Dr. Aziz Ullah Awan

Professor (Tenured)

Institute of Mathematics
University of the Punjab
Lahore 54590, Pakistan

Nationality:
Pakistani

Phone number:
+923314349477

Email Address:
aziz.math@pu.edu.pk
auawan2003@yahoo.com

Website:
http://pu.edu.pk/faculty/description/416/Dr-Aziz-Ullah-Awan.html

Google Scholar:
https://scholar.google.com/citations?user=NOBW6jZ3ig0C&hl=en&oi=ao

Research Gate:
https://www.researchgate.net/profile/Aziz-Awan

ORCID:
https://orcid.org/0000-0003-3184-3652

Web of Science:
https://www.webofscience.com/wos/author/record/AEO-6306-2022

EDUCATION

Ph.D. Mathematics (2007-2012)
Supervised by
Prof. Dr. Constantin Fetecau
Abdus Salam School of Mathematical Sciences,
Government College University, Lahore, Pakistan.

M.Phil. Mathematics (2004-2006)
University of the Punjab, Lahore, Pakistan.

B.Ed. (2002-2004)
Allama Iqbal Open University Islamabad,
Pakistan.

M.Sc. Mathematics (2000-2002)
University of the Punjab, Lahore, Pakistan.

RESEARCH AND PUBLICAITON

My research area is Applied Mathematics :
Fluid Dynamics ; Bio-Mathematics and Solitons.
My research publications ~150, with total citation of >3400 and current H-index = 36.

AWARDS

- Invited Participant in "International School on Extrinsic Curvature Flows" by Abdus Salam International Centre for Theoretical Physics (ICTP) from June 04-15, 2018.
- Indigenous HEC Ph.D. Fellowship (Batch-IV), awarded by Higher Education Commission (HEC) Pakistan in 2007.
- Enlisted in the top 2% of scientists' ranking by Stanford University in 2022, 2023, 2024 and 2025.

SOFTWARES

MS Word; Latex; Power Point; Mathematica; Matlab.

Employment History

- Tenured Professor (November 2024- to date)
  Institute of Mathematics, University of the Punjab, Lahore, Pakistan.
- Tenured Associate Professor (August 2020- to November 2024)
  Dept. of Mathematics, University of the Punjab, Lahore, Pakistan.
- Assistant Professor (March 2013- August 2020)
  Dept. of Mathematics, University of the Punjab, Lahore, Pakistan.
- Lecturer (May 2006-March 2013)
  Dept. of Mathematics, University of the Punjab, Lahore, Pakistan.
- Lecturer (April 2005-May 2006)
  Govt. College, Noorpur Thal (Khushab), Pakistan.
- Subject Specialist (September 2003- August 2004)
  KCP Model Higher Sec. School, KCP Colony Chowk Girote (Khushab), Pakistan.
- Lecturer (March 2003- August 2003)
  District Public School, Jauharabad (Khushab), Pakistan.
- Lecturer (October 2002- March 2003)
  Govt. College, Jauharabad (Khushab), Pakistan.

Teaching

I have taugh the following courses :

- Calculus I
- Calculus II
- Vector and Tensor Analysis
- Mechanics
- Ordinary Differential Equations
- Partial Differential Equations
- Analytical Dynamics
- Methods of Mathematical Physics
- Special Theory of Relativity
- Quantum Mechanics-I
- Methods of Mathematical Physics
- Special Theory of Relativity and Analytical Dynamics
- Electromagnetic Theory
- Fluid Dynamics I & II
- Introduction to Bio Mathematics
- Reading and Research

Research Papers

Published in 2025

1. **Aziz Ullah Awan**, Shafiullah Niazai, Muzammil Hussain, Bagh Ali, N. Ameer Ahammad, Fehmi Gamaoun, Sohail Nadeem, Optimizing entropy generation in MHD Maxwell dusty nanofluid flow via nanoparticle radius and inter-particle spacing on an inclined stretching sheet, Scientific Reports, 15 (2025) 38931. https://doi.org/10.1038/s41598-025-22833-2. **(IF=4.996) (W, United Kingdom)**
2. Yasir Ramzan, Amna Riaz, Kamel Guedri, **Aziz Ullah Awan**, Hatoon A. Niyazi, Hanadi Alzubadi, Basim M. Makhdoum, A nonlinear optimization framework for a Lassa fever model capturing zoogenic transmission and disability risks, European Physical Journal Plus, 140 (2025) 975. https://doi.org/10.1140/epjp/s13360-025-06902-z. **(IF=3.758) (W, United States)**
3. Muzammil Hussain, **Aziz Ullah Awan**, MHD Boger dusty nanofluid flow: Nanoparticle aggregation and esterification effects over a stretching sheet, Scientia Iranica, (2025). http://doi.org/10.24200/sci.2025.66578.10125. **(IF=1.9) (W, Iran)**
4. Yasir Ramzan, Kamel Guedri, **Aziz Ullah Awan**, Jeevan Kafle, Hatoon A. Niyazi, Basim M. Makhdoum, Modeling gonorrhea and HIV coinfection with predictive analytics for disability and mortality risks, Scientific Reports, 15 (2025) 32983. https://doi.org/10.1038/s41598-025-16601-5. **(IF=4.996) (W, United Kingdom)**
5. Asia Ali Akbar, Kiran Mazhar, **Aziz Ullah Awan**, Investigation of free convective flow of electrically conducting fluid in the presence of magnetic field by two different techniques, Journal of New Horizons in Mathematics, 1(1) (2025) 67-81. http://doi.org/10.51846/jnhm.v1i1.4147.
6. **Aziz Ullah Awan**, Muzammil Hussain, Bagh Ali, N. Ameer Ahammad, Fehmi Gamaoun, Jeevan Kafle, Sohail Nadeem, Computational analysis of entropy generation in EMHD micropolar dusty fluid flow incorporating esterification process, Scientific Reports, 15 (2025) 30146. https://doi.org/10.1038/s41598-025-15017-5. **(IF=4.996) (W, United Kingdom)**
7. Kamel Guedri, Yasir Ramzan, Muhammad Mudassar Bilal, Hatoon Abdullah Niyazi, **Aziz Ullah Awan**, Basim M. Makhdoum, Gender-specific modeling for Lassa virus transmission with hearing loss disability risk and control strategies, European Journal of Pure and Applied Mathematics, 18(2) (2025) 6104. https://doi.org/10.29020/nybg.ejpam.v18i2.6104. **(IF=1) (W, United States)**
8. **Aziz Ullah Awan**, Sidra Qayyum, Bagh Ali, Fehmi Gamaoun N. Ameer Ahammad, Sohail Nadeem, Optimization of heat transfer and entropy for Maxwell dusty fluid: Significance of Lorentz force and variable viscosity, Engineering Science and Technology, an International Journal 69 (2025) 102129. https://doi.org/10.1016/j.jestch.2025.102129. **(IF=5.4) (W, Turkey)**

9. Muzammil Hussain, **Aziz Ullah Awan**, Khaled A. Gepreel, Bagh Ali, N. Ameer Ahammad, Sohail Nadeem, Characterization of thermal buoyancy forces and suction on bioconvective magnetohydrodynamic dusty nanofluid flow over a stretching surface, Modern Physics Letters B, (2025) 2550209 (20 pages). https://doi.org/10.1142/S0217984925502094. **(IF=2.2) (W, Singapore)**
10. Dean Chou, Hamood Ur Rehman, **Aziz Ullah Awan**, Uzma Bashir, Hameed Ashraf and Abdul Malik Sultan, Investigating soliton phenomena in incompressible fluids: Study of the (2+1)-dimensional Boiti-Leon-Manna-Pempinelli equation, Modern Physics Letters A, 40(15&16) (2025) 2550049. https://doi.org/10.1142/S021773232550049X. **(IF=1.6) (W, Singapore)**
11. Yasir Ramzan, Bandar M. Fadhl, Shafiullah Niazai, **Aziz Ullah Awan**, Kamel Guedri, Decoding the transmission and subsequent disability risks of Rabineurodeficiency syndrome without recuperation, Scientific Reports, 15 (2025) 17322. https://doi.org/10.1038/s41598-025-01066-3. **(IF=4.996) (W, United Kingdom)**
12. Takasar Hussain, **Aziz Ullah Awan**, Fatima Tasneem, Khaled A. Gepreel, Muhammad Tanveer, Muhammad Ozair, Haneen Hamam, Mathematical analysis and management strategies for controlling an infectious disease: Case Study of Bursaphelenchus xylophilus, Mathematical Methods in the Applied Sciences, 0 (2025) 1–22. https://doi.org/10.1002/mma.10974. **(IF=2.1) (W, England)**
13. Muhammad Hasnain Shahzad, N. Ameer Ahammad, Sohail Nadeem, **Aziz Ullah Awan**, Kamel Guedri, Ahmed Alamer, Bandar M. Fadhl, Non-Newtonian blood flow across stenosed elliptical artery: Case study of nanoparticles for brain disabilities with fuzzy logic, Modern Physics Letters B, 39(11) (2025) 2450470. https://doi.org/10.1142/S0217984924504700. **(IF=2.2) (W, Singapore)**
14. Hamood Ur Rehman, Ifrah Iqbal, Mohamed Medani, **Aziz Ullah Awan**, Uzma Perveen, Roobaea Alroobaea, Analyzing the dynamics of multi-solitons and other solitons in the perturbed nonlinear Schrödinger equation, Modern Physics Letters B, 39(12) (2025) 2450468. https://doi.org/10.1142/S0217984924504682. **(IF=2.2) (W, Singapore)**
15. Qasim Ali, **Aziz Ullah Awan**, Rajai S. Alassar, Muhammad Amir, Usman Younas, Muhammad Farman, Comprehensive study of tri-hybrid nanofluid flow in a vertical channel with Cu, Al2O3, and TiO2 nanoparticles via fractional dynamics and non-local kernel approach, Modern Physics Letters B, 39(1) (2025) 2450401. https://doi.org/10.1142/S0217984924504013. **(IF=2.2) (W, Singapore)**
16. Abdul Malik Sultan, Alishba Mushtaq, Dean Chou, Hamood Ur Rehman, Hameed Ashraf, **Aziz Ullah Awan**, Observational analysis of gravitational baryogenesis constraints in Einstein-æther gravity, Journal of High Energy Astrophysics, 45 (2025) 135-145. https://doi.org/10.1016/j.jheap.2024.11.018. **(IF=10.2) (W, Netherlands)**
17. **Aziz Ullah Awan**, Muhammad Hasnain Shahzad, Sohail Nadeem, Haneen Hamam, N. Ameer Ahammad, Aleeza Arshad, Investigation of Sutterby fluid flow through elliptic multi-stenosed artery: analytical solutions of blood flow problem, Multidiscipline Modeling in Materials and

