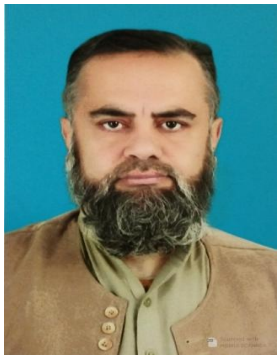
CURRICULUM VITAE



Dr. Abdul Rehman
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Research Pages:

Google Scholar: https://scholar.google.co.th/citations?hl=en&user=FnFiLK0AAAAJ

Education

- **Ph. D. in** Mathematics**, 2014, from Quaid-i-Azam University, Islamabad, Pakistan**
- **Area of** specialization**: Applied Mathematics (Non-Newtonian fluid Mechanics)**
- M. Phil in Mathematics, 2010, from Quaid-i-Azam University, Islamabad, Pakistan
- M. Sc. In Mathematics, 2005, from University of Balochistan, Quetta, Pakistan

Academics Appointments

- Lecturer at the Department of Mathematics, University of Balochistan, Quetta, from 25 June, 2007 till 12th April 2015
- Assistant Professor at the Department of Mathematics, University of Balochistan, Quetta, from 13th April 2015 till 25th February 2022
- Associate Professor at the Department of Mathematics, University of Balochistan, Quetta, from 26th February 2022 to date
- Chairperson Department of Mathematics, University of Balochistan, Quetta, from 23rd November 2022 to date

Research Interests

Newtonian and non-Newtonian Fluids, Peristaltic flows, Flows in arteries, Flows in porous medium, Stretching Problems in Newtonian and non-Newtonian Fluid Mechanics, Magnetohydrodynamic flows, Unsteady flows, Micropolar fluids, Homotopy Analysis Method, Solutions of PDE's using Analytical Techniques, Blood Flow through arteries, Fuzzy logics, Fuzzy Algebra, Neural Networks.

Area of specialization:

- Applied Mathematics

Courses Taught

BS/M. Sc. Level Courses

- Fluid Mechanics
- Numerical Methods
- Numerical Analysis
- Optimization Theory
- Complex Analysis
- Calculus, Affine and Euclidean Geometry
- Discrete Mathematics
- Real Analysis

M. Phil/ Ph. D. Level Courses

- Basic Theory of Viscous Fluids
- Advance Partial Differential Equations
- Mathematical Techniques for Boundary Value Problem
- Numerical Optimization
- Numerical Linear Algebra
- Elastodynamics
- Minimal Surfaces.

Conferences Attended

1. Second international conference on “Recent Developments in Fluids” organized by Fluid Mechanics Group department of Mathematics Quaid-i-Azam University Islamabad, Pakistan.
2. Third international conference on “Recent Developments in Fluids” organized by Fluid Mechanics Group department of Mathematics Quaid-i-Azam University Islamabad, Pakistan (Held from 30th July – 1st August 2009).
3. National conference entitled “All Pakistan Mathematical Conference 2010” organized by All Pakistan Mathematical Association, Islamabad, Pakistan (Held on 22nd and 23rd June 2010).
4. Forth international conference on “Recent Developments in Fluids” organized by Fluid Mechanics Group department of Mathematics Quaid-i-Azam University Islamabad, Pakistan (Held from 3rd to 5th August 2010).
5. National conference entitled “All Pakistan Mathematical Conference 2011” organized by All Pakistan Mathematical Association, Islamabad, Pakistan (Held on 21st and 22nd July 2011).
6. International workshop on “Mathematical Sciences and its Applications” organized by OIC standing committee on scientific technological cooperation (COMSTECH) Islamabad, Pakistan (Held from 23rd to 25th May 2011).
7. Two day training workshop on “Semester System” organized by FTDC (Faculty Training & Development Center), University of Balochistan, Quetta (Held on 25-26 June 2014)
8. One-day consultative workshop on “Policies for Creating Enabling Environment for Encouraging Problem-Solving Research” organized by ORIC (Office of Research Innovation & commercialization), University of Balochistan, Quetta (Held on 4th June 2015)
9. Two day training summit entitled “Project Formulation Workshop” organized by Pakistan Science Foundation, Islamabad at University of Balochistan, Quetta (Held on 24-25 April 2017)

Thesis Supervised

- **Ph. D Theses Supervised 01**
- **M. Phil Theses Supervised 13**

Ph. D Theses Supervised

1. Naheeda Iftikhar (Degree Awarded) Investigation for the transportation of peristaltic and magnto-hydrodynamics fluids by theoretical approach

M. Phil Theses Supervised

2. Sardar Muhammad (Degree Awarded) Some contribution to interval valued Fuzzy new ideals in BF-algebras
3. Ghulam Farooq (Degree Awarded) Heat transfer analysis for the boundary layer flow of non-Newtonian second grade fluids
4. Muhammad Idrees (Degree Awarded) On *(α, β)*-Interval valued Fuzzy H-ideals in BF-algebras
5. Amina (Degree Awarded) Mixed convection magnetohydrodynamic flow of a viscoelastic fluid through a porous wedge
6. Zahida Kakar (Degree Awarded) Non-Newtonian fluid flow through a permeable medium
7. Dawood Khan (Degree Awarded) Discrete Dynamical System in BCK-Algebra
8. Nazish Ambreen (Degree Awarded) Analytic solution for the steady incompressible nanofluid flow over a rotating disk in porous medium
9. Haroon Rasheed (Degree Awarded) Analytical analysis for the auxiliary parameters appearing due to magneto-hydrodynamic boundary layer viscoelastic fluid flow for a moving surface
10. Razmak Bazai (Degree Awarded) Micropolar fluid flow over a vertical exponentially stretched cylinder
11. Muhammad Umer Farooq (Degree Awarded) Effects of Nanoparticles on annular axisymmetric flow over a moving cylinder
12. Farha Deba (Degree Awarded) Analytic Solutions for some Partial Differential Equations by using Homotopy Perturbation Method
13. Abdur Rab (Degree Awarded) Axisymmetric Stagnation Flow of Micropolar Fluid Through Porous Medium in Moving Cylinder

14. Muhammad Rafiq (Waiting for final defense) Numerical Study of the Boundary layer problem over a Flat Plate by Finite Difference Method

Research Publications

Impact Factor Research Papers (Published)

1. S. Nadeem, Abdul Rehman, K. Vajravelu, Jinho Lee, Changhoon Lee, Axisymmetric stagnation flow of a micropolar nanofluid in a moving cylinder, Mathematical Problems in Engineering, Volume 2012, Article ID 378259

JCR Impact Factor =1.009

2. Abdul Rehman, S. Nadeem, Mixed convection heat transfer in micropolar nanofluid over a vertical slender cylinder, Chin. Phy. Lett. 29 (12) (2012) 124701

JCR Impact Factor = 1.080

3. S. Nadeem, Abdul Rehman, Changhoon Lee, Jinho Lee, Boundary layer flow of second grade fluid in a cylinder with heat transfer, Mathematical Problems in Engineering, Volume 2012, Article ID 640289.

JCR Impact Factor = 1.009

4. Abdul Rehman, S. Nadeem, M. Y. Malik, Boundary layer stagnation-point flow of a third grade fluid over an exponentially stretching sheet, Braz. J. Che. Eng. 30(3) (2013) 611-618.

JCR Impact Factor = 1.027

5. M. Y. Malik, M. Naseer, S. Nadeem, Abdul Rehman, The boundary layer flow of Casson nanofluid over a vertical exponentially stretching cylinder, Appl. NanoSci. DOI: 10.1007/s13204-012-0267-0

JCR Impact Factor = 2.880

6. M. Y. Malik, M. Naseer, S. Nadeem, Abdul Rehman, The boundary layer flow of hyperbolic tangent fluid over a vertical exponentially stretching cylinder, Alexandria Engineering J.,53 (2014) 747-750

JCR Impact Factor = 2.460

7. Naheeda Iftikhar, Abdul Rehman, Peristaltic flow of an Eyring Prandtl fluid in a diverging tube with heat and mass transfer, International Journal of Heat and Mass Transfer 111 (2017) 667–676

JCR Impact Factor = 4.947

8. Najeeb Alam Khan, Umair Bin Saeed, Faqiha Sultan, Saif Ullah, and Abdul Rehman, Study of velocity and temperature distributions in boundary layer flow of fourth grade fluid over an exponential stretching sheet, AIP ADVANCES 8, 025011 (2018)
JCR Impact Factor = 1.337

9. Naheeda Iftikhar, Abdul Rehman, Hina Sadaf, Muhammad Najam Khan, Impact of wall properties on the peristaltic flow of Cu-water nano fluid in a non-uniform inclined tube, Int. Journal of Heat and Mass Transfer 125 (2018) 772–779
JCR Impact Factor = 4.947

10. Naheeda Iftikhar, Abdul Rehman, Hina Sadaf, Saleem Iqbal, Study of Al_2O_3/copper-water nanoparticles shape, slip effects and heat transfer on steady physiological delivery of MHD hybrid nanofluid. Canadian Journal of Physics, 97(12) (2019) 1239-1252
JCR Impact Factor = 1.032

11. D. Munir, N. Sheikh, A. Raziq, Abdul Rehman, A. Basit, I. Ullah, D. Khan, Blood pressure estimation using artificial neural network and multitaper model, Linguisita Antverpiensia, 2021(Issue-2) (2021) 4041-4052
JCR Impact Factor

12. Naheeda Iftikhar, Abdul Rehman, Hina Sadaf, Theoretical investigation for convective heat transfer on Cu/water nanofluid and (SiO_2-copper)/water hybrid nanofluid with MHD and nanoparticle shape effects comprising relaxation and contraction phenomenon, International Communications in Heat and Mass Transfer 120 (2021) 105012
JCR Impact Factor = 5.683

13. Naheeda Iftikhar, Hina Sadaf, Abdul Rehman, Consequences of gold nanoparticles of MHD blood flow in a wavy tube with wall properties, Waves in Random and Complex Media, Vol 147,
doi.org/10.1080/17455030.2021.2017067
JCR Impact Factor = 4.051

14. Naheeda Iftikhar, Abdul Rehman, Hina Sadaf, Inspection of physiological flow in the presence of nanoparticles with MHD and slip effects, Journal of Thermal Analysis and Calorimetry, Journal of Thermal Analysis and Calorimetry, 147(1) (2022) 987-997

JCR Impact Factor = 3.0

15. N. Sheikh, S. Parveen, Abdul Rehman, A. Naeem, M. Anjum, K. Shahid, M. Yasin, Comparative Study of Fake News Detection using Navie Bayes and Logistic Model, Kurdish Studies, 12(5) (2024) 1008 1015

JCR Impact Factor

16. N. Sheikh, A. Naeem, S. Parveen, Abdul Rehman, M. Anjum, M. Yasin, R. Manzoor, Prediction of Cardiovascular Diseases Through Machine Learning Algorithms: A Supervised Model, Kurdish Studies, 12(5) (2024) 818-822

JCR Impact Factor

17. R. Kausar, F. Iqbal, A. Raziq, N. Sheikh, Abdul Rehman, Enhanced Foreign Exchange Volatility Forecasting using CEEMDAN with Optuna-Optimized Ensemble Deep Learning Model, Sains Malaysiana, 53(9) (2024) 3229-3239

JCR Impact Factor = 0.7

18. S. Muhammad, Abdul Rehman, A. Iqbal, T. Ali, F. Khan, Pareto-critical equilibrium condition for non-linear multiobjective optimization problems with applications, Heliyon, 10 (2024) e39498

JCR Impact Factor = 3.4

Non-W Category Research Papers (Published)

(Both Impact Factor and Non-Impact Factor Research Papers)

19. S. Nadeem, Abdul Rehman, Mohamed Ali, The boundary layer flow and heat transfer of a nanofluid over a vertical slender cylinder, J. NanoEngineering and NanoSystems (2012) 1-9

20. S. Nadeem, Abdul Rehman, Axisymmetric stagnation flow of a nanofluid in a moving cylinder, Comp. Math. Mod. 24(2) (2013) 293-306

21. Abdul Rehman, S. Nadeem, M. Y. Malik, Stagnation flow of couple stress nanofluid over an exponentially stretching sheet through a porous medium, J. Power Tech. 93(2) (2013) 122-132.

22. Abdul Rehman, S. Nadeem, S. Iqbal, M. Y. Malik, M. Naseer, Nanoparticle effect over the boundary layer flow over an exponentially stretching cylinder, J. NanoEngineering and NanoSystems (2014) 1-6.

23. M. Y. Malik, M. Naseer, Abdul Rehman, Numerical study of convective heat transfer on the Power Law fluid over a vertical exponentially stretching cylinder, App Comp Math, 4(5), (2015) 346-350.

24. Abdul Rehman, R. Bazai, S. Achakzai, S. Iqbal, M. Naseer, Boundary Layer Flow and Heat Transfer of Micropolar Fluid over a Vertical Exponentially Stretched Cylinder, App Comp Math, 4(6) (2015) 424-430.

25. Abdul Rehmana, S. Achakzai, S. Nadeem, S. Iqbal, Stagnation point flow of Eyring Powell fluid in a vertical cylinder with heat transfer, Journal of Power Technologies 96 (1) (2016) 57–62

26. Saleem Iqbal, Farhana Sarwar, Syed Mohsin Raza, Abdul Rehman, Y. Zahra Jafri, An Aperiodic Stable Chaos with Lyapunov Exponents in Time Series, American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS) 15(1) (2016) 282-289

27. Haroon Rasheed, Abdul Rehman, Naveed Sheikh, Saleem Iqbal, MHD Boundary Layer Flow of Nanofluid over a Continuously Moving Stretching Surface, Applied and Comp. Math., 2017; 6(6): 265-270

28. Saboor Ahmad Kakar, Naveed Sheikh, Adnan Naseem, Saleem Iqbal, Abdul Rehman, Aziz ullah Kakar, Bilal Ahmad Kakar, Hazrat Ali Kakar, Bilal Khan, Artificial Neural Network based Weather Prediction using Back Propagation Technique, International Journal of Advanced Computer Science and Applications, 9(8) (2018), 462-470

29. Naheeda Iftikhar, Abdul Rehman and Muhammad Najam Khan, Features of Convective heat transfer on MHD peristaltic movement of Williamson fluid with the presence of Joule heating, IOP Conf. Series: Materials Science and Engineering 414 (2018) 012010

30. Azizullah Kakar, Naveed Sheikh, Bilal Ahmed, Saleem Iqbal, Abdul Rahman, Saboor Ahmad Kakar, Arbab Raza, Samina Naz, Junaid Babar, Systematic Analysis and Classification of Cardiac Rate Variability using Artificial Neural Network, International Journal of Advanced Computer Science and Applications, 9(11) (2018) 746-750

31. Amina Panezai, Abdul Rehman, Naveed Sheikh, Saleem Iqbal, Israr Ahmed, Manzoor Iqbal, Muhammad Zulfiqar, Mixed Convective Magnetohydrodynamic Heat Transfer Flow of Williamson Fluid Over a Porous Wedge, American Journal of Math. Comp. Mod., 4(3) (2019) 66-73

32. N. Ambreen, A. Rehman, N. Sheikh, S. Iqbal, M. Zulfqar, Boundary-Layer Flow and Heat Transfer over a Rotating Porous Disk in a Non-Newtonian Williamson Nanofluid, Indian J. Sci. Tech., 12(38) (2019) 1-8

33. Noreen Azhar, Saleem Iqbal, Sher Muhammad Nasir, Faiza Akhtar, Farhana Sarwar, Abdul Rehman, Wind Data Analysis of Coastal Region of Balochistan (Pakistan) by Weibull and Rayleigh Method, Indian Journal of Science and Technology, 12(26) (2019) 1-8

34. Zahida Khan, Abdul Rehman, Naveed Sheikh, Saleem Iqbal, Ejaz Shah, Boundary Layer Flow of a Nanofluid through a Permeable Medium Due to Porous Plate, American J. Math. Comp. Modelling, 2020; 5(4): 97-101

35. Dawood Khan, Abdul Rehman, Naveed Sheikh, Saleem Iqbal, Israr Ahmed, Properties of Discrete Dynamical System in BCI-Algebra, IJMFS, 6(3) (2020) 53-58

36. Khan Muhammad, Naveed Sheikh, Abdul Rehman, Mathematical Modeling, Design and Development of Light-Weight Polyvinyl Chloride (PVC) Pipe Based Quadrotor for Monitoring an Outdoor Environment, Mathematical Modelling and Applications, 6(1) (2021) 10-16

37. Dawood Khan, Abdul Rehman, Saleem Iqbal, Naveed Sheikh, Some Results of Self-Maps in PU-Algebra, Punjab University Journal of Mathematics, 53(3) (2021) 1-7

38. Dawood Khan, Abdul Rehman, A New View of Homomorphic Properties of BCK-Algebra in Terms of Some Notions of Discrete Dynamical System, Journal of New Theory, 35 (2021) 1-10

39. D. Khan, Abdul Rehman, S. Iqbal, A. Ahmed, S. Jafar, M. Baloch, Modified Fourