

**Dr. AAMIR ALI**

Associate Professor

Department of Mathematics,

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**Office Phone #:** +92579049226

**Date of Birth:** November 16, 1984

**Academic qualification:**

**Ph.D. in Mathematics**, (2013) from COMSATS Institute of Information Technology, Islamabad, Pakistan.

(Ph.D. Thesis Title: Oscillatory Channel Flow for Newtonian and Non-Newtonian Fluids)

**MS in Mathematics**, (2009) from COMSATS Institute of Information Technology, Islamabad, Pakistan.

(MS Thesis Title: Asymptotic Solution for the Oscillatory Flow in a Porous Channel with Porous Medium)

**BS in Mathematics**, (2006) from COMSATS Institute of Information Technology, Islamabad, Pakistan.

(BS Project Title: A General Survey on Formation of Taylor Columns in Rotating Fluids)

**HSSC (Math, Physics, Computer)** (2002) from Govt. Post Graduate College Attock, Pakistan.

**SSC (Science)** (2000) from F. G. Boys High School, Sanjwal Cant, Attock, Pakistan.

**Details of Employment:**

1. Associate Professor in Department of Mathematics, COMSATS University Islamabad, Attock Campus from April 11, 2022 to date.
2. Assistant Professor in Department of Mathematics, COMSATS University Islamabad, Attock Campus from August 29, 2014 to April 10, 2022.
3. Assistant Professor in Department of Mathematics, COMSATS Institute of Information Technology, Islamabad from Sep 16, 2013 to Aug 29, 2014.

4. Lecturer in Department of Mathematics, COMSATS Institute of Information Technology, Islamabad from Sep 01, 2007 to Sep 15, 2013.
5. Visiting faculty in NUST Institute of Information Technology from Feb- July 2007.

### **Awards received:**

1. HEC Approved Supervisor.
2. Research Productivity Award from CIIT (2017).
3. Research Productivity Award from CIIT (2016).
4. Research Productivity Award from CIIT (2014).
5. Research Productivity Award from CIIT (2013).
6. 10 months post-doc at University de Nice Sophia Antipolis, France under Erasmus Mundus Mobility with Asia (EMMA).
7. Research Productivity Award from CIIT (2011).
8. Secure scholarship for MS and PhD from COMSATS under “In-house Study Program for Faculty desirous of Advanced Education”.
9. Full fee wavier for BS (Mathematics) from CIIT (2002-2006).
10. District government merit scholarship for the years 2005 and 2006.

### **Field of specialization:**

Applied Mathematics (Fluid Mechanics)

### **List of publications:**

1. B. Bibi, M. Ashraf, A. Ilyas and **Aamir Ali**, Influence of thermal stratification and porous media on transient mixed convection in coaxial pipe systems, Mod. Phys. Lett. B, 39 (29) (2025) 2550172.
2. **Aamir Ali**, A. A. Pasha, V. Tirth, M. M. Sarfraz, A. Algahtani and K. Irshad, Thermal analysis of MHD radiative flow of hybrid nanofluids in a porous medium between coaxial cylinders, J. Rad. Res. Appl. Sci. 18 (3) (2025) 101699.
3. A. Ihsan, **Aamir Ali** and A. U. Khan, Thermal analysis of electroosmotic flow in a vertical ciliated tube with viscous dissipation and heat source effects: implications for endoscopic applications, J. Therm. Anal. Calorim. 150 (4) (2025) 2727 - 2741.
4. D. Hacen, M. Abdallah, **Aamir Ali**, K. Mohamed, S. M. Rafik, S. A. Idris and I. Mahariq, Entropy generation and thermal performance analysis of MHD ternary hybrid

