



ARSHAD RIAZ

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EDUCATION

International Islamic University, Islamabad, Pakistan	<i>2014</i>
PhD Mathematics	CGPA: 4.0/4.0
International Islamic University, Islamabad, Pakistan	<i>2010</i>
MS mathematics	CGPA: 3.9/4.0
University of the Punjab, Lahore, Pakistan	<i>2007</i>
M.Sc mathematics	Percentage: 76
University of Sargodha, Sargodha, Pakistan	<i>2004</i>
B.Sc (Maths (A,B), Physics)	Percentage: 74
BISE Sargodha, Pakistan	<i>2002</i>
F.Sc (Pre Engineering)	Percentage: 71
BISE Sargodha, Pakistan	<i>2000</i>
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 MS Office, Scientific Workplace

WORK EXPERIENCE

- 1. University of Education, Lahore, Jauharabad Campus** *15-11-2016 to date*
Assistant Professor on TTS
- 2. University of Education, Lahore, Jauharabad Campus** *02-03-2015 to 01-04-2016*
Assistant Professor on IPFP
- 3. University of Sargodha, Lahore campus, Pakistan** *05-12-2014 to 10-03-2015*
Assistant Professor
- 4. 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)

COURSES TAUGHT

1. Vector and Tensor Analysis
2. Numerical Analysis-I
3. Analytical 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

CONFERENCES AND WORK SHOPS

1. Attended **All Pakistan Mathematical Conference** arranged by All Pakistan Mathematical Association 2011.
2. Presented a paper in **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. Attended **Two Days Conference on Mathematical Sciences** arranged by Department of Mathematics, IIU Islamabad, Pakistan 2012.

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

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.

RESEARCH PUBLICATIONS

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.
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.

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., 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
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., Akbar, N. S. (2014). Series solution of unsteady peristaltic flow of a Carreau fluid in small intestines. *International Journal of Biomathematics*, 7(05), 1450049.
18. 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.
19. 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.
20. 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.
21. 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.
 22. 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.
 23. 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.
 24. 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.
 25. 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.
 26. 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.
 27. Ijaz, M., Ayub, M., Zubair, M., Riaz, A. (2019). On stratified flow of ferromagnetic nanofluid with heat generation/absorption. *Physica Scripta*, 94(2019), 9.
 28. 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.
 29. 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.
 30. Riaz, A., Alolaiyan, H., Razaq, A. (2019). Convective heat transfer and magnetohydrodynamics across a peristaltic channel coated with nonlinear nanofluid. *Coatings*, 9(12), 816.
 31. 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.
 32. 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*, 537, 123788.
 33. 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.
 34. 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.
 35. Abdelmalek, Z., Khan, S. U., Waqas, H., Riaz, A., Khan, I. A., Tlili, I. (2020). 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 and Calorimetry*, 1-13.

36. 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.
37. Riaz, A., Khan, S. U. D., Zeeshan, A., Khan, S. U., Hassan, M., Muhammad, T. (2020). 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*, 1-13.
38. Flow of non-Spherical Nanoparticle in Electromagnetohydrodynamics of Nanofluids through Porous medium between Eccentric Cylinders, *Journal of Porous media*, In press (2020).
39. A. Riaz, A. Sadiq, Pumping Flow of a two phase non-Newtonian Fluid through a Curved Channel with the Insertion of Solid Particles. **Frontiers in Physics**, In press (2020).
40. A. Riaz, Thermal Analysis of an Eyring-Powell Fluid Peristaltic Transport in a Rectangular Duct with Mass Transfer, **JTAC**, In press (2020).

SUBMITTED ARTICLES

1. A. Riaz, A.U Awan, Effects Of Solid Particles On Fluid-Particulate Phase Flow Of Non-Newtonian Fluid Through Eccentric Annuli Having Thin Peristaltic Walls. **JTAC**.
2. A. Riaz, SU Khan, T Muhammad, Importance of magnetic dipole in bioconvection flow of Carreau nanofluid with activation energy and binary chemical reaction. **International Journal of Chemical Reactor Engineering**.
3. A. Riaz, T. Muhammad, Unsteady 3D bioconvection flow of viscoelastic nanofluid with gyrotactic motile microorganisms. **International Communications in Heat Mass Transfer**.
4. A. Riaz, SU Khan, A revised viscoelastic micropolar nanofluid model with motile micro-organisms and variable thermal conductivity. **Heat Transfer Asian Research**.
5. A. Riaz, A. Zeeshan, Physiological delivery of magnetohydrodynamics solid-liquid two phase fluid in rotating channel due to peristaltic wave with heat transfer. **Canadian Journal of Physics**.
6. A. Riaz, SU. Khan, The Effects of Magnetic Field on a Pseudoplastic Fluid through a Curved Passage having Porous Medium: A Hybrid Analytical Treatment, **Symmetry**.
7. A. Riaz, MM Bhatti, Biologically-inspired thermal transport on the rheology of Williamson hydro-magnetic nanofluid flow with convection: An entropy analysis, **FDR**.
8. A. Riaz, R. Ellahi, Role of hybrid nanoparticles in thermal performance of peristaltic flow of Eyring-Powell fluid model, **JTAC**.
9. A. Riaz, T. Abbas, Nanoparticles phenomenon for the thermal management of wavy flow of a Carreau fluid through a three dimensional channel, **JTAC**.
10. A. Riaz, A. Zeeshan, Entropy generation measures in biologically inspired flow of Powell-Eyring viscoelastic nanofluid: A theoretical approach, **Physica A**.
11. A. Riaz, SU. Khan, Peristaltic flow of magneto Jeffery nanofluid in a vertical channel with multiple slip features, **Journal of Molecular Liquids**.
12. A. Riaz, A. Zeeshan, Two-Phase Peristaltic transport of Ree-Eyring Fluid considering magnetic field of porous cavity with Rectangular Duct, **Modern Physics Letter B**.
13. A. Riaz, Abuzar Ghaffari, Impact of Induced Magnetic Field on Thermal Enhancement in Gravity Driven Ferrofluid Fe₃O₄ Flow through Vertical Non-isothermal Surface, **JTAC**.

BOOKS AUTHORED

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