Structures, 21(1) (2025) 199-216. https://doi.org/10.1108/MMMS-07-2024-0209. **(IF=1.7) (W, Netherlands)**

18. Syed Asif Ali Shah, N. Ameer Ahammad, Sidra Qayyum, Sohail Nadeem, Hanadi Alzubadi, **Aziz Ullah Awan**, Roobaea Alroobaea, Thermal characterization of Sutterby nanofluid flow under Riga plate: Tiwari and Das model, Modern Physics Letters B, 39(3) (2025), 2450421. https://doi.org/10.1142/S0217984924504219. **(IF=2.2) (W, Singapore)**
19. Muhammad Hasnain Shahzad, Madiha Akram, Sohail Nadeem, N. Ameer Ahammad, **Aziz Ullah Awan**, Hanadi Alzubadi, Investigation of Prandtl-Eyring fluid flow under the influence of peristalsis through an inclined elliptic channel, Numerical Heat Transfer, Part A: Applications, 86(24), (2025) 8721–8739. https://doi.org/10.1080/10407782.2024.2362347. **(IF=2) (X, United Kingdom)**

Published in 2024

20. Muzammil Hussain, Bagh Ali, **Aziz Ullah Awan**, Mohammed Alharthi, Yasser Alrashedi, Role of nanoparticle radius for heat transfer optimization in MHD dusty fluid across stretching sheet, Journal of Thermal Analysis and Calorimetry, 149(24) (2024) 15179-15192. https://doi.org/10.1007/s10973-024-13738-9. **(IF=3.1) (W, Hungary)**
21. Yasir Ramzan, Hanadi Alzubadi, **Aziz Ullah Awan**, Kamel Guedri, Mohammed Alharthi, Bandar M. Fadhl, A mathematical lens on the zoonotic transmission of Lassa virus infections leading to disabilities in severe cases, Mathematical and Computational Applications, 29 (2024) 102. https:// doi.org/10.3390/mca29060102. **(IF=1.9) (W, Switzerland)**
22. Haneen Hamam, Yasir Ramzan, Shafiullah Niazai, Khaled A. Gepreel, **Aziz Ullah Awan**, Muhammad Ozair, Takasar Hussain, Deciphering the enigma of Lassa virus transmission dynamics and strategies for efective epidemic control through awareness campaigns and rodenticides, Scientific Reports, 14 (2024) 18079. https://doi.org/10.1038/s41598-024-68600-7. **(IF=4.996) (W, United Kingdom)**
23. **Aziz Ullah Awan**, Syed Asif Ali Shah, Sidra Qayyum, Hanadi Alzubadi, N. Ameer Ahammad, Roobaea Alroobaea, Mixed convected synchronization of gyrotactic microorganism flow of an Eyring–Powell nanofluid over a riga plate, ZAMM - Journal of Applied Mathematics and Mechanics, 104(12) (2024) e202301055. https://doi.org/10.1002/zamm.202301055. **(IF=1.759) (W, Germany)**
24. Muhammad Hasnain Shahzad, **Aziz Ullah Awan**, Sohail Nadeem, N. Ameer Ahammad, Haneen Hamam, Ahmed Alamer, Sidra Shafique, Rheological effects in peristaltic flow of Prandtl fluid through elliptical duct: A comprehensive analysis, ZAMM - Journal of Applied Mathematics and Mechanics, 104(9) (2024) e202400094. https://doi.org/10.1002/zamm.202400094. **(IF=1.759) (W, Germany)**
25. **Aziz Ullah Awan**, Sidra Qayyum, Sohail Nadeem, N. Ameer Ahammad, Khaled A. Gepreel, Mohammed Alharthi, Moataz Alosaimi, Analysis of chemical characteristics of engine-oil-based

Prandtl hybrid nanofluid flow, ZAMM - Journal of Applied Mathematics and Mechanics, 104(8) (2024) e202400050. https://doi.org/10.1002/zamm.202400050. **(IF=1.759) (W, Germany)**

26. H. Ashraf, Dean Chou, Rabia Hameed, Hamood Ur Rehman, **Aziz Ullah Awan**, Abdul Malik Sultan, Flow analysis of temperature-dependent variable viscosity Phan Thien Tanner fluid thin film over a horizontally moving heated plate, Case Studies in Thermal Engineering, 60 (2024) 104726. https://doi.org/10.1016/j.csite.2024.104726. **(IF=6.4) (W, United Kingdom)**
27. Madiha Akram, Muhammad Hasnain Shahzad, N. Ameer Ahammad, Fehmi Gamaoun, **Aziz Ullah Awan**, Haneen Hamam, Roobaea Alroobaea, Rheology of Eyring-Powell hybrid nanofluid flow under the peristaltic effects through an elliptical conduit: Analytical investigation, Results in Physics, 59 (2024) 107602. https://doi.org/10.1016/j.rinp.2024.107602. **(IF=5.3) (W, Netherlands)**
28. Amudhini M, Poulomi De, **Aziz Ullah Awan**, Hanadi Alzubadi, Mathematical modeling of cross diffusion effect on bioconvective Casson nanofluid over multi slips porous stretching surface, Numerical Heat Transfer, Part B: Fundamentals, (2024). https://doi.org/10.1080/10407790.2024.236590. **(IF=1.0) (X, United Kingdom)**
29. Haneen Hamam, **Aziz Ullah Awan**, Mohamed Medani, Roobaea Alroobaea, S. A. H. S. Bukhari, Dowlath Fathima, Theoretical analysis of colonic crypt and colorectal cancer model through Caputo–Fabrizio fractional derivative, Modern Physics Letters B, 38(36) (2024) 2450365 (20 pages). https://doi.org/10.1142/S0217984924503652. **(IF=1.948) (X, Singapore)**
30. Asia Ali Akbar, **Aziz Ullah Awan**, Shafiullah Niazai, Sohail Nadeem, N. Ameer Ahammad, Roobaea Alroobaea, Hanadi Alzubadi, Fehmi Gamaoun, Radiation-influenced magnetohydr-odynamic third-grade nanofluid flow around non-linearly stretched cylinder, Journal of Computational Design and Engineering, 11(3) (2024) 72–90. https://doi.org/10.1093/jcde/qwae009. **(IF=4.9) (W, United Kingdom)**
31. Syed Asif Ali Shah, **Aziz Ullah Awan**, Bagh Ali, Adham E. Ragab, Dynamics of methanol conveying mono and hybrid nanoparticles to optimization of heat transfer across stretching cylinder, Numerical Heat Transfer, Part A: Applications, 86(18) (2024) 6462–6477. https://doi.org/10.1080/10407782.2024.2343040. **(IF=2) (X, United Kingdom)**
32. **Aziz Ullah Awan**, Sidra Shafique, Muhammad Hasnain Shahzad, Kamel Guedri, Basim M. Makhdoum, Sohail Nadeem, Non-Newtonian rheology of blood in elliptical cross-section artery affected by several stenosis: Prandtl fluid model, Archive of Applied Mechanics, 94 (2024) 943-960. https://doi.org/10.1007/s00419-024-02557-x. **(IF=2.8) (W, Germany)**
33. Muhammad Hasnain Shahzad, **Aziz Ullah Awan**, Ali Akgul, Sohail Nadeem, Kamel Guedri, Murad Khan Hassani, Basim M. Makhdoum, Analytical investigation of Carreau fluid flow through a non-circular conduit with wavy wall, Scientific Reports, 14 (2024) 2437. https://doi.org/10.1038/s41598-024-52848-0. **(IF=4.996) (W, United Kingdom)**
34. Muhammad Hasnain Shahzad, **Aziz Ullah Awan**, Kamel Guedri, Bandar M. Fadhl, Mowffaq Oreijah, Entropy-based investigation of blood flow in elliptical multi-stenotic artery with hybrid

nanofluid in a fuzzy environment: Applications as drug carriers for brain diseases, Engineering Applications of Artificial Intelligence, 130 (2024) 107695. https://doi.org/10.1016/j.engappai.2023.107695. **(IF=8.0) (W, United Kingdom)**

