



IMAD A. JARADAT

JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF MATHEMATICS AND STATISTICS
P.O.Box 3030, IRBID 22110, JORDAN

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[SCOPUS](#), [GOOGLE SCHOLAR](#), [RESEARCH GATE](#), [ORCID](#)

EDUCATION

NEW MEXICO STATE UNIVERSITY (NMSU), NM, USA.

1. **PH.D. (WITH HONORS)**, Mathematics (Affine Algebraic Geometry), May 2014
 - **THESIS ENTITLED:** *Equivariant Triviality of Proper \mathbb{G}_a -Actions on $\mathbb{A}_{\mathbb{C}}^4$*
 - **ADVISOR:** David R. Finston, Professor.
2. **MSC (WITH HONORS)**, Mathematics, June 2009.

JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (JUST), Irbid, JORDAN.

1. **MSC (WITH VERY GOOD RATING)**, Mathematics (Numerical Analysis), June 2003
 - **THESIS ENTITLED:** *Line Integrals Over Implicitly Defined Curves*
 - **ADVISOR:** Hani I. Siyyam, Ph.D.
2. **BSc (WITH VERY GOOD RATING)**, Mathematics, June 2001.

ACADEMIC CAREER

- **VISITING ASSISTANT PROFESSOR**, Department of Mathematical Sciences, NMSU, USA
Aug. 2020 – present
- **ASSOCIATE PROFESSOR**, Department of Mathematics and Statistics, JUST, JORDAN
Nov. 2019 – Aug. 2020
- **ASSISTANT PROFESSOR**, Department of Mathematics and Statistics, JUST, JORDAN
Nov. 2014 – Nov. 2019
- **VISITING INSTRUCTOR**, Department of Mathematics, CUNY - Brooklyn College, USA
Feb. 2014 - Aug. 2014
- **TEACHING ASSISTANT**, Department of Mathematical Sciences, NMSU, USA
Sept. 2007 - Dec. 2013
- **FULL-TIME INSTRUCTOR**, Department of Mathematics, PHILADELPHIA UNIVERSITY, JORDAN
Sept. 2004 - Sept. 2007

RESEARCH INTERESTS

- Fractional Calculus and its Applications
- Dual-Mode Partial Differential Equations
- Algebraic Group Actions on Affine Varieties
- Numerical Radius Inequalities of Operator Matrices.

PUBLICATIONS

(2022)

1. **I. JARADAT**, M. Alquran, T.A. Sulaiman, A. Yusuf, [Analytic simulation of the synergy of spatial-temporal memory indices with proportional time delay](#). *Chaos, Solitons and Fractals* **156**: 111818 (2022).

2. I. JARADAT, M. Alquran, [Geometric perspectives of the two-mode upgrade of a generalized Fisher-Burgers equation that governs the propagation of two simultaneously moving waves](#). *Journal of Computational and Applied Mathematics* **404**: 113908 (2022).
3. I. JARADAT, M. Alquran, S. Qureshi, T.A. Sulaiman, A. Yusuf, [Convex-rogue, half-kink, cusp-soliton and other bidirectional wave-solutions to the generalized Pochhammer-Chree equation](#). *Physica Scripta* **79**: 055203 (2022).
4. M. Al-Dolat, I. JARADAT, B. Al-Husban, [A novel numerical radius upper bounds for \$2 \times 2\$ operator matrices](#). *Linear and Multilinear Algebra* **70**(6), 1173–1184 (2022).
5. M. Al-Dolat, M. Alquran, I. JARADAT, M. Ali, [Analytical simulation for the mutual influence of temporal and spatial Caputo-derivatives embedded in some physical models](#). *Romanian Reports in Physics* **74**(1): 103 (2022).

