



## CURRICULUM VITAE

**Ayed Hussein Huwail Al e'damat**

Nov.2025



### PERSONAL

|                             |                                                                                                                                                                                                                |
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| <b>Place of Birth</b>       | Alkom Al Ahmar ,Um Algmal, Mafraq, Jordan                                                                                                                                                                      |
| <b>Date of Birth</b>        | January 1, 1976                                                                                                                                                                                                |
| <b>Marital Status</b>       | Married                                                                                                                                                                                                        |
| <b>Nationality</b>          | Jordanian                                                                                                                                                                                                      |
| <b>Work Address</b>         | Department of Mathematics, College of Science,<br>Al-Hussein Bin Talal University, Ma'an, Jordan.<br>Phone: +962-3-2179000, E-mail: <a href="mailto:ayed.h.aledamat@ahu.edu.jo">ayed.h.aledamat@ahu.edu.jo</a> |
| <b>Academic Rank (date)</b> | Professor (2025)                                                                                                                                                                                               |
| <b>Permanent Address</b>    | Mafraq, Jordan. . Mobile :+962-797550295.                                                                                                                                                                      |

### ACADEMIC QUALIFICATIONS

|             |                                                                            |
|-------------|----------------------------------------------------------------------------|
| 2009 – 2013 | <b>Ph.D.,</b> Mathematical Analysis, Damascus University, Damascus, Syria. |
| 2002 – 2005 | <b>M.Sc.,</b> Mathematics, AL al-Bayt University, Mafraq, Jordan.          |
| 1995 – 1999 | <b>B.Sc.,</b> Mathematics, Yarmouk University, Irbid, Jordan.              |

### SPECIALTY

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|--------------------------------|-----------------------|
| <b>General Specialization:</b> | Mathematics           |
| <b>Specialization :</b>        | Mathematical Analysis |

### CAREER HISTORY

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|----------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 29/8/1999- 13/9/2008 | <b>Teacher</b> , Jordan Ministry of Education                                                                                  |
| 14/9/2008- 6/9/2014  | <b>Mathematics Supervisor</b> , Jordan Ministry of Education                                                                   |
| 7/9/ 2014 –8/11/2015 | <b>Lecturer</b> , Department of Mathematics, College of Science,<br>Al-Hussein Bin Talal University, Ma'an, Jordan.            |
| 9/11/2015-23/6/2020  | <b>Assistance Professor</b> , Department of Mathematics, College<br>of Science, Al-Hussein Bin Talal University, Ma'an, Jordan |



Ayed Al e'damat C.V.



24/6/2020- 28/7/2025

**Associate Professor**, Department of Mathematics, College of Science, Al-Hussein Bin Talal University, Ma'an, Jordan

28/7/2025- Now

**Professor**, Department of Mathematics, College of Science, Al-Hussein Bin Talal University, Ma'an, Jordan

## ADMINISTRATIVE EXPERIENCE

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### *Positions AHU*

4/4/ 2017 – 17/9/ 2018

Chairman of Mathematics Department, College of Science, Al-Hussein Bin Talal University, Ma'an, Jordan

17/11/2021- 16/11/ 2022

Member of Al Hussein Bin Talal University Council.

### *Committees*

2014 – Now

Member of the Mathematics Department Council.

2015-2016

Representative of the Mathematics Department in the College of Science Council.

2019-2020

Member of the Social Committee at the College of Science

2014-2024

Member of the Social Committee at the Mathematics Department.

2017-2024

Graduate Student Mathematics Committee, Member

## PROFESSIONAL MEMBERSHIPS AND SERVICES

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### *Membership(s)*

- Member of the Alkom Al ahmar Sports Social Club.
- Member of the Alkom Al ahmar Association for Social Development.
- Member of Amnesty International.



## RESEARCH INTEREST

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- Mathematical Analysis (Differential Equations, Numerical Analysis, Measure Theory , Complex Analysis and Functional Analysis).
- Computational Mathematics studies and modelling.
- Statistics and Applications.

