Curriculum Vitae

Top 2% SCIENTISTS of WORLD 2021-2022 (STANFORD UNIVERSITY & SCOPUS)

Personal Information

- Name: ***Emad Ahmad A. Az-Zo'bi***
- Date of Birth: May/07/1980
- Nationality: ***Jordan***
- Material Status: Married
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Qualifications

- Ph.D of Mathematics & Statistics 2011 - Applied Mathematics/Differential Equations (DEs) - University of Jordan – Department of Mathematics & Statistics - Thesis Title: Theory and Computations for Systems of Conservation Laws of Mixed Hyperbolic-Elliptic Type - Average: 3.4, Rating: very good.
- MSc of Mathematics & Statistics 2005 – Approximation Theory - Al al-Bayt University – Faculty of Science – Department of Mathematics - Thesis Tile: Some Exact Inequalities of Hardy-Littlewood-Polya Type - Average: 90.63, Rating: Excellent
- BSc of Mathematics & Statistics 2002 – Al al-Bayt University – Faculty of Science – Department of Mathematics - Average: 76.2, Rating: Very Good

Experience

- Mutah University (Jordan) 2020 - Now – Prof. of Applied Mathematics.
- Mutah University (Jordan) 2015 - 2020 – Associate Prof. of Applied Mathematics.
- Mutah University (Jordan) 2011 - 2015 – Assistant Prof. of Applied Mathematics.
- Mutah University (Jordan) 2011-2021 – Supervisor and member of discussion committee for many MSc and PhD students.
- King Saud University (KSA) 2010-2011 – Instructor.
- University of Jordan (Jordan) 2006-2010 – Part-time Lecturer.
- Al-Balqa' Applied University (Jordan) 2005-2006 - Part-time Lecturer.
- Ministry of Education (Jordan) – 2002-2007 – Teacher of Mathematics

Courses Taught

- PDEs and Theory of ODEs (Graduate & Undergraduate).
- Numerical Analysis (Graduate & Undergraduate).
- Computational Methods.
- Principles of Applied Mathematics.
- Calculus.
- Statistics & Probability.
- Biostatistics.
- Linear Algebra.
- Euclidean Geometry.
- Number Theory.

Activities

- *Mathematica & Matlab*.
- Latex (Scientific WorkPlace).
- TOT (Trainer of Trainers).

- Math Zone Training Workshop, McGraw Hill Education.
- Windows (7/8/10), Microsoft Office 365 (Word, Excel, Access, Power Point), Internet (licensed from the International Computer Driven License - ICDL). Microsoft Teams. Moodle.

Languages

- Arabic mother tongue,
- English; Fluent.

Research Interests

- Differential Equations.
- Numerical Methods; Stability & Convergence.
- Modelling; Fluid Mechanics, Dynamics & Conservation Laws.
- Soliton Theory.
- Mathematics Education.

Editorial Board

- **Journal of Mathematics and Statistics Studies**
https://al-kindipublisher.com/index.php/jmss/about/editorialTeam
- **Scientific Insights.**
https://ojs.achpub.com/SI
- **Computational Mathematics and its Applications**
https://www.mathematicsgroup.com/cma/about

Reviewer

- ***See the attached WoS link.***

H-Index (Webpages)

- **SCOPUS: 22**
https://www.scopus.com/authid/detail.uri?authorId=57899346400
- **WEB of SCIENCE: 20**
https://www.webofscience.com/wos/author/record/ABA-6658-2020
- **Google Scholar: 24**
https://scholar.google.co.nz/citations?user=19ZJBDUAAAAJ&hl=en
- **Research Gate: 21**
https://www.researchgate.net/profile/Emad-Az-Zobi/research
- **ORCID: https://orcid.org/0000-0003-4914-0461**

Conferences

- INTERNATIONAL 2nd 'MAVİŞEHİR' MERSİN SCIENTIFIC RESEARCHES CONGRESS (UBSDER). ON THE SOLUTIONS OF HYPERBOLICELLIPTIC PROBLEMSWITH THE RESIDUAL POWER SERIES METHOD. Turkey 2025.
- The 9th International Arab Conference on Mathematics and Computations (IACMC 2025). AI-Maximum Likelihood Approach for Parameter Estimation of Non-Homogeneous Poisson Process with Integrated Brownian Motion. Jordan 2025.
- The 9th International Arab Conference on Mathematics and Computations (IACMC 2025). Progressing Numerical Simulation for Fractional Integro-Differential Problems: An Application of Physics-Informed Neural Networks. Jordan 2025.

Publications

1. Enhanced Parameter Estimation for the Modified Gompertz-Makeham Model in Nonhomogeneous Poisson Processes Using Modified Likelihood and Swarm Intelligence Approaches. Deleted Journal, 2025, 32–43. https://doi.org/10.58496/bjm/2025/005
2. Fractional magnetohydrodynamic Casson fluid flow with thermal radiation and buoyancy effects: a constant proportional Caputo model. *Bound Value Probl* **2025**, 44 (2025). https://doi.org/10.1186/s13661-025-02036-4