35. Asia Akbar Akbar, Muzammil Hussain, **Aziz Ullah Awan**, Sohail Nadeem, Roobaea Alroobaea, Dowlath Fathima, Abdul Hamid Ganie, Magnetized heat transfer visualization through computational modeling of third grade fluid via exponentially stretching cylinder, Modern Physics Letters B, 38(33) (2024), 2450334 (14 pages). https://doi.org/10.1142/S0217984924503342. **(IF=1.948) (X, Singapore)**
36. Asia Ali Akbar, **Aziz Ullah Awan**, Sohail Nadeem, N. Ameer Ahammad, Nauman Raza, Mowffaq Oreijah, Kamel Guedri, Seham Ayesh Allahyani, Heat transfer analysis of Carreau-Yasuda nanofluid flow with variable thermal conductivity and quadratic convection, Journal of Computational Design and Engineering, 11(1) (2024) 99-109. https://doi.org/10.1093/jcde/qwae009. **(IF=4.9) (W, United Kingdom)**
37. Kamel Guedri, Yasir Ramzan, **Aziz Ullah Awan**, Bandar M. Fadhl, Bagh Ali, Mowffaq Oreijah, Rabies-related brain disorders: transmission dynamics and epidemic management via educational campaigns and application of nanotechnology, European Physical Journal Plus, 139 (2024) 49. https://doi.org/10.1140/epjp/s13360-023-04796-3. **(IF=3.758) (W, United States)**
38. Hamood Ur Rehman, Muhammad Tehseen, Hameed Ashraf, **Aziz Ullah Awan**, Mohamed R. Ali, Unveiling dynamic solitons in the (2+1)-dimensional Kadomtsev–Petviashvili equation: Insights from fluids and plasma, Partial Differential Equations in Applied Mathematics, 9 (2024) 100633. https://doi.org/10.1016/j.padiff.2024.100633. **(IF=0.0) (X, Netherlands)**
39. Xiaoye Ding, Salah Mahmoud Boulaaras, Hamood Ur Rehman, Ifrah Iqbal, **Aziz Ullah Awan**, Iffat Sabir, Unraveling the Dynamic Complexity: Exploring the (3+1)-Dimensional Conformable mKdV-ZK Equation, Optical and Quantum Electronics, 56 (2024) 775. https://doi.org/10.1007/s11082-024-06465-w. **(IF=3.0) (W, United States)**
40. Muhammad Asad Ullah, Kashif Ali Khan, Mohamed Hussein, Dowlath Fathima, Roobaea Alroobaea, Nauman Raza, Hassan Ali Ghazwani, **Aziz Ullah Awan**, Numerical simulation on the MHD time-dependent williamson nanouid flow with cross diffusion and heat generation/absorption over a stretching plate, Modern Physics Letters B, 38(28) (2024), 2450257 (25 pages). https://dx.doi.org/10.1142/S0217984924502579. **(IF=1.948) (X, Singapore)**
41. Kamel Guedri, Yasir Ramzan, **Aziz Ullah Awan**, Bandar M. Fadhl, Mowffaq Oreijah, Modeling transmission patterns and optimal control through nanotechnology: A case study of malaria causing brain disabilities, Journal of Disability Research, 3 (2024) 1-18. https://doi.org/10.57197/JDR-2023-0061.
42. Muhammad Hasnain Shahzad, Sohail Nadeem, Hijaz Ahmad, Mohammed Hussein, **Aziz Ullah Awan**, Roobaea Alroobaea, Seham Ayesh Allahyani, Entropy-based analysis of hemodynamics in elliptical arterial flows with non-Newtonian Rabinowitsch fluid, Modern Physics Letters B, 38(28) (2024), 2450276 (18 pages). https://doi.org/10.1142/S0217984924502762. **(IF=1.948) (X, Singapore)**

43. Hamood Ur Rehman, Ifrah Iqbal, Mohammad Mirzazadeh, M. S. Hashemi, **Aziz Ullah Awan**, Ahmed M. Hassan, Optical solitons of new extended (3+1) -dimensional nonlinear Kudryashov's equation via -model expansion method, Optical and Quantum Electronics, 56 (2024) 279. https://doi.org/10.1007/s11082-023-05850-1. **(IF=3.0) (W, United States)**
44. Muhammad Hasnain Shahzad, Sohail Nadeem, **Aziz Ullah Awan**, Seham Ayesh Allahyani, N. Ameer Ahammad, Sayed M. Eldin, On the steady flow of non-Newtonian fluid through multi-stenosed elliptical artery: A theoretical model, Ain Shams Engineering Journal, 15(1) (2024) 102262. https://doi.org/10.1016/j.asej.2023.102262. **(IF=6) (W, Egypt)**

Published in 2023

45. Muhammad Hasnain Shahzad, **Aziz Ullah Awan**, Mechanics of heated Rabinowitsch fluid in elliptic vertical duct: Peristalsis and analytical study, International Journal of Modern Physics B, (2023) 2350274. https://doi.org/10.1142/S0217979223502740. **(IF=1.7) (X, Singapore)**
46. Muhammad Hasnain Shahzad, **Aziz Ullah Awan**, Non-Newtonian characteristics of blood flow in a multi-stenosed elliptical artery: A case of sensitivity analysis, International Journal of Modern Physics B, 37(19) (2023) 2350182. https://doi.org/10.1142/S0217979223501825. **(IF=1.7) (X, Singapore)**
47. **Aziz Ullah Awan**, Dowlath Fathima, Muhammad Hasnain Shahzad, M.M. Alqarni, Sohail Nadeem, Haneen Hamam, Investigation of Erying-Powell fluid flow in the elliptical multi-stenosed artery : application of perturbation method via polynomial solutions, ZAMM - Journal of Applied Mathematics and Mechanics, (2023) 1-16. https://doi.org/10.1002/zamm.202300603. **(IF=1.759) (W, Germany)**
48. **Aziz Ullah Awan**, Muhammad Usman Khalid, Sohail Nadeem, Muhammad Hasnain Shahzad, N. Ameer Ahammad, Fehmi Gamaoun, Ahmed M. Hassan, Analysis of pulsatile blood flow through elliptical multi-stenosed inclined artery influenced by body acceleration, Engineering Science and Technology, an International Journal, 47 (2023) 101545. https://doi.org/10.1016/j.jestch.2023.101545. **(IF=5.155) (W, Netherlands)**
49. **Aziz Ullah Awan**, Bagh Ali, Syed Asif Ali Shah, Mowffaq Oreijah, Kamel Guedri, Sayed M. Eldin, Numerical analysis of heat transfer in Ellis hybrid nanofluid flow subject to a stretching cylinder, Case Studies in Thermal Engineering, 49 (2023), 103222. https://doi.org/10.1016/j.csite.2023.103222. **(IF=6.268) (W, United Kingdom)**
50. Yasir Ramzan, **Aziz Ullah Awan**, Muhammad Ozair, Takasar Hussain, Rahimah Mahat, Innovative strategies for Lassa fever epidemic control: a groundbreaking study, AIMS Mathematics, 8(12) (2023) 30790–30812. https://doi.. org/10.3934/math.20231574. **(IF=2.2) (W, United States)**
51. Hamood Ur Rehman, **Aziz Ullah Awan**, Ahmed M. Hassan, Shagufta Razzaq, Analytical soliton solutions and wave profiles of the (3+1)-dimensional modified Korteweg–de Vries–Zakharov–Kuznetsov equation, Results in Physics, 52 (2023) 106769. https://doi.org/10.1016/j.rinp.2023.106769. **(IF=5.3) (W, Netherlands)**

52. Hamood Ur Rehman, **Aziz Ullah Awan**, Sayed M. Eldin, Ifrah Iqbal, Study of optical stochastic Solitons of Biswas-Arshed equation with multiplicative noise, Aims Mathematics, 8(9) (2023) 21606–21621. https://doi.org/10.3934/math.20231101. **(IF=2.2) (W, United States)**
53. Muhammad Umair Shahzad, Hamood Ur Rehman, **Aziz Ullah Awan**, Zeeshan Zafar, Ahmed M. Hassan, Ifrah Iqbal, Analysis of the exact solutions of nonlinear coupled Drinfeld–Sokolov–Wilson equation through ϕ^6-model expansion method, Results in Physics, 52 (2023) 106771. https://doi.org/10.1016/j.rinp.2023.106771. **(IF=5.3) (W, Netherlands)**
54. Nauman Raza, Ahmad Kamal Khan, **Aziz Ullah Awan**, Kashif Ali Abro, Dynamical aspects of transient electro-osmotic flow of Burgers' fluid with zeta potential in cylindrical tube, Nonlinear Engineering, 12 (2023) 20220256. https://doi.org/10.1515/nleng-2022-0256. **(IF=0.52) (X, Germany)**
55. Hamood Ur Rehman, Azka Habib, Kashif Ali, **Aziz Ullah Awan**, Study of Langmuir waves for Zakharov equation using Sardar sub-equation method, International Journal of Nonlinear Analysis and Applications, (2023). http://dx.doi.org/10.22075/ijnaa.2023.27106.3500. **(IF=0.64) (Y, Iran)**

Published in 2022

56. Syed Asif Ali Shah, **Aziz Ullah Awan**, Significance of magnetized Darcy-Forchheimer stratified rotating Williamson hybrid nanofluid flow : A case of 3D sheet, International Communications in Heat and Mass Transfer, 136 (2022) 106214. https://doi.org/10.1016/j.icheatmasstransfer.2022.106214. **(IF=7) (W, United Kingdom)**
57. **Aziz Ullah Awan**, Syed Asif Ali Shah, Bagh Ali, Bio-convection effects on Williamson nanofluid flow with exponential heat source and motile microorganism over a stretching sheet, Chinese Journal of Physics, 77 (2022) 2795-2810. https://doi.org/10.1016/j.cjph.2022.04.002. **(IF=5) (W, Taiwan)**
58. **Aziz Ullah Awan**, Sonia Majeed, Bagh Ali, Liaqat Ali, Significance of nanoparticles aggregation and Coriolis force on the dynamics of Prandtl nanofluid: The case of rotating flow, Chinese Journal of Physics, 79 (2022) 264-274. https://doi.org/10.1016/j.cjph.2022.07.008. **(IF=5) (W, Taiwan)**
59. **Aziz Ullah Awan**, N. Ameer Ahammad, Wasfi Shatanawi, Seham Ayesh Allahyani, ElSayed M. Tag-ElDin, Nadeem Abbas, Bagh Ali, Significance of magnetic field and Darcy–Forchheimer law on dynamics of Casson-Sutterby nanofluid subject to a stretching circular cylinder, International Communications in Heat and Mass Transfer, 139 (2022) 106399. https://doi.org/10.1016/j.icheatmasstransfer.2022.106399. **(IF=7) (W, United Kingdom)**
60. **Aziz Ullah Awan**, N. Ameer Ahammad, Sonia Majeed, Fehmi Gamaoun, Bagh Ali, Significance of hybrid nanoparticles, Lorentz and Coriolis forces on the dynamics of water based flow, International Communications in Heat and Mass Transfer, 135 (2022) 106084. https://doi.org/10.1016/j.icheatmasstransfer.2022.106084. **(IF=7) (W, United Kingdom)**

