* * * CURRICULUM VITAE C.V. * * *

* * PERSONAL INFORMATION * *

* **Name:** Adeeb Gasim Mustafa Talafha.

* **Academic Rank:** Professor.

* **Nationality:** Jordanian.

* **Address:**   Department of Mathematics,

  Faculty of Science,

  Al-Hussein Bin Talal University,

  Maan, Jordan,

* **Email:** Adeebgt@ahu.edu.jo OR agtalafh@mtu.edu

* **Cell Phone:**   +962-0-795360320

* * EDUCATION * *

1- PhD degree:

- Main Subject: Applied Mathematics,

- University and Country: Michigan Technological University/ USA.

- Graduation Date: November/2006

- Average: Excellent

- Dissertation Title: Inverse Scattering Transform Analysis of Multi-Soliton Solutions of the Three-Wave-Interaction of Long Rectangular Pulses.

2- Master degree:

- Main Subject: Mathematics,

- University and Country: The University of Jordan/ Jordan.

- Graduation Date: Jan/1994

Average: Very Good

- Dissertation Title: A Variational Principle for Free Surface Waves Over General Bottom Topographies.

3- Bachelor degree:

- Main Subject: Mathematics,

- University and Country: Mutah University/ Jordan.

- Graduation Date: Jan/1991

- Average: Very Good

* * COMPUTER SKILLS * *

1 - ICDL.

2 - Mathematica: Expert.

3 - Latex: Expert.

4 - Mat Lab. Expert.

* * LANGUAGES * *

1 - Arabic: Native.

2 - English: Excellent.

* * RESEARCH INTERESTS * *

1 - Applied mathematics.

2 - Discrete Mathematics

3 - Group and Ring Theory

4 - Number theory

5 - Applications of linear and nonlinear systems of ordinary and partial differential equations.

6 - Mathematical Models.

7 - Fuzzy Spaces.

8 - Mathematical physics.

9 - Numerical analysis.

10 - Complex analysis.

* * PROFESSIONAL EXPERIENCES * *

1 - Mutah University/ Jordan, Lecturer, Feb/1995 - Oct//2001.

2 - Michigan Technological University/ USA, Teaching Assistance, Jan/2002 - Nov/2006.

3 - Al-Hussein Bin Talal University/ Jordan, November/2006 - now

- Position Held:

- **Assistance Professor:** Nov/2006 - Feb/2012.

- **Associate professor:** Feb/2012 - August/2022.

- **professor:** August/2022 - now.

4 -Head of the Department of Mathematics and Statistics: for four years:

i) Sep/2008 - Sep/2009.

ii) Sep/2010 - Sep/2012.

iii) Sep/2018 - Sep/2019.

5 - Al Majmaah University/ Kingdom of Saudi Arabia, Sabbatical Leave, Sep/ 2014 - Sep/ 2016.

* * CONFERENCES * *

1 - International conference on Mathematics and Statistics, June 11 - 12, 2007. Athens, Greece.

2 - Arabic Council for Training Arab Students. Al-Hussein Bin Talal University/ Jordan. August 9/2007

3 - Petra International Conference on Mathematics, Oct. 23 - 25 Oct., 2007. Al-Hussein Bin Talal University/ Jordan.

4 - 2nd Regional Conference on Applied and Engineering Mathematics 2012 (RCAEM II - 2012) Institute of Engineering Mathematics / University Malaysia Perlis ,Malaysia.

5 - The International Conference on Fractional Differentiation and its Applications, ICFDA, 16 - 18 July 2018, Amman, The Hashemite Kingdom of Jordan.

6 - 21st International Conference on Automatic Control, Modeling and Simulation (ACMOS '19), Rome, Italy May 25 - 27, 2019.

7 - The Second International Conference on Mathematics Ewdr, Organized by: The Euro - Arab Organization for Environment Water, and Desert Reseaches, Antalya - Turkey 26 - 30/03/2020.

** * GRADUATE COMMITTEES * **

A) **SUPERVISION:**

1 - Master degree in Mathematics for Thaier Mohammed Al-Meqdad. Fractional Integrals Operators and their Applications in Mathematics and Other Sciences, Al-Hussein Bin Talal University/ Jordan, April/2019

2 - Master degree in Mathematics for Ahmad Jaradat. Exact solutions of the KDV-equation, Al-Hussein Bin Talal University/ Jordan, 2021

3 - Master degree in Mathematics for Amaal Al-Eiseh. Exact solutions of the three wave interaction equations, Al-Hussein Bin Talal University/ Jordan, 2021

4 - Master degree in Mathematics for Razan Rafaiah. Approximating the solution of some initial value problems by Runge-Kuttah methods, Al-Hussein Bin Talal University/ Jordan, 2021