(2021)

6. I. JARADAT, M. Alquran, S. Sivasundaram, D. Baleanu, [Simulating the joint impact of temporal and spatial memory indices via a novel analytical scheme](#). *Nonlinear Dynamics* **103**, 2509–2524 (2021).
7. IA. Irwaq, M. Alquran, M. Ali, I. JARADAT, MSM. Noorani, [Attractive new fractional-integer power series method for solving singularly perturbed differential equations involving mixed fractional and integer derivatives](#). *Results in Physics* **20**: 103780 (2021).
8. M. Alquran, I. JARADAT, A. Yusuf, T.A. Sulaiman, [Heart-cusp and bell-shaped-cusp optical solitons for an extended two-mode version of the complex Hirota model: application in optics](#). *Optical and Quantum Electronics* **53**: 26 (2021).
9. M. Alquran, M. Alsukhour, M. Ali, I. JARADAT, [Combination of Laplace transform and residual power series techniques to solve autonomous n-dimensional fractional nonlinear systems](#). *Nonlinear Engineering* **10**(1), 282–292 (2021).
10. M. Ali, M. Alquran, I. JARADAT, [Explicit and Approximate Solutions for the Conformable-Caputo Time-Fractional Diffusive Predator–Prey Model](#). *International Journal of Applied and Computational Mathematics* **7**: 90 (2021).
11. I. JARADAT, M. Alquran, [A variety of physical structures to the generalized Equal-Width equation derived from Wazwaz-Benjamin-Bona-Mahony model](#). *Journal of Ocean Engineering and Science*. In Press (2021).
12. M. Alquran, M. Ali, I. JARADAT, N. Al-Ali, [Changes in the physical structures for new versions of the Degasperis-Procesi-Camassa-Holm model](#). *Chinese Journal of Physics* **71**, 85–94 (2021).
13. I. JARADAT, M. Alquran, M. Ali, T.A. Sulaiman, A. Yusuf, Q. Katatbeh, [New mathematical model governing the propagation of two-wave modes moving in the same direction: classical and fractional potential KdV equation](#). *Romanian Reports in Physics*. **73**(3): 118 (2021).

(2020)

14. M. Alquran, M. Ali, M. Alsukhour, I. JARADAT, [Promoted residual power series technique with a laplace transform to solve some time-fractional problems arising in physics](#). *Results in Physics* **19**: 103667 (2020).
15. M. Al-Dolat, I. JARADAT, D. Baleanu, [An extension of several essential numerical radius inequalities of \$2 \times 2\$ off-diagonal operator matrices](#). *Advances in Difference Equations* **2020**: 336 (2020).
16. I. JARADAT, M. Alquran, [Construction of solitary two-wave solutions for a new two-mode version of the Zakharov-Kuznetsov equation](#). *Mathematics* **8**(7): 1127 (2020).