61. **Aziz Ullah Awan**, Samia Riaz, Maryam Ashfaq, Kashif Ali Abro, A scientific report of singular kernel on the rate type fluid subject to the mixed convection flow, Soft Computing, 26 (2022) 475-485. https://doi.org/10.1007/s00500-022-06913-3. **(IF=4.1) (W, Germany)**

62. **Aziz Ullah Awan**, Mashal Aziz, Naeem Ullah, Sohail Nadeem, Kashif Ali Abro, Thermal analysis of oblique stagnation point flow with slippage on second order fluid, Journal of Thermal Analysis and Calorimetry, 147 **(2022) 3839–3851**. https://doi.org/10.1007/s10973-021-10760-z. **(IF=4.4) (W, Netherlands)**

63. **Aziz Ullah Awan**, N. Ameer Ahammad, Bagh Ali, ElSayed M. Tag-ElDin, Kamel Guedri, Fehmi Gamaoun, Significance of thermal phenomena and mechanisms of heat transfer through the dynamics of second-grade micropolar nanofluids, Sustainability, 14 (2022) 9361. https://doi.org/10.3390/ su14159361. **(IF=3.9) (W, Switzerland)**

64. **Aziz Ullah Awan**, Fahad S. Al-Mubaddel, Sumble Ahmad, Nadeem Abbas and Mohammad Mahtab Alam, Significance of thermal radiation, Lorentz force, and non-Darcian porous medium on the dynamics of second-grade fluid subject to exponential stretching sheet, Waves in Random and Complex Media, (2022). https://doi.org/10.1080/17455030.2022.2111030. **(IF=4.051) (W, United Kingdom)**

65. **Aziz Ullah Awan**, Asia Ali Akbar, Haneen Hamam, Fehmi Gamaoun, ElSayed M. Tag El Din, Amal Abdulrahman, Characterization of the induced magnetic field on the third-grade micropolar fluid flow across an exponentially stretched sheet, Frontiers in Physics, 10 (2022) 964653. https://doi:10.3389/fphy.2022.964653. **(IF=3.718) (W, Switzerland)**

66. Hamood Ur Rehman, **Aziz Ullah Awan**, ElSayed M. Tag-ElDin, Uzma Bashir, Seham Ayesh Allahyani, Construction of exact solutions for Gilson–Pickering model using two different approaches, Universe, 8 (2022) 592. https://doi.org/10.3390/universe8110592. **(IF=2.9) (X, Switzerland)**

67. Muhammad Hasnain Shahzad, **Aziz Ullah Awan**, Salman Akhtar, Sohail Nadeem, Entropy and stability analysis on blood flow with nanoparticles through a stenosed artery having permeable walls, Science Progress, 105(2) (2022) 1-34. https://doi.org/10.1177/00368504221096000. **(IF=2.1) (W, United Kingdom)**

68. Asia Ali Akbar, **Aziz Ullah Awan**, Mutasem Z. Bani-Fwaz, ElSayed M. Tag-ElDin, Kamel Guedri, Mansour F. Yassen, Bagh Ali, Linear and quadratic convection significance on the dynamics of MHD Maxwell fluid subject to stretched surface, Frontiers in Physics, 10 (2022) 974681. https://doi: 10.3389/fphy.2022.974681. **(IF=3.718) (W, Switzerland)**

69. Takasar Hussain, **Aziz Ullah Awan**, Kashif Ali Abro, Muhammad Ozair, Mehwish Manzoor, José Francisco Gómez-Aguilar, and Ahmed M. Galal, A passive verses active exposure of mathematical smoking model : A role for optimal and dynamical control, Nonlinear Engineering, 11 (2022) 507-521. https://doi.org/10.1515/nleng-2022-0214. **(IF=0.52) (X, Germany)**

70. Asia Ali Akbar, **Aziz Ullah Awan**, Nadeem Abbas, Significance of SWCNTs and MWCNTs on the dynamics of hybrid nanofluid flow over a stretching surface, Waves in Random and Complex

Media, (2022). https://doi.org/10.1080/17455030.2022.2119299. **(IF=4.051) (W, United Kingdom)**

71. Hamood-Ur-Rehman, **Aziz Ullah Awan**, Seham Ayesh Allahyani, ElSayed M. Tag-ElDin, Muhammad Ahsan Binyamin, Sadia Yasin, Exact solution of paraxial wave dynamical model with Kerr media by using $\phi 6$ model expansion technique, Results in Physics, 42 (2022) 105975. https://doi.org/10.1016/j.rinp.2022.105975. **(IF=5.3) (W, Netherlands)**
72. Bagh Ali, N. Ameer Ahammad, **Aziz Ullah Awan**, Abayomi S. Oke, ElSayed M. Tag-ElDin, Farooq Ahmed Shah, Sonia Majeed, The dynamics of water-based nanofluid subject to the nanoparticle's radius with a significant magnetic field: The case of rotating micropolar fluid, Sustainability, 14 (2022) 10474. https://doi.org/10.3390/su141710474. **(IF=3.9) (W, Switzerland)**
73. Asia Ali Akbar, N. Ameer Ahammad, **Aziz Ullah Awan**, Ahmed Kadhim Hussein, Fehmi Gamaoun, ElSayed M. Tag-ElDin, Bagh Ali, Insight into the role of nanoparticles shape factors and diameter on the dynamics of rotating water-based fluid, Nanomaterials, 12 (2022) 2801. https://doi.org/10.3390/nano12162801. **(IF=5.3) (W, Switzerland)**
74. Salman Akhtar, Muhammad Hasnain Shahzad, Sohail Nadeem, **Aziz Ullah Awan**, Shahah Almutairi, Hassan Ali Ghazwani, Mohamed Mahmoud Sayed, Analytical solutions of PDEs by unique polynomials for peristaltic flow of heated Rabinowitsch fluid through an elliptic duct, Scientific Reports, 12 (2022) 12943. https://doi.org/10.1038/s41598-022-17044-y. **(IF=4.996) (W, United Kingdom)**
75. Seham Ayesh Allahyani, Hamood Ur Rehman, **Aziz Ullah Awan**, ElSayed M. Tag-ElDin, Mahmood Ul Hassan, Diverse variety of exact solutions for nonlinear Gilson–Pickering equation, Symmetry, 14 (2022) 2151. https://doi.org/10.3390/sym14102151. **(IF=2.7) (W, Switzerland)**
76. M. Hasnain Shahzad, N. Ameer Ahammad, Sohail Nadeem, Seham Ayesh Allahyani, ElSayed M. Tag-ElDin, **Aziz Ullah Awan**, Sensitivity analysis for Rabinowitsch fluid flow based on permeable artery constricted with multiple stenosis of various shapes, Biomass Conversion and Biorefinery, (2022). https://doi.org/10.1007/s13399-022-03311-5. **(IF=4) (X, Germany)**
77. Kamel Guedri, N. Ameer Ahammad, Sohail Nadeem, ElSayed M. Tag-ElDin, **Aziz Ullah Awan**, Mansour F. Yassen, Insight into the heat transfer of third-grade micropolar fluid over an exponentially stretched surface, Scientific Reports, 12 (2022) 15577. https://doi.org/10.1038/s41598-022-19124-5. **(IF=4.996) (W, United Kingdom)**
78. Muhammad Umair Shahzad, Hamood Ur Rehman, **Aziz Ullah Awan**, ElSayed M. Tag-ElDin, Attiq Ur Rehman, Motion of particles around time conformal dilaton black holes, Symmetry, 14 (2022) 2033. https://doi.org/10.3390/sym14102033. **(IF=2.7) (W, Switzerland)**
79. Bagh Ali, N. Ameer Ahammad, **Aziz Ullah Awan**, Kamel Guedri, ElSayed M. Tag-ElDin, Sonia Majeed, Dynamics of rotating micropolar fluid over a stretch surface : the case of linear and quadratic convection significance in thermal management, Nanomaterials, 12 (2022), 3100. https://doi.org/10.3390/nano12183100. **(IF=5.3) (W, Switzerland)**

