

Dr. Ambreen Afsar Khan

QUALIFICATIONS:

Ph. D in Fluid Mechanics from QUAID-E-AZAM University Islamabad

EXPERIENCE:

- International Islamic University Islamabad from 21th August 2008 till now as Assistant Professor.
- F.G College for Women G-10/4 Islamabad from June 2006 to 20th August 2008 as Assistant professor.
- Bahira College E-8 Islamabad from 1st November 2003 to 15th June 2006 as Lecturer.
- ICG F-6/2 from 28th August 2001 to 30th October 2003 as Lecturer.

SYLLABUS MODIFICATION

- Modified the syllabus of Applied Mathematics of CSS (2012).

ACHIEVEMENTS:

- Merit scholarship in M. Phil at Quaid-e-Azam University Islamabad Pakistan during 1st and 2nd semesters.
- University Grant commission Scholarship in M. Phil during 3rd and 4th semesters.

BOOK CHAPTER:

Effect of Convection on Wavelet Estimation for a multidimensional Acoustic Earth,

PUBLICATIONS:

1. Peristaltic transport of a third grade fluid under the effect of a magnetic field, Tasawar Hayat, **Ambreen Afsar**, Masood Khan, Saleem Asghar, Computers and Mathematics with Applications 53 (2007) 1074-1087.
2. Peristaltic transport of a Johnson-Segalman fluid in an asymmetric channel, Tasawar Hayat, **Ambreen Afsar**, Nasir Ali, Mathematical and Computer Modelling 47 (2008) 380-400.
3. Effect of an Endoscope on the Peristaltic Transport through a Porous Medium, **Ambreen Afsar**, Nasir Ali, Tasawar Hayat Journal of Porous Media 11 (2008) 476-486.
4. Peristaltic transport of a Jeffrey fluid with variable viscosity through a porous medium in an asymmetric channel, **A. Afsar Khan**, R. Ellahi and K. Vafai, Advances in Mathematical Physics 2012 (2012) 1-15
5. Analytical Solution for Non-Newtonian Nanofluid with Heat Transfer and Nonlinear Partial Slip Boundary Conditions by Means of Optimal Homotopic Asymptotic Method, Rahmat Ellahi, Mohsan Hassan, **Ambreen Afsar Khan**, and Khadija Maqbool Adv. Sci. Eng. Med, 5 (2013) 744-751.
6. Effects of MHD and Porosity on the flow of Third Grade Fluid in a Pipe by Means of Reynolds and Vogels Models, R. Ellahi, Shafiq ur Rehman, **Ambreen Afsar Khan** and Muhammad Mushtaq, Advanced Science, Engineering and Medicine, 5 (2013)

7. The effects of variable viscosity on the Peristaltic flow of Non-Newtonian fluid through a porous medium in an inclined channel with slip boundary conditions. **A. Afsar Khan**, R. Ellahi, M. Usman, Journal of Porous Media, (2013) 59-67.
8. Effects of heat transfer on peristaltic motion of Oldroyd fluid in the presence of inclined magnetic field, **A. Afsar Khan**, R. Ellahi, M. Mudassar Gulzar, Mohsen Sheikholeslami field, Journal of Magnetism and Magnetic Materials. 372 (2014) 97–106.
9. Study of magnetic and heat transfer on the peristaltic transport of a fractional second grade fluid in a vertical tube, M. Hameed, **Ambreen A. Khan**, R. Ellahi, M. Raza, Engineering Science and Technology, an International Journal 18 (2015) 496-502.
10. The Study of Peristaltic Motion of Third Grade Fluid under the Effects of Hall Current and Heat Transfer, Kambiz Vafai, **Ambreen Afsar Khan**, Saba Sajjad and Rahmat Ellahi, Z. Naturforsch. De Gruyter 70(4) a (2015) 281–293.
11. The shape effects of nanoparticles suspended in HFE-7100 over wedge with entropy generation and mixed convection, R. Ellahi, M. Hassan, A. Zeeshan, **Ambreen A. Khan**, Appl Nanosci (2016) DOI 10.1007/s13204-015-0481-z.
12. Bionic Study of Variable Viscosity on MHD Peristaltic Flow of pseudoplastic Fluid in an Asymmetric Channel, **Ambreen A. Khan**, Saima Muhammad, R. Ellahi, and Q. M. Zaigham Zia, Journal of Magnetism 21(2), (2016) 273-280.
13. Effects of Slip Condition, Variable Viscosity and Inclined Magnetic Field on the Peristaltic Motion of a Non-Newtonian Fluid in an Inclined Asymmetric Channel **A. Afsar Khan**, A. Sohail, S. Rashid, M. Mehdi Rashidi and N. Alam Khan *Journal of Applied Fluid Mechanics*. 9(3), (2016) 1381-1393.
14. Study of peristaltic flow of magnetohydrodynamics Walter's B fluid with slip and heat transfer, **Ambreen A. Khan**, Hafsa Usman, K. Vafai, R. Ellahi *Scientia Iranica B* 23(6), (2016) 2650-2662.
15. Effect of entropy generation on powell Eyring fluid in a porous channel, **Ambreen Afsar Khan**, Faiza Zaib, Akbar Zaman, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 39 (2017) 5027–5036.
16. Impact of induced magnetic field on synovial fluid with peristaltic flow in an asymmetric channel, **Ambreen Afsar Khan**, Arfa Farooq, Kambiz Vafai, Journal of Magnetism and Magnetic Materials, 446 (2018) 54-67.
17. Influence of initial stress and gravity on refraction and reflection of SV wave at interface between two viscoelastic liquid under three thermoelastic theories **Ambreen Afsar Khan**, Ambreen Afzal, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 40 (2018) 1-13.
18. Impact of Two Relaxation Times on Thermal, P and SV Waves at Interface With Magnetic Field and Temperature Dependent Elastic Moduli, **Ambreen Afsar Khan**, Sundas Yaseen, Akbar Zaman, Result in Physics, 8 (2018) 324-335.
19. Mass transport on chemicalized fourth -grade fluid propagating peristaltically through a curved channel with magnetic effects, **Ambreen Afsar Khan**, Fouzia Masood, Rehmat Ellahi, M.M.Bhatti, Journal of Molecular Liquids, 258 (2018) 186-195.
20. Modeling of unsteady non-Newtonian blood flow through a stenosed artery: with nanoparticles, Akbar Zaman, **Ambreen Afsar Khan**, Nasir Ali, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 40 (2018) 307.

21. Influence of wall properties on the peristaltic flow of a dusty Walter's B fluid, **Ambreen Afsar Khan**, Hadia Tariq, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 40 (2018) 368.
22. Effects of mass transfer on MHD second grade fluid towards stretching cylinder: A novel perspective of Cattaneo–Christov heat flux model, Sultan, Z. Alamri, **Ambreen A. Khan**, Mariam Azeez, R. Ellahi, Physics Letters A 383 (2019) 276–281.
23. Effects of chemical reaction on third-grade MHD fluid flow under the influence of heat and mass transfer with variable reactive index, **Ambreen Afsar Khan**, Syeda Rida Bukhari, Marin Marin, Rehmat Ellahi, Heat Transfer Research, (2019),50(11):1061-1080.
24. Peristaltically Wavy Motion on DustyWalter's B Fluid with Inclined Magnetic Field and Heat Transfer; Hadia Tariq, **Ambreen Afsar Khan**, A Zaman; Arabain Journal for Science and Engineering;(2019) 7799-7808.
25. Important Paradigms of the Thermoelastic Waves; **Ambreen Afsar Khan**, Ayesha Sohail, O. A. Beg · Rabia Tariq; Arabain Journal for Science and engineering (2019).44: 663-671.
26. Activation energy and non-Darcy resistance in magneto peristalsis of Jeffrey material, T. Hayat, **A.A. Khan**, Farhat Bibi, S. Farooq, Journal of Physics and Chemistry of Solids 129 (2019) 155-161.
27. Nonlinear radiative peristaltic flow of Jeffrey nanofluid with activation energy and modified Darcy's law; T. Hayat, Farhat Bibi, S. Farooq, · **Ambreen Afsar Khan**; Journal of the Brazilian Society of Mechanical Sciences and Engineering (2019) 41:296
28. Entropy generation analysis in peristaltic motion of Sisko material with variable viscosity and thermal conductivity Farhat Bibi, T. Hayat, S. Farooq, **A. A. Khan & A. Alsaedi**, Journal of Thermal Analysis and Calorimetry (2019) doi.org/10.1007/s10973-019-09125-4.
29. Rayleigh waves propagation in anisotropic layer superimposed a monoclinic medium **Ambreen Afsar Khan**, Aroosa Umar and Akbar Zaman, Indian Journal of Physics (2019), 95(3),449-457.
30. Dufour and Soret effects on Darcy-Forchheimer flow of second-grade fluid with the variable magnetic field and thermal conductivity, **Ambreen Afsar Khan**, Naeem, S., Ellahi, R., Sait, S. and Vafai, K. International Journal of Numerical Methods for Heat & Fluid Flow, (2020) doi.org/10.1108/HFF-11-2019-0837.
31. Computational biomedical simulations of hybrid nanoparticles on unsteady blood hemodynamics in a stenotic artery, Akbar Zaman, Nasir Ali, **Ambreen Afsar Khan**, Mathematics and Computers in Simulation, Volume 169, 2020, Pages 117-132.
32. Theoretical Analysis of Peristaltic Viscous Fluid with Inhomogeneous Dust Particles, H Tariq, **Ambreen Afsar Khan**, A Zaman, Arabian Journal for Science and Engineering, 2020, DOI: 10.1007/s13369-020-04668-3.
33. Entropy production minimization and non-Darcy resistance within wavy motion of Sutterby liquid subject to variable physical characteristics, T Hayat, F Bibi, **Ambreen Afsar Khan**, A Alsaedi, Journal of Thermal Analysis and Calorimetry, (2020) doi.org/10.1007/s10973-020-10007-3.
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37. Peristaltic flow of second-grade dusty fluid through a porous medium in an asymmetric channel, **Ambreen Afsar Khan**, Hadia Tariq, Journal of Porous Media 23(9):883–905 (2020).
38. Dufour, Soret and radiation effects with magnetic dipole on Powell-Eyring fluid flow over a stretching sheet, K. Vafai, **Ambreen A. Khan**, G. Fatima, Sadiq M Sait and R. Ellahi, International Journal of Numerical Methods for Heat & Fluid Flow. DOI 10.1108/HFF-06-2020-0328.
39. Peristaltic transport of a second-grade dusty fluid in a tube. Hadia Tariq, **Ambreen Afsar Khan** Journal of Mechanical Engineering Research 11(2): 11-25 (2020).
40. Peristaltic flow of a dusty electrically conducting fluid through a porous medium in an endoscope. Hadia Tariq, **Ambreen Afsar Khan** SN Applied Sciences 2:2107 (2020)
41. Time dependent non-Newtonian nano-fluid (blood) flow in w-shape stenosed channel; with curvature effects Akbar Zaman, **Ambreen Afsar Khan**, Mathematics and Computers in Simulation 181 (2021) 82–97.
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43. MHD compressible Fluid with variable thermal conductivity through a ciliated channel. Rida Rafaqat, **Ambreen Afsar Khan** Advances in Mechanical engineering. 13(4). 1-14 (2021).
44. Effect of relaxation and retardation times on dusty Jeffrey fluid in a curved channel with peristalsis. **Ambreen Afsar Khan**, Saira Zafar, Atifa Kanwal. Advances in Mechanical engineering. 13(6). 1-10 (2021).
45. Transmission and reflection of SV waves at micropolar solid-liquid interface with dual-phase lag theory. **Ambreen Afsar Khan**, Sania Tanveer. Indian Journal of Physics. <https://doi.org/10.1007/s12648-021-02056-7> (2021).
46. Simulations of unsteady blood flow through curved stenosed channel with effects of entropy generations and magneto-hydrodynamics. Akbar Zaman, Fazle Mabood, **Ambreen Afsar Khan**, Aamar Kamal Abbasi, Muhammad Faisal Nadeem, Irfan Anjum Badruddin. International Communications in Heat and Mass Transfer. 127(2021), 105569.
47. Effect of initial stress on an SH wave in a monoclinic layer over a Heterogeneous Monoclinic Half Space. **Ambreen Afsar Khan**, Anum Dilshad, Muhammad Rahimi Gorgi, Muhammad Mahtab Alam. Mathematics. 9, 3243(2021).
48. Examining the behavior of MHD micropolar fluid over curved stretching surface based on the modified Fourier law. **Ambreen Afsar Khan**, Rabia Batool, Nabeela Kousar. Scientia Iranica Transactions B: Mechanical Engineering. 28(1), 223-230 (2021).

49. Significance of induced magnetic field and variable Thermal conductivity on stagnation point flow of second grade fluid. **Ambreen Afsar Khan**, Sadaf Illyas, Tahseen Abbas, Rehmat Ellahi. J. Cent. South Univ. (2021) 28: 3381 – 3390.
50. Entropy generation analysis for peristalsis of magneto Jeffrey materials. Tasawar Hayat, Farhat Bibi, **Ambreen Afsar Khan**, Akbar Zaman and Ahmed Alsaedi. Journal of process Mechanical Engineering. (2021) DOI: 10.1177/09544089211041278.
51. Effect of Initial Stress on an SH wave in a Monoclinic Layer over a Heterogeneous Monoclinic Half space. **Ambreen Afsar Khan**, Anum Dilshad, Mohammad Rahimi-Gorji and Mohammad Mahtab Alam. Mathematics. (2021), 9, 3243.
52. Radiation Consequence on Sutterby Fluid over a curved Surface. A. S. M. Metwally, A. Khalid, **A. A. Khan**, K. Iskakova, M. R. Gojri and M. Ehab. Journal of Engineering Thermo Physics. (2022), 31(2), 315-327.
53. Thermal analysis of unsteady hybrid nanofluid magneto-hemodynamics flow via overlapped curved stenosed channel Akbar Zaman, **Ambreen A Khan**, Fazle Mabood, Amar Abbasi and Irfan A Badruddin. Proc IMechE Part C: J Mechanical Engineering Science 2022, 1–13.
54. Magneto-hydrodynamics second grade compressible fluid flow in a wavy channel under peristalsis: Application to thermal energy. R. Rafaqat, **A.A. Khan**, A. Zaman, F. Mabood, I.A. Badruddin. Journal of Energy Storage. 51 (2022) 104463.
55. Laser Impact on harmonic waves through microstretch medium under the DPL theory. **A. A. Khan**, S. Zafar Waves in Random and Complex Media (2022). doi.org/10.1080/17455030.2022.2084652.
56. Electro-osmotic peristaltic flow and heat transfer in an ionic viscoelastic fluid through a curved micro-channel with viscous dissipation. **Ambreen Afsar Khan**, Kaenat Akram, Akbar Zaman, O Anwar Beg and Tasveer Anwar Beg. J Engineering in Medicine. (2022). https://doi.org/10.1177/09544119221105848.
57. Unsteady biomedical investigation of nanofluid flow via a bent stenosed blood vessel (with aneurysm) using the Sisko model Akbar Zaman & A. A. Khan. Waves in Random and Complex Media, (2022) doi.org/10.1080/17455030.2022.2123972.
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59. Unsteady Radiative-Convective Flow of a Compressible Fluid: A Numerical Approach, Rida Rafaqat, **Ambreen Afsar Khan**, and Akbar Zaman, Canadian Journal of Physics. (2022) doi.org/10.1139/cjp-2022-0154