- nanofluid Jeffery-Hamel flow under heat generation/absorption, *Adv. Theory Simul.* 8 (7) (2025) 2401120.
5. A. Alrashdi, A. Sahreen, A. Ahmad, **Aamir Ali** and M. Ashraf, Impact of viscous dissipation on heat transfer and drag in polymeric non-Newtonian flow over a shrinking surface: Dual solution analysis, *J. Mol. Liq.* 435 (2025) 128155.
  6. A. Ihsan and **Aamir Ali**, Electrothermal blood flow of Casson hybrid nanofluid with complex cilia: Investigating nanoparticles for drug delivery applications, *J. Mol. Liq.* 437 (2025) 128432.
  7. T. Maryam, U. Ahmad, M. Ashraf and **Aamir Ali**, Computational analysis MHD natural convection flow round vertical thermally stratified Jet: Finite difference method in conjunction with primitive variable formulation, *Numer. Heat Transf. B Fundam.* 86 (11) (2025) 3909-3920.
  8. S. Anwar, U. Ahmad, M. Ashraf and **Aamir Ali**, Effects of temperature dependent density of the fluid on a plume generated by heat source in the presence of aligned magnetic field, *International Journal of Modelling and Simulation*, (2025) (accepted).
  9. S. Anwar, U. Ahmad, M. Ashraf and **Aamir Ali**, Computational study of the aligned magnetic field in a plume generated by the energy line source, *Numerical Heat Transfer, Part A: Applications*, (2024) (accepted).
  10. **Aamir Ali**, R. Khatoon, M. Ashraf and M. Awais, Cattaneo-Christov heat flux on MHD flow of hybrid nanofluid across stretched cylinder with radiations and Joule heating effects, *Waves in Random and Complex Media*, (2024) (accepted).
  11. H. J. Anjum and **Aamir Ali**, Influence of different waveforms on peristaltic flows; a qualitative investigation, *Waves in Random and Complex Media*, (2024) (accepted).
  12. **Aamir Ali**, Sunila Malik, M. Awais, A. S. Alqahtani and M. Y. Malik, MHD peristaltic flow of hybrid nanomaterials between compliant walls with slippage and radiation, *J. Mol. Liq.* 393 (2024) 123619.
  13. **Aamir Ali**, M. F. Afzaal, F. Tariq and S. Hussain, Cattaneo-Christov heat flux and thermal radiation in magnetohydrodynamic nanofluid flow over a bi-directional stretching/shrinking surface, *J. Nonlinear Math. Phys.* 31 (1) (2024) 7.

14. A. Ihsan, **Aamir Ali** and A. U. Khan, Complex cilia-generated flow of hybrid nanofluid with electroosmosis, viscous dissipation and slippage, *Int. J. Thermofluids*. 22 (2024) 100624.
15. **Aamir Ali**, H. J. Khan, I. Noor, A. A. Pasha, K. Irshad, M. K. Al Mesfer and M. Danish, Hall effects and Cattaneo-Christov heat flux on MHD flow of hybrid nanofluid over a varying thickness stretching surface, *Mod. Phys. Lett. B*, 38 (18) (2024) 2450130.
16. **Aamir Ali**, S. Hussain, T. Umber and M. Ashraf, Impact of second order slip on radiative MHD rotating flow in a channel, *J. Thermophys. Heat Trans.* 38 (2) (2024) 199-209.
17. **Aamir Ali**, M. F. Afzaal, M. Sulaiman, S. Hussain and M. Ashraf, Linear regression analysis of MHD Maxwell nanofluid flow over a stretched surface of varying thickness with heat flux and chemical reaction, *Mod. Phys. Lett. B*, 38 (24) (2024) 2450204.
18. **Aamir Ali**, Rabia, S. Hussain and M. Ashraf, Theoretical investigation of unsteady MHD flow of Casson hybrid nanofluid in porous medium: Applications of thermal radiations and nanoparticle, *J. Rad. Res. Appl. Sci.* 17 (3) (2024) 101029.
19. A. Ahmad, R. Nawaz and **Aamir Ali**, Impact of microorganisms on Blasius-Rayleigh-Stokes flow and heat transfer of nanofluid: A numerical study, *Z. Angew. Math. Mech. (ZAMM)*, 104 (12) (2024) e202300287.
20. F. Ali, M. Awais, **Aamir Ali**, N. Vrinceanu, Z. Shah and V. Tirth, Intelligent computing with Levenberg-Marquardt artificial neural network for Carbon nanotubes-water between stretchable rotating disks, *Sci. Rep.* 13 (1) (2023) 3901.
21. **Aamir Ali**, M. Ahmed, A. Ahmad and R. Nawaz, Enhanced heat transfer analysis of hybrid nanofluid over a Riga plate: Incorporating Lorentz forces and entropy generation, *Tribol. Int.* 188 (2023) 108844.
22. S. Hussain, **Aamir Ali**, K. Rasheed, A. A. Pasha, S. Algarni, T. Alqahtani and K. Irshad, Application of response surface methodology to optimize MHD nanofluid flow over a rotating disk with thermal radiation and joule heating, *Case Stud. Therm. Eng.* 52 (2023) 103715.
23. **Aamir Ali**, M. Awais, A. Al-Zubaidi, S. Saleem and D. N. Khan Marwat, Hartmann boundary layer in peristaltic flow for viscoelastic fluid: Existence, *Ain. Shams Eng. J.* 13 (2) (2022) 101555.

24. A. Ali, D. N. Khan Marwat and **Aamir Ali**, Analysis of flow and heat transfer over stretching/shrinking and porous surfaces, *J. Plast. Film Sheeting*, 38 (1) (2022) 21-45.
25. **Aamir Ali**, M. Maqsood, H. J. Anjum, M. Awais and M. Sulaiman, Analysis of heat transfer on MHD Jeffrey nanofluid flow over non-linear elongating surface of variable thickness, *Z. Angew. Math. Mech. (ZAMM)* 102 (2) (2022) e202100250.
26. **Aamir Ali**, M. Sajid, H. J. Anjum, M. Awais, K. S. Nisar and C. A. Saleel, Entropy generation analysis of peristaltic flow of nanomaterial in a rotating medium through generalized compliant walls of micro-channel with radiation and heat flux effects, *Micromachines*, 13 (3) (2022) 375.
27. H. J. Anjum and **Aamir Ali**, Quantifying particle adhesion to the ureteral walls during peristaltic flow, *Phy. Rev. E*, 105 (2) (2022) 024406.
28. F. Hussain, S. Saleem, M. Nazeer, F. S. Al-Mubaddel, **Aamir Ali**, A. Saleem and M. Saleem, Mathematical modeling and numerical solution of Cross-flow of Non-Newtonian fluid: Effects of viscous dissipation and slip boundary conditions, *Z. Angew. Math. Mech. (ZAMM)* 102 (3) (2022) e202100130.
29. M. Awais, M. Bibi, **Aamir Ali**, M. Y. Malik, K. S. Nisar and W. Jamshed, Numerical treatment for MHD axisymmetric rotating Bodewadt rheology under ohmic heating and viscous dissipation effects, *Sci. Rep.* 12 (1) (2022) 10097.
30. **Aamir Ali**, S. Mumraiz, H. J. Anjum, S. Asghar and M. Awais, Slippage phenomenon in hydro magnetic peristaltic rheology with hall current and viscous dissipation, *Int. J. Nonlinear Sci. and Numer. Simul.* 23 (5) (2022) 635-659.
31. **Aamir Ali**, H. S. Khan, S. Saleem and M. Hussain, EMHD nanofluid flow with radiation and variable heat flux effects along a Slandering stretching sheet, *Nanomaterials*, 12 (21) (2022) 3872.
32. S. Hussain, K. Rasheed, **Aamir Ali**, N. Vrinceanu, A. Alshehri and Z. Shah, A sensitivity analysis of MHD nanofluid flow across an exponentially stretched surface with non-uniform heat flux by response surface methodology, *Sci. Rep.* 12 (1) (2022) 18523.
33. M. Ashraf, A. Ilyas, Z. Ullah and **Aamir Ali**, Combined effects of viscous dissipation and magnetohydrodynamic on periodic heat transfer along a cone embedded in porous medium, *Proc. Inst. Mech. Eng. E: J. Process Mech. Eng.* 236 (6) (2022) 2325-2335.

34. M. Awais, H. Rehman, M. A. Z. Raja, S. E. Awan, **Aamir Ali**, M. Shoaib and M. Y. Malik, Hall effect on MHD Jeffrey fluid flow with Cattaneo-Christov heat flux model: An application of stochastic neural computing, *Complex Intell. Syst.* 8 (6) (2022) 5177-5201.
35. **Aamir Ali**, S. Saleem, S. Mumraiz, A. Saleem, M. Awais and D. N. Khan Marwat, Investigation on  $\text{TiO}_2\text{-Cu/H}_2\text{O}$  hybrid nanofluid with slip conditions in MHD peristaltic flow of Jeffery material, *J. Therm. Anal. Calorim.* 143 (3) (2021) 1985 – 1996.
36. S. Mumraiz, **Aamir Ali**, M. Awais, M. Shutaywi and Z. Shah, Entropy generation in electrical magnetohydrodynamic flow of  $\text{Al}_2\text{O}_3\text{-Cu/H}_2\text{O}$  hybrid nanofluid with non-uniform heat flux, *J. Therm. Anal. Calorim.* 143 (3) (2021) 2135 – 2148.
37. **Aamir Ali**, A. Noreen, S. Saleem, A. F. Aljohani and M. Awais, Heat transfer analysis of  $\text{Cu-Al}_2\text{O}_3$  hybrid nanofluid with heat flux and viscous dissipation, *J. Therm. Anal. Calorim.* 143 (3) (2021) 2367 – 2377.
38. M. Awais, P. Kumam, Memoona, **Aamir Ali**, Z. Shah and H. Alrabaian, Impact of activation energy on hyperbolic tangent nanofluid with mixed convection rheology and entropy optimization, *Alex. Eng. J.* 60 (1) (2021) 1123-1135.
39. W. U. Khan, M. Awais, N. Parveen, **Aamir Ali**, S. E. Awan, M. Y. Malik and Y. He, Analytical assessment of  $\text{Al}_2\text{O}_3\text{-Ag/H}_2\text{O}$  hybrid nanofluid influenced by induced magnetic field for second law analysis with mixed convection, viscous dissipation and heat generation, *Coatings*, 11 (5) (2021) 498.
40. U. Ahmad, M. Ashraf, A. Al-Zubaidi, **Aamir Ali** and S. Saleem, Effects of temperature dependent viscosity and thermal conductivity on natural convection flow along a curved surface in the presence of exothermic catalytic chemical reaction, *PLOS One*, 16 (7) (2021) e0252485.
41. **Aamir Ali**, T. Kanwal, M. Awais, Z. Shah, P. Kumam and P. Thounthong, Impact of thermal radiation and non-uniform heat flux on MHD hybrid nanofluid along a stretching cylinder, *Sci. Rep.* 11 (1) (2021) 20262.
42. **Aamir Ali**, Javairia Akhtar, H. J. Anjum, M. Awais, Z. Shah and P. Kumam, 3D nanofluid flow over exponentially expanding surface of Oldroyd-B fluid, *Ain. Shams Eng. J.* 12 (4) (2021) 3939-3946.

43. A. Ilyas, M. Ashraf, **Aamir Ali**, Z. Shah, P. Kumam and P. Thounthong, Heat source and sink effects on periodic mixed convection flow along the electrically conducting cone inserted in porous medium, *PLOS One*, 16 (12) (2021) e0260845.
44. N. Parveen, M. Awais, S. Mumraiz, **Aamir Ali** and M. Y. Malik, An estimation of pressure rise and heat transfer rate for hybrid nanofluid with endoscopic effects and induced magnetic field: computational intelligence application, *Eur. Phys. J. Plus*, 135 (11) (2020) 886.
45. M. Ashraf, A. Abbas, **Aamir Ali**, Z. Shah, H. Alrabaiah and E. Bonyah, Numerical simulation of the combined effects of Thermophoretic motion and variable thermal conductivity on free convection heat transfer, *AIP Advances*, 10 (8) (2020) 085005.
46. M. Bilal, D. N. Khan Marwat and **Aamir Ali**, Flow of a viscous fluid over an annular rotating and porous disk with stretching (shrinking) effects, *Rev. Mex. Fis.* 66 (2) (2020) 171-179.
47. M. Awais, Z. Shah, N. Parveen, **Aamir Ali**, P. Kumam, H. Ur Rehman and P. Thounthong, MHD effects on ciliary-induced peristaltic flow coatings with rheological hybrid nanofluid, *Coatings*, 10 (2) (2020) 186.
48. M. Awais, Z. Shah, N. Parveen, **Aamir Ali**, P. Kumam and P. Thounthong, Slip and hall effects on peristaltic rheology of Copper-Water nanomaterial through generalized complaint walls with variable viscosity, *Font. Phys.* 7 (2020) 249.
49. **Aamir Ali**, Y. Ali, D. N. Khan Marwat, M. Awais and Z. Shah, Peristaltic flow of nanofluid in a deformable porous channel with double diffusion, *SN Appl. Sci.* 2 (1) (2020) 100.
50. **Aamir Ali**, F. Iqbal, D. N. Khan Marwat, S. Asghar and M. Awais, Soret and Dufour effects between two rectangular plane walls with heat source/sink, *Heat Transfer-Asian Res.* 49 (1) (2020) 614-625.
51. **Aamir Ali**, S. Mumraiz, S. Nawaz, M. Awais and S. Asghar, Third grade fluid flow of stretching cylinder with heat source/sink, *J. Appl. Compt. Mech.* 6 (SI) (2020) 1125-1132.
52. R. Laila, D. N. Khan Marwat, **Aamir Ali** and Z. Shah, Flow in a two dimensional channel with deforming and peristaltically moving walls, *SN Appl. Sci.* 1 (12) (2019) 1534.

53. **Aamir Ali**, Z. Shah, S. Mumraiz, P. Kumam and M. Awais, Entropy generation on MHD peristaltic flow of Cu-water nanofluid with slip conditions, *Heat Transfer-Asian Res.* 48 (8) (2019) 4301-4319.
54. **Aamir Ali**, Y. Ali, P. Kumam, K. Babar, A. Ahmad and Z. Shah, Flow of a Nanofluid and Heat Transfer in Channel With Contracting/Expanding Walls, *IEEE Access*, 7 (2019) 102427-102436.
55. **Aamir Ali**, M. Nazir, M. Awais, Aqsa and M. Y. Malik, Stratification phenomenon in an inclined rheology of UCM nanomaterial, *Phys. Lett. A.* 383 (18) (2019) 2201-2206.
56. **Aamir Ali**, K. Shehzadi, M. Sulaiman and S. Asghar, Heat and mass transfer analysis of 3D Maxwell nanofluid over an exponentially stretching surface, *Phys. Scr.* 94 (6) (2019) 065206.
57. **Aamir Ali**, D. N. Khan Marwat and S. A. Shah, Viscous flow in a porous channel with stretching and shrinking walls, *U. P. B. Sci. Bull., Series A-Appl. Math. Phys.* 81 (1) (2019) 183-196.
58. **Aamir Ali**, A. Sajjad and S. Asghar, Thermal-diffusion and diffusion-thermo effects in a nanofluid flow with non-uniform heat flux and convective walls, *J. Nanofluids.* 8 (6) (2019) 1367-1372.
59. **Aamir Ali**, M. Sulaiman, S. Islam, Z. Shah and E. Bonyah, Three-dimensional magnetohydrodynamic (MHD) flow of Maxwell nanofluid containing gyrotactic micro-organisms with heat source/sink, *AIP Advances*, 8 (8) (2018) 085303.
60. M. Sulaiman, **Aamir Ali** and Saeed Islam, Heat and mass transfer in three-dimensional flow of an Oldroyd-B nanofluid with gyrotactic micro-organisms, *Math. Probl. Eng.* 2018 (2018) 6790420.
61. M. Awais, T. Hayat, N. Muqaddass, **Aamir Ali**, Aqsa and S. E. Khan, Nanoparticles and nonlinear thermal radiation properties in the rheology of polymeric material, *Res. Phys.* 8 (2018) 1038-1045.
62. **Aamir Ali**, S. Saba, S. Asghar and S. Saleem, Thermal and concentration effects of unsteady flow of non-Newtonian fluid over an oscillating plate, *Compt. Rend. Acad. bulg. Sci.* 71 (4) (2018) 467-475.



63. **Aamir Ali**, S. Saba, S. Asghar and D. N. Khan Marwat, Transport phenomenon in a third-grade fluid over an oscillating surface, *J. Appl. Mech. Tech. Phys.* 58 (6) (2017) 990-996.
64. D. N. Khan Marwat, **Aamir Ali** and S. Asghar, Flow between two rectangular inclined plane walls, *Chin. J. Phys.* 55 (4) (2017) 1195-1201.
65. **Aamir Ali**, S. Asghar and M. Awais, Thermophoresis and concentration effects in a fourth grade peristaltic flow with convective walls, *J. Cent. South Univ.* 24 (7) (2017) 1654-1662.
66. M. Awais, U. Bukhari, **Aamir Ali** and H. Yasmin, Convective and peristaltic viscous fluid flow with variable viscosity, *J. Eng. Thermophysics*, 26 (1) (2017) 69-78.
67. **Aamir Ali**, S. Asghar and D. Vincenzi, Mixed convection of a conducting third-grade fluid past an oscillating porous plate, *J. Eng. Thermophysics*, 26 (1) (2017) 60-68.
68. **Aamir Ali**, E. L. C. VI M. Plan, S. S. Ray and D. Vincenzi, Semiflexible particles in isotropic turbulence, *Phys. Rev. Fluids*, 1 (2016) 082402-8 (R).
69. M. Awais, T. Hayat, **Aamir Ali** and S. Irum, Velocity, thermal and concentration slip effects on a magneto-hydrodynamic nanofluid flow, *Alex. Eng. J.* 55 (3) (2016) 2107-2114.
70. E. L. C. VI M. Plan, **Aamir Ali** and D. Vincenzi, Bead-rod-spring models in random flows, *Phys. Rev. E*, 94 (2) (2016) 020501-6 (R).
71. M. Awais, T. Hayat and **Aamir Ali**, 3-D Maxwell fluid flow over an exponentially stretching surface using 3-stage Lobatto IIIA formula, *AIP Advances*, 6 (5) (2016) 055121-6.
72. S. Asghar, T. Minhas and **Aamir Ali**, Existence of a Hartmann layer in the peristalsis of Sisko fluid, *Chin. Phys. B*, 23 (5) (2014) 054702-5.
73. **Aamir Ali** and S. Asghar, Analytic solution for oscillatory flow in a channel for Jeffrey fluid, *J. Aerosp. Eng.* 27 (3) (2014) 644-651.
74. **Aamir Ali** and S. Asghar, Oscillatory flow in a porous channel with porous medium and small suction, *J. Mechanics*, 30 (2) (2014) 153-159.
75. **Aamir Ali**, S. Asghar and H. H. Alsulami, Oscillatory flow of second grade fluid in cylindrical tube, *Appl. Math. Mech. Engl. Ed.* 34 (9) (2013) 1097-1106.

76. **Aamir Ali** and S. Asghar, Oscillatory channel flow for non-Newtonian fluid, Int. J. Phys. Sci. 36(6) (2011) 8035-8043.

### **Research Project:**

1. Research Project of COMSATS Research Grant Program (CRGP) as a Principal Investigator with title: Some Solution of the Non Newtonian Fluid over Porous Plate with Magnetic Field, (2011- 2014).
2. Research Project under National Research Programme for Universities (NRPU) as a Principal Investigator with title: Diffusion and Convection Analysis of Nanofluid (2017-2020).
3. Research Project under National Research Programme for Universities (NRPU) as a Co-Principal Investigator with title: Consequence of radially varying magnetic field and carbon nanotubes with ciliated walls on fluid (2017-2020).

### **Supervision:**

#### **MS Thesis:**

1. Aqsa Saqib (2025)  
Local Non Similar Analysis of Magnetohydrodynamic Flow of Maxwell Nanofluid Over an Exponentially Stretching Surface
2. Muhammad Mansoor Sarfraz (2024)  
Radiation and Slip Effects on MHD Flow of Hybrid Nanofluid Between Two Coaxial Cylinders in a Porous Medium
3. Naseer Hussain (2024)  
Cattaneo-Christov Heat Flux Effects on Magnetized Stretching Surface in a Porous Medium
4. Mudassir Ahmed (2023)  
Entropy Generation Analysis of MHD Flow of Hybrid Nanofluid Past a Riga Plate under the Effects of Velocity Slip, Thermal Radiation, Viscous Dissipation, and Heat Source/Sink
5. Faiza Tariq (2023)  
Cattaneo-Christov Heat Flux and Thermal Radiation Effects on Three-Dimensional Nanofluid Flow across a Stretching/Shrinking Surface

6. Rukhsana Khatoon (2022)  
Cattaneo-Christov Heat Flux on MHD Flow of Hybrid Nanofluid across Stretching Cylinder with Thermal Radiation and Joule Heating Effects
7. Hajra Safdar Khan (2022)  
Radiation Impact on EMHD Nanofluid Flow along a Slandering Stretching Sheet with Variable Heat Flux
8. Ifra Noor (2021)  
MHD Hybrid Nanofluid Flow Over Stretched Surface with Varying Thickness and Hall Effects
9. Sunila Malik (2021)  
Peristaltic Flow of Hybrid Nano-Material between Complaint Walls with No Slip Condition and Radiation Effects
10. Mehak Sajid (2021)  
Entropy Generation Analysis of Peristaltic Flow of Two-Phase Nanomaterial in a Rotating Medium through Generalized Complaint Walls under the Effects of Heat Source/Sink and Radiation
11. Mehvish Maqsood Awan (2020)  
MHD Flow and Heat Transfer of a Jeffrey Nanofluid over Non-Linear Stretching Sheet with Variable Thickness
12. Afshan Noreen (2020)  
Heat Transfer Analysis of the Cu-Al<sub>2</sub>O<sub>3</sub>/H<sub>2</sub>O Hybrid-Nanofluid with Heat Flux
13. Tasmia Kanwal (2020)  
MHD Hybrid Nanofluid Flow Over a Stretching Cylinder with Thermal Radiation and Non-Uniform Heat Flux
14. Sana Mumraiz (2019)  
Slip Effects on MHD Peristaltic Flow in a Porous Medium with Viscous Dissipation
15. Yasir Ali (2019)  
Peristaltic Flow of a Nanofluid in a Deformable Porous Channel
16. Kiran Shahzadi (2018)  
Three-Dimensional Flow of Maxwell Nanofluid over Exponentially Stretching Surfaces
17. Javairia Akhtar (2018)

Rheology of Oldroyd-B Nanofluid Flow

18. Aamna Bibi (2017)

Radiative Heat and Mass Transfer Effects on MHD Peristaltic Flow with Convective Conditions

19. Saira Hameed Gulshan (2017)

Effects of Hall Current and Viscous Dissipation on MHD Peristaltic Flow

20. Tehzeen Umber (2017)

Generalized Rotating Flow in a Porous Channel with Radiations and Second Order Slip

21. Sara Nawaz (2017)

Third-Grade Fluid Flow of Stretching Cylinder with Heat Source/Sink

22. Mehvish Nazir (2017)

Double Stratification of Magneto-Hydrodynamic Maxwell Nanofluid with Heat Source/Sink

23. Farah Iqbal (2017)

Soret and Dufour Effects in a Deformable Porous Channel with Heat Source/Sink

24. Khan Babar (2016)

Heat and Mass Transfer Analysis of a Viscous Fluid in a Deformable Porous Channel

25. Surayya Saba (2016)

Heat and Mass Transfer Analysis of a Non-Newtonian Fluid over an Oscillating Porous Plate

26. Ammara Sajjad (2016)

Analysis of Steady Flows over an Exponentially Stretching Surface

**MSc/BS Projects:**

1. Izza Sajjad (2024)

Approximate Solution of Linear and Non-Linear Differential Equations using Perturbation Method

2. Kinza Ibrahim (2024)

Mixed Convection of a Second-Grade Fluid Past an Oscillating Porous Plate

3. Iqra Rafiq (2024)

Multi-Parameter Perturbation Analysis of a Third-Grade Fluid

4. Aiman Tahir (2023)

- Mixed Convection of MHD Oscillatory Flow of a Viscous Fluid
5. Rabia (2023)  
Exact Dolution of MHD Casson Fluid over an Accelerated Plate
  6. Affia Shafaat (2023)  
Heat Transfer Analysis of a Three Dimensional Flow of a Maxwell Fluid over a Bi-directional Stretching Sheet
  7. Farah Sohail (2023)  
Three Dimensional Flow of Hybrid Nanofluid over a Bi-directional Stretching Sheet
  8. Nudrat Farooq (2022)  
Perturbation Theory and its use on Algebraic and Ordinary Differential Equations
  9. Arfah Hafeez (2021)  
MHD Peristaltic Flow of Viscous Fluid with Variable Viscosity
  10. Faiza Shahid (2021)  
Peristaltic Transport of Newtonian Fluid with Convective Walls
  11. Faiza Jamshaid (2021)  
Inverse Interpolation for Non-Linear Equations
  12. Sana Bibi (2020)  
Mathematical Modelling of Three-Dimensional Flow of Maxwell Nanofluid
  13. Tehreem Ikram (2020)  
Solution of ODEs and PDEs Using Laplace and Fourier Transforms
  14. Ashir Iqbal (2020)  
Mixed Convection of a Conducting Third-Grade Fluid Past an Oscillating Porous Plate
  15. Bazgha Hassan (2019)  
Asymptotic Series Solution Near an Irregular Singular Point
  16. Sania Aziz (2019)  
Applications of Fourier Transform to Boundary-Value Problems
  17. Sannian Bibi (2019)  
Canonical Form of Second Order PDE
  18. Ali Nawab Khan (2018)  
Solution of Differential Equations Using Green's function
  19. Sadia Riaz (2018)

Series Solution about Irregular Singular Point

20. Bibi Fatima (2018)

Approximate Solution of Differential Equations for Large Eigenvalues

21. Muhammad Khalid (2018)

Matched Asymptotic Expansions

22. Muhammad Usama Siddique (2018)

Higher Order Matching for Boundary Layer Problems

23. Maria Iqbal (2018)

Asymptotic Approximations of Integrals

24. Fouzia Noureen (2017)

Singular Solution of Nonlinear Equations

25. Hafsa Bibi (2017)

Singular Perturbation

26. Qaisar Bashir (2017)

Mathematical Modeling of Second Grade Fluid

27. Mudassir Afzal (2016)

Approximate Solution for Linear and Non-linear Differential Equations

28. Aneela Riaz (2016)

Dominant Balance Method For Solving Linear Differential Equation

29. Zeenish Iftikhar (2015)

Perturbation Methods for Linear and Non-Linear Differential Equations

30. Tehzeen Umber (2015)

WKB Approximation Method for Solving Linear Differential Equations

31. Umer Ghani (2015)

Dimensional Analysis

32. Aamna Bibi (2015)

Method of Dominant Balance for Solving Linear Equations

**Courses Taught:**

1. MTH102 Calculus-II
2. MTH104 Calculus and Analytic Geometry
3. MTH105 Multivariable Calculus

4. MTH211 Discrete Mathematics
5. MTH231 Linear Algebra
6. MTH241 Ordinary Differential Equations
7. MTH242 Differential Equations
8. MTH343 Partial Differential Equations
9. MTH344 Special Functions
10. MTH374 Optimization
11. MTH375 Numerical Computations
12. MTH382 Analytical Dynamics
13. MTH467 Operations Research
14. MTH471 Integral Equations
15. MTH469 Business Math and Statistics
16. MTH483 Mathematical Methods of Physics
17. MTH485 Calculus of Variation
18. MTH603 Perturbation Methods-I
19. MTH663 Perturbation Methods-II
20. MTH669 Group Theoretic Methods

### Conferences Presentations:

| ➤ <i>Conference</i>                                                                                  | ➤ <i>Venue</i>                                                                        | ➤ <i>Title of Talk</i>                                                   |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 1. Conference on Recent Advances in Mathematical Methods, Models and Applications, April 19-20, 2014 | Center for Mathematical and Statistical Sciences, Lahore School of Economics, Lahore. | Analytic solution for oscillatory flow in a channel for Jeffrey fluid    |
| 2. Particles in Turbulence, July 01-05, 2013                                                         | Technische Universiteit Eindhoven, Netherlands.                                       | Bending dynamics of semi-flexible macromolecules in isotropic turbulence |
| 3. International Workshop on Non Linear Problems in Mathematics, Oct 09-11, 2012                     | COMSTECH Headquarters, Islamabad.                                                     | Oscillatory Channel Flow for non-Newtonian Fluid                         |
| 4. Fourth International Conference: Recent Developments in Fluid Mechanics,                          | International Islamic University, Islamabad.                                          | Hartmann Boundary Layer Analysis for Sisko Fluid in a Channel            |

|                                                                                                      |                                                                                              |                                                                                     |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Aug 03-05, 2010                                                                                      |                                                                                              |                                                                                     |
| 5. Conference on Recent Advances in Mathematical Methods, Models and Applications, April 17-18, 2010 | Center for Advanced Studies in Mathematics, Lahore University of Management Science, Lahore. | Asymptotic Solution for the Oscillatory Flow in a Porous Channel with Porous Medium |