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BIOGRAPHY

Assistant Prof. Dr. Hijaz Ahmad received his MS degree in computational mathematics from the Department of Mathematics, COMSATS University Islamabad, Wah Campus. In 2022, he completed his PhD in Computational and Applied Mathematics from the Department of Basic Sciences and Islamiat, University of Engineering and Technology Peshawar, Pakistan and then he started his Post-doc from Lebanese American University, Beirut, Lebanon.

His research work is focused on the development and advancement of numerical techniques for finding the numerical solution of mathematical models in the form of partial differential equations and fractional partial differential equations arising in finance, computational biology, and different disciplines of engineering. He has introduced modified variational iteration algorithm-I and modified variational iteration algorithm-II for the numerical solution of nonlinear partial differential equations and fractional iteration algorithm-I for finding the numerical solution of nonlinear non-integer order partial differential equations. The scope of his research is quite broad, covering numerical analysis, fractional calculus, mathematical biology and mathematical physics.

He has been affiliated at Near East University as an Assistant Professor in the Department of Mathematics and Operational Research Center in Healthcare since February 2023.

He has published more than 420 articles in well-reputed SCI journals with total impact factor points exceeding 1350, and his research has received over 6900 Google Scholar citations with an h-index of 44.

He is editor of many good journals and reviewer of more than 150 high-quality impact factor journals.

The links of his research profiles are below:

ResearchGate:

<https://www.researchgate.net/profile/Hijaz-Ahmad>

Google Scholar:

<https://scholar.google.com/citations?user=JjwnbsoAAAAJ&hl=en>

Web of Science researcher ID:

<https://www.webofscience.com/wos/author/record/H-5958-2018>

ACADEMIC CURRICULUM VITAE

1. Name - Surname: HIJAZ AHMAD

2. Title: Assistant Prof. Dr.

3. Educational Background:

| Degree | Department/Program | University | Year |
|------------|--|--|------|
| Bachelor's | Department of Mathematics/Applied Mathematics | COMSATS University Islamabad, Pakistan | 2015 |
| Master's | Department of Mathematics/Applied Mathematics | COMSATS University Islamabad, Pakistan | 2017 |
| PhD | Department of Basic Sciences/Applied Mathematics | University of Engineering & Technology, Peshawar, Pakistan | 2022 |

4. Master's / PhD Thesis

4.1. Master's Thesis Title and Thesis Advisor(s): "Variational iteration method with an auxiliary parameter for solving boundary value problems.": Assoc.Prof.Dr. Muhammad Rafiq

4.2. PhD Thesis /Medical Specialty Thesis Title and Advisor(s): "Efficient Variational Iteration Algorithms for the Solution of Partial Differential Equations ": Assist. Prof.Dr. Tufail Ahmad Khan

5. Academic Titles:

Date of Assistant Professorship: 07 July 2023

Date of Associate Proferssorship:

Date of Professorship:

6. Supervised Master's and PhD Theses:

6.1. Master's Theses

6.2. PhD Theses

7. Publications

7.1. Articles Published in International Peer-Reviewed Journals (SCI,SSCI, AHCI, ESCI, Scopus)

1. Ahmad H, Khan MN, Ahmad I, Omri M, Alotaibi MF. A meshless method for numerical solutions of linear and nonlinear time-fractional Black-Scholes models. *AIMS Mathematics*. 2023;8(8):19677-98. (Q1, I.F=2.2)
2. Khader MM, Ahmad H, Megahed AM. Developing some of engineering applications through numerical treatment of non-Newtonian nanofluid flow on nonlinear stretching surface with heat generation. *Case Studies in Thermal Engineering*. 2023 Oct 18:103641. (Q1, I.F=6.8)
3. Almutairi N, Saber S, Ahmad H. The fractal-fractional Atangana-Baleanu operator for pneumonia disease: stability, statistical and numerical analyses. *AIMS Mathematics*. 2023;8(12):29382-410. (Q1, I.F=2.2)
4. Qayyum M, Ahmad E, Ahmad H, Almohsen B. New solutions of time-space fractional coupled Schrödinger systems. *AIMS Mathematics*. 2023;8(11):27033-51. (Q1, I.F=2.2)
5. Ahmad H, Ozsahin DU, Farooq U, Fahmy MA, Albalwi MD, Abu-Zinadah H. Comparative analysis of new approximate analytical method and Mohand variational transform method for the solution of wave-like equations with variable coefficients. *Results in Physics*. 2023:106623. (Q1, I.F=5.3)
6. Ahmad, H., Khokhar, R. B., Suleman, M., Tariq, M., Ntouyas, S. K., Tariboon, J.. "Some new notions of fractional Hermite-Hadamard type inequalities involving applications to the physical sciences." *Journal of Mathematics and Computer Science*, 2024;33(1):27-41.
7. Khan, T., Rihan, F.A. & Ahmad, H. Modelling the dynamics of acute and chronic hepatitis B with optimal control. *Sci Rep* **13**, 14980 (2023). <https://doi.org/10.1038/s41598-023-39582-9> (Q2, I.F=4.6)
8. Abu-Zinadah H, Alsulami MD, Ahmad H. Application of efficient hybrid local meshless method for the numerical simulation of time-fractional PDEs arising in mathematical physics and finance. *The European Physical Journal Special Topics*. 2023:1-1. (Q2, I.F=2.8)
9. Zulqarnain RM, Siddique I, Asif M, Ahmad H, Askar S, Gurmani SH. Extension of correlation coefficient based TOPSIS technique for interval-valued Pythagorean fuzzy soft set: A case study in extract, transform, and load techniques. *Plos one*. 2023 Oct 30;18(10):e0287032. (Q2, I.F=3.7)
10. Batool, F., Suleman, M.S., Demirbilek, U. et al. Studying the impacts of M-fractional and beta derivatives on the nonlinear fractional model. *Opt Quant Electron* 56, 164 (2024). (Q2, I.F=3.0)
11. Benabdellah G, toufik D, Mokhtari M, Salman Khan M, Tawfeek AM, Ahmad H. Investigating the electronic structure, elastic, magnetic, and thermoelectric nature of NiVXSc1-XSb quaternary half-Heusler alloys. *Modelling and Simulation in Materials Science and Engineering*. 2023 Dec 12.
12. Adel, M., Tariq, K.U., Ahmad, H. et al. Soliton solutions, stability, and modulation instability of the (2+1)-dimensional nonlinear hyperbolic Schrödinger model. *Opt Quant Electron* 56, 182 (2024). (Q2, I.F=3.0)

13. Ullah K, Ishaq M, Tchier F, Ahmad H, Ahmad Z. Fuzzy-based maximum power point tracking (MPPT) control system for photovoltaic power generation system. *Results in Engineering*. 2023;20:101466.
14. (Q1, I.F=5.0)
15. Butt AR, Saqib AA, Bakar A, Ozsahin DU, Ahmad H, Almohsen B. Investigating the fractional dynamics and sensitivity of an epidemic model with nonlinear convex rate. *Results in Physics*. 2023;107089. (Q1, I.F=5.3)
16. Mabrouk, S.M., Rezazadeh, H., Ahmad, H. et al. Implementation of optical soliton behavior of the space–time conformable fractional Vakhnenko–Parkes equation and its modified model. *Opt Quant Electron* 56, 222 (2024). (Q2, I.F=3.0)
17. Khan MS, Gul B, Benabdellah G, Ahmad B, Albaqami MD, Wabaidur SM, Ahmad H. Tailoring the optoelectronic, thermoelectric, and thermodynamic properties of rare-earth quaternary chalcogenides: An inclusive first-principles study. *Materials Today Communications*. 2023 Dec 12:107848. (Q2, I.F=3.8)
18. Khan MS, Gul B, Ahmad B, Tighezza AM, Ahmad H. Insight into the electronic, optical, and transport properties of novel BaLaCuX₃ (X= S, Se, and Te) quaternary chalcogenides. *Journal of Solid State Chemistry*. 2023 Dec 10:124496. (Q2, I.F=3.3)
19. Ahmad S, Adichwal NK, Aamir M, Shabbir J, Alsadat N, Elgarhy M, Ahmad H. An enhanced estimator of finite population variance using two auxiliary variables under simple random sampling. *Scientific Reports*. 2023;13(1):21444. (Q1, I.F=4.6)
20. Jassim HK, Zair MY, Ahmad H, Alzaki LK, Shuaa AH, Cherif MH. Approximate analytical solutions of fractional Navier-Stokes equation. In *AIP Conference Proceedings 2023* (Vol. 2834, No. 1). AIP Publishing.
21. Nadeem M, Siddique I, Saif Ud Din I, Awwad FA, Ismail EA, Ahmad H. Impact of chemical reaction on Eyring–Powell fluid flow over a thin needle with nonlinear thermal radiation. *Scientific Reports*. 202;13(1):21401. (Q1, I.F=4.6)
22. Az-Zo'bi EA, Afef K, Ur Rahman R, Akinyemi L, Bekir A, Ahmad H, Tashtoush MA, Mahariq I. Novel topological, non-topological, and more solitons of the generalized cubic p-system describing isothermal flux. *Optical and Quantum Electronics*. 2024;56(1):84. (Q2, I.F=3.0)
23. Ozsahin DU, Jalili B, Asadi Z, Shateri A, Jalili P, Ganji DD, Ahmad H, Nofal TA. Investigation of turbine cooling using semi-analytical methods in non-Newtonian fluid flow with porous wall. *Case Studies in Thermal Engineering*. 2023:103808. (Q1, I.F=6.8)
24. Khan MS, Ali A, Suhail M, Awwad FA, Ismail EA, Ahmad H. On the performance of two-parameter ridge estimators for handling multicollinearity problem in linear regression: Simulation and application. *AIP Advances*. 2023;13(11). (Q3, I.F=1.6)
25. Shah NN, Jan R, Ahmad H, Razak NN, Ahmad I, Ahmad H. Enhancing public health strategies for tungiasis: A mathematical approach with fractional derivative. *AIMS Bioengineering*. 2023;10(4):384-405.
26. A. Mahboob, M. Asif, R. M. Zulqarnain, I. Saddique, H. Ahmad *et al.*, "A mathematical approach for generating a highly non-linear substitution box using quadratic fractional transformation," *Computers, Materials & Continua*, 2023;77(2):2565–2578 (Q2, I.F= 3.1)

