNALS.**

1-Maximum Arcs in a Projective Plane  $PG(2,9)$  Over Galois Field, College of Education Journal, University of Mostanserey, Issue : 3 - Page:306 - 317,(2010).

2- A Complete  $(k,r)$ -Cap in  $PG(3,p)$  Over Galois Field  $GF(4)$ , Ibn Al-Haitham Jour. for Pure & Appl. Sci, 24(2)(2011).

3- Classification and Construction of  $(k, 3)$ -Arcs on Projective Plane Over Galois Field  $GF(9)$ , Ibn Al-Haitham Jour. for Pure & Appl. Sci,26(1)(2013).

4-The Construction of  $(k,3)$ -Arcs in  $PG(2,9)$  by Using Geometrical Method, Ibn Al-Haitham Jour. for Pure & Appl. Sci, 26(2)(2013).

5-The Construction of Complete  $(k,n)$ -arcs in 3-Dimensional Projective Space Over Galois Field  $GF(4)$ , College of Education Journal, University of Mostanserey, (1) (2013).

6-A  $(k, \ell)$  Span in Three Dimensional Projective Space  $PG(3, p)$  Over Galois Field where  $p=4$ , Journal of the college of basic Education, University of Mostanserey 19(80)(2013).

7-ON GROUPS OF GEOMETRIC FIGURES, International Journal of Mathematical Archive-4(4),(2013), 276-281.

8- N-Fold Commutative KU-Algebras, International Journal of Algebra, Vol. 8, 2014, no. 6, 267 – 275.

9- Fuzzy n-fold KU-ideals of KU-algebras, **Annals of Fuzzy Mathematics and Informatics**, Volume 8, No. 6, (December 2014), pp. 987-1000.

10- Bipolar fuzzy n-fold KU-ideal of KU-algebras, *Mathematica Aeterna*, Vol. 4, 2014, no. 6, 633 – 650.

11- INTERVAL VALUE FUZZY n-FOLD KU-IDEALS OF KU-ALGEBRAS, *J. Math. Comput. Sci.* 5 (2015), No. 2, 246-264.

12- Effect of Some Geometric Transfers on Homology Groups, *Journal of Mathematics Research*; Vol. 6, No. 4; 2014.

13- LEFT FIXED MAPS AND  $\alpha$ -DERIVATIONS OF KU-ALGEBRA, *JOURNAL OF ADVANCES IN MATHEMATICS*, Vol .9, No 7, 2014

14- THE GRAPH OF A COMMUTATIVE KU-ALGEBRA, *Algebra Letters*, 2015, 2015:1.

15- TOPOLOGY SPECTRUM OF A KU-ALGEBRA, *JOURNAL OF NEW THEORY*, (8) 2015, 78-91.