80. Syed Asif Ali Shah, N. Ameer Ahammad, Bagh Ali, Kamel Guedri, **Aziz Ullah Awan**, Fehmi Gamaoun, ElSayed M. Tag-ElDin, Significance of bio-Convection, MHD, thermal radiation and activation energy across Prandtl nanofluid flow: A case of stretching cylinder, International Communications in Heat and Mass Transfer, 137 (2022) 106299. https://doi.org/10.1016/j.icheatmasstransfer.2022.106299. **(IF=7) (W, United Kingdom)**
81. Hamood ur Rehman, **Aziz Ullah Awan**, ElSayed M. Tag-ElDin, Sharifah E. Alhazmi, Mansour F. Yassen, Rizwan Haider, Extended hyperbolic function method for the (2+1)-dimensional nonlinear soliton equation, Results in Physics, 40 (2022) 105802. https://doi.org/10.1016/j.rinp.2022.105802. **(IF=5.3) (W, Netherlands)**
82. Hamood ur Rehman, **Aziz Ullah Awan**, Azka Habib, Fehmi Gamaoun, ElSayed M. Tag El Din, Ahmed M. Galal, Solitary wave solutions for a strain wave equation in a microstructured solid, Results in Physics, 39 (2022) 105755. https://doi.org/10.1016/j.rinp.2022.105755. **(IF=5.3) (W, Netherlands)**
83. Syed Asif Ali Shah, N. Ameer Ahammad, ElSayed M. Tag El Din, Fehmi Gamaoun, **Aziz Ullah Awan**, Bagh Ali, Bio-convection effects on Prandtl hybrid nanofluid flow with chemical reaction and motile microorganism over a stretching sheet, Nanomaterials, 12 (2022) 2174. https://doi.org/10.3390/nano12132174. **(IF=5.3) (W, Switzerland)**
84. Hamood Ur Rehman, **Aziz Ullah Awan**, Kashif Ali Abro, ElSayed M. Tag El Din, Sobia Jafar, Ahmed M. Galal, A non-linear study of optical solitons for Kaup-Newell equation without four-wave mixing, Journal of King Saud University - Science, 34(5) (2022) 102056. https://doi.org/10.1016/j.jksus.2022.102056. **(IF=3.8) (W, Netherlands)**
85. Nehad Ali Shah, **Aziz Ullah Awan**, Rabia Khan, Iskander Tlili, M. Umar Farooq, Bashir Salah, Jae Dong Chung, Free convection Hartmann flow of a viscous fluid with damped thermal transport through cylindrical tube, Chinese Journal of Physics, 80 (2022) 19-33. https://doi.org/10.1016/j.cjph.2021.09.019. **(IF=5) (W, Taiwan)**
86. Piyu Li, Faisal Z. Duraihem, **Aziz Ullah Awan**, A. Al-Zubaidi, Nadeem Abbas, Daud Ahmad, Heat transfer of hybrid nanomaterials base Maxwell micropolar fluid flow over an exponentially stretching surface, Nanomaterials, 12 (2022) 1207. https://doi.org/10.3390/nano12071207. **(IF=5.3) (W, Switzerland)**
87. Muhammad Ozair, Takasar Hussain, **Aziz Ullah Awan**, Muhammad Tanveer, Kainat Ashfaq, Muhammad Awais, Investigation from sensitivity to optimality for the transmission and detection of pine wilt disease, The European Physical Journal Plus, 137 (2022) 258. https://doi.org/10.1140/epjp/s13360-022-02465-5. **(IF=3.4) (W, United States)**
88. Arshad Riaz, **Aziz Ullah Awan**, Sajad Hussain, Sami Ullah Khan, Kashif Ali Abro, Effects of solid particles on fluid-particulate phase flow of non-Newtonian fluid through eccentric annuli having thin peristaltic walls, Journal of Thermal Analysis and Calorimetry, 147(2) (2022) 1645-1656. https://doi.org/10.1007/s10973-020-10447-x. **(IF=4.4) (W, Netherlands)**
89. **Aziz Ullah Awan**, Samia Riaz, Kashif Ali Abro, Ayesha Siddiqa, Qasim Ali, The role of relaxation and retardation phenomenon of Oldroyd-B fluid flow through Stehfest's and Tzou's

algorithms, Nonlinear Engineering - Modeling and Application, 11 (2022) 35-46. https://doi.org/10.1515/nleng-2022-0006. **(IF=0.52) (X, Germany)**

Published in 2021

90. Takasar Hussain, Muhammad Ozair, Ammara Komal, **Aziz Ullah Awan**, B. Alshahrani, Sayed F. Abdelwahab, Abdel-Haleem Abdel-Aty, Theoretical assessment of cholera disease and its control measures, Chaos, Solitons and Fractals, 153 (2021) 111528. https://doi.org/10.1016/j.chaos.2021.111528. **(IF=9.924)**
91. Muhammad Ozair, Takasar Hussain, Kashif Ali Abro, Sajid Jameel, **Aziz Ullah Awan**, Role of pine wilt disease based on optimal control strategy at multiple scales: A case study of Korea, Journal of Biosciences, 46 (2021) 93. https://doi: 10.1038/s41598-020-60088-1. **(IF=2.795)**
92. Muhammad Tahir, **Aziz Ullah Awan**, Kashif Ali Abro, Extraction of optical solitons in birefringent fibers for Biswas-Arshed **equation** via extended trial equation method, Nonlinear Engineering, 10(1) (2021) 146–158. https://doi.org/10.1515/nleng-2021-0011.
93. Adnan Aslam, Muhammad Ozair, Takasar Hussain, **Aziz Ullah Awan**, Fatima Tasneem, Nehad Ali Shah, Transmission and epidemiological trends of pine wilt disease : Findings from sensitivity to optimality, Results in Physics, 26 (2021) 104443. https://doi.org/10.1016/j.rinp.2021.104443. **(IF=4.565)**
94. **Aziz Ullah Awan**, Attia Sharif, Kashif Ali Abro, Muhammad Ozair, Takasar Hussain, Dynamical aspects of smoking model with cravings to smoke, Nonlinear Engineering, 10(1) (2021) 91-108. https://doi.org/10.1515/nleng-2021-0008.
95. Qasim Ali, Samia Riaz, **Aziz Ullah Awan**, Kashif Ali Abro, A mathematical model for thermography on viscous fluid based on damped thermal flux, Zeitschrift für Naturforschung A - A Journal of Physical Sciences, 76(3) (2021) 285-294. https://doi.org/10.1515/zna-2020-0322. **(IF=1.712)**
96. **Aziz Ullah Awan**, Qasim Ali, Samia Riaz, Nehad Ali Shah, Jae Dong Chung, A thermal optimization through an innovative mechanism of free convection flow of Jeffrey fluid using non-local kernel, Case Studies in Thermal Engineering, 24 (2021) 100851. https://doi.org/10.1016/j.csite.2021.100851. **(IF=6.268)**
97. **Aziz Ullah Awan**, Muhammad Tahir, Kashif Ali Abro, Multiple soliton solutions with nonlinear Chiral Schrodinger's equation in (2+1)-dimensions, European Journal of Mechanics / B Fluids, 85 (2021) 68-75. https://doi.org/10.1016/j.euromechflu.2020.07.014. **(IF=2.589)**
98. **Aziz Ullah Awan**, Hamood Ur Rehman, Muhammad Tahir, Muhammad Ramzan, Optical soliton solutions for resonant Schrodinger equation with anti-cubic nonlinearity, Optik, 227 (2021) 165496. https://doi.org/10.1016/j.ijleo. 2020.165496. **(IF=2.84)**

96. Takasar Hussain, **Aziz Ullah Awan**, Kashif Ali Abro, Muhammad Ozair, Mehwish Manzoor, A mathematical and parametric study of epidemiological smoking model: a deterministic stability and optimality for solutions, The European Physical Journal Plus, (2021) 136:11. https://doi.org/10.1140/epjp/s13360-020-00979-4. **(IF=3.911)**

Published in 2020

100. Muhammad Ozair, Takasar Hussain, Mureed Hussain, **Aziz Ullah Awan**, Dumitru Baleanu, Kashif Ali Abro, A mathematical and statistical estimation of potential transmission and severity of COVID-19 : A combined study of Romania and Pakistan, BioMed Research International, 2020 (2020) 5607236, 14 pages. https://doi.org/10.1155/2020/5607236. **(IF=3.411)**

101. **Aziz Ullah Awan**, Samia Riaz, Samina Sattar, Kashif Ali Abro, Fractional modeling and synchronization of ferrofluid on free convection flow with magnetolysis, The European Physical Journal Plus, (2020) 135:841. https://doi.org/10.1140/epjp/s13360-020-00852-4. **(IF=3.911)**

102. **Aziz Ullah Awan**, Sana Abid, Nadeem Abbas, Theoretical study of unsteady oblique stagnation point based Jaffrey nanofluid flow over an oscillatory stretching sheet, Advances in Mechanical Engineering, 12(11) (2020) 1-13. https://doi.org/10.1177%2F1687814020971881. **(IF=1.316)**

103. Qasim Ali, Samia Riaz, **Aziz Ullah Awan**, Kashif Ali Abro, Thermal investigation for electrified convection flow of Newtonian fluid subjected to damped thermal flux on a permeable medium, Physica Scripta, 95 (2020) 115003. https://doi.org/10.1088/1402-4896/abbc2e. **(IF=2.487)**

104. J. Romero, **A. U. Awan**, A. Sharif, T. Hussain, M. Ozair, A. Aslam, F. Ali, Analysis of a mathematical model for the pine wilt disease using a graph theoretic approach, Applied Sciences, 22 (2020) 189-204. http://www.mathem.pub.ro/apps/v22/A22-ro-ZAH33.pdf.

