



ARSHAD RIAZ

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EDUCATION

International Islamic University, Islamabad, Pakistan	2014
PhD Mathematics (Study of Peristaltic Flows of non-Newtonian Fluids)	CGPA: 4.0/4.0
International Islamic University, Islamabad, Pakistan	2010
MS mathematics	CGPA: 3.9/4.0
University of the Punjab, Lahore, Pakistan	2006
M.Sc mathematics	Percentage: 76
University of Sargodha, Sargodha, Pakistan	2004
B.Sc (Maths (A,B), Physics)	Percentage: 74
BISE Sargodha, Pakistan	2002
F.Sc (Pre Engineering)	Percentage: 71
BISE Sargodha, Pakistan	2000
Matric (Science)	Percentage: 80

CARRIER OBJECTIVE

To work for an organization which provides me the opportunity to improve my skills and knowledge to grow along with the organization objective.

TECHNICAL STRENGTHS

Modeling and Analysis Mathematica, MatLab, Latex, MS Office, Scientific Workplace

WORK EXPERIENCE

1. University of Education, Lahore, Jauharabad Campus	27-07-2023 to date
Tenured Associate Professor on TTS	
2. University of Education, Lahore, Jauharabad Campus	15-11-2016 to 26-07-2023
Assistant Professor on TTS	
3. University of Education, Lahore, Jauharabad Campus	02-03-2015 to 01-04-2016
Assistant Professor on IPFP	
4. University of Sargodha, Lahore campus, Pakistan	05-12-2014 to 10-03-2015
Assistant Professor	
5. University of Sargodha, Lahore Campus, Pakistan	31-08-2013 to 04-12-2014
Lecturer	

ACADEMIC ACHIEVEMENTS

1. HEC Indigenous Scholarship for MS and PhD (Phase-I, Batch-v)
2. Gold Medalist in MS degree (2010)
3. 3rd merit position in B.Sc. (2004)

4. Included in the list of Top 2% Scientists' of the world released by Stanford University America (2022)
5. Included in the list of Top 2% Scientists' of the world released by Stanford University America (2023)

COURSES TAUGHT

1. Vector and Tensor Analysis
2. Mathematical Methods for Physics
3. Analytic Geometry
4. Partial Differential Equations
5. Classical Mechanics
6. Numerical Analysis-I
7. Numerical Analysis-II
8. Calculus-I
9. General Topology
10. Calculus-II
11. Ordinary Differential Equations
12. Complex Analysis
13. Advanced Partial Differential Equations
14. Advanced Numerical Methods
15. Computational Multivariate calculus

CONFERENCES AND WORK SHOPS

1. **All Pakistan Mathematical Conference** arranged by All Pakistan Mathematical Association 2011.
2. **Fourth International Conference on Recent Developments in Fluid Mechanics** arranged by Fluid Mechanics Group department of Mathematics Quaid-i-Azam University Islamabad, Pakistan 2010.
3. **Two Days Conference on Mathematical Sciences** arranged by Department of Mathematics, IIU Islamabad, Pakistan 2012.

SEMINARS ORGANIZED

1. **Structure Preserving Mappings and Their Applications** presented by Mr Muhammad Naeem Aslam (Date 09-11-2018).
2. **Numerical Solution of Bubbles in Fluids** presented by Dr Ahmad Zeeshan (Date 12-11-2018).
3. **Some Basics of Fluid Mechanics and Flow of a non-Newtonian Fluid** presented by Dr Aziz Ullah Awan (Date 06-11-2020).
4. **Behavior of Anisotropic Compact Stars in $f(R,)$ Gravity** presented by Dr Adnan Malik (13-11-2020).

PERSONAL TRAITS

Highly motivated and eager to learn new things.

Strong motivational and leadership skills.

Ability to work as an individual as well as in group.

FIELDS OF INTEREST (MAJOR AND SPECIALIZATION)

Applied mathematics, Partial differential equations, Studies of Newtonian and non-Newtonian Fluids, Peristaltic flows, Flows in porous medium, Magneto hydrodynamic flows, Unsteady flows, Three dimensional flows, Nanofluids, Perturbation methods, exact solutions, Eigen function expansion method, Homotopy Analysis Method, Homotopy Perturbation method, Analytical solutions for differential equations.

H-INDEX, TOTAL CITATIONS, GOOGLE SCHOLAR LINK, ORCID.

H-index = 28

Total citations = 2729

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

ORCID ID: 0000-0003-0717-6677

NUMBER OF PUBLICATIONS

Total Number of Publications = 103

Number of Publications in last five years = 82

The number of publications in Q1 journals in the last 5 years = 28

The number of publications in Q2 journals in the last 5 years = 38

The number of publications in Q3 journals in the last 5 years = 06

The number of publications in Q4 journals in the last 5 years = 03

The number of publications in non-indexed journals = 07

The number of published books = 01

The number of published chapter of books = 01

YEAR WISE RESEARCH PUBLICATIONS

Publications in the Year 2010

1. Ellahi, R., & Riaz, A. (2010). Analytical solutions for MHD flow in a third-grade fluid with variable viscosity. *Mathematical and Computer Modelling*, 52(9-10), 1783-1793.

Publications in the Year 2012

2. Ellahi, R., Riaz, A., Nadeem, S., & Ali, M. (2012). Peristaltic flow of Carreau fluid in a rectangular duct through a porous medium. *Mathematical problems in Engineering*, 2012.

Publications in the Year 2013

3. Ellahi, R., Riaz, A., Nadeem, S., & Mushtaq, M. (2013). Series solutions of magnetohydrodynamic peristaltic flow of a Jeffrey fluid in eccentric cylinders. *Applied Mathematics & Information Sciences*, 7(4), 1441.
4. Ellahi, R., Riaz, A., & Nadeem, S. (2013). Three dimensional peristaltic flow of Williamson fluid in a rectangular duct. *Indian Journal of Physics*, 87(12), 1275-1281.
5. Nadeem, S., Riaz, A., & Ellahi, R. (2013). Peristaltic flow of a Jeffrey fluid in a rectangular duct having compliant walls. *Chemical Industry and Chemical Engineering Quarterly*, 19(3), 399-409.

Publications in the Year 2014

6. Nadeem, S., Riaz, A., Ellahi, R., Akbar, N. S. (2014). Mathematical model for the peristaltic flow of Jeffrey fluid with nanoparticles phenomenon through a rectangular duct. *Applied Nanoscience*, 4(5), 613-624.
7. Nadeem, S., Riaz, A., Ellahi, R., & Akbar, N. S. (2014). Effects of heat and mass transfer on peristaltic flow of a nanofluid between eccentric cylinders. *Applied Nanoscience*, 4(4), 393-404.
8. Nadeem, S., Riaz, A., Ellahi, R., & Akbar, N. S. (2014). Mathematical model for the peristaltic flow of nanofluid through eccentric tubes comprising porous medium. *Applied Nanoscience*, 4(6), 733-743.
9. Ellahi, R., Riaz, A., & Nadeem, S. (2014). A theoretical study of Prandtl nanofluid in a rectangular duct through peristaltic transport. *Applied Nanoscience*, 4(6), 753-760.
10. Ellahi, R., Riaz, A., & Nadeem, S. (2014). Three-dimensional peristaltic flow of a Williamson fluid in a rectangular channel having compliant walls. *Journal of Mechanics in Medicine and Biology*, 14(01), 1450002.
11. Nadeem, S., Riaz, A., Ellahi, R., & Akbar, N. S. (2014). Series solution of unsteady peristaltic flow of a Carreau fluid in eccentric cylinders. *Ain Shams Engineering Journal*, 5(1), 293-304.
12. Nadeem, S., Riaz, A., Ellahi, R., Akbar, N. S., & Zeeshan, A. (2014). Heat and mass transfer analysis of peristaltic flow of nanofluid in a vertical rectangular duct by using the optimized series solution and genetic algorithm. *Journal of Computational and Theoretical Nanoscience*, 11(4), 1133-1149.
13. Riaz, A., Ellahi, R., & Nadeem, S. (2014). Peristaltic transport of a Carreau fluid in a compliant rectangular duct. *Alexandria Engineering Journal*, 53(2), 475-484.
14. Ellahi, R., Bhatti, M. M., Riaz, A., & Sheikholeslami, M. (2014). Effects of magnetohydrodynamics on peristaltic flow of Jeffrey fluid in a rectangular duct through a porous medium. *Journal of Porous Media*, 17(2).
15. Riaz, A., Nadeem, S., Ellahi, R., & Akbar, N. S. (2014). The influence of wall flexibility on unsteady peristaltic flow of Prandtl fluid in a three dimensional rectangular duct. *Applied Mathematics and Computation*, 241, 389-400.
16. Nadeem, S., Riaz, A., & Ellahi, R. (2014). Peristaltic flow of viscous fluid in a rectangular duct with compliant walls. *Computational Mathematics and Modeling*, 25(3), 404-415.
17. Riaz, A., Nadeem, S., Ellahi, R., & Zeeshan, A. (2014). Exact solution for peristaltic flow of Jeffrey fluid model in a three dimensional rectangular duct having slip at the walls. *Applied Bionics and Biomechanics*, 11(1-2), 81-90.
18. Nadeem, S., Riaz, A., & Ellahi, R. (2014). Series Solution of Three Dimensional Peristaltic Flow of Prandtl Fluid in a Rectangular Channel. *J Appl Mech Eng*, 3(139), 2.
19. Ellahi, R., Riaz, A., Abbasbandy, S., Hayat, T., & Vafai, K. (2014). A study on the mixed convection boundary layer flow and heat transfer over a vertical slender cylinder. *Thermal Science*,

18(4), 1247-1258.

Publications in the Year 2015

20. Riaz, A., Nadeem, S., & Ellahi, R. (2015). Effects of the wall properties on unsteady peristaltic flow of an Eyring-Powell fluid in a three-dimensional rectangular duct. *International Journal of Biomathematics*, 8(06), 1550081.

Publications in the Year 2017

21. Riaz, A., Razaq, A., & Awan, A. U. (2017). Magnetic field and permeability effects on Jeffrey fluid in eccentric tubes having flexible porous boundaries. *Journal of Magnetism*, 22(4), 642-648.

Publications in the Year 2018

22. Razaq, A., Al-Olayan, H. A., Ullah, A., Riaz, A., & Waheed, A. (2018). A Novel Technique for the Construction of Safe Substitution Boxes Based on Cyclic and Symmetric Groups. *Security and Communication Networks*, 2018.

23. Riaz, A., Al-Olayan, H., Zeeshan, A., Razaq, A., & Bhatti, M. M. (2018). Mass transport with asymmetric peristaltic propulsion coated with synovial fluid. *Coatings*, 8(11), 407.

Publications in the Year 2019

24. Zubair, M., Ijaz, M., Abbas, T., & Riaz, A. (2019). Analysis of modified Fourier law in flow of ferromagnetic Eyring-Powell fluid considering two equal magnetic dipoles. *Canadian Journal of Physics*, 97(7), 772-776.

25. Riaz, A., Zeeshan, A., Ahmad, S., Razaq, A., & Zubair, M. (2019). Effects of external magnetic field on non-Newtonian two phase fluid in an annulus with peristaltic pumping. *Journal of Magnetism*, 24(1), 62-69.

26. Ijaz, M., Ayub, M., Zubair, M., & Riaz, A. (2019). On stratified flow of ferromagnetic nanofluid with heat generation/absorption. *Physica Scripta*, 94(2019), 9.

27. Riaz, A., Ellahi, R., Bhatti, M. M., & Marin, M. (2019). Study of Heat and Mass Transfer on Eyring-Powell Fluid Model Propagating Peristaltically through a Rectangular Complaint Channel. *Heat Transfer Research*, 50(16) 1539-1560.

28. Abdelsalam, S. I., Bhatti, M. M., Zeeshan, A., Riaz, A., & Bg, O. A. (2019). Metachronal propulsion of a magnetised particle-fluid suspension in a ciliated channel with heat and mass transfer. *Physica Scripta*, 94(11), 115301.

29. Riaz, A., Alolaiyan, H., & Razaq, A. (2019). Convective heat transfer and magnetohydrodynamics across a peristaltic channel coated with nonlinear nanofluid. *Coatings*, 9(12), 816.

Publications in the Year 2020

30. Riaz, A., Bhatti, M. M., Ellahi, R., Zeeshan, A., & M Sait, S. (2020). Mathematical Analysis on an Asymmetrical Wavy Motion of Blood under the Influence Entropy Generation with Convective Boundary Conditions. *Symmetry*, 12(1), 102.

31. Riaz, A., Zeeshan, A., Bhatti, M. M., & Ellahi, R. (2020). Peristaltic propulsion of Jeffrey nanofluid and heat transfer through a symmetrical duct with moving walls in a porous medium. *Physica A: Statistical Mechanics and its Applications*, 545, 123788.

32. Ijaz, N., Riaz, A., Zeeshan, A., Ellahi, R., Sait S. M. (2020). Buoyancy Driven Flow with Gas-Liquid Coatings of Peristaltic Bubble Flow in Elastic Walls. *Coatings*, 10(2), 115.

33. Alolaiyan, H., Riaz, A., Razaq, A., Saleem, N., Zeeshan, A., Bhatti, M. M. (2020). Effects of Double Diffusion Convection on Third Grade Nanofluid through a Curved Compliant Peristaltic Channel. *Coatings*, 10(2), 154.
34. Abdelmalek, Z., Khan, S. U., Waqas, H., Riaz, A., Khan, I. A., & Tlili, I. (2021). A mathematical model for bioconvection flow of Williamson nanofluid over a stretching cylinder featuring variable thermal conductivity, activation energy and second-order slip. *Journal of Thermal Analysis & Calorimetry*, 144(1).
35. Riaz, A., Gul, A., Khan, I., Ramesh, K., Khan, S.U., Baleanu, D., Nisar, K.S. (2020). Mathematical Analysis of Entropy Generation in the Flow of Viscoelastic Nanofluid through an Annular Region of Two Asymmetric Annuli Having Flexible Surfaces. *Coatings*, 10(3), 213.
36. Riaz, A., Khan, S. U. D., Zeeshan, A., Khan, S. U., Hassan, M., & Muhammad, T. (2021). Thermal analysis of peristaltic flow of nanosized particles within a curved channel with second-order partial slip and porous medium. *Journal of Thermal Analysis and Calorimetry*, 143(3), 1997-2009.
37. Riaz, A., & Sadiq, M. A. (2020). ParticleFluid Suspension of a Non-Newtonian Fluid Through a Curved Passage: An Application of Urinary Tract Infections. *Frontiers in Physics*, 8, 109.
38. Riaz, A. (2021). Thermal analysis of an EyringPowell fluid peristaltic transport in a rectangular duct with mass transfer. *Journal of Thermal Analysis and Calorimetry*, 143, 2329-2341.
39. Khan, S. U., Bhatti, M. M., & Riaz, A. (2020). A revised viscoelastic micropolar nanofluid model with motile microorganisms and variable thermal conductivity. *Heat Transfer*, 49(6), 3726-3741.
40. Riaz, A., Abbas, T., & ul Ain, A. Q. (2021). Nanoparticles phenomenon for the thermal management of wavy flow of a Carreau fluid through a three-dimensional channel. *Journal of Thermal Analysis and Calorimetry*, 143(3), 2395-2410.
41. Riaz, A., Ellahi, R., & Sait, S. M. (2021). Role of hybrid nanoparticles in thermal performance of peristaltic flow of EyringPowell fluid model. *Journal of Thermal Analysis and Calorimetry*, 143, 1021-1035.
42. Bhatti, M. M., Riaz, A., Zhang, L., Sait, S. M., & Ellahi, R. (2021). Biologically inspired thermal transport on the rheology of Williamson hydromagnetic nanofluid flow with convection: an entropy analysis. *Journal of Thermal Analysis and Calorimetry*, 144(6), 2187-2202.
43. Siddiqui, M. A., Riaz, A., Khan, I., & Nisar, K. S. (2020). Augmentation of mixed convection heat transfer in a lid-assisted square enclosure utilizing micropolar fluid under magnetic environment: A numerical approach. *Results in Physics*, 18, 103245.
44. Riaz, A., Ellahi, R., Sait, S. M., & Muhammad, T. (2020). Magnetized Jeffrey nanofluid with energy loss in between an annular part of two micro non-concentric pipes. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 1-20.
45. Zeeshan, A., Ijaz, N., Riaz, A., Mann, A. B., & Hobiny, A. (2020). Flow of nonspherical nanoparticles in electromagnetohydrodynamics of nanofluids through a porous medium between eccentric cylinders. *Journal of Porous Media*, 23(12).
46. Iqbal, M. S., Malik, F., Mustafa, I., Ghaffari, A., Riaz, A., & Nisar, K. S. (2020). Impact of induced magnetic field on thermal enhancement in gravity driven Fe₃O₄ ferrofluid flow through vertical non-isothermal surface. *Results in Physics*, 19, 103472.
47. Muhammad, T., Ullah, M. Z., Waqas, H., Alghamdi, M., & Riaz, A. (2020). Thermo-bioconvection in stagnation point flow of third-grade nanofluid towards a stretching cylinder involving motile microorganisms. *Physica Scripta*, 96(3), 035208.

Publications in the Year 2021

48. Riaz, A., Awan, A. U., Hussain, S., Khan, S. U., & Abro, K. A. (2021). 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*, 1-12.
49. Riaz, A., Abbas, T., Zeeshan, A. and Doranehgard, M.H. (2021), Entropy generation and MHD analysis of a nanofluid with peristaltic three dimensional cylindrical enclosures, *International Journal of Numerical Methods for Heat & Fluid Flow*, 31 (8), 2698-2714. <https://doi.org/10.1108/HFF-11-2020-0704>.
50. Riaz, A., Zeeshan, A., & Bhatti, M. M. (2021). Entropy analysis on a three-dimensional wavy flow of eyringpowell nanofluid: a comparative study. *Mathematical Problems in Engineering*, 2021.
51. Raza, M., Riaz, A., Hamid, A. H., Khan, S. U., & Siddiqui, M. A. (2021). Numerical investigation of oxygen transport in the retinal artery with higher order accuracy by using seven and nine point finite difference technique: a comparative study. *Physica Scripta*, 96(5), 055209.
52. Siddiqui, A., Mehmood, Z., Riaz, A., & Lu, D. (2021). Numerical study of energy transmission through copper-based nanofluid contained in a partially heated isosceles triangular cavity in the presence of heat source/sink. *Physica Scripta*, 96(5),055222.
53. Vaidya, H., Rajashekhar, C., Prasad, K. V., Khan, S. U., Riaz, A., & Viharika, J. U. (2021). MHD peristaltic flow of nanofluid in a vertical channel with multiple slip features: an application to chyme movement. *Biomechanics and Modeling in Mechanobiology*, 20(3), 1047-1067.
54. Ramesh, K., Riaz, A., & Dar, Z. A. (2021). Simultaneous effects of MHD and Joule heating on the fundamental flows of a Casson liquid with slip boundaries. *Propulsion and Power Research*, 10(2), 118-129.
55. Zeeshan, A., Riaz, A., & Alzahrani, F. (2021). Electroosmosismodulated bioflow of nanofluid through a rectangular peristaltic pump induced by complex traveling wave with zeta potential and heat source. *Electrophoresis*, 42(21-22), 2143-2153.
56. Riaz, A., Bobescu, E., Ramesh, K., & Ellahi, R. (2021). Entropy Analysis for Cilia-Generated Motion of Cu-Blood Flow of Nanofluid in an Annulus. *Symmetry*, 13(12), 2358.

Publications in the Year 2022

57. Iqbal, M. S., Ghaffari, A., Riaz, A., Mustafa, I., & Raza, M. (2022). Nanofluid Transport through a Complex Wavy Geometry with Magnetic and Permeability Effects. *Inventions*, 7(1), 7.
58. Qian, W. M., Riaz, A., Ramesh, K., Khan, S. U., Khan, M. I., Chinram, R., & Alaoui, M. K. (2022). Mathematical modeling and analytical examination of peristaltic transport in flow of Rabinowitsch fluid with Darcys law: two-dimensional curved plane geometry. *The European Physical Journal Special Topics*, 231(3), 545-555.
59. Zeeshan, A., Riaz, A., Alzahrani, F., & Moqet, A. (2022). Flow Analysis of Two-Layer Nano/Johnson-Segalman Fluid in a Blood Vessel-like Tube with Complex Peristaltic Wave. *Mathematical Problems in Engineering*, 2022.
60. Tahir, W., Althobaiti, N., Kousar, N., Alhazmi, S. E., Bilal, S., & Riaz, A. (2022). Effects of Homogeneous-Heterogeneous Reactions on Maxwell Ferrofluid in the Presence of Magnetic Dipole along a Stretching Surface: A Numerical Approach. *Mathematical Problems in Engineering*, 2022.
61. Riaz, A., Almutairi, S., Alhazmi, S. E., Saleem, A., Nadeem, S., & Abdelrahman, A. (2022). Insight into the cilia motion of electrically conducting Cu-blood nanofluid through a uniform curved channel when entropy generation is significant. *Alexandria Engineering Journal*, 61(12), 10613-10630.
62. Riaz, A., Ahammad, N. A., Alqarni, M. M., Hejazi, H. A., & Tag-ElDin, E. M. (2022). Peristaltic flow of a viscous fluid in a curved duct with a rectangular cross section. *Frontiers in Physics*, 666.

63. Ijaz, N., Zeeshan, A., Riaz, A., & Alhodaly, M. S. (2022). Transport of drugs using complex peristaltic waves in a biological system. *Waves in Random and Complex Media*, 1-16.
64. Alharbi K.A.M., Ijaz N., Riaz A., Altaf F. & Zeeshan A. (2022). On multiphase wavy movements of non-Newtonian Jeffery fluid in a rotating channel with MHD and compliant walls: Exact solutions. *Waves in Random and Complex Media*, <https://doi.org/10.1080/17455030.2022.2128230>.
65. Alqarni, M. M., Riaz, A., Firdous, M., Lali, I. U., El-Din, E. M., & Rahman S.U. (2022). Hall currents and EDL effects on multiphase wavy flow of Carreau fluid in a microchannel having oscillating walls: A numerical study. *Frontiers in Physics*, 828.
66. Shah, I. A., Bilal, S., Riaz, A., El-Din, E. M. T., Alqarni, M. M., & Hamam, H. (2022). Thermosolutal natural convective transport in Casson fluid flow in star corrugated cavity with Inclined magnetic field. *Results in Physics*, 43, 106081.
67. Shahzad, H., Wang, X., Raizah, Z., Riaz, A., Majeed, A. H., Anwar, M. A., & Eldin, S. M. (2022). Fluid-structure interaction study of bio-magnetic fluid in a wavy bifurcated channel with elastic walls. *Frontiers in Physics*, 10, 1147.
68. Bilal, S., Khan, N. Z., Riaz, A., Alyami, M. A., & El-Din, E. M. (2022). Measure and evaluate the hydrothermal flow of a Newtonian fluid in homogeneous permeable media equipped with a fin: A numerical approach. *Frontiers in Physics*, 10, 1129.
69. Fatima, N., Ijaz, N., Riaz, A., Tag El-Din, E. M., & Ali, S.S. (2022). Evaluate Asymmetric Peristaltic Pumping Drug Carrying Image in Biological System: Measure Multiphase Flows in Biomedical Applications. *Symmetry*, 14(11), 2437.
70. Riaz, A., Abbasi, A., Al-Khaled, K., Gulzar, S., Khan, S. U., Farooq, W., & El-Din, E. M. (2022). A numerical analysis of the transport of modified hybrid nanofluids containing various nanoparticles with mixed convection applications in a vertical cylinder. *Frontiers in Physics*, 10, 1213.
- Publications in the Year 2023**
71. Bilal, S., Khan, N. Z., Fatima, I., Riaz, A., Ansari, G. J., Alhazmi, S. E., & El-Din, E. M. (2023). Mixed convective heat transfer in a power-law fluid in a square enclosure: Higher order finite element solutions. *Frontiers in Physics*, 10, 1327.
72. Fatima, N., Alharbi, A. M., Ijaz, N., Riaz, A., & El-Din, E. M. (2023). Analysis of rotating-symmetric frame and MHD for peristaltic multiphase flow: An exact solution. *Frontiers in Physics*, 11, 1111163.
73. Fatima, N., Alayyash, K., Alfwzan, W. F., Ijaz, N., Riaz, A., Saleem, N., & El-Din, E. M. T. (2023). Mathematical model for numerical simulations of thermal energy of nano-fluid in a complex peristaltic transport within a curved passage: Pharmacological and engineering biomedical application. *Case Studies in Thermal Engineering*, 102897.
74. Irshad, S., Majeed, A. H., Jahan, S., Riaz, A., Eldin, S. M., & Shahzad, H. (2023). Numerical simulations of MHD generalized Newtonian fluid flow effects on a stretching sheet in the presence of permeable media: A finite difference-based study. *Frontiers in Physics*, 11, 130.
75. Alfwzan, W. F., Riaz, A., Alammari, M., Hejazi, H. A., & Tag El-Din, E. M. (2023). A novel mathematical model for the effects of wall properties on pumping flow of a biofluid in a symmetrical three-dimensional curved duct. *Frontiers in Physics*, 11, 112.
76. Riaz, A., Saleem, K., & Raza, M. (2023). CiliaDriven Flow in a Symmetric Elliptical Duct with Electric Double Layer and Thermal Effects: Exact Solutions. *Arabian Journal for Science and Engineering*, 48(6), 8189-8206.

77. Alfwzan, W. F., Hussain, Z., Al-Khaled, K., Riaz, A., Abdelhamid, T., Khan, S. U., Khurram J., Tag El-Din, E. M., Chammam, W. (2023). An optimized stability framework for three-dimensional Hartman flow via Chebyshev collocation simulations. *Results in Physics*, 49, 106497.
78. Alfwzan, W. F., Allehiany, F. M., Riaz, A., Sikandar, S., Alhamzi, G. (2023). Mathematical model of ciliary flow and entropy for carreau nanofluid with electroosmosis and radiations in porous medium: A numerical work. *Case Studies in Thermal Engineering*, 103230.
79. Alharbi, K. A. M., Riaz, A., & Sikandar, S. (2023). An entropy model for Carreau nanofluid ciliary flow with electroosmosis and thermal radiations: A numerical study. *Electrophoresis*.
80. Khedher, N. B., Ijaz, N., Zeeshan, A., Saleem, N., Ali, S. S., Zouidi, F., ... & Tag-ElDin, E. M. (2023). Measurement of thermal radiative and mass transfer of peristaltic pumping of electrically-conducting bio-bi-phase flow due to metachronal wave: Eukaryotic cells in biological applications. *Case Studies in Thermal Engineering*, 103196.
81. Alfwzan, W. F., Riaz, A., Nadeem, M., & Alhamzi, G. (2023). Effects of Entropy Generation and Magnetic field on Blood Flow of Jeffrey Fluid in a Catheterized Artery: A Mathematical Study. *Tribology International*, 108758.
82. Riaz, A., Mehmood, K., Alhamzi, G., & Alharbi, K. A. M. (2023). Electroosmotic flow of cobalt-ferrite nanoparticles in water and ethylene glycol through a ciliary annulus: A biomedical application. *Electrophoresis*.
83. Alqarni, M. M., Riaz, A., Shehzadi, M., Alhamzi, G., & Mahmoud, E. E. (2023). A multiphase ciliary flow of Casson fluid in a porous channel under the effects of electroosmosis and MHD: Exact solutions. *Results in Physics*, 52, 106947.
84. Aslam, M. N., Riaz, A., Shaukat, N., Aslam, M. W., & Alhamzi, G. (2023). Machine learning analysis of heat transfer and electroosmotic effects on multiphase wavy flow: a numerical approach. *International Journal of Numerical Methods for Heat & Fluid Flow*.
85. Aslam, M. N., Shaheen, A., Riaz, A., Alshaikey, S., Shaukat, N., Aslam, M. W., & Muhammad, T. (2023). An ANN-PSO approach for mixed convection flow in an inclined tube with ciliary motion of Jeffrey six constant fluid. *Case Studies in Thermal Engineering*, 103740.
86. Allehiany, F. M., Riaz, A., Shoukat, S., Alhamzi, G., & Mahmoud, E. E. (2023). Three dimensional study for entropy optimization in nanofluid flow through a compliant curved duct: A drug delivery and therapy application. *Heliyon*.
87. Aslam, M. N., Shaukat, N., Riaz, A., Khan, I., & Niazai, S. (2023). Machine learning intelligent based hydromagnetic thermal transport under Soret and Dufour effects in convergent/divergent channels: a hybrid evolutionary numerical algorithm. *Scientific Reports*, 13(1), 21973.
88. Khan, N. Z., Bilal, S., Riaz, A., & Muhammad, T. (2023). Coupled effects of variable permeability and adiabatic undulating walls on natural convective flow in a trapezoidal cavity: Finite element analysis. *Results in Physics*, 107267.
89. Alshehri, N. A., Riaz, A., Sikandar, S., & Muhammad, T. (2023). Entropy generation in a ciliary flow of an EyringPowell ternary hybrid nanofluid through a channel with electroosmosis and mixed convection. *Electrophoresis*.
90. Aslam, M. N., Riaz, A., Shaukat, N., Ali, S., Akram, S., & Bhatti, M. M. (2023). Analysis of incompressible viscous fluid flow in convergent and divergent channels with a hybrid meta-heuristic optimization techniques in ANN: An intelligent approach. *Journal of Central South University*, 30(12), 4149-4167.

Publications in the Year 2024

91. Riaz, A., Mehmood, K., & Chamorro, L. P. (2024). Exploring pressure, temperature, and flow patterns in ciliated microfluidic systems. *Physics of Fluids*, 36(1).
92. Aslam, M. N., Shaukat, N., Riaz, A., Nigar, N., Shaukat, S., & Naveed, M. (2024). A machine learning investigation of the ZnO-water nanofluid flow with magnetic field through convergent and divergent channels: a numerical study. *International Journal of Ambient Energy*, 45(1), 2316793.
93. Abbasi, A., Farooq, W., Khan, S. U., Adnan, Riaz, A., & Bhatti, M. M. (2024). An Insight Into the Dynamics of Carreau-Yasuda Nanofluid Through a Wavy Channel with Electroosmotic Effects: Relevance to Physiological Ducts. *Brazilian Journal of Physics*, 54(3), 66.
94. Allehiany, F. M., Riaz, A., Alfwzan, W. F., Shaheen, S., Muhammad, T. (2024). Cilia flow of magnetized Eyring-Powell nanofluid in a vertical thermal channel with viscous dissipation: An application of Adomian decomposition method. *Ain Shams Engineering Journal*, 102699.
95. Alqudah, M., Riaz, A., Aslam, M. N., Shehzadi, M., Aslam, M. W., Shaukat, N., Alhamzi, G. (2024). Thermal and mass exchange in a multiphase peristaltic flow with electric-debye-layer effects and chemical reactions using machine learning. *Case Studies in Thermal Engineering*, 104234.
96. Bilal, S., Akram, S., Saeed, K., Athar, M., Riaz, A., Razia, A. (2024). A computational simulation for peristaltic flow of thermally radiative sisko nanofluid with viscous dissipation, double diffusion convection and induced magnetic field. *Numerical Heat Transfer, Part A: Applications*, 1-22.
97. Riaz, A., Shehzadi, M., Muhammad, T., Khan, I., Niazi, S. (2024). Thermal and viscous slip effects on electroosmotic Casson nanofluid flow with microorganisms in peristaltic porous media. *Discover Applied Sciences*, 6(5), 1-19.
98. Riaz, Nawaz, M. D., A., Aslam, M. N., Khan, S. U. & Rehman, S. U. (2024). Modeling peristaltic nanofluid flow with microorganisms for thermal therapy: a CFD and entropy analysis. *Mechanics of Time-Dependent Materials*, 1-26.
99. Aslam, M. N., Shaukat, N., Riaz, A., Duraihem, F. Z., Sultana, H. (2024). Exploring double-diffusive nanofluid flow in divergent/convergent non-darcy porous space: A machine learning numerical approach with zero mass flux. *Numerical Heat Transfer, Part B: Fundamentals*, 1-23.
100. Riaz, A., Nawaz, M. D., Aslam, M. N., Khan, S. U., ur Rehman, S., Alhamzi, G. (2024). Effect of Boundary Slips and magnetohydrodynamics on Peristaltic Mechanism of Jeffrey Nanofluid along with Microorganisms through a porous medium. *Heliyon*.
101. Riaz, A., Siddiq, A., Akram, S., Nawaz, T., Khan, S. U., Rehman, S. U. (2024). Mathematical modeling of thermal transfer in a symmetric peristaltic flow of a Newtonian fluid through a curved duct with entropy generation: a microfluidics application. *International Journal of Modelling and Simulation*, 1-17.
102. Khan, S. U., Adnan, Ramesh, K., Riaz, A., Awais, M., Bhatti, M. M. (2024). Insights into the impact of Cattaneo-Christov heat flux on bioconvective flow in magnetized Reiner-Rivlin nanofluids. *Separation Science and Technology*, 1-11.

ACCEPTED ARTICLES

103. A. Riaz, S. Akram, Simulation of multiple slips and thermal radiation on the mechanism of double diffusion convection in a peristaltic six-constant Jeffreys nanofluid in an asymmetric channel with an inclined magnetic field and viscous dissipation, **AIP Advances**.

104. A. Riaz, S. Akram, Numerical analysis on theoretical model of magneto-Williamson nanofluid in relation to viscous dissipation, double-diffusion convection, thermal radiation and multiple slip boundaries, **Pramana**.

SUBMITTED ARTICLES

1. A. Riaz, N. Ijaz, S. Nadeem, Multiphase Jeffery Fluid Flow in a flexible duct having porous medium and MHD along with peristaltic compliant boundaries, **ZAMM**.
2. A. Riaz, N. Aslam, Nano-Fluid Flow Predictions in Convergent/Divergent Channels using ANN-BLMT and Physics Informed Neural Networks, **JTAC**
3. A. Riaz, Mohsan Hassan, Study on the Flow Structure of Complex Dual Nature Fluids: A Mathematical Model for Shear Thinning-Viscoelastic behavior. **Fluid Dynamics**
4. A. Riaz, Mehpara, Effects of variable viscosity and Arrhenius activation energy on Casson nanomaterial with gyrotactic microorganisms in a peristaltic channel: A numerical approach, **MTC**
5. A. Riaz, SU, Khan, Implicit finite difference simulations for unsteady oscillating flow of Walters-B nanofluid with microbes using the Cattaneo-Christov model” submitted to Numerical Heat Transfer, Part A: Applications, **NHTA**
6. A. Riaz, S. Akram, Phenomenon of double diffusion convection and viscous dissipation on thermally radiated Williamson nanofluid with induced magnetic field through non-uniform channel in peristaltic waves, **ZAMM**
7. A. Riaz, Asfand Javed, Effects of tapering and electro-osmosis on copper suspended nanofluid through a composite stenosed artery with permeable walls, **Brazilian journal of physics**
8. A. Riaz, Sadia Shoukat, T. Nawaz, A pumping flow of Jeffrey ternary-hybrid (TiO₂-SiO₂-Al₂O₃) nanofluid through a curved compliant duct: An analytic study, **pending**
9. A. Riaz, N. Aslam, Optimizing Artificial Neural Networks with Particle Swarm Optimization for Analyzing Eyring-Powell Ternary Hybrid Nanofluid Ciliary Flow within an Electroosmotic Channel with Mixed Convection, **Pending**
10. A. riaz, M. A. Awan, M. N. Aslam, S. U Khan, A three dimensional peristaltic blood flow of magnetized tri-hybrid Carreau nanofluid within a curved rectangular duct (CRD) by using HPM and machine learning, **pending**
11. A. Riaz, N. Aslam, Artificial Neural Networks Approach for Optimizing Nanofluid Dynamics due to Rotating Disk with Generalized Slip: A Tiwari and Das Model, **pending**
12. A. Riaz, M. Nadeem, Irreversibility analysis on blood flow of a characteristic Prandtl fluid through a catheterized eccentric artery with overlapping stenosis: An application to biomechanics and endoscopy, **ICHMT**
13. A. Riaz, N. Aslam, A machine learning approach to analyze nanotribology for viscous flow of ethylene glycol and water under magnetic effects among parallel sheets, **pending**
14. A. Riaz, S.M. Bilal, Finite Element Analysis of Hybrid (Fe₃O₄+MWNTs) Nanofluid in a Curved Corrugated Enclosure with Entropy Generation Measures, **pending**
15. A. Riaz, SU, Khan, A revised double diffusion Cattaneo-Christov bioconvective model for unsteady Williamson nanofluid due to Riga surface with additional nonlinear thermal sources, **ZAMM**
16. A. Riaz, SU, Khan, Darcy-Forchheimer multiple slip flow of Maxwell nanofluid due to porous elongated cylinder with radiative phenomenon and chemical reaction features, **pending**

17. A. Riaz, SU, Khan, Thermal determination of hybrid nanofluid with molybdenum disulphide (MoS₂) and graphene oxide (GO) nanoparticles: AB fractional simulations” for possible publication in Computational Particle Mechanics, **JCPM**
18. A. Riaz, N. Aslam, Computational composition of Artificial Neural Networks with Sperm Swarm and Water Cycle Algorithms for Improved Jaffrey-Hamel flow of Oldroyd-B model: A Machine Learning Approach, **pending**
19. A. Riaz, M. Shehzadi, SU, Khan, Effects of Electro-osmosis, Chemical Reaction and Entropy Generation on Particulate-Fluid Mixture using Prandtl Fluid with Thermal and Mass Diffusion, **IJAE**
20. A. Riaz, M.A. Awan, T. Nawaz, SU khan, L.P. Chamorro, A three dimensional study for flow of ternary hybrid Casson nanofluid in a curved rectangular duct (CRD) with irreversibility and magnetic field effects: An application to biomedical flow phenomenon, **POF**
21. A. Riaz, Sobia Shaheen, SU Khan, Analysis of Peristaltic Dual-Layer Flow with Jeffrey Nanofluid in a Porous Medium under Magnetic Field Influence: Exact solutions, **RINE**
22. A. Riaz, N. Aslam, A Comprehensive Study of Cross-Diffusion Effects with Integrated Artificial Neural Network and Hybridization of Evolutionary Algorithms for Optimizing Magnetized and Radiative Jeffery-Hamel Flow, **pending**
23. A. Riaz, N. Aslam, Neuro-Computing Analysis for Effects of Mixed Convection on Hybrid NanoFluid Flow over a Rotating Disk using Machine Learning, **NHTB**
24. A. Riaz, S. Akram, Significance of multiple slip on the theoretical model of a magneto-peristaltic six-constant Jeffreys nanofluid in a symmetric channel with double diffusion convection, thermal radiation, and viscous dissipation, **Bionanoscience**
25. A. Riaz, Sobia, SU Khan, Investigating pressure, temperature, electro-osmosis and stresses for Prandtl nanofluid (TiO₂) in a ciliated slippery channel by utilizing Adomian decomposition method, **pending**
26. A. Riaz, SU, Khan, Unveiling the triple diffusion bioconvective applications for couple stress nanofluid due to an oscillating regime with variable thermal features, **Bionanoscience**
27. A. Riaz, M. Shehzadi, M.N. Aslam, Exploring electroosmosis and chemical reactions for multiphase flow of Sisko fluid by using Artificial Neural Networks (ANN): A thermal and mass transfer analysis, **HFF**
28. A. Riaz, Mehpara, SU Khan, S. Akram, T. Nawaz, Duct flow of tri-hybrid Casson nanofluid with velocity and thermal slips at compliant peristaltic walls, **pending**
29. A. Riaz, SU, Khan, Thermal optimized model for sperm based Carreau Yasuda nanomaterial flow due to wavy channel: Physiological ducts applications, **pending**
30. A. Riaz, N. Tahir, G. Alhamzi, Numerical Analysis of the Flow Topology Surrounding Two Staggered Rectangles, **pending**
31. A. Riaz, M.N. Aslam, AI based Analysis for Optimizing Radiative Jeffery-Hamel Flow for Cross-Diffusion Effects: A Physics Informed Machine Learning Approach, **ICHMT**
32. A. Riaz, Mehpara, SU Khan, S. Akram, T. Nawaz, A computational study to investigate heat and mass transfer in peristaltic transport of Williamson fluid-particulate suspension, **MMIAS**

BOOKS AUTHORED

1. ”Peristaltic Flow of Non-Newtonian FLuids (Analytical Solutions in Three Dimensional Geometries)” **Lambert Academic Publishing** ISBN:978-620-0-48763-6.

BOOK CHAPTER

Book Name: "Mathematical Modelling of Fluid Dynamics and Nanofluids"

Chapter Name: Entropy and MHD Effects on Ciliated Flow of a Williamson Fluid, DOI: 10.1201/9781003299608, Taylor & Francis

INTERNATIONAL JOURNAL'S EDITORSHIP

1. Lead Guest Editor of Special Issue "Nanofluids and Entropy Analysis with Electroosmotic Phenomenon" **Mathematical Problems in Engineering**
2. Guest Editor of a Special Issue "Recent Developments in Fluid and Structures" **Frontiers in Physics**
3. Associate editor **Frontiers in Bioengineering and Biotechnology**
4. Review editor **Frontiers in Thermal Engineering**

INTERNATIONAL JOURNAL'S REVIEWERSHIP

1. Journal of Thermal Analysis and Calorimetry
2. SN-Applied Sciences
3. Journal of Petroleum Science and Technology
4. Engineering Reports
5. Frontiers in Physics
6. Alexandria Engineering Journal
7. Heat Transfer-Asian Research
8. Physica A: Statistical Mechanics and its Applications
9. Journal of Porous Media
10. Journal of Taibah University for Science
11. Special Topics & Reviews in Porous Media - An International Journal
12. International Journal of Heat and Mass Transfer
13. Advances in Mathematical Physics
14. IEEE Access
15. International Journal of Numerical Methods in Heat & Fluid Flow
16. Mathematical Problems in Engineering
17. Numerical Methods for Partial Differential Equations
18. Chemical Industry and Chemical Engineering Quarterly
19. Science Progress
20. Microvascular Research
21. Symmetry
22. Heat Transfer

23. Waves in Random and Complex Media
24. Crystals
25. Materials
26. Nanomaterials
27. Iranian Journal of Chemistry and Chemical Engineering
28. Visual Computing for Industry, Biomedicine and Art Editorial Office
29. Journal of Process Mechanical Engineering
30. International Journal of Ambient Energy
31. International Journal of Modern Physics B
32. Processes
33. Applied Sciences (mdpi)
34. Scientific Reports
35. Lubricants
36. Part C: Journal of Mechanical Engineering Science
37. Numerical Heat Transfer, Part B: Fundamentals
38. Ain Shams Engineering Journal
39. International journal of modelling and simulations

PROJECTS REVIEWED

1. Project No: 14550: A numerical approach in the symmetric and hybrid waveguide modelling of the vocal tract to generate real-time speech, (**NRPU-2021**).
2. Project No: 15204: Some Aspects of Symmetries of Differential Equations, (**NRPU-2022**).
3. Project No: 17274: Study of solitons in optical fibers and nonlinear optics, (**NRPU-2022**).

PROJECTS AWARDED

1. Mathematical Modeling for Mass Transport of Fluid exhibits both viscoelastic and Shear Thinning characteristics(**NRPU-17319**) as a PI.
2. Meshless Analysis for Heat Transfer in Cavity Flow, (**SRGP-254**) as a Co-PI

SUPERVISION OF MS/PHD THESIS = 14

1. Mr Zeshan Pervaiz (PhD), Effects of chemical reaction in bifurcation ducts (in progress).
2. Ayesha Ishaq (MS), Study of Effects of Solid Particles on the Peristaltic Flow of a non-Newtonian Fluid in a Curved Channel.
3. Bushra Irshad (MS), Peristaltic flow of Nano-sized particles in a Non-Darcy porous curved channel with second order partial slip condition.
4. Kinza Noreen (MS), The Study of Peristaltic pumping on a non-Newtonian nanoFluid in Asymmetric Channel with Convective Boundary Conditions.

5. Neelam Saleem (MS), Effect of Wall Properties and Double Diffusion on Peristaltic Flow of Nanofluid through a Curved Channel.
6. Sadia Shoukat (MS), Effects of Wall Properties on Pumping Flow of Nanofluid in a Three Dimensional Vertical Curved Channel.
7. Ayesha Siddiqa (MS), Entropy Optimization and Heat Transfer Analysis for Peristaltic Flow through a Curved Duct.
8. Sheraz Sikandar (MS), Mixed Convective Ciliated Flow of Magneto Ternary Hybrid Non-Newtonian Nanofluid through a Channel with Electroosmotic Effects and Entropic Analysis.
9. Kinza Mehmood (MS), Mathematical Modeling of Cilia Driven Flow of Nanofluid ($\text{CoFe}_2\text{O}_4 + \text{C}_2\text{H}_6\text{O}_2$) in an Annulus.
10. Muhammad Nadeem (MS), Effects of Entropy Generation on Blood Flow in an Eccentric Catheterized Artery having Mild Stenosis.
11. Mehpara Shehzadi (MS), Effects of Arrhenius Activation Energy and Motile Microorganisms on Peristaltic Flow of Casson Nanofluid in an Entropic Porous Channel.
12. Sobia Shaheen (MS), Cilia Flow of Magnetized Nanofluids in a Thermal Channel with Viscous Dissipation by Adomian Decomposition Method.
13. Mahreen Ali Awan (MS), Study of Ternary Hybrid Non-Newtonian Nanofluids in a Flexible Curved Rectangular Duct with Irreversibility and Magnetic Field Effects.
14. Muhammad Dil Nawaz (MS), Numerical flow analysis of viscoelastic Nano fluids with microorganisms and slip effects in a wavy conduit

SUPERVISION OF BS/M.SC THESIS = 16

1. Farheen (BS Mathematics, 2014-18), Effects of Magnetohydrodynamics on Peristaltic Flow of Jeffrey Fluid in a Rectangular Duct through a Porous Medium.
2. Yasmeen Sultana (BS Mathematics, 2014-18), Exact Solution for Peristaltic Flow of Jeffery Fluid Model in a Three Dimensional Rectangular Duct having Slip at The Walls.
3. Nida Mustafvi (M.Sc Mathematics, 2016-18), Peristaltic flow of a Jeffrey fluid in a rectangular duct having compliant walls
4. Amarah Arif (M.Sc Mathematics, 2017-19), Partial Slip Effects on Peristaltic Flow of Fractional Jeffrey Model.
5. Naheed Habib (M.Sc Mathematics, 2017-19), Effects of Entropy Generation on Peristaltic Flow of a Williamson Fluid with Convective Boundary Conditions.
6. Naeem Yasin (M.Sc Mathematics, 2017-19), Solid Particles inclusion in the Flow of a non-Newtonian Fluid through Eccentric Wavy Tubes along with the Effects of MHD and Porous Medium.
7. Muhammad Nadeem (BS Mathematics 2015-19), Entropy Generation in a Flow of a Viscous Nanofluid through Eccentric Annuli with Peristalsis.
8. Ayesha Gul (BS Mathematics 2016-20), Analytical Study of Entropy Generation and Peristaltic Flow of Jeffrey Nanofluid.
9. Ayesha Qurat ul Ain (M.Sc Mathematics 2018-20), A Theoretical Analysis of Pumping Flow of Williamson Nanofluid in a Channel with Entropy Generation.

10. Shamsa Rasheed (BS-Mathematics 2016-20), Effects of Entropy Generation on Wavy Flow of Eyring-Powell Nanofluid.
11. Ume Rubab (BS-Mathematics 2017-21), Entropy effects on cilia transport of Williamson fluid in an inclined channel under the effects of MHD.
12. Farwa Nadeem (BS-Mathematics 2017-21), Irreversibility of heat effects on Cilia motion of Cu-blood nanofluid under the influence of magnetic field in a curved geometry.
13. Maria Saleha (BS-Mathematics 2017-21), Mathematical study of ciliated Motion of nanofluid with entropy effects in an annulus.
14. Hafza Muazma Firdous (BS-Mathematics 2018-22), Electro-osmotic and Thermal Effects on Peristaltic Motion of Particle-Fluid Flow with Hall current and Compliant Walls: A Numerical Solution.
15. Mehpara Shehzadi (BS-Mathematics 2018-22), Electro-osmotic Effects on Ciliary Multi-Phase Flow of Casson Fluid with Magnetic Field: An Exact solution.
16. Kinza Saleem (BS-Mathematics 2018-22), Electroosmotic peristaltic flow of viscous fluid in elliptic duct having ciliated walls with thermal effects.

EVALUATION OF MS THESIS

1. Sadia Sharif Awan: Ferrofluid Flow to Stretchable Convergent/Divergent Channel.
2. Javeria Zaman: Investigation of Heat flux for micropolar hybrid nanofluid through intelligent computing programming.
3. Azqa Tariq: Thermal Analysis of Hybrid Nanofluid Flow along A Rotating Disk: Intelligent Computing Networks.
4. Shimza Ansar: Numerical treatment for the Williamson Ferro-nanofluid subjected to activation energy and magnetic dipole.
5. Tayyaba Saghir: Pessimistic multigranulation roughness of a hesitant fuzzy set in terms of soft binary relations.
6. Mamoon Maqsood: Neural networks construction for the analysis of Sisko nanofluid along stenotic artery under impact of viscous dissipation and porosity.

EVALUATION OF BS/M.SC THESIS

1. Adeeba Haider, Numerical solution of Blasius Flow Problem by using Shooting Method.
2. Ifrah Irshad, Solution of Second and Third Order Boundary Value Problems using Method of Superposition.
3. Iqra Aslam, Comparative study of some numerical techniques for initial value problems.
4. Javeria Sarwar, Approximate Solution Of Fredholm Integral Equations With Legendre Polynomials.
5. Jazia Jamil, Approximation theory of multi-dimensional Legendre polynomials and applications.
6. Naila Batool, Existence and Uniqueness of results for Nonlinear Second Order Boundary Value Problem.
7. Saadia Haider, Approximate solution of three compartment population model with discretization algorithm.
8. Tehseen Zahra, Existence of golden ratio in nature and its connection with Islam.

9. Sidra Karim, Influence of Lorentz Forces Boundary Layer Flow of Casson Fluid over a Stretching Sheet.
10. Muhammad Ishaq, Newtonian Heating Effect on Unsteady Casson Fluid Flow Past A Flat Plate.
11. Usama Khan, Heat Transfer in the Boundary Layer Flow of a Casson Fluid over a Permeable Shrinking Sheet with Viscous Dissipation.
12. Iqra Abid, Numerical solution of boundary value problems with AdamsBashforth (Predictor- corrector) method.
13. Qudsia Andleeb, Stability analysis of Runge-Kutta method of order four.
14. Ali Yousaf, Boundary layer flow of viscous fluid over shrinking sheet.
15. Mubeen Qamar, Slip Effects of Fluid over a Riga Surface.
16. Mughees Ur Rehman, Mathematical Study of Fluid Flow over a Riga Sheet.
17. Mahrukh Shahnawaz, Anisotropic extension of isotropic solution.
18. Sahar Farooq, Stability of compact objects.
19. Nosheen Naseer, Anisotropic solution by gravitational decoupling.

REFERENCES

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