3. Effect of Brownian and thermophoresis motion on fluid flow with chemical reaction and heat transfer. *Radiation Effects and Defects in Solids 2025*, 1–17. https://doi.org/10.1080/10420150.2025.2467360
4. The Level of Compliance to the Criteria of the Education Evaluation Commission in Jordan in Teaching and Learning Standards. *Journal of Statistics Applications & Probability 2025*, *14*(01), 17–26. https://doi.org/10.18576/jsap/140102
5. Exact solution of channelized flow of MHD Maxwell fluid with suction/injection. *Mech Time-Depend Mater* **29**, 29 (2025). https://doi.org/10.1007/s11043-025-09768-x
6. Numerical Solutions for Fuzzy Stochastic Ordinary Differential Equations Using Heun's Method with a Dual-Wiener Process Framework. *Mathematical Modelling of Engineering Problems (2025)*, *12*(3). https://doi.org/10.18280/mmep.120303
7. New Software Reliability Growth Model: Piratical Swarm Optimization-Based Parameter Estimation in Environments with Uncertainty and Dependent Failures. (2025). Stat., Optim. Inf. Comput., 13, 209-221. https://doi.org/10.19139/soic-2310-5070-2109
8. The Effect of Artificial Intelligence on Enhancing Education Quality and Reduce the Levels of Future Anxiety among Jordanian Teachers. (2025). *Applied Mathematics & Information Sciences*, *19*(2), 279–290. https://doi.org/10.18576/amis/190205
9. Exact solutions and modulation instability analysis of a generalized Kundu-Eckhaus equation with extra-dispersion in optical fibers. *Physica Scripta (Print)*. https://doi.org/10.1088/1402-4896/ad3859
10. Stability analysis and solitons solutions of the (1+1)-dimensional nonlinear chiral Schrödinger equation in nuclear physics. *Communications in Theoretical Physics/Communications in Theoretical Physics*. (2024). https://doi.org/10.1088/1572-9494/ad5719
11. Computational fluid dynamics analysis on endoscopy of main left coronary artery: An application of applied mathematics. *Heliyon*, (2024). e26628–e26628. https://doi.org/10.1016/j.heliyon.2024.e26628
12. Assorted Spatial Optical Dynamics of a Generalized Fractional Quadruple Nematic Liquid Crystal System in Non-Local Media. *Symmetry*, *16*(6), 778–778. (2024). https://doi.org/10.3390/sym16060778
13. On the feed-forward neural network for analyzing pantograph equations. *AIP Advances*, *14*(2). (2024). https://doi.org/10.1063/5.0195270
14. Comparative study of some non-Newtonian nanofluid models across stretching sheet: a case of linear radiation and activation energy effects. *Scientific Reports*, *14*(1). (2024). https://doi.org/10.1038/s41598-024-54398-x
15. Theoretical examination and simulations of two nonlinear evolution equations along with stability analysis. *Results in Physics*, 107504–107504. (2024). https://doi.org/10.1016/j.rinp.2024.107504
16. Dejdumrong Collocation Approach and Operational Matrix for a Class of Second-Order Delay IVPs: Error Analysis and Applications. *WSEAS Transactions on Mathematics*, *23*, 467–479. (2024). https://doi.org/10.37394/23206.2024.23.49
17. On the analytical soliton approximations to fractional forced Korteweg-de Vries equation arising in fluids and Plasmas using two novel techniques. *Communications in Theoretical Physics/Communications in Theoretical Physics*. (2024). https://doi.org/10.1088/1572-9494/ad53bc
18. Construction of periodic wave soliton solutions for the nonlinear Zakharov–Kuznetsov modified equal width dynamical equation. *Optical and Quantum Electronics*, *56*(8). (2024). https://doi.org/10.1007/s11082-024-06387-7
19. Solitonic solutions and stability analysis of Benjamin Bona Mahony Burger equation using two versatile techniques. *Scientific Reports*, *14*(1). (2024). https://doi.org/10.1038/s41598-024-60732-0
20. Performance Assessment of the Calculus Students by Using Scoring Rubrics in Composition and Inverse Function. (2024). *Applied Mathematics & Information Sciences*, *18*(5), 1037–1049. (2024). https://doi.org/10.18576/amis/180511
21. Unraveling Metachronal Wave Effects on Heat and Mass Transfer in Non-Newtonian Fluid. Case Studies in Thermal Engineering, 104379–104379. (2024). https://doi.org/10.1016/j.csite.2024.104379
22. Sensitivity and wave propagation analysis of the time-fractional (3+1)-dimensional shallow water waves model. Zeitschrift Für Angewandte Mathematik Und Physik, 75(3). (2024). https://doi.org/10.1007/s00033-024-02216-9

23. Bioconvective flow analysis of non-Newtonian fluid over a porous curved stretching surface. Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems. (2024). https://doi.org/10.1177/23977914241231891
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27. Nearly μ-Lindelöfness Via Hereditary Class. Tatra Mountains Mathematical Publications, Accepted (2024). https://doi.org/10.2478/tmmp-2024-0001
28. Analysis of mixed soliton solutions for the nonlinear Fisher and diffusion dynamical equations under explicit approach. Optical and Quantum Electronics, 56(4). (2024). https://doi.org/10.1007/s11082-024-06316-8
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30. Chemically reactive aspects of stagnation-point boundary layer flow of second-grade nanofluid over an exponentially stretching surface. Numerical Heat Transfer, Part B: Fundamentals, 1–17. (2024). https://doi.org/10.1080/10407790.2024.2318456
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75. On the Convergence of Variational Iteration Method for Solving Systems of Conservation Laws, Trends in Applied Sciences Research 10 (3) (2015) 157-165. https://scialert.net/abstract/?doi=tasr.2015.157.165
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References

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