27. Khan MS, Gul B, Benabdellah G, Ahmad B, Ouladsmame M, Ahmad H. Unveiling the electronic, optical, thermoelectric, and thermodynamic properties of novel SrXCu₃Se₄ (X= In, Tl) materials: A systematic DFT study. *Chemical Physics Letters*. 2023;141012. (Q3, I.F= 2.8)
28. Ahmad H, Jassim HK. Solving burger's and coupled Burger's equations with caputo-fabrizio fractional operator. *Facta Universitatis, Series: Mathematics and Informatics*. 2023;241-52.
29. Gul B, Khan MS, Mohamed AS, Wafa G, Ahmad H. Unveiling the electronic structure and optical properties of two-dimensional TMDCs: first-principles study. *Optical Materials Express*. 2023;13(12):3688-702. (Q2, I.F= 2.8)
30. Zulqarnain RM, Nadeem M, Siddique I, Ahmad H, Askar S, Samar M. Heat transfer analysis of Maxwell tri-hybridized nanofluid through Riga wedge with fuzzy volume fraction. *Scientific Reports*. 2023;13(1):18238. (Q1, I.F=4.6)
31. Hussain J, Soomro MA, Dahri SA, Memon KN, Bano M, Awwad FA, Ismail EA, Ahmad H. A study of maximizing skew Brownian motion with applications to option pricing. *Journal of Radiation Research and Applied Sciences*. 2024;17(1):100732. (Q3, I.F=1.7)
32. Nazam M, Ahmad H, Waheed M, Askar S. On the Perov's type (β , F)-contraction principle and an application to delay integro-differential problem. *AIMS Mathematics*. 2023;8(10):23871-88. (Q1, I.F=2.2)
33. Zahran EH, Ahmed H, Askar S, Ozsahin DU. New impressive performances for the analytical solutions to the (1+ 1)-dimensional van der-waals gas system against its numerical solutions. *Results in Physics*. 2023 :106667. (Q1, I.F=5.3)
34. Tariq M, Ahmad H, Shaikh AA, Ntouyas SK, Hınçal E, Qureshi S. Fractional Hermite–Hadamard-Type Inequalities for Differentiable Preinvex Mappings and Applications to Modified Bessel and q-Digamma Functions. *Mathematical and Computational Applications*. 2023; 28(6):108. (ESCI, I.F=1.9)
35. Zulqarnain, R.M., Nadeem, M., Siddique, I. *et al.* Heat transfer analysis of Maxwell tri-hybridized nanofluid through Riga wedge with fuzzy volume fraction. *Sci Rep* **13**, 18238 (2023). (Q1, I.F=4.6) <https://doi.org/10.1038/s41598-023-45286-x>
36. Farooq M, Ahmad H, Ozsahin DU, Khan A, Nawaz R, Almohsen B. A study of heat and mass transfer flow of a variable viscosity couple stress fluid between inclined plates. *Modern Physics Letters B*. 2023 :2350231. (Q2, I.F=1.9)
37. Nawaz R, Sumera, Zada L, Ayaz M, Ahmad H, Awwad FA, Ismail EA. Rational approximation for solving Fredholm integro-differential equations by new algorithm. *Open Physics*. 2023;21(1):20220181. (Q3, I.F=1.9)
38. Vaidya, H., Prasad, K.V., Tripathi, D. *et al.* Viscoplastic Hybrid Nanofluids Flow Through Vertical Stenosed Artery. *BioNanoSci.* (2023). <https://doi.org/10.1007/s12668-023-01213-y>. (Q3, I.F=3.0)
39. Barak MS, Ahmad H, Kumar R, Kumar R, Gupta V, Awwad FA, Ismail EA. Behavior of higher-order MDD on energy ratios at the interface of thermoelastic and piezothermoelastic mediums. *Scientific Reports*. 2023;13(1):17170. (Q1, I.F=4.6)
40. Ullah K, Ishaq M, Tchier F, Ahmad H, Ahmad Z. Fuzzy-based maximum power point tracking (MPPT) control system for photovoltaic power generation system. *Results in Engineering*. 2023;20:101466. (Q1, I.F=5.0)