## PUBLICATIONS

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### *Peer-reviewed journal articles*

- 1) *Ayed Al e'damat*, Waseem Ahmad Khan, Ugur Duran, Cheon-Seoung Ryoo, Alaa Rawajfeh, (2025), Generalized properties of degenerate hyperharmonic numbers, **Journal of Mathematics and Computer Science**, Volume 40, Issue 4, p.p.273–291  
<https://dx.doi.org/10.22436/jmcs.040.02.08>
- 2) *Ayed Al e'damat*, Waseem Ahmad Khan, Naeem Ahmad and Ugur Duran, (2025), GENERALIZED DEGENERATE FUBINI-EULER-GENOCCHI POLYNOMIALS, **Journal of Inequalities and Special Functions**, Volume 16, Issue 2, p.p.26–38.
- 3) *Ayed Al e'damat*, Waseem Ahmad Khan and Ugur Duran, (2025), Some Properties of Gould-Hopper Based poly-Euler Polynomials with a q-Parameter, ICMMAAC2024, p.p.134–146. [http://dx.doi.org/10.1007/978-3-031-90914-6\\_11](http://dx.doi.org/10.1007/978-3-031-90914-6_11)
- 4) *Ayed Al e'damat*, Waseem Ahmad Khan and Cheon Seoung Ryoo, (2024), Certain properties on Bell-based Apostol-type Frobenius-Genocchi polynomials of complex variable, **Journal of Mathematics and Computer Science**, Volume 33, Issue 4, p.p.326–338.
- 5) *Ayed Al e'damat*, Waseem Ahmad Khan, Ugur Duran, Syed Ajaz K. Kirmani and Cheon Seoung Ryoo, (2024), Exploring the depths of degenerate hyper-harmonic numbers in view of harmonic functions, **Journal of Mathematics and Computer Science**, Volume 35, Issue 2, p.p. 136–148.
- 6) *Ayed Al e'damat*, Waseem Ahmad Khan, Ugur Duran and Cheon Seoung Ryoo, (2024), Construction for q-hypergeometric Bernoulli polynomials of a complex



- variable with applications computer modeling, **Advanced Mathematical Models & Applications**, Vol.9, No.1, p.p. 68-92.
- 7) **Ayed Al e'damat**, Jihad Younis and Ashish Verma, (2024), Recursion formulas for Humbert's matrix functions, **Italian Journal of Pure and Applied Mathematics**, No.51, p.p.1–17.
  - 8) **Ayed al e'damat**, (2020), Approximate Analytical Solution for a Coupled System of Fractional Nonlinear Integrodifferential Equations by the RPS Method, **Complexity**, Volume 2020, Article ID 1010382, p.p. 1-8.
  - 9) **Ayed al e'damat** and Shehata, A., (2023), On Bibasic Humbert Hypergeometric Function  $\Phi_1$ , **Malaysian Journal of Mathematical Sciences**, 17(1): p.p. 77–86.
  - 10) **Ayed Al e'damat**, Ashish Verma, Jihad Younis, and Hassen Aydi, (2023), Some Properties of Incomplete First Appell Hypergeometric Matrix Functions, **Applied mathematics and Information Sciences**, 17, No. 3, p.p. 499-505.
  - 11) **Ayed Al e'damat** and Jihad Younis, (2023), Linear Independent Solutions and Recursion Formulas for The Quadruple Hypergeometric Functions  $X_{31}^{(4)}$ , **International Journal of Applied Mathematics**, Volume 36 No. 3, p.p. 323-334.
  - 12) Khalid Ul Islam Rather, **Ayed AL e'damat**, Tanveer Ahmad Tarray and M. Iqbal Jeelani, A New-Fangled Ratio-Type Exponential Estimator for Population Variance using Auxiliary Information, *J. Stat. Appl. Pro.* 12, No. 2, p.p. 629-633 (2023).
  - 13) M. Iqbal Jeelani, **Ayed AL e'damat**, Imran Rashid, S. N Zafar Geelani, Afshan Tabassum and Khalid Ul Islam Rather, Evaluation of Ranked Set Sampling Methods under Skewed and Unskewed Distributions, *J. Stat. Appl. Pro.* 12, No. 2, p.p. 817-837 (2023).
  - 14) **Ayed AL e'damat**, Roohul Andrabi, Tundo, Rajes Khana, Joko Sutopo, Andi Saidah, Tiorivaldi and Emilia Roza, An Adroit Stratified Unrelated Question Randomized Response Model with Assorted Strategies, *J. Stat. Appl. Pro. Lett.* 11, No. 3, 145-166 (2024).
  - 15) **Ayed AL e'damat** and Khalid Ul Islam Rather, A NEW EXPONENTIAL TYPE RATIO ESTIMATOR FOR THE POPULATION MEAN IN SYSTEMATIC SAMPLING, *RT&A*, No 3 (74) Volume 18, p.p. 442-449, September (2023).