- 16- INTERSECTIONAL  $(\alpha, A)$ -SOFT NEW-IDEALS IN PU-ALGEBRAS, JOURNAL OF NEW THEORY, (13) 2016, 38-48.
- 17- GRAPH OF EQUIVALENCE CLASSES OF A COMMUTATIVE IS-ALGEBRA, BULLETIN OF MATHEMATICS AND STATISTICS RESEARCH JOURNAL, Vol.4.Issue.2.2016 (April-June).
- 18- CUBIC HYPER KU-IDEALS, JOURNAL OF NEW THEORY, (16) 2017, 80-91.
- 19- Neutrosophic ideals of neutrosophic KU-algebras, Gazi University Journal of Science, 30(4): 463-472 (2017).
- 20- HYPER STRUCTURE THEORY APPLIED TO KU-ALGEBRAS, Journal of Hyperstructures 6 (2) (2017), 82-95
- 21- ON KU-SEMIGROUPS, International Journal of Science and Nature, 8 (4) (2017).
- 22- Intuitionistic fuzzy n-fold KU-ideal of KU-algebra, *Journal of Physics: Conference Series* Vol.1003 (2018).
- 23- Fuzzy KU-semigroups and investigate some basic properties, Journal of Engineering and Applied Sciences, Vol.13 (2018).
- 24- Study of two types finite graphs in KU-semigroups, Al-Haitham Jour. for Pure & Appl. Sci, 31(3)(2018).
- 25- Fuzzy Topological Spectrum of a KU-algebra, IOP Conference Series: Materials Science and Engineering 2019.
- 26- Bipolar fuzzy  $k$ -ideals of KU-semigroup, JOURNAL OF NEW THEORY, (29) 2019, 71-78.
- 27- Interval value fuzzy  $k$ -ideals of a KU-semigroup, Al-Haitham Jour. for Pure & Appl. Sci, 33(2)(2020).
- 28- Intuitionistic fuzzy ideals of KU-semigroups, Iraqi Journal of Science, Special Issue, 2020, 1-10.
- 29- Hyper AT-ideal on AT-algebra, Journal of Physics IOP, 1530(2020) 0121116.
- 30- A study of the density property in module theory, Journal of Advances in Mathematics, 19(2020), 40-46.
- 31- Topology of cubic bipolar structures and its application on Q-algebra, Annals of Fuzzy Mathematics and Informatics, Volume 21, No. 1, (February 2021) pp. 69-92.
- 32- A topology on a ring part of IS-algebra, Int. J. Nonlinear Anal. Appl. 12 (2021) No. 2, 843-848.
- 33- Cubic ideals of semigroup in KU-algebra, Journal of Physics: Conference Series 2021. 1804 012018.
- 34- Generalizations of Fuzzy  $k$ -ideals in a KU-algebra with Semigroup, Journal of Physics: Conference Series 1879 (2021) 022108.
- 35- Hyper Fuzzy AT-ideals of AT-algebra, 2021 J. Phys.: Conf. Ser. 1804 012067.
- 36- Interval value fuzzy hyper AT-algebras, Journal of Physics: Conference Series 1879 (2021) 032021.
- 37- Multipliers of an AT-algebra, Iraqi Journal of Science, 2021, Vol. 62, No. 8, pp: 2694-2701.
- 38- Study of the dual ideal of KU-algebra, Int. J. Nonlinear Anal. Appl. 12 (2021) No. 2, 1099-1107.
- 39- The Homomorphism of a cubic set of a semigroup in a KU-algebra, Journal of Physics: Conference Series 1879 (2021) 022119.
- 40- Cubic Bipolar Fuzzy Ideals with Thresholds  $(\alpha, \beta)$ ,  $(\omega, \vartheta)$  of a Semigroup in KU-algebra, Ibn Al Haitham Journal for Pure and Applied Sciences, 53 (2)2022.
- 41- The Homomorphism of Cubic bipolar ideals of a KU-semigroup, Ibn Al-Haitham Jour. for Pure & Appl. Sci. 35(1)2022.
- 42- Bipolar Intuitionistic  $\mathfrak{S}, \mathfrak{L}$ -Fuzzy Medial-Ideals (Bi-Intstic  $\mathfrak{S}, \mathfrak{L}$  Fuzzy Med-I),

AIP Conference Proceedings 2414, 040053 (2023).

43- Cubic bipolar ideals of a semi group in KU-Algebra, AIP Conference Proceedings 2414, 040001 (2023).

44- Cubic Ideals of TM-algebras, Ibn Al-Haitham Journal for Pure and Applied Sciences, 36(1)2023.

45- CUBIC INTUITIONISTIC STRUCTURES OF A SEMIGROUP IN KU-ALGEBRA, MATHEMATICA MONTISNIGRI , Vol LVI (2023).

#### **B) Papers under Review**

1- Interval valued fuzzy ideals of TM-algebra, Journal of Interdisciplinary Mathematics.

#### **C) Reviewer**

- Reviewer for Journal of Mathematics and Statistics.
- Reviewer for Italian Journal.
- Reviewer for Annals of Fuzzy Mathematics and Informatics (AFMI)
- Reviewer for JOURNAL OF ADVANCES IN MATHEMATICS
- Reviewer for JOURNAL OF New theory
- Journal of new results in science

#### **EDITORIAL BOARD MEMBERSHIP**

EDITORIAL BOARD MEMBERSHIP in Pure and Applied Mathematics Journal (PAMJ);

ISSN: 2326-9790 (Print)

ISSN: 2326-9812 (Online)

#### **Links to researcher**

<https://scholar.google.com/citations?user=xSxnRIQAAAAJ&hl=ar>

<https://www.scopus.com/authid/detail.uri?authorId=57202452300>

<https://www.researchgate.net/profile/Fatema-Kareem>

<https://repository.uobaghdad.edu.iq/author/fatma.f.k.ihcoedu>

## CONFERENCES

Ibn-Al-Haitham college of Education University of Baghdad, Iraq.  
Academic Planning Committee 1997/1998 Member Examinations Committee 2001/2011 Member Examinations Committee 2015/2016 Member Department Council and Scientific Committee 2015/2020 Member Department Council and Scientific Committee 2020/2023 Chairman

## Skills

- Advising skills
- Individualised instruction
- Academic advisement
- Faculty communication
- Learning management interfaces
- Class organisation
- Research and analysis
- Computer Skills Print, Word, Excel, PowerPoint and Latex

## Languages

### **English**

Fluent

### **Arabic**

Native