41. Islam SR, Ahmad H, Khan K, Wang H, Akbar MA, Awwad FA, Ismail EA. Stability analysis, phase plane analysis, and isolated soliton solution to the LGH equation in mathematical physics. *Open Physics*. 2023 Oct 30;21(1):20230104. . (Q3, I.F=1.9)
42. Raza Q, Wang X, Akbar Qureshi MZ, Siddique I, Ahmad M, Ali B, Ahmad H, Tchier F. Significance role of dual porosity and interfacial nanolayer mechanisms on hybrid nanofluids flow: A symmetry flow model. *Modern Physics Letters B*. 2023 Oct 6:2450022. (Q2, I.F=1.9)
43. Jain R, Mehta R, Sharma MK, Mehta T, Ahmad H, Tchier F. Numerical analysis of heat and mass transport of hybrid nanofluid over an extending plate with inclined magnetic field in presence of Soret and dufour Effect. *Modern Physics Letters B*. 2023 Oct 6:2450037. (Q2, I.F=1.9)
44. Haq IU, Ali N, Ahmad H, Sabra R, Albalwi MD, Ahmad I. Mathematical analysis of a Corona virus model with Caputo, Caputo-Fabrizio-Caputo fractional and Atangana-Baleanu-Caputo differential operators. *International Journal of Biomathematics*. 2023. (Q3, I.F=2.2)
45. Amur AA, Memon KN, Shah SF, Amur M, Ahmad H, Siddiqui AM, Ozsahin DU, Askar S. The hydrodynamics of gravity-driven vessel drainage of third order fluid using perturbation method. *Heliyon*. 2023. (Q1, I.F=4.0)
46. Jalili P, Mirzaei A, Jalili B, Shateri A, Ganji DD, Ozsahin DU, Ahmad H. Thermal analysis of transverse fluid flow in a gradient porous media with the exponentially boundary conditions. *Modern Physics Letters B*. 2023 Oct 21:2350229. (Q2, I.F=1.9)
47. Khan H, Aslam M, Rajpar AH, Chu YM, Etemad S, Rezapour S, Ahmad H. A New Fractal-Fractional Hybrid Model for Studying Climate Change on Coastal Ecosystems from the Mathematical Point of View. *Fractals*. 2023. (Q1, I.F= 4.7)
48. Caliskan A, Zulqarnain RM, Güdekli E, Siddique I, Ahmad H, Askar S. Structural properties of a new class of stellar structures in modified teleparallel gravity. *Frontiers in Astronomy and Space Sciences*. 2023;10:1203777. (Q2, I.F= 3.0)
49. Zahran EH, Ibrahim RA, Ozsahin DU, Ahmad H, Shehata MS. New diverse exact optical solutions of the three dimensional Zakharov–Kuznetsov equation. *Optical and Quantum Electronics*. 2023;55(9):817. (Q2, I.F=3.0)
50. Zulfiqar H, Aashiq A, Tariq KU, Ahmad H, Almohsen B, Aslam M, Rehman HU. On the solitonic wave structures and stability analysis of the stochastic nonlinear Schrödinger equation with the impact of multiplicative noise. *Optik*. 2023;289:171250. (Q2, I.F=3.1)
51. Jagadeesh S, Chenna Krishna Reddy M, Tarakaramu N, Ahmad H, Askar S, Shukhratovich Abdullaev S. Convective heat and mass transfer rate on 3D Williamson nanofluid flow via linear stretching sheet with thermal radiation and heat absorption. *Scientific Reports*. 2023;13(1):9889. (Q1, I.F=4.6)
52. Esen H, Ozdemir N, Secer A, Bayram M, Sulaiman TA, Ahmad H, Yusuf A, Albalwi MD. On the soliton solutions to the density-dependent space time fractional reaction–diffusion equation with conformable and M-truncated derivatives. *Optical and Quantum Electronics*. 2023;55(10):923. (Q2, I.F=3.0)
53. Latha KB, Gnaneswara Reddy M, Tripathi D, Bég OA, Kuharat S. Computation of stagnation coating flow of electro-conductive ternary Williamson hybrid *GO– AU– Co3O4/EO* nanofluid with