105. Qasim Ali, Samia Riaz, **Aziz Ullah Awan**, Free convection MHD flow of viscous fluid by means of damped shear and thermal flux in a vertical circular tube, Physica Scripta, 95 (2020) 095212. https://doi.org/10.1088/1402-4896/abab39. **(IF=2.487)**

106. **Aziz Ullah Awan**, Sana Abid, Naeem Ullah, Sohail Nadeem, Magnetohydrodynamic oblique stagnation point flow of second grade fluid over an oscillatory stretching surface, Results in Physics, 18 (2020), 103233. https://doi.org/10.1016/j.rinp.2020.103233. **(IF=4.476)**

107. **Aziz Ullah Awan**, Muhammad Tahir, Hamood Ur Rehman, Singular and bright singular combo optical solitons in birefringent to the Biswas–Arshed equation, Optik, 210 (2020) 164489. https://doi.org/10.1016/j.ijleo.2020.164489. **(IF=2.443)**

108. Muhammad Tahir, **Aziz Ullah Awan**, Optical dark and singular solitons to the Biswas-Arshed equation in birefringent fibers without four-wave mixing, Optik, 207 (2020) 164421. https://doi.org/10.1016/j.ijleo.2020.164421. **(IF=2.443)**

109. Muhammad Tahir, **Aziz Ullah Awan**, Mohamed S. Osman, Dumitru Baleanu, Maysaa M. Alqurashi, Abundant periodic wave solutions for fifth-order Sawada-Kotera equations, Results in Physics, 17 (2020) 103105. https://doi.org/10.1016/j.rinp.2020.103105. **(IF=4.476)**

110. **Aziz Ullah Awan**, Mukarram Ali, Kashif Ali Abro, Electroosmotic slip flow of Oldroyd-B fluid between two plates with non-singular kernel, Journal of Computational and Applied Mathematics, 376 (2020) 112885. https://doi.org/10.1016/j.cam.2020.112885. **(IF=2.621)**

111. Muhammad Ozair, Takasar Hussain, **Aziz Ullah Awan**, Adnan Aslam, Riaz Ahmad Khan, Farhad Ali, Fatima Tasneem, Bio-inspired analytical heuristics to study pine wilt disease model, Scientific Reports, 10 (2020) 3534. https://doi.org/10.1038/s41598-020600881. **(IF=4.379)**

112. Muhammad Tahir, **Aziz Ullah Awan**, Optical traveling wave solutions for the Biswas–Arshed model in Kerr and non-Kerr law media, Pramana Journal of Physics, (2020) 94 :29. https://doi.org/10.1007/s12043-019-1888-y **(IF=2.219)**

113. Muhammad Danial Hisham, **Aziz Ullah Awan**, Nehad Ali Shah, Iskander Tlili, Unsteady two-dimensional flow of pseudo-blood fluid in an arterial duct carrying stenosis, Physica A: Statistical Mechanics and its Applications, 550 (2020) 124126. https://doi.org/10.1016/j.physa.2019.124126. **(IF=3.263)**

114. Muhammad Tahir, **Aziz Ullah Awan**, Optical singular and dark solitons with Biswas-Arshed model by modified simple equation method, Optik, 202 (2020) 163523. https://doi.org/10.1016/j.ijleo.2019.163523. **(IF=2.443)**

Published in 2009-2019

115. Takasar Hussain, Muhammad Ozair, Kazeem Oare Okosun, Muhammad Ishfaq, **Aziz Ullah Awan**, Adnan Aslam, Dynamics of swine influenza model with optimal control, Advances in Difference Equations, (2019) 2019:508 https://doi.org/10.1186/s13662-019-2434-4. **(IF=2.421)**

116. M. Tahir, **A. U. Awan**, The study of complexitons and periodic solitary wave solutions with fifth order KdV equation in (2+1)-dimensions, Modern Physics Letters B, 33 (2019) 1950411 (13 pages). https://doi.org/10.1142/S0217984919504116. **(IF=1.224)**

117. Muhammad Tahir, **Aziz Ullah Awan**, Analytical solitons with the Biswas-Milovic equation in the presence of spatio-temporal dispersion in non-Kerr law media, European Physical Journal Plus, 134 (2019) 464. https://doi 10.1140/epjp/i2019-12887-3. **(IF=3.228)**

118. Muhammad Tahir, **Aziz Ullah Awan**, Hamood ur Rehman, Optical solitons to Kundu–Eckhaus equation in birefringent fibers without four-wave mixing, Optik, 199 (2019) 163297. https://doi.org/10.1016/j.ijleo.2019.163297. **(IF=2.187)**

119. **Aziz Ullah Awan**, Nehad Ali Shah, Najma Ahmed, Qasim Ali, Samia Riaz, Analysis of free convection flow of viscous fluid with damped thermal and mass fluxes, Chinese Journal of Physics, 60 (2019) 98-106. https://doi.org/10.1016/j.cjph.2019.05.006. **(IF=2.638)**

120. Nauman Raza, **Aziz Ullah Awan**, Ehsan Ul Haque, Muhammad Abdullah, Muhammad Mehdi Rashidi, Unsteady flow of a Burgers' fluid with Caputo fractional derivatives: A hybrid technique, Ain Shams Engineering Journal, 10 (2019) 319-325. https://doi.org/10.1016/j.asej.2018.01.006. **(IF=1.949)**

121. M. Tahir, **A. U. Awan**, H. U. Rehman, Dark and singular optical solitons to the Biswas-Arshed model with Kerr and power law nonlinearity, Optik, 185 (2019) 777-783. https://doi.org/10.1016/j.ijleo.2019.03.108. **(IF=2.187)**

122. **A. U. Awan**, M. Tahir, H. U. Rehman, On traveling wave solutions: The Wu-Zhang system describing dispersive long waves, Modern Physics Letters B, 33(6) (2019) 1950059 (11 pages). https://doi.org/10.1142/S0217984919500593. **(IF=1.224)**

123. **Aziz Ullah Awan**, Muhammad Danial Hisham, Nauman Raza, The effect of slip on electroosmotic flow of a second grade fluid between two plates with Caputo-Fabrizio time fractional derivatives, Canadian Journal of Physics, 97(5) (2019) 509-516. https://doi.org/10.1139/cjp-2018-0406. **(IF=1.032)**

124. Muhammad Danial Hisham, Abdul Rauf, Dumitru Veiru, **Aziz Ullah Awan**, Analytical and semi-analytical solutions to flows of two immiscible Maxwell fluids between moving plates, Chinese Journal of Physics, 56 (2018) 3020-3032. https://doi.org/10.1016/j.cjph.2018.10.009. **(IF=2.544)**

125. Anwar Ali, Madeeha Tahir, Rabia Safdar, **Aziz Ullah Awan**, Muhammad Imran, Maria Javaid, Magnetohydrodynamics oscillating rotating flows of Maxwell electrically conducting fluids in a porous plane, Punjab University Journal of Mathematics, 50(4) (2018) 61-71. http://pu.edu.pk/images/journal/maths/PDF/Paper-5_50_4_2018.pdf. **(Local HEC Recognized, X Category)**

126. **Aziz Ullah Awan**, Takasar Hussain, Kazeem Oare Okosun and Muhammad Ozair, Qualitative analysis and sensitivity based optimal control of pine wilt disease, Advances in Difference Equations, (2018) 2018:27. https://doi.org/10.1186/s13662-018-1486-1. **(IF=1.510)**

127. Ehsan Ul Haque, **Aziz Ullah Awan**, Nauman Raza, Muhammad Abdullah, Maqbool Ahmad Chaudhry, A computational approach for the unsteady flow of Maxwell fluid with Caputo fractional derivatives, Alexandria Engineering Journal, 57 (2018) 2601-2608. https://doi.org/10.1016/j.aej.2017.07.012. **(IF=3.696)**

128. Nauman Raza, M. Abdullah, Asma Rashid Butt, **Aziz Ullah Awan**, Ehsan Ul Haque, Flow of a second-grade fluid with fractional derivatives due to a quadratic time dependent shear stress, Alexandria Engineering Journal, 57 (2018) 1963-1969. https://doi.org/10.1016/j.aej.2017.04.004. **(IF=3.696)**

129. N. Raza, E. U. Haque, M. M. Rashidi, **A. U. Awan**, M. Abdullah, Oscillating motion of an Oldroyd-B fluid with fractional derivatives in a circular cylinder, Journal of Applied Fluid Mechanics, 10(5) (2017) 1421-1426. http://dx.doi.org/10.18869/acadpub.jafm.73.242.27079. **(IF=1.090)**

130. Nauman Raza, Ehsan Ul Haque, **Aziz Ullah Awan**, M. Abdullah, Maqbool Ahmad Chaudhry, A new hybrid technique for the solution of a Maxwell fluid with fractional derivatives in a circular pipe, Journal of Applied Environmental and Biological Sciences, 7(10) (2017) 195-206. **(ISI)**

131. Arshad Riaz, Abdul Razaq, **Aziz Ullah Awan**, Magnetic field and permeability effects on Jeffrey fluid in eccentric tubes having flexible porous boundaries, Journal of Magnetics, 22(4) (2017) 642-648. https://doi.org/10.4283/JMAG.2017.22.4.642. **(IF=0.628)**

132. **Aziz Ullah Awan**, Attia Sharif, Takasar Hussain, Muhammad Ozair, Smoking model with cravings to smoke, Advanced Studies in Biology, 9(1) (2017), 31-41. https://doi.org/10.12988/asb.2017.61245. **(ISI)**

133. **Aziz Ullah Awan**, Takasar Hussain, Umara Iqbal, Nita H. Shah, Muhammad Ozair, Qualitative behavior of pine wilt disease model, Journal of Basic and Applied Research International, 19(3) (2016), 206-218. **(Non-IF Foreign Journal Paper)**

134. **A. U. Awan**, Rabia Safdar, M. Imran, Aneela Shaukat, Effects of chemical reaction on the unsteady flow of an incompressible fluid over a vertical oscillating plate, Punjab University Journal of Mathematics, 48(2) (2016), 167-182. http://pu.edu.pk/images/journal/maths/PDF/Paper-13-48-2-16.pdf. **(Local HEC Recognized, X Category)**

135. **Aziz Ullah Awan**, Muhammad Ozair, Qamar Din, Takasar Hussain, Stability analysis of pine wilt disease model by periodic use of insecticides, Journal of Biological Dynamics, 10:1 (2016) 506-524, http://doi: 10.1080/17513758.2016.1225828. **(IF=1.279)**

136. M. Ozair, Q. Din, T. Hussain, **A. U. Awan**, Qualitative behavior of vector-borne disease model, Journal of Nonlinear Science and Applications, 9 (2016), 1382-1395. http://dx.doi.org/10.22436/jnsa.009.03.62. **(IF=1.340)**

137. M. Imran, Madeeha Tahir, M. A. Imran, **A. U. Awan**, Taylor-Couette flow of an Oldroyd-B fluid in an annulus subject to a time-dependent rotation, American Journal of Applied Mathematics, 3 (3-1) (2015), 25-31. http://doi:10.11648/j.ajam.s.2015030301.15. **(Non-IF Foreign Journal Paper)**

138. M. Athar, **A. U. Awan**, Corina Fetecau, Mehwish Rana, Unsteady flow of a Maxwell fluid with fractional derivatives in a circular cylinder moving with nonlinear velocity, Quaestiones Mathematicae, 37 (2014), 139-156. https://doi.org/10.2989/16073606.2014.871445. **(IF=0.542)**

139. **A. U. Awan**, M. Imran, M. Athar, M. Kamran, Exact analytical solutions for a longitudinal flow of a fractional Maxwell fluid between two coaxial cylinders, Punjab University Journal of Mathematics, 45 (2013) 9-23. http://pu.edu.pk/images/journal/maths/PDF/paper2_v45_2013.pdf. **(Local HEC Recognized, X Category)**

140. M. Imran, **A. U. Awan**, Mehwish Rana, M. Athar, M. Kamran, Exact solutions for the axial Couette flow of a fractional Maxwell fluid in an annulus, ISRN Mathematical Physics, Volume 2012 (2012), Article ID 209678. https://doi.org/10.5402/2012/209678. **(Non-IF Foreign Journal Paper)**

141. A. Mahmood, N. A. Khan, I. Siddique, A. Zada, **A. U. Awan**, A note on the unsteady torsional sinusoidal flow of fractional viscoelastic fluid in an annular cylinder, Journal of King Saud University-Science, 23(4) (2011) 341-347. https://doi.org/10.1016/j.jksus.2010.07.022. **(Non-IF**

Foreign Journal Paper)

142. M. Imran, M. Athar, M. Kamran, **A. U. Awan**, Some study on the unsteady constantly accelerating rotational flow of a fractional Oldroyd-B fluid, Science International (Lahore), 23(3) (2011) 175-182. **(Local HEC Recognized in 2011, X Category)**
143. M. Jamil, **A. U. Awan**, D. Vieru, Unsteady helical flows of Maxwell fluids via prescribed shear stresses, Bulletin of the Polytechnic Institute of Iasi, Tome LVII (LXI), Fasc. 1 (2011) 137-148. **(International Conference Paper)**
144. Corina Fetecau, **A. U. Awan**, Nazish Shahid, Axial-Couette flow of an Oldroyd-B fluid in an annulus due to a time dependent shear stress, Bulletin of the Polytechnic Institute of Iasi, Tome LVII (LXI), Fasc. 4 (2011) 13-25. **(International Conference Paper)**
145. M. Nazar, Corina Fetecau, **A. U. Awan**, A note on the unsteady flow of a generalized second-grade fluid through a circular cylinder subject to a time dependent shear stress, Nonlinear Analysis: Real World Applications, 11(4) (2010) 2207-2214. https://doi.org/10.1016/j.nonrwa.2009.06.010. **(IF=2.138)**
146. **A. U. Awan**, Corina Fetecau, Qammar Rubbab, Axial Couette flow of a generalized Oldroyd-B fluid due to a longitudinal time-dependent shear stress, Quaestiones Mathematicae, 33(4) (2010), 429–441. http://doi: 10.2989/16073606.2010.541611. **(IF=0.412)**
147. C. Fetecau, **A. U. Awan**, M. Athar, A note on Taylor-Couette flow of a generalized second grade fluid due to a constant couple, Nonlinear Analysis: Modelling and Control, 15 (2) (2010) 155-158. https://doi.org/10.15388/NA.2010.15.2.14351. **(IF=0.400)**
148. W. Akhtar, Corina Fetecau, **A. U. Awan**, Exact solutions for the Poiseuille flow of a generalized maxwell fluid induced by time-dependent shear stress, ANZIAM Journal, 51 (2010) 416-429. http://doi:10.1017/S1446181111000514. **(IF=0.414)**
149. M. Athar, C. Fetecau, Corina Fetecau, **A. U. Awan**, Exact solutions for the flow of a generalized second grade fluid due to a longitudinal quadratic time-dependent shear stress, International Journal of Industrial Mathematics, 2(3) (2010) 153-165. **(Non-IF Foreign Journal Paper)**
150. C. Fetecau, A. U. Awan**,** Corina Fetecau, Taylor-Couette flow of an Oldroyd-B fluid in a circular cylinder subject to a time-dependent rotation, Bull. Math. Soc. Sci. Math. Romania (Mathematical Bulletin of the Society of Mathematical Sciences of Romania), 52(2) (100) (2009) 117-128. https://www.jstor.org/stable/43679123. **(IF=0.554)**
151. Corina Fetecau, Florina-Liliana Buzescu, **A. U. Awan**, C. Fetecau, Exact solutions for some oscillating motions of Oldroyd-B fluids, International Journal of Liquid State Sciences, 1(1) (2009) 43-52. **(Non-IF Foreign Journal Paper)**
152. **A. U. Awan**, Corina Fetecau, M. Imran, Some exact solutions for the flow of a generalized Oldroyd-B fluid between two side walls perpendicular to a plate, Bulletin of the Polytechnic Institute of Iasi, Tome LV (LIX), Fasc. 1 (2009) 1-9. **(International Conference Paper)**

Thesis Supervision

- **Ph.D**

1. Mr. Muhammad Hasnain Shahzad, Mathematical Analysis of Blood Flow through Diseased Vessels, 2024.
2. Mr. Syed Asif Ali Shah, Numerical Computations of Hybrid Nanofluids Flow across Macro Geometries, 2024.
3. Mr. Qasim Ali, Analysis of Free Convection Flow with Damping for Different Fluids, 2021.
4. Mr. Muhammad Tahir, Analytical Study on Optical Solitons and Exact Traveling Wave Solutions of Nonlinear Partial Differential Equations, 2020.
5. Mr. Muhammad Danial Hisham, Unsteady Flows of Newtonian and non-Newtonian Fluids through Rectangular Channels, 2020.

❖ **M.Phil**

1. Miss Shanza Nazeer, Numerical Study of Dusty Fluid Flow with Variable Thermal Conductivity, 2025.
2. Miss Amna Riaz, Mathematical Analysis of MERS-CoV Transmission with Epidemic Solution, 2025.
3. Mr. Sadam Hussain, Computational Analysis of Blood Flow Patterns in Arteries with Multiple Stenosis, 2025.
4. Mr. Muhammad Mudassar Bilal, Analyzing the Dynamics of Lassa Virus Epidemics with Control Interventions Using Real-World Data, 2025.
5. Miss Aleeza Arshad, Investigation of Sutterby Fluid Flow through an Elliptic Arterial Channel with Multiple Stenosis, 2024.
6. Mr. Zahid Iqbal, Epidemiological Modeling of Rabies Transmission Patterns, 2024.
7. Miss Madiha Akram, Analytical Investigation of Peristaltic Flow of Eyring-Powell Nanofluid through an Elliptical Conduit, 2024.
8. Miss Sidra Qayyum, Investigation of Nanofluid Flow over a Riga Plate, 2023.
9. Miss Sidra Shafique, Study of Prandtl Fluid Flow in an Elliptic Stenosed Artery, 2023.
10. Mr. Yasir Ramzan, Mathematical Modeling and Control Strategies for Lassa Fever, 2023.
11. Miss Asia Ali Akbar, Theoretical Investigation of Nanofluids Flow over Stretching Surfaces, 2022.
12. Miss Sonia Majeed, Significance of Hybrid Nanoparticles, Lorentz and Coriolis Forces on the Dynamics of Water Based Flow, 2022.
13. Mr. Syed Azkar Hussain Shah Bukhari, Study of Colonic Crypt and Colorectal Cancer Model through Fractional Derivative, 2022.
14. Mr. Muzammil Hussain, Mathematical Analysis of Non-Newtonian Fluid Flow over a Stretching Surface, 2021.
15. Mr. Farooq Imran, Study of Nanofluid Flow with Variable Viscosity, 2021.
16. Miss Mashal Aziz, Some Study of Second Grade Fluid over an Oscillatory Stretching Surface with Slip Effects, 2020.
17. Miss Sana Abid, Magnetohydrodynamics Stagnation Point Flow of Differential Type Fluid, 2020.

18. Mr. Muhammad Aqib Ijaz, Analysis of Free Convection Flow of Casson Fluid with Damped Mass and Thermal Fluxes, 2019.
19. Mr. Mukarram Ali, Electroosmotic Flow of an Oldroyd-B Fluid with Caputo- Fabrizio Fractional Derivative, 2019.
20. Miss Maria Siddique, Qualitative Analysis of Go-Clean Model, 2019.
21. Miss Kiran Mazhar, Free Convective Flow of Electrically Conducting Fluids in the Presence of Magnetic Field, 2018.
22. Attia Sharif, Mathematical Analysis of Smoking Model with Cravings to Smoke, 2017.
23. Mr. Qasim Ali, Qualitative Analysis of Epidemic Model of Measles, 2017.
24. Miss Ummara Iqbal, Mathematical Study on the Transmission of Pine Wilt Disease, 2016.
25. Miss Aneela Shaukat, Chemical Reaction Effect of an Unsteady Incompressible Flow on a Vertical Oscillating Plate, 2016.
26. Mr. Burhan Ul Haq, Free Convection Flow near an Oscillating Vertical Plate, 2015.

Research Evaluation

❖ **M.Phil/Ph.D Thesis**

The following five Ph.D. Theses are evaluated:

1. Ms. Fakhra Umar, "Limiting K-Interpolation Methods with Iterated Logarithms" Public defense on December 18, 2024, Government College University, Faisalabad, Pakistan
2. Mr. Muhammad Madssar Kaleem, "Numerical Solutions of Fractional Oldroyd-B fluid with the Applications of Nanoparticles" Public defense on July 25, 2024, Department of Mathematics, University of Management and Technology, C-II, Johar Town, Lahore, Pakistan
3. Ms. Humaira Bashir, “Computing the 2-Metric Dimension of Graphs” Public defense on October 21, 2022, Department of Mathematics, University of Management and Technology, C-II, Johar Town, Lahore, Pakistan
4. Ms. Rabia Ilyas Butt, “On Stability Analysis of Fractional Difference Equations” Public defense on August 24, 2021, Department of Mathematics, School of Natural Sciences, NUST, Islamabad.
5. Mr. Syed Tauseef Saeed, “The Study of Differential and Rate Type Fluids over Different Surfaces,” Public defense on June 25, 2021, Department of Sciences and Humanities, NUCES-FAST, Lahore Campus, Lahore.

More than eighty M. Phil/MS theses evaluated from different universities in Pakistan

❖ **Research Papers**

Reviewed Research Papers (Referee) of the following Journals:

- Engineering Applications of Artificial Intelligence
- Case Studies in Thermal Engineering
- Scientific Reports
- Ain Shams Engineering Journal

- International Communications in Heat and Mass Transfer
- Nanomaterials; Water; Symmetry; Materials; Polymers; Applied Sciences
- Mathematical Problems
- Arabian Journal of Chemistry
- Journal of Applied Mathematics and Computing
- ZAMM - Journal of Applied Mathematics and Mechanics
- Scientific Journal of King Faisal University: Basic and Applied Sciences
- Journal of Optics
- Optik
- Physica D: Nonlinear Phenomena
- Annals of Mathematics and Physics
- Numerical Heat Transfer, Part A: Applications
- Aims Mathematics
- Journal of Fractional Calculus and Applications
- Canadian Journal of Physics
- Journal of Porous Media
- Physics of Fluids
- International Journal of Thermofluids
- International Journal of Applied and Computational Mathematics
- Physica Scripta
- Nonlinear Dynamics
- Waves in Random and Complex Media
- Computational and Mathematical Methods in Medicine
- Journal of Advanced Physics
- Computational and Mathematical Methods in Medicine
- Inderscience Online
- International Journal of Mathematical, Engineering and Management Sciences
- Helion
- Results in Physics
- Results in Engineering
- Journal of Biological Physics
- Chinese Journal of Physics
- Computer Methods in Biomechanics and Biomedical Engineering
- Journal of Ocean Engineering and Science
- Journal of Computational Design and Engineering
- Modern Physics Letters B
- International Journal of Modern Physics B
- Multidiscipline Modeling in Materials and Structures
- Numerical Methods for Partial Differential Equations

- Discover Applied Sciences

Conferences Attended/Organized

- A research paper presented at 4th Summer School "New Trends in Mathematical Sciences", Shangla Campus, University of Swat (August 5-9, 2024).
- A Research Paper Presented (online) at in 5-days International Faculty Development Program on "Exploring Research Frontiers in Dynamical Systems" organized by the Department of Mathematics Jointly with School of Emerging Sciences & Technology, Gujarat University, Ahmedabad, India (May 20-24, 2024).
- Invited Speaker, International Mathematics Day, Department of Mathematics, GC University, Faisalabad, March 10, 2024.
- A Research Paper Presented (online) at in "International Research Discussion on Computational Fluid Dynamics" organized by Division of Mathematics, School of Advanced Sciences, Vellore Institute of Technology, Chennai, India (July 24, 2023).
- Keynote Speaker at "1st International Conference on Mathematics and Applied Sciences, Department of Basic Sciences and Related Studies, Mehran UET (Shaheed Z.A. Bhutto Campus) Khairpur Mir's, Sindh, Pakistan" (March 21-23, 2022).
- A Research Paper Presented at "Two Day 1st International Conference on Pure and Applied Mathematics, Department of Mathematics, GC University, Faisalabad" (February 19-20, 2022).
- Participated in National Conference on Latest Trends in Mathematical Modeling and Simulation for two days at Abdus Salam School of Mathematical Sciences, GC University Lahore, December 14-15, 2021.
- Presented an online seminar entitled "Analysis of Non-Newtonian Fluid Flow" at the University of Education, Jauharabad Campus, November 13, 2021.
- Key Note Speaker at "5th International Conference on Pure and Applied Mathematics, Department of Mathematics, University of Sargodha, Sargodha" (February 24-25, 2020).
- A research paper presented at "6th UMT International Conference on Pure and Applied Mathematics, Centre for Mathematics and its Applications, UMT Lahore" (February 21-23, 2020).
- Participated in "Workshop on MATLAB Programming and its Applications in Computing, Department of Mathematics and Statistics, Riphah International University, Islamabad" (August 02-04, 2019).
- A seminar of Prof. Dr. Sohail Nadeem is organized in the Department of Mathematics, University of the Punjab, Lahore, on February 28, 2019.
- Participated in "Workshop on Solitons and its Applications, Department of Mathematics, GC University Lahore" (January 07, 2019).
- A research paper presented at "4th International Conference on Pure and Applied Mathematics, Department of Mathematics, University of Sargodha, Sargodha" (December 21-22, 2018).
- A research paper presented at "2018-International Conference on Mathematics and its Applications, GC University, Lahore" (November 13-15, 2018).
- A research paper presented in "International Conference on Education, University of Education, Lahore" (March 15-17, 2018).
- A research paper presented at "2017 International Conference on Mathematics and its Applications, Department of Mathematics, GC University Lahore" (November 13-15, 2017).
- World Quality Day by QEC, University of the Punjab, Lahore (November 14, 2017).
- A research paper presented at "3rd International Conference on Pure and Applied Mathematics, Department of Mathematics, University of Sargodha, Sargodha" (November 10-11, 2017).
- A seminar presented "Centre for Mathematics and its Applications, University of Management and Technology, Lahore" (February 28, 2017).

- Participated in "Advancement in Pure and Applied Mathematics, Govt College University, Faisalabad" (January 24, 2017).
- A talk presented "One day Workshop, Department of Mathematics, University of Malakand" (December 13, 2016).
- A resource person for "One day Workshop, Govt Post Graduate College For women, Satellite Town, Gujranwala" (November 25, 2016).
- International Workshop on Nonlinear Analysis and Applications, UMT Lahore (October 01-03, 2016).
- World Quality Day by QEC, University of the Punjab, Lahore (April 05, 2016).
- 1st UMT Conference on Pure and Applied Mathematics, UMT Lahore (March 2015).
- Organizer, "International Conference on Relativistic Astrophysics" Department of Mathematics, University of the Punjab, Lahore (February 10-14, 2015).
- Indigenous on-Campus Training Program for Management Team, University of the Punjab, Lahore (December 22-26, 2014).
- CASM-PIEAS Workshop on Computational Fluid Dynamics and Scientific Computing (November 8-9, 2013).
- 5th International Conference on Recent Developments in Fluid Mechanics, QAU, Islamabad, Pakistan, 2013.
- 6th International Conference on 21st Century Mathematics, ASSMS, Lahore, 2013.
- 5th International Conference on 21st Century Mathematics, ASSMS, Lahore, 2011.
- 4th International Conference on 21st Century Mathematics, ASSMS, Lahore, 2009.
- 3th International Conference on Recent Developments in Fluid Mechanics, QAU, Islamabad, Pakistan, 2009.
- International Conference on Mathematics, LUMS, Lahore, 2008.
- 3rd International Conference on 21st Century Mathematics, ASSMS, Lahore, 2007.
- 1st international conference on relativity, University of the Punjab, Lahore, Pakistan, 2006.
- 1st International Conference on Statistics and Operational Research, University of the Punjab, Lahore, Pakistan, 2006.
- Second World Conference on 21st Century Mathematics, ASSMS, Lahore, 2005.

International Visits

- Department of Mathematics, Taibah University, Madinah, Saudi Arabia (September-October 2017).
- Department of Mathematics, Islamic University of Madinah, Saudi Arabia (September-October 2017).
- Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy (June 2018).

Services

- Member and resource person, Departmental Self-Assessment Manual, Quality Enhancement Cell, University of the Punjab, Lahore. (2014 – 2019)
- Member, Board of Studies, Department of Mathematics, Govt. College University, Faisalabad (2019-2022)
- Member, Board of Studies, Department of Mathematics, University of Okara, Okara (2019-Present)

- Member, Library Committee, Institute of Mathematics, University of the Punjab, Lahore (2016 – Present)
- Students Advisor, Department of Mathematics, University of the Punjab, Lahore (September 2012 – October 2015)
- In-charge, Students Hostels Affairs, Institute of Mathematics, University of the Punjab, Lahore (2013 – 2017) and (2023-Present)
- Member of BS Admission Committee, Department of Mathematics, University of the Punjab, Lahore (2015-2016)
- Member, Scholarship Committee, Institute of Mathematics, University of the Punjab, Lahore (2013 – Present)
- Coordinator for Seminar series held in Department of Mathematics, University of the Punjab, Lahore (2013 – 2015)
- Member, Doctoral Program Committee, Institute of Mathematics, University of the Punjab, Lahore (2013 – 2015, 2020 – Present)
- Member of MSc Admission Committee, Department of Mathematics, University of the Punjab, Lahore (2012 – 2014)
- Sports in-charge, Department of Mathematics, University of the Punjab, Lahore (2013 – 2015)
- Member, Board of Studies, Institute of Mathematics, University of the Punjab, Lahore (2013 – 2014, 2020 – Present)
- Member, Board of Studies, Department of Mathematics, University of Lahore, (2022 – 2024)
- Member, Purchase Committee, Institute of Mathematics, University of the Punjab, Lahore (2020 – Present)
- Staff Secretary, Department of Mathematics, University of the Punjab, Lahore (2012 – 2013)
- On duty during summer vacations (2012 – 2024)
- Member, Departmental Tenure Review Committee, Department of Mathematics, Govt. College University, Faisalabad (2024-Present)