5 - Master degree in Mathematics for Dania Rafaiah. A comparison study between some numerical methods for approximating the solutions of linear systems of Equations, Al-Hussein Bin Talal University/ Jordan, 2022

6 - Master degree in Mathematics for Shareefah Ajaleen. Some polynomial interpolation methods of discrete and continuous data, Al-Hussein Bin Talal University/ Jordan, 2022

7 - Master degree in Mathematics for Ahmad Mazaydeh. Numerical solutions of systems of second order ordinary differential equations, Al-Hussein Bin Talal University/ Jordan, 2023

8 - Master degree in Mathematics for Dana Damania. Approximating solutions of systems of initial linear ordinary differential equations, Al-Hussein Bin Talal University/ Jordan, 2023

B) **DISCUSSION COMMITTEE:**

1 - Master degree in Mathematics for Muna Al-Hamouri. Inertial Manifolds of Nonlinear Beam Equations. The University of Jordan/ Jordan. Nov/20/2007.

2 - Master degree in Mathematics for Ahmad Khalil. Exponential Attractors for Semi Linear Wave Equations with Damping. The University of Jordan/ Jordan. May/10/2008.

3 - Master degree in Mathematics for Hazem Albashyreh. On the Numerical Solution of Singular

Initial Value Problem by Homotopy Analysis Method. Mutah University/Jordan. Nov/27/ 2008.

4 - Master degree in Mathematics for Samar Alrawashdeh. On the Numerical Solutions of Singular Boundary Value Problems by Differential Transform Method. Mutah University/ Jordan. April/14/2010.

5 - Master degree in Mathematics for Ghada Ali. Al-atoom . Cayley Graphs of Groups and Constructive Properties. Mutah University/Jordan. July/24/ 2010.

6 - Master degree in Mathematics for Ahmmad Etoom. Line Graph of Simple Graphs and Structure Properties. Mutah University/Jordan. July/24/ 2010.

7 - Master degree in Mathematics for Alaa' Hakam Alrawajfeh. The Cycles of Simple Graphs . Mutah University/Jordan. October/22/ 2012.

8 - Master degree in Mathematics for Salah Ibrahim Al-awad. On Regular Group Rings, . Mutah University/Jordan. October/22/ 2012.

9 - Master degree in Mathematics for Eman Mohammad Al-Turk. Fixed Point Theorems of non Expansive Mapping in 2-Metric Spaces. Mutah University/Jordan. December/27/ 2012.

10 - Master degree in Mathematics for Dhaifallah Aqla Alazmi. On Commutative Group Rings. Mutah University/Jordan. Jan/01/ 2013.

11 - Master degree in Mathematics for Sharhabeel Madallah Al-Jawazneh. On LpSpace Related to Class of Lebesgue Measure. Mutah University/Jordan. June/23/ 2013.

12 - Master degree in Mathematics for Mohammad Jamal. On Isomorphism Rings. Mutah University/Jordan. Oct/01/ 2013.

13 - Master degree in Mathematics for Ahmad Ali. On Noetherian Rings. Mutah University/Jordan. Oct/01/ 2013.

14 - Master degree in Mathematics for Mohammad Kh. Alkassasbah. Jacobi-Chebyshev Polynomials and Approximations. Mutah University/Jordan. Nov/05/ 2013.

15 - Master degree in Mathematics for Salwa Mohmmed Abu Tuqayqah. On the Comparison Between Euclidean Geometry and Lobacheveskian Geometry. Mutah University/Jordan. Aug/12/ 2014.

16 - Master degree in Mathematics for Mohammad Ali-Neimat. Reproducing Kernel Hilbert Space Method for Certain Class of Boundary Value Problem: Theorems Application. Al-Hussein Bin Talal University/ Jordan, December/2018.

17 - Master degree in Mathematics for Ahmad Mahmoud Alnamarneh. Fundamental Groups and Covering Spaces of Trans-normal Manifolds, Mutah University/Jordan, April/ 2019.

18 - Master degree in Mathematics for Ahmad Awad Al-Habahbeh. Applications of Reproducing Kernel Method for Solving System of Boundary Value Problems, Al-Hussein Bin Talal University/ Jordan, April/2019

19 - Master degree in Mathematics for Mohammad Yousef Daradkeh. Approximated Solutions to Some Fractional Differential Models Using Effective Computational Technique. Al-Hussein Bin Talal University/ Jordan, November/2019

20 - Master degree in Mathematics for Rania Mohammed Al-Areed. Finiteness of the Order of a Trans-normal Manifold, Mutah University/Jordan, June/ 2020.