- a Cattaneo-Christov heat flux model and magnetic induction. *Scientific Reports*. 2023;13. (Q1, I.F=4.6)
54. Shehata MS, Ahmad H, Zahran EH, Askar S, Ozsahin DU. Isomorphic shut form valuation for quantum field theory and biological population models. *Open Physics*. 2023;21(1):20220252. (Q3, I.F=1.9)
55. Megahid SF, Abouelregal AE, Ahmad H, Fahmy MA, Abu-Zinadah H. A generalized More-Gibson-Thomson heat transfer model for the study of thermomagnetic responses in a solid half-space. *Results in Physics*. 2023:106619. (Q1, I.F=5.3)
56. Vijay MM, Sunil J, Vincy VA, IjazKhan M, Abdullaev SS, Eldin SM, Govindan V, Ahmad H, Askar S. Underwater wireless sensor network-based multihop data transmission using hybrid cat cheetah optimization algorithm. *Scientific Reports*. 2023;13(1):10810. (Q1, I.F=4.6)
57. Bashir S, Dawood A, Hayat A, Askar S, Ahmad Z, Ahmad H, Khan MA. Laser-assisted plasma formation and ablation of Cu in a controlled environment. *Heliyon*. 2023;9(8). (Q1, I.F=4.0)
58. Zahran EH, Ibrahim RA, Ozsahin DU, Ahmad H, Shehata MS. New diverse exact optical solutions of the three dimensional Zakharov–Kuznetsov equation. *Optical and Quantum Electronics*. 2023;55(9):817. (Q2, I.F=3.0)
59. Gul B, Khan MS, Aasim M, Khan G, Ahmad H, Thounthong P. First-principles study of the optoelectronic and thermoelectric properties of lead-free $ASnI_3$ ($A = K, Rb, \text{ and } Cs$) novel halide perovskites. *Physica B: Condensed Matter*. 2023 Sep 12:415316. (Q2, I.F=2.8)
60. Alsadat N, Marei GA, Elgarhy M, Ahmad H, Almetwally EM. Bayesian and non-Bayesian analysis with MCMC algorithm of stress-strength for a new two parameters lifetime model with applications. *AIP Advances*. 2023;13(9). (Q3, I.F=1.6)
61. Gul B, Salman Khan M, Aasim M, Ifseisi AA, Khan G, Ahmad H. First-Principles Investigation of Novel Alkali-Based Lead-Free Halide Perovskites for Advanced Optoelectronic Applications. *ACS Omega*. 2023 Aug 25. (Q2, I.F=4.1)
62. Gul B, Fayz-Al-Asad M, Khan MS, Rahaman M, Periyasami G, Ahmad H. Insight into the Optoelectronic Nature and Mechanical Stability of Binary Chalcogenides: A First-Principles Study. *ChemElectroChem*. 2023:e202300368. (Q2, I.F=4.0)
63. Tlili S, Kaddour A, Ousra OA, Bayram M, Atif M, Ahmad H, Menni Y. Enhancing thermal performance and sustainability parabolic trough concentrator systems in Djelfa's solar-integrated urban design. *Thermal Science*. 2023;27(4 Part B):3251-60. (Q3, I.F=1.7)
64. Kaid N, Bayram M, Asad J, Atif M, Alhassan MS, Ameer H, Ahmad H, Menni Y. Simulation of newly designed vortex generators for optimizing fluid mixing efficiency in compact static mixers with single-exit configuration. *Thermal Science*. 2023;27(4 Part B):3337-47. (Q3, I.F=1.7)
65. Mahboob A, Hussaain T, Abbas T, Bonyah E, Khan MS, Almohsen B, Fatima M, Ahmad H, Ahmad Z. Minimal CSS-supplemented subgroups of finite groups. *AIP Advances*. 2023;13(9). (Q3, I.F=1.6)
66. Alsadat N, Elgarhy M, Tolba AH, Elwehidy AS, Ahmad H, Almetwally EM. Classical and Bayesian estimation for the extended odd Weibull power Lomax model with applications. *AIP Advances*. 2023;13(9). (Q3, I.F=1.6)

67. Alsadat N, Nagarjuna VB, Hassan AS, Elgarhy M, Ahmad H, Almetwally EM. Marshall–Olkin Weibull–Burr XII distribution with application to physics data. *AIP Advances*. 2023;13(9). (Q3, I.F= 1.6)
68. Gul B, Salman Khan M, A. Ifseisi A, Ahmad H. First-principles study of potassium-based novel chalcogenide materials for optoelectronic and thermoelectric devices. *Physica Scripta*. 2023. (Q2, I.F= 2.9)
69. Kodamasingh, B., Tariq, M., Sahoo, S. K., Ahmad, H. & Nasir, J. (2023). Hyperbolic type harmonically convex function and integral inequalities. *TWMS Journal of Applied and Engineering Mathematics*, 13(4), 1617-1630.
70. Alsadat N, Elgarhy M, Hassan AS, Ahmad H, Abd Eisa EH. A new extension of linear failure rate distribution with estimation, simulation, and applications. *AIP Advances*. 2023;13(10). (Q3, I.F= 1.6)
71. Gul B, Khan MS, Ahmad B, Rahaman M, Lolika PO, Wafa G, Ahmad H. First-principles study of the electronic, optical, and transport properties of novel transition-metals dichalcogenides. *Materials Advances*. 2023. <https://doi.org/10.1039/D3MA00398A>(Q2, I.F=5.0)
72. Mahboob A, Asif M, Zulqarnain RM, Siddique I, Ahmad H, Askar S, Pau G. An Innovative Technique for Constructing Highly Non-Linear Components of Block Cipher for Data Security against Cyber Attacks. *Computer Systems Science & Engineering*. 2023;47(2). (Q1, I.F=2.2)
73. Kumar R, Pathania V, Gupta V, Barak MS, Ahmad H. Thermoelastic Modeling with Dual Porosity Interacting with an Inviscid Liquid. *Journal of Applied and Computational Mechanics*. 2023. (Q2, I.F=3.0)
74. Gul B, Salman Khan M, Khan G, Ahmad H. Ab-initio study about the electronic structure, optical, and transport properties of novel Aln_2O_4 ($A = \text{Ca}, \text{Sr}, \text{and Na}$) materials. *Modelling and Simulation in Materials Science and Engineering*. 2023. (Q3, I.F=1.8)
75. Bano A, Dawood A, Rida, Saira F, Malik A, Alkholief M, Ahmad H, Khan MA, Ahmad Z, Bazighifan O. Enhancing catalytic activity of gold nanoparticles in a standard redox reaction by investigating the impact of AuNPs size, temperature and reductant concentrations. *Scientific Reports*. 2023;13(1):12359. (Q1, I.F=4.6)
76. Khan SU, Khan A, Ullah A, Ahmad S, Awwad FA, Ismail EA, Maitama S, Umar H, Ahmad H. Solving nth-order integro-differential equations by novel generalized hybrid transform. *European Journal of Pure and Applied Mathematics*. 2023;16(3):1940-55. (Q3, I.F=0.7)
77. Gul B, Khan MS, Ahmad B, Periyasami G, Rahaman M, Ahmad H. Exploring the electronic, optical, and thermoelectric properties of Ba_2GeX_4 ($X = \text{S}, \text{and Se}$) novel chalcogenides. *Journal of Solid State Chemistry*. 2023;326:124243. (Q2, I.F=3.3)
78. Manvi BK, Kerur SB, Tawade JV, Nieto JJ, Ningonda S, Sankeshwari HA, Govindan V. MHD Casson nanofluid boundary layer flow in presence of radiation and non-uniform heat source/sink. *Mathematical Modelling and Control*. 2023;3(3):152-67.
79. El Houda NN, Mohammed B, Essaid B, Ahmad I, Ahmad H, Askar S. Multigrid Methods for The Solution of Nonlinear Variational Inequalities. *European Journal of Pure and Applied Mathematics*. 2023;16(3): 1956-69. (Q3, I.F=0.7)

80. Murtaza S, Ahmad Z, Daher Albalwi M, Akhtar Z, Khan MA, Ahmad H, Baleanu D. Caputo Time Fractional Model Based on Generalized Fourier's and Fick's Laws for Brinkman-type Fluid: Exact Solution via Integral Transform. *Fractals*. 2023. (Q1, I.F= 4.7)
81. Moaaz O, Muhib A, Ahmad H, Muhsin W. Iterative Criteria for Oscillation of Third-Order Delay Differential Equations with p-Laplacian Operator. *Mathematica Slovaca*. 2023;73(3):703-12. (Q2, I.F= 1.6)
82. Asmat F, Asmat H, Askar S, Ahmad H, Khan MI. On weighted vertex and edge Mostar index for trees and cacti with fixed parameter. *European Journal of Pure and Applied Mathematics*. 2023;16(3):1794-808. (Q3, I.F=0.7)
83. Zil-E-Huma, Butt, A. R., Raza, N., Ahmad, H., Ozsahin, D. U., & Tchier, F. (2023). Different solitary wave solutions and bilinear form for modified mixed-KDV equation. *Optik*, 171031. (Q2, I.F=3.1)
84. Hashemi MS, Mirzazadeh M, Ahmad H. A reduction technique to solve the $(2+ 1)$ -dimensional KdV equations with time local fractional derivatives. *Optical and Quantum Electronics*. 2023;55(8):721. (Q2, I.F=3.0)
85. Ullah I, Ullah A, Ahmad S, Ahmad H, Nofal TA. A survey of KdV-CDG equations via nonsingular fractional operators. *AIMS Mathematics*. 2023;8(8):18964-81. (Q1, I.F=2.2)
86. Adel M, Khader MM, Ahmad H, Assiri TA. Approximate analytical solutions for the blood ethanol concentration system and predator-prey equations by using variational iteration method. *AIMS Mathematics*. 2023;8(8):19083-96. (Q1, I.F=2.2)
87. Siddique I, Adrees R, Ahmad H, Askar S. MHD Free convection flows of Jeffrey fluid with Prabhakar-like fractional model subject to generalized thermal transport. *Scientific Reports*. 2023;13(1):9289. (Q1, I.F=4.6)
88. Vijay MM, Sunil J, Vincy VA, IjazKhan M, Abdullaev SS, Eldin SM, Govindan V, Ahmad H, Askar S. Underwater wireless sensor network-based multihop data transmission using hybrid cat cheetah optimization algorithm. *Scientific Reports*. 2023;13(1):10810. (Q1, I.F=4.6)
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419. Ahmad H, Khan TA, Cesarano C. Numerical solutions of coupled Burgers' equations. *Axioms*. 2019; 8(4):119. (Q2, I.F= 2.0)
420. Ahmad H, Khan TA. Variational iteration algorithm-I with an auxiliary parameter for wave-like vibration equations. *Journal of Low Frequency Noise, Vibration and Active Control*. 2019;38(3-4):1113-24. (Q2, I.F= 2.3)
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8. Art and Design Activities

9. Projects

| International Projects | |
|------------------------|---|
| 2023 | University of Jeddah, Jeddah, Saudi Arabia. under Grant No. (UJ-21-DR-30). |
| 2023 | Deanship of Scientific Research at Imam Mohammad Ibn Saud Islamic University (IMSIU) (grant number IMSIU-RP23059) |
| 2023 | Deanship of Scientific Research at Imam Mohammad Ibn Saud Islamic University (IMSIU) (grant number IMSIU-RP23092) |
| 2023 | Research Supporting Project number (RSP2024R167), King Saud University, Riyadh, Saudi Arabia |
| 2023 | Researchers Supporting Project number (RSP2023R401), King Saud University, Riyadh, Saudi Arabia |
| 2022 | Deanship of Scientific Research at King Khalid University under Grant number RGP. 2/112/43 |
| 2022 | Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under grant No. (IFPIP-1582-130-1443). |
| 2022 | Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under grant No. (D-297-305-1442). |

- 2021 Deanship of Scientific Research at King Khalid University under Grant number RGP. 1/387/42
- 2021 Deanship of Scientific Research at King Khalid University Saudi Arabia under Grant number RGP. 1/155/42
- 2021 Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under grant No. (D-007-130-1443).
- 2021 Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under grant No. (FP-096-43).
- 2021 Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under grant No. (D-006-130-1443).
- 2020 Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under grant No. (D-603-135-1441).
- 2020 Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under grant No. (D-591-130-1441).

10. Administrative Responsibilities

11. Memberships in Scientific and Professional Organizations

12. Awards and Honors

- Honorary Professor degree from Azerbaijan University, Jeyhun Hajibeyli street, 71, AZ1007, Baku Azerbaijan
- Among World's Top 2% Most Cited Scientist Single Year 2022 and 2023 (Stanford University)
- Hifz ul Quran from Daral Uloom Rehmania, mohallah Gul Bahar Lahor Swabi.
- Tajvid ul Quran from Daral Uloom Rehmania, mohallah Gul Bahar Lahor Swabi.

SCIENTIFIC CONFERENCES/SEMINARS/SYMPOSIUM ATTENDED

- Member of Organizing Committee of International Scientific Conference on Advances in Applied Physics and Mathematics (AAPM-2023), Tashkent, Uzbekistan
<http://aapm-2023.online/committees>
- Member of Organizing Committee of the 10th International Conference on Fuzzy Systems and Data Mining (FSDM 2024), Matsue, Japan
<http://www.fsdmconf.org/TPC>
- Technical Program Committee (TPC) Member of the 9th International Conference on Fuzzy Systems and Data Mining (FSDM 2023), Chongqing, China
<http://www.fsdmconf.org/TPC>
- Scientific Committee Member of 2nd International Conference on Computations for Science and Engineering, Rimini Riviera, Italy
<https://events.unibo.it/iccse/scientific-committee>
- Scientific Committee Member of the 2nd International Meet on Astronomy and Astrophysics , Brussels, Belgium
<https://www.albedomeetings.com/2023/astromet/committee>
- Member of international Program Committee and Invited speaker at the International Conference on Innovations in Energy Engineering & Cleaner Production (IEECP'22), Oxford – United Kingdom
<https://ieecp-conference.org/ieecp22-committees/#international-program-committee>
- Scientific Committee Member and Invited speaker at the 2nd International Meet & Expo on Semiconductors, Optoelectronics and Nanostructures (SEMICONMEET2022), Barcelona,

Spain.