17. M. Alquran, **I. JARADAT**, M. Ali, D. Baleanu, [The dynamics of new dual-mode Kawahara equation: Interaction of dual-waves solutions and graphical analysis](#). *Physica Scripta* **95**(4): 045216 (2020).
 18. M. Alquran, **I. JARADAT**, M. Ali, N. Al-Ali, S. Momani, [Development of spreading symmetric two-waves motion for a family of two-mode nonlinear equations](#). *Heliyon* **6**(6): e04057 (2020).
 19. **I. JARADAT**, M. Alquran, S. Momani, D. Baleanu, [Numerical schemes for studying biomathematics model inherited with memory-time and delay-time](#). *Alexandria Engineering Journal* **59**(5), 2969–2974 (2020).
 20. **I. JARADAT**, M. Alquran, R. Abdel-Muhsen, S. Momani, D. Baleanu, [Higher-dimensional physical models with multimemory indices: analytic solution and convergence analysis](#). *Advances in Difference Equations* **2020**: 364 (2020).
 21. M. Alquran, **I. JARADAT**, S. Momani, D. Baleanu, [Chaotic and solitonic solutions for a new time-fractional two-mode Korteweg-de Vries equation](#). *Romanian Reports in Physics* **72**(3):117 (2020).
 22. I. Abu Irwaq, M. Alquran, **I. JARADAT**, M.S.M. Noorani, S. Momani, D. Baleanu, [Numerical investigations on the physical dynamics of the coupled fractional Boussinesq-Burgers system](#). *Romanian Journal of Physics* **65**:111 (2020).
 23. M. Ali, M. Alquran, **I. JARADAT**, N. Abu Afouna, D. Baleanu, [Dynamics of integer-fractional time-derivative for the new two-mode Kuramoto-Sivashinsky model](#). *Romanian Reports in Physics* **72**(1):103 (2020).
 24. M. Alquran, **I. JARADAT**, M. Ali, A. Abu-Aljazar, [Computational scheme for the time-fractional reaction-diffusion Brusselator model](#). *International Journal of Applied and Computational Mathematics* **6**, 141 (2020).
 25. M. Alquran, **I. JARADAT**, S. Sivasundaram, L. AlShraiedeh, [New shock-wave and periodic-wave solutions for some physical and engineering models: Vakhnenko-Parkes, GEWB, GRLW and some integrable equations](#). *Nonlinear Studies* **27**(2), 393–403 (2020).
 26. M. Alquran, **I. JARADAT**, R. Abdel-Muhsen, [Embedding \(3+1\)–dimensional diffusion, telegraph, and Burgers' equations into fractal 2D and 3D spaces: An analytical study](#). *Journal of King Saud University-Science* . **32**(1), 349–355 (2020).
 27. **I. JARADAT**, M. Alquran, Q. Katatbeh, F. Yousef, S. Momani, D. Baleanu, [An avant-garde handling of temporal-spatial fractional physical models](#). *International Journal of Nonlinear Sciences and Numerical Simulation* **21**(2), 183–194 (2020).
- (2019)
28. M. Alquran, **I. JARADAT**, [Multiplicative of dual-waves generated upon increasing the phase velocity parameter embedded in dual-mode Schrödinger with nonlinearity Kerr laws](#). *Nonlinear Dynamics* **96**(1), 115–121 (2019).
 29. **I. JARADAT**, M. Alquran, F. Yousef, S. Momani, D. Baleanu, [On \(2 + 1\)–dimensional physical models endowed with decoupled spatial and temporal memory indices](#). *European Physical Journal Plus* **134**(7):360 (2019).
 30. F. Yousef, M. Alquran, **I. JARADAT**, S. Momani, D. Baleanu, [New fractional analytical study of three-dimensional evolution equation equipped with three memory indices](#). *Journal of Computation and Nonlinear Dynamics* **14**(11):111008 (2019).
 31. F. Yousef, M. Alquran, **I. JARADAT**, S. Momani, D. Baleanu, [Ternary-fractional differential transform schema: theory and application](#). *Advances in Difference Equations* **2019**(1):197 (2019).

32. M. Alquran, **I. JARADAT**, Delay-asymptotic solutions for the time-fractional delay-type wave equation. *Physica A: Statistical Mechanics and its Applications* **527**:121275 (2019).
33. M. Alquran, **I. JARADAT**, D. Baleanu, Shapes and dynamics of dual-mode Hirota-Satsuma coupled KdV equations: Exact traveling wave solutions and analysis. *Chinese Journal of Physics* **58**, 49–56 (2019).
34. M. Ali, M. Alquran, **I. JARADAT**, D. Baleanu, Stationary wave solutions for new developed two-waves' fifth-order Korteweg–de Vries equation. *Advances in Difference Equations* **2019**(1):263 (2019).
35. M. Alquran, **I. JARADAT**, D. Baleanu, R. Abdel-Muhsen, An analytical study of (2+1)–dimensional physical models embedded entirely in fractal space. *Romanian Journal of Physics* **64**:103 (2019).
36. M. Ali, M. Alquran, **I. JARADAT**, Asymptotic-sequentially solution style for the generalized Caputo time-fractional Newell-Whitehead-Segel system. *Advances in Difference Equations* **2019**(1):70 (2019).
37. M. Alquran, **I. JARADAT**, D. Baleanu, M. Syam, The duffing model endowed with fractional time derivative and multiple pantograph time delays. *Romanian Journal of Physics* **64**:107 (2019).
38. I. Al-Ayyoub, **I. JARADAT**, K. Al-Zoubi, On the normality of a class of monomial ideals via the Newton polyhedron. *Mediterranean Journal of Mathematics* **16**(3):77 (2019).
39. M. Al-Dolat, M. Ali, **I. JARADAT**, K. Al-Zoubi, On the boundedness of a certain class of maximal functions on product spaces and extrapolation. *Analysis and Mathematical Physics* **9**(1), 453–464 (2019).
- (2018)
40. **I. JARADAT**, M. Al-Dolat, K. Al-Zoubi, M. Alquran, Theory and applications of a more general form for fractional power series expansion. *Chaos, Solitons and Fractals* **108**, 107–110 (2018).
41. **I. JARADAT**, M. Alquran, R. Abdel-Muhsen, An analytical framework of 2D diffusion, wave-like, telegraph, and Burgers' models with twofold Caputo derivatives ordering. *Nonlinear Dynamics* **93**(4), 1911–1922 (2018).
42. M. Alquran, **I. JARADAT**, A novel scheme for solving Caputo time-fractional nonlinear equations: theory and application. *Nonlinear Dynamics* **91**(4), 2389–2395 (2018).
43. **I. JARADAT**, M. Alquran, M. Al-Dolat, Analytic solution of homogeneous time-invariant fractional IVP. *Advances in Difference Equations* **2018**(1):143 (2018).
44. **I. JARADAT**, M. Alquran, K. Al-Khaled, An analytical study of physical models with inherited temporal and spatial memory. *European Physical Journal Plus* **133**(4):162 (2018).
45. **I. JARADAT**, M. Alquran, M. Ali, A numerical study on weak-dissipative two-mode perturbed Burgers' and Ostrovsky models: right-left moving waves. *European Physical Journal Plus* **133**(4):164 (2018).
46. **I. JARADAT**, M. Alquran, S. Momani, A. Biswas, Dark and singular optical solutions with dual-mode nonlinear Schrödinger's equation and Kerr-law nonlinearity. *Optik* **172**, 822–825 (2018).
47. I. Abu Irwaq, M. Alquran, **I. JARADAT**, D. Baleanu, New dual-mode Kadomtsev–Petviashvili model with strong–weak surface tension: analysis and application. *Advances in Difference Equations* **2018**(1):433 (2018).
48. M. Alquran, **I. JARADAT**, S. Sivasundaram, Elegant scheme for solving Caputo-time-fractional integro-differential equations. *Nonlinear Studies* **25**(2), 385–393 (2018).