- 16) Ghaleb Gumah, Zuhier Altawallbeh, **Ayed Al e'damat**, and A. Ateiwi " An Alternative Proof of the Spectral Radius Inequality for Products of Hilbert Space Operators" Australian Journal of Basic and Applied Sciences, **Vol. 8(18), PP. 462 – 465, 2014.**
- 17) **Ayed Al e'damat**, Analytical- numerical method for solving a class of two- point boundary value problems , **International Journal of Mathematical Analysis** , **Vol. 9, no. 40 , 1987-2002 , 2015.**
- 18) I.V. Komashynska, M. Al-Smadi, A.M. Ateiwi and **Ayed Al e'damat** " Oscillations of solutions of nonlinear second-order stochastic differential equations", **Journal of computational analysis and applications** **Vol.20, No. 5,p. 860-868, 2016.**
- 19) Ali Ateiwi, **Ayed Al e'damat**, Asad Freihat, Iryna Komashynska, Approximation scheme for handling coupled systems of Differential Equations within Reproducing Kernel Method, **Filomat**, **33; 2, page 599-615, 2019.**
- 20) **Ayed Al e'damat**, Ala' Alrawajf, Adeeb talafha, Ahmad Alhabahbeh, Ali Ateiwi, Numerical simulation of nonlinear fractional integrodifferential equations of Volterra type via power series expansion, **Italian journal of pure and mathematics**, **N. 43, page 944 – 957, 2020.**
- 21) Mohammad Q. Owaidat, Ahmed A. Qwasmeh, **Ayed Al e'damat**, Spanning Trees on Decorated Centered Cubic Lattices, **Applied mathematical sciences** **Vo.9, no.25, 1335 – 1244, 2015.**

#### **Books and book chapters**

- **Ayed Al e'damat** , Mohammed Al-Smadi , Iryna Komashynska, Ali Ateiwi and Ala' Alrawajf , Analytical-Numerical Solutions for First-Order Periodic Boundary Value Problems Using the Reproducing Kernel Algorithm. **Springer Proceedings in Mathematics & Statistics**, Volume 164, Springer International Publishing Switzerland **2016.**



## CONFERENCES AND PROCEEDINGS

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1. *The 8th International Conference on advances in natural and applied science*, Antalya, **Turky**, **Octoper28 -31, 2025**.
2. *The 7th International Conference on Mathematical Modelling, Applied Analysis and Computation*, Beirut, **Lebanon**, *Lebanese American University between April 18 and 20, 2024*.
3. *The Euro – Arab Organization for Environment, water, and Desert Researches, The Third International Conference of Science and Engineering*, Antalya, **Turky**, Octoper24 -28, **2019**.
4. *International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2017)* , Istanbul Commerce University, the Turkish Academy of Science (TUBA) , Kusadasi - **AYDIN/TURKEY**, May 11-15, **2017**.
5. *International Conference on Differential and Difference Equations and Applications* .Military academy, Amadora, **Portugal**, May 18-22, **2015**.
6. *The International Arab Conference on mathematics and computations" IACMC"*, Zarqa University, **Jordan**, Apr.23-25, **2014**.
7. *Ayed Al e'damat* , Mohammed Al-Smadi , Iryna Komashynska, Ali Ateiwi and Ala' Alrawajf , Analytical-Numerical Solutions for First-Order Periodic Boundary Value Problems Using the Reproducing Kernel Algorithm. *Springer Proceedings in Mathematics & Statistics*, Volume 164, Springer International Publishing Switzerland **2016**.

## TEACHING

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### *Courses Taught-undergraduate*

- 1) Calculus1 (0302101), Al Hussein Bin Talal University .
- 2) Pre-Calculus (0302099), Al Hussein Bin Talal University .
- 3) History of Mathematics (0302100) Al Hussein Bin Talal University
- 4) Calculus1 (0302101), Al Hussein Bin Talal University .