<https://www.albedomeetings.com/semiconmeet/2022/committee.php>

- Scientific Committee Member of the 1st International Congress on Natural Sciences (ICNAS-2021), Ataturk University Erzurum, Turkey
<https://icnas2021.atauni.edu.tr/index.php/committee-and-boards>
- Scientific Committee Member of the 1st International Symposium on Recent Advances in Fundamental And Applied Sciences Atatürk University, Erzurum, Turkey
<https://isfas2021.atauni.edu.tr/index.php/committee-and-boards>
- Scientific Committee Member of the Academia International Conference on Mathematics and Mathematics Education (AICMME-2021), SIIRT University, Turkey
<https://www.aicmath.com/committees>

MEMBERSHIP IN EDITORIAL BOARDS OF SCIENTIFIC JOURNALS

Editor as a Lead Guest Editor

- Special Issue: Recent Advances in Fractional Calculus and Nonlinear Fractional Equations ([Link](#))
Journal: Demonstratio Mathematica (Q1, 2.093)
- Special Issue: Symmetry in Fractional Calculus: Advances and Applications ([Link](#))
Symmetry (Q2, having 2.940 impact factor)
- Special Issue: Theoretical and Numerical Study of Nonlinear Models (Dynamical Systems) ([Link](#))
Journal: Communications in Analysis and Mechanics
Special Issue: Implementing Fractional Calculus for Physical System Applications ([Link](#))
Journal: AIMS Biophysics
Special Issue: Electromagnetic waves and biology ([Link](#))
Journal: Mathematical Modelling and Control
- Special Issue: Importance of Fractional Order Derivatives in Real-World Applications: New Aspects and Understanding the Natural Phenomena ([Link](#))
Journal: Fractal and Fractional (Q1, having 3.313 impact factor)
- Special Issue: Special Issue on Nanofluids: Synthesis, Characterization, and Applications ([Link](#))
Journal: Open Physics (Q3, having 1.9 impact factor)
- Special Issue: Heat Transfer Reinforcement Techniques in Heat Exchangers ([Link](#))
Journal: Applied Sciences (Q2, having 2.679 impact factor)
- Special Issue: Recent Advances in Solar Energy Collectors: Models and Applications ([Link](#))
Journal: Energies (Q1, having 3.004 impact factor)
- Special Issue: Dedicated to Professor Ji-Huan He on the Occasion of His 55th Birthday ([Link](#))
Journal: Axioms (Q2, 1.824)
- Special Issue: Role of Computer in Modelling & Solving Real-World Problems ([Link](#))
Journal: Computers, Materials & Continua (Q1, having 4.89 impact factor)
- Special Issue: Recent Trends in Computational Methods for Differential Equations ([Link](#))
Journal: Intelligent Automation & Soft Computing (Q2, having 1.276 impact factor)

Editor as a Permanent Editorial Board Member

| | |
|--------------|--|
| 2023–present | South African Journal of Chemical Engineering |
| 2023–present | Advanced Mathematical Models & Applications |
| 2023–present | Chaos Theory and Applications |
| 2023–present | Contemporary Mathematics |
| 2023–present | Iraqi Journal for Computer Science and Mathematics |

| | |
|--------------|---|
| 2023–present | Babylonian Journal of Mathematics (Editor in Chief) |
| 2020–present | Facta Universitatis, Series: Mathematics and Informatics |
| 2020–present | Journal of Scientific, Technology and Engineering Research (JSTER) |
| 2020–present | Sigma Journal of Engineering and Natural Sciences |
| 2020–present | Baghdad Science Journal |
| 2021–present | International Advanced Researches and Engineering Journal |
| 2021–present | Journal of Mathematical Analysis |
| 2022–present | Mechanical Engineering for Society and Industry. |
| 2022-Present | Mathematical Modelling and Control (MMC) |
| 2022-Present | Mechanical Engineering for Society and Industry |
| 2022-Present | International Advanced Researches and Engineering Journal |
| 2022-Present | Mathematical Modelling and Numerical Simulation with Applications (MMNSA) |
| 2022-Present | Journal of Mathematical Analysis and Modeling |
| 2022-Present | Thermal Science and Engineering |
| 2022-Present | TWMS Journal of Applied and Engineering Mathematics |