49. R. Abdalmohsen, **I. JARADAT**, M. Alquran, S. Momani, [An assortment of analytical solution schemes for system of FDEs with multi-memory indices](#). *Proceedings of Internat. Conference on Fractional Differentiation and its Applications (ICFDA)*, (2018).
- (2017)
50. **I. JARADAT**, D. Finston, [A locally trivial \$\mathbb{G}_a\$ -action on \$\mathbb{C}^5\$ with singular algebraic quotient](#). *Communications in Algebra* **45**(11), 4992–5001 (2017).
51. M. Ali, **I. JARADAT**, M. Alquran, [New computational method for solving fractional Riccati equation](#). *Journal of Mathematics and Computer Science-Jmcs* **17**(1), 106–114 (2017).
52. H.M. Jaradat, **I. JARADAT**, M. Alquran, M.M.M. Jaradat, Z. Mustafa, K. Abohassan, R. Abdelkarim, [Approximate solutions to the generalized time-fractional Ito system](#). *Italian Journal of Pure and Applied Math.* **37**, 699–710 (2017).
- (2015)
53. K. Al-Zoubi, **I. JARADAT**, M. Al-Dolat, [On graded \$P\$ -compactly packed modules](#). *Open Mathematics* **13**(1), 487–492 (2015).
- (2014)
54. A. Dubouloz, D. Finston, **I. JARADAT**, [Proper triangular \$\mathbb{G}_a\$ -actions on \$\mathbb{A}^4\$ are translations](#). *Algebra & Number Theory* **8**(8), 1959–1984 (2014).
55. A. Dubouloz, D. Finston, **I. JARADAT**, [Equivariant triviality of quasi- monomial triangular \$\mathbb{G}_a\$ -actions on \$\mathbb{A}^4\$](#) . *Automorphisms in Birational and Affine Geometry*, Springer Proceedings in Mathematics & Statistics **79**, 287–299 (2014).
56. **I. Jaradat**, Equivariant triviality of proper \mathbb{G}_a -actions on $\mathbb{A}_{\mathbb{C}}^4$. Ph.D. Thesis, New Mexico State University (2014).
- (2007)
57. H. Siyyam, **I. JARADAT**, Line integrals over implicitly defined curves, *Pacific-Asian Journal of Mathematics* **1** (1), 61–80 (2007).

TEACHING INTERESTS

Graduate and undergraduate-level courses in Applied Mathematics and Modern Algebra and its Applications.

TEACHING EXPERIENCE

- **VISITING ASSISTANT PROFESSOR**, Department of Mathematical Sciences
NMSU, NM, USA. August 15, 2020 - Present

COURSES TAUGHT:

- Math 191 - Calculus I
- Math 192 - Calculus II
- Math 392 - Introduction to Differential Equations
- Math 480 - Matrix Theory and Applied Linear Algebra

- **ASSOCIATE/ASSISTANT PROFESSOR**, Department of Mathematics and Statistics
JUST, Irbid, JORDAN. Sept. 2014 - present

COURSES TAUGHT:

- Math 101 - Calculus I
- Math 102A - Calculus for Biological Sciences

- Math 102 - Calculus II
- Math 140 - Elements of Linear Algebra
- Math 201 - Intermediate Analysis
- Math 203 - Ordinary Differential Equations
- Math 240 - Linear Algebra
- Math 245 - Set Theory and Logic
- Math 252 - Mathematical Methods
- Math 305 - Partial Differential Equations
- Math 342 - Abstract Algebra I
- Math 442 - Abstract Algebra II
- Math 492 - Research In Applied Mathematics
- Math 703 - Mathematics for Pharmaceutics (Master Course)
- Math 741 - Abstract Algebra I (Master Course)

- **VISITING INSTRUCTOR**, Department of Mathematics
CITY UNIVERSITY OF NEW YORK (CUNY) - BROOKLYN COLLEGE, Brooklyn, USA.
 Feb. 2014 - Aug. 2014

COURSES TAUGHT:

- Math 1011 - Precalculus Mathematics
- Math 1201 - Calculus I
- Math 1206 - Calculus II
- Math 2101 - Linear Algebra I

- **TEACHING ASSISTANT**, Department of Mathematical Sciences
NMSU, NM, USA. Sept. 2007 - Dec. 2013

COURSES TAUGHT:

- Math 121 & Math 102 - Collage Algebra & Supplementary Course
- Math 142 & 142L - Calculus for the Biological and Management Sciences
- Math 191, 192, and 291 - Calculus I, II, and III
- Math 191L & 192L - Calculus I & II Labs (Federal grant supported activity)
- Math 280 - Introduction to Linear Algebra
- Math 331 - Introduction to Modern Algebra (Group and Ring Theory)
- Math 392 - Introduction to Differential Equations

- **FULL TIME LECTURER**, Department of Basic Sciences and Mathematics
PHILADELPHIA UNIVERSITY, Amman, JORDAN. Sept. 2004 - Sept. 2007.

COURSES TAUGHT:

- Math 101 - Calculus I
- Math 106 - Mathematics for Engineers
- Math 151 - Discrete Mathematics
- Math 231 - Introduction to Probability and Statistics
- Math 235 - Biostatistics
- Math 241 - Linear Algebra
- Math 342 - Abstract Algebra I

– Math 372 - Computer Aided Mathematics

- **PART TIME LECTURER**, Department of Mathematics and Statistics
JUST, Irbid, JORDAN. Sept. 2003 - May 2004
- **”DOHA MATH FORUM” COORDINATOR**, **QATAR UNIVERSITY**, QATAR. 2007 - 2013

DUTIES:

- Developing students’ deep understandings of mathematical concepts
- Solving and discussing mathematical problems on various levels
- Designing Mathematical Competitions for students.

**ADMINISTRATIVE
EXPERIENCE**

- **ASSISTANT DEAN FOR DEANSHIP OF STUDENT AFFAIRS**
JUST, JORDAN. Sept. 2018 - Sept. 2020
- **ACTING DIRECTOR FOR DEPARTMENT OF ATHLETIC ACTIVITIES**
JUST, JORDAN. Sept. 2019 - Sept. 2020

PRESENTATIONS

- **PDEs embedded entirely in fractional space**
Conference on Modern Fractional Calculus and its Applications 2020. BIRUNI UNIVERSITY,
ISTANBUL, TURKEY. December 2020.
- **Taylor series in higher dimensional fractal space**
Joint Mathematics Meeting 2020. DENVER, COLORADO, USA. January 2020.
- **Proper triangular \mathbb{G}_a -actions on \mathbb{C}^4 revisited**
Commutative Algebra & Algebraic Geometry Seminar. CUNY, NY, USA. March 2014.
- **On the geometric quotient of proper triangular \mathbb{G}_a -action on $\mathbb{A}_{\mathbb{C}}^4$**
Algebra seminar. NMSU, USA. September 2013.
- **Proper triangular \mathbb{G}_a -actions on \mathbb{C}^4**
Commutative Algebra & Algebraic Geometry Seminar. CUNY, NY, USA. April 2013.
- **On properness of \mathbb{G}_a -action on $\mathbb{A}_{\mathbb{C}}^4$**
11th Joint NMSU/UTEP Workshop on Math. Uni of Texas at El Paso, TX, USA. March 2012.
- **Proper triangular \mathbb{G}_a -actions generated by ”monomials+1” derivations on \mathbb{C}^4**
Conf. on Birational Transf. and Aut. of Affine Varieties. Basel, SWITZERLAND. June 2011.
- **\mathbb{G}_a -actions on \mathbb{C}^4**
A poster presented at the Southwest Local Algebra Meeting. NM, USA. March 2011.
- **A locally trivial \mathbb{G}_a -action on \mathbb{C}^5 whose algebraic quotient is singular**
Algebra seminar. NMSU, USA. October 2011.
- **A conjecture on proper triangular \mathbb{G}_a -actions on \mathbb{C}^4**
Algebra seminar. NMSU, USA. April 2011.
- **Rentschler’s Theorem and related results**
Graduate student seminar series. NMSU, USA. February 2010

CONFERENCES

- **CMFCA 2020**
BIRUNI UNIVERSITY, ISTANBUL, TURKEY. December 4–6, 2020.
- **Joint mathematics Meeting 2020**
DENVER, COLORADO, USA. January 15–18, 2020.
- **The International Conference on Fractional Differentiation and its Applications**
Amman, JORDAN. July 16–88, 2018.

- **Mini-Courses & Workshop "The Topology of Algebraic Varieties"**
CRM, Université de Montréal, CANADA. Sept. 21–28, 2012.
- **On Birational Transformations And Automorphisms Of Affine Varieties**
Universität Basel, Basel, SWITZERLAND. June 20–22, 2011.
- **Southwest Local Algebra Meeting**
NMSU, NM, USA. March 5–6, 2011.
- **American Mathematical Society Sectional Meeting**
Notre Dame University, IN, USA. Nov. 5-7, 2010.
- **Joint Mathematics Meetings - AMS and MAA**
San Francisco, CA, USA. January 13-16, 2010.
- **American Mathematical Society Sectional Meeting**
Albuquerque, NM, USA. April 17-18, 2010.

**WORKSHOPS AND
SHORT COURSES**

- **Applying the QM Rubric (APPQMR)**
Online Course Improvement Program (OCIP) in the NMSU Office of Distance Education, NMSU, USA. December 01 - 15, 2020.
- **Strategies for Teaching Online**
Online Course Improvement Program (OCIP) in the NMSU Office of Distance Education, NMSU, USA. October 12 - 26, 2020.
- **Teaching Methods and Strategies**
Academic Development and Quality Assurance Center, JUST, JORDAN. January 22 - 23, 2017.
- **Course Planning and Curriculum Development**
Academic Development and Quality Assurance Center, JUST, JORDAN. January 18 - 19, 2017.
- **Writing Across the Curriculum**
NMSU Teaching Academy, USA. May 13 - 16, 2013.
- **Let's Talk Online Teaching: Learner Support in Online Learning**
NMSU Teaching Academy, USA. April 25, 2013.
- **Let's Talk Online Teaching: Using Canvas for Collaboration and Group Work**
NMSU Teaching Academy, USA. February 07, 2013.
- **Student-Centered Teaching through Experiential Learning and Assessment**
NMSU Teaching Academy, USA. September 28, 2012.
- **Exploring the great books of mathematics**
MAA Short Course, San Francisco, USA. January 11 - 12, 2010.
- **Using video case studies in teaching a proof-based gateway course to the mathematics major,** MAA Mini Course, San Francisco, USA. January 15, 2010.

**COMMITTEE
SERVICE**

During the period 2014-present, I have served the following Committees:

- **Community Level:**
 - **Committee Member for Designing the National Curriculum Framework of Mathematics for key stages 1 to 12**
National Center for Curriculum Development, JORDAN. 2018
 - **Committee Member for Appraisal Mathematics Textbooks for key stages 1 to 12,** National Center for Curriculum Development, JORDAN. 2018
- **Department Level:**
 - Member of the Scientific Research Committee. Sept. 2019 - Sept. 2020.
 - Member of the ABET Accreditation Committee. Sept. 2018 - Sept. 2020.
 - Member of the Students Advisory Committee. 2018

- Member of the Curriculum Committee. 2017-2018
- Member of the Library Committee. 2017-2018
- **College Level:**
 - Member of the College Council. 2018-2019
 - Member of the Internet Committee. 2018-2019
 - Member of the Social Committee. 2018-2019
- **University Level:**
 - Member of a committee to design a smart identity card jointly with Cario-Amman Bank 2018-2019

AWARDS AND HONOURS

- **PH.D. GRADUATION WITH HONORS**, NMSU, USA 2014.
- **PENGELLEY AWARD FOR EXCELLENCE IN TEACHING**, NMSU, USA 2012-2013.
- **TRAVEL AWARD**, NMSU, USA 2012.
- **AN HONORARIUM FOR A SEMINAR**, Brooklyn Collage, NY April 2013.
- **NSF GRANT FOR CONDUCTING RESEARCH IN EUROPE (OISE 0936691)**, USA 2011.
- **MERIT-BASED ENHANCEMENT FELLOWSHIP**, NMSU, USA 2010-2011.
- **ASNMSU LEADERSHIP SCHOLARSHIP**, NMSU, USA 2011.
- **GRADUATE TUITION FELLOWSHIP**, NMSU, USA 2007-2010.
- **MSc GRADUATION WITH HONORS**, NMSU, USA 2009.
- **A SCHOLARSHIP TO OBTAIN A PH.D.**, JUST, JORDAN 2009.
- **RESEARCH FELLOWSHIP**, JUST, JORDAN 2002.

SCHOLARLY AND PROFESSIONAL ACTIVITIES

- **Manuscript Reviewer** for several journals including
 - Nonlinear Dynamics, Springer, ISSN 0924-090X
 - Fractals, World Scientific, ISSN 0218-348X
 - Mathematics, MDPI, ISSN 2227-7390
 - Mathematical Reviews, AMS
 - AIMS Mathematics, AIMS Press, ISSN 2473-6988
 - Journal of Ocean Engineering and Science, Elsevier, ISSN 2468-0133
 - Nonlinear Engineering Modeling and Application, De Gruyter, ISSN 2192-8029.
- **Scientific Committee**, FIRST ONLINE CONFERENCE ON MODERN FRACTIONAL CALCULUS AND ITS APPLICATIONS (OCMFCA-2020), Istanbul, TURKEY. 04-06 December, 2020
- **Organizer**, INTERNATIONAL CONF. ON FRACTIONAL DIFFERENTIATION AND ITS APPLICATIONS, Amman, JORDAN. 16-18 July, 2018
- **Graduate Senator**, ASSOCIATED STUDENTS OF NMSU, USA 2010-2011.
- **Posters Judge**, GRADUATE RESEARCH AND ARTS SYMPOSIUM at NMSU, USA Spring 2009.

MONITORING

- **Mohammad Makhadmeh**. M.Sc. Thesis: An embedding of the residual power series method into higher fractional spaces: theory and application. **Advisor** 2021.
- **Ruwa Abdel-Muhsen**. M.Sc. Thesis: Analytical solution schemes of partial differential equations equipped with multi-memory indices. **Advisor** 2019.
- **Murad Zhuir**. M.Sc. Thesis: Approximate solutions for mathematical modeling of biological species living together. **Co-Advisor** 2019.

- **Bara Al-Husban.** M.Sc. Thesis: Numerical radius inequalities for matrices of bounded linear operators. **Co-Advisor** 2019.
- **Leila Al-Shraideh.** M.Sc. Thesis: Soliton, Kink and periodic wave solutions for nonlinear models which arise in physics and engineering. **Co-Advisor** 2019.