- 5) Calculus2 (0302102), Al Hussein Bin Talal University .
- 6) Calculus3 (0302201), Al Hussein Bin Talal University .
- 7) Ordinary Differential Equation(0302203), Al Hussein Bin Talal University.
- 8) Partial Differential Equation(0302301), Al Hussein Bin Talal University.
- 9) Advanced Calculus (0302207), Al Hussein Bin Talal University .
- 10) Real Analysis (0302215), Al Hussein Bin Talal University .
- 11) Real Analysis1 (0302216), Al Hussein Bin Talal University .
- 12) Real Analysis2 (0302316), Al Hussein Bin Talal University .
- 13) Mathematical Analysis1 (0302315), Al Hussein Bin Talal University.
- 14) Linear Algebra 2 (0302341) Al Hussein Bin Talal University.
- 15) Mathematical Analysis2 (0302415), Al Hussein Bin Talal University .
- 16) Complex Analysis1 (0302312), Al Hussein Bin Talal University .
- 17) Number Theory (0302343), Al Hussein Bin Talal University .
- 18) Topology (0302362), Al Hussein Bin Talal University .
- 19) Functional Analysis (0302412), Al Hussein Bin Talal University .
- 20) Differential Geometry(0302361), Al Hussein Bin Talal University.
- 21) Spicial Subject in Mathematics (0302407). Al Hussein Bin Talal University

### ***Courses Taught-postgraduate***

- 22) Measure Theory and Integration (0302611), Al Hussein Bin Talal University .
- 23) Functional Analysis (0302612), Al Hussein Bin Talal University .
- 24) Special Subjects in Functional Analysis (0302619), Al Hussein Bin Talal University .

### **SKILLS**\_\_\_\_\_

#### ***Languages***

- Arabic (native)
- English (excellent)

#### ***Computer Programs***

- 1- ICDL, Ministry of Education, Jordan.
- 2- Mathematica, Zarqa University, Jordan .



### ***Courses and workshops***

- 1- **End Note Program** (6 hours), Staff Development Center, Al Hussein Bin Talal University, **30/7/2017 - 1/8/2017**.
- 2- **Development of competencies of the performance of faculty members**, (30 hours), Staff Development Center, Al Hussein Bin Talal University **4/2/2018 - 8/2/2018**.
- 3- **The right bases in the teaching process**, (10 hours), Staff Development Center, Al Hussein Bin Talal University, **8/2/2018 - 14/2/2018**.

### **Master Thesis Supervisor:**

- 1- Supervisor for Khaled Bakheet Al-Smeheen . **A study of Bounded and Continuous Linear Operator in Random Normed Space** . Al-Hussein Bin Talal University.
- 2- Supervisor for Salem Jihad Bni Ali, **Sobolev space ; Theories and Applications** . Al-Hussein Bin Talal University.
- 3-Supervisor for Ameera Saleh Batayneh, **Lp Spaces ;Definitions,Properties and Applications**. Al-Hussein Bin Talal University.
- 4- Supervisor for Rojana Al nawafleh, **Study About Fredholm Operators In Sobolev Spaces**. Al-Hussein Bin Talal University.
- 5- Supervisor, Hala Saleh Al saedyeen **Some Important Inequality In Sobolev Spaces and It's Applications**, Al-Hussein Bin Talal University.
- 6- Supervisor, Rawan Al darawsheh , **A Study About Compact Operators and Singular Value Decoposition In some Measur Spaces**, Al-Hussein Bin Talal University.
- 7- Supervisor, Suhaib Al Harahsheh, **A Study about Fourier Analysis and Measure Theory**, Al-Hussein Bin Talal University.
- 8- Supervisor, Abdullah Hikmat Mardi AL-khreshah, **Continuity of Solutions to Boundary Value Problems for Systems of Ordinary Differential Equations in Sobolev Spaces**, Al-Hussein Bin Talal University.
- 9 - Supervisor, Rawan Hashem Al Shaibat, **Fuzzy Measurable Spaces**. Al-Hussein Bin Talal University.





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10- Supervisor, Alaa Al shqerat, **Convergence And Boundedness In Fuzzy Measure Spaces**, Al-Hussein Bin Talal University.

11- Supervisor, Sajeda Al tawaheh, **A Study About Fourier Analysis On Finite Comutative Group**, Al-Hussein Bin Talal University.