21 - Master degree in Mathematics for Heba Ghazi Bani Saeed. Mathematical Models for Convective Heat Transfer and Magneto Hydro Dynamic Effects on Casson Nano Fluid Flow, Al-Hussein Bin Talal University/ Jordan, Aug/2020.

22 - Master degree in Mathematics for Mohammed Easa Talafha. Complex Hesitant Fuzzy Sets, Al-Hussein Bin Talal University/ Jordan, Dec/2020.

23 - Master degree in Mathematics for Mahmoud Fuad Alsdoq. On Line Graphs of Simple Graphs, Mu'tah University/ Jordan, March/2021.

24 - Master degree in Mathematics for Haneen Abdul-Lateef Saleh. Numerical Solutions of convection Boundary-Layer FLow in Casson Nano Fluid, Al-Hussein Bin Talal University/ Jordan, April/2021.

25 - Master degree in Mathematics for Asia Motei Al-Amamreh,Biological Invasion Speed via Traveling Wave Solution of a Reaction-Diffusion Equations System, Al-Hussein Bin Talal University/ Jordan, July/2021.

* * TAUGHT COURSES * *

(*) Undergraduate Courses:

- Calculus.
- Linear Algebra.
- Abstract Algebra.
- Discrete Mathematics.
- Number theory.
- Ordinary Differential Equations.
- Partial Differential Equations.
- Principles of Pure and Applied Mathematics.
- Probability and Mathematical Statistics.
- Set theory.(Principles of Mathematics, Mathematical logic)
- Euclidean and Non - Euclidean Geometry.
- Mathematical Methods (Special Functions).
- Special Topics in Applied Mathematics (Fluid and Quantum Mechanics).
- Numerical Analysis.
- Real Analysis.
- Complex Analysis.
- Functional Analysis .
- Mathematical Modeling.

(**) Graduate Courses:

- Theory of Ordinary Differential Equations.
- Partial Differential Equations.
- Special Topics in Applied Mathematics.
- Advanced Complex Analysis.

* * AWARDS * *

1 - Scholarship from Al-Hussein Bin Talal University to study PhD in Applied Mathematics at Michigan Technological University, USA 2002 - 2006.

2 - Erasmus Mundus External Cooperation Window Lot 3 (EMECW3) Scholarship funded by the European Union. For post doctoral degree at Masaryk University/ Czech Republic. Feb/05/2008 - Feb/05/2009.

* * PUBLICATIONS * *:

1 - Adeeb G. Talafha, Allan, A., Struthers. Inverse Scattering Transform Analysis of Multi-Soliton Solutions of the Three-Wave-Interaction of Long Rectangular Pulses. Published PhD Thesis, (2006).

2 - Adeeb G. Talafha. Exact Soliton-like Solutions for the (3+1) Dimensions Kadomtsev-Petviashvilli and Jimbo-Miwa Equations by the Extended tan and tanh Methods, Global Journal of Pure and Applied Mathematics.Vol 6, Number 3, pp. 285 - 292, (2010). **Scopus Q3.**

3 - Sahar M. Alqaraleh, and **Adeeb G. Talafha**. New Family of Exact Soliton Solutions for the Nonlinear Three-Wave-Interaction Equations, Journal of Mathematics and Statistics v. 7, issue 1, pp 45 - 50, (2011). **Scopus Q2.**

4 - Adeeb G. Talafha. Solving the (3+1) Dimensional Three-wave Resonance Interaction Equations by Generalizing the Extended Tanh Method. Mathematical Sciences Research Journal, 15(7), pp 226 - 233, (2011). **Scopus Q2.**

5 - Adeeb G. Talafha and Sahar M. Alqaraleh. Obtaining Analytic Soliton Solutions for the Three-Wave-Interaction Equations by the Extended Tanh Method. Advances in Theoretical and Applied Mathematics. Vol 7, Number 2, pp.109 - 123, (2012). **Scopus Q2.**

6 - Sahar M. Alqaraleh, Feras M. Al Faqih and **Adeeb G. Talafha**. Constructing a train of soliton solutions for the three-wave-interaction equations. Applied Mathematical Sciences, Vol. 7, no. 63, 3097 - 3109, (2013). **Scopus Q2.**

7 - Sahar M. Alqaraleh , **Adeeb G. Talafha**. A systematic Approach Toward Constructing Novel Solitary Wave Solutions for the Three-Wave-Interaction Equations, International Journal of Computational and Applied Mathematics. Volume 8, Number 2, pp.139 - 153, (2013). **Scopus Q2.**

8 - Adeeb G. Talafha, Feras Al-Faqih, Iurie Caraus. Direct-Approximate Methods for Solution of Singular Integral Equations with Complex Conjugation Defined on the System of Fejer Points on Contour Γ in Generalized Holder Spaces, International Journal of Mathematical and Computational Methods, Volume 4, pp. 23 - 30, (2019). **Scopus Q3.**

9 - Ayed Ale'damat, Ala'Alrawajf, **Adeeb G. Talafha**, Ahmad Alhabahbeh, Ali Ateiwi. Numerical simulation of nonlinear fractional integro differential equations of Volterra type via power series expansion, Italian Journal of Pure and Applied Mathematics, 43, 944 - 957, (2020). **Scopus Q2.**

7

10 - Hamzeh T. Alkasasbeha, Mohammed Z. Swalmeh, Hebah G. Bani Saeed, Feras M. Al Faqih , **Adeeb G. Talafha**. Investigation on CNTS-Water and Human Blood Based Casson Nanofluid Flow Over A Stretching Sheet Under Impact of Magnetic Field, Frontiers in Heat and Mass Transfer (FHMT), Vol. 14, 15, (2020). __Scopus Q1.__

11 - Adeeb G. Talafha, Sahar M. Alqaraleh, Mohammed Al-Smadi, Samir Hadid, Shaher Momani. Analytic solutions for a modified fractional three wave interaction equations with conformable derivative by unified method, Alexandria Engineering Journal, Vol. 59, Issue 5, pp. 3731 - 3739, (2020). __Scopus Q1.__

12 - Adeeb G. Talafha, Sahar M. Alqaraleh, Mohammed Al-Smadi, Samir Hadid, and Shaher Momani. Exact Soliton Solutions for Conformable Fractional Four-Wave Interaction Equations Using Ansatz Method, Progress in Fractional Differentiation and Applications, Volume 2021, (2021). __Scopus Q1.__

13 - E. A. Farrag, Ahmad Musleh Alrub, **Adeeb G. Talafha**, Rateb M. K. Al-Rjoob, A study on the mechanism of switching dynamic of ferroelectric bilayers by using Landau theory, Ferroelectrics, pp. 52-62, (2021). __Scopus Q3.__

14 - Adeeb G. Talafha, Sahar M. Alqaraleh, A.E El-Ahmady, Jehad Al-Jaraden On Fuzzy Fundamental Groups and Fuzzy Folding of Fuzzy Minkowski Space, Advances in Fuzzy Systems, Vol. 2021, (2021). __Scopus Q1.__

15 - Sahar M. Alqaraleh, Abd Ulazeez M. J. S. Alkouri, Mourad Oqla Massadeh, **Adeeb G. Talafha**, Anwar Bataihah. Bipolar Complex Fuzzy Soft Sets and Their Application, International Journal of Fuzzy System Applications. Volume 11, Issue 1, (2022). __Scopus Q1.__

16 - Sahar M. Alqaraleh, **Adeeb G. Talafha**, Shaher Momani, Shrideh Al-Omari, Mohammed Al-Smadi. Exact Soliton Solutions for Conformable Fractional Six-Wave Interaction Equations by the Ansatz Method, Fractional, Volume 30 (05), pp 1-16, (2022). __Scopus Q1.__

17 - Sahar M. Alqaraleh, **Adeeb G. Talafha**, Novel soliton solutions for the fractional three-wave resonant interaction equations, Demonstratio Mathematica, Volume 55, pp 490- 505, (2022). __Scopus Q1.__

18 - Sahar M. Alqaraleh, **Adeeb G. Talafha**, A. E. El-Ahmady, The Geodesic Deformation Retract of the Hyperbolic Labachevsky Model and its Folding, under consideration, (2023).

19 - Adeeb G. Talafha, Sahar M. Alqaraleh, A. E. El-Ahmady, On fuzzy fundamental groups and fuzzy retraction of fuzzy anti-de Sitter spacetime, under consideration, (2023).

20 - Sahar M. Alqaraleh, **Adeeb G. Talafha**, A. E. El-Ahmady, On fuzzy fundamental group and fuzzy retractions of fuzzy spheres in fuzzy Minkowski space, under consideration, (2023).

* * REFEREES * *

1 - Prof: Shaher M. Momani, Department of Mathematics, The University of Jordan, Amman/ Jordan, Email: s.momani@ju.edu.jo
2 - Prof: Mohammed Al-Smadi, Nonlinear Dynamics Research Center (NDRC), Ajman University, Ajman, UAE, Email: mhm.smadi@yahoo.com
3 - Prof: Jehad Jardeen, Department of Mathematics, Al-Hussein Bin Talal University, Maan/ Jordan, Email: jjaraden@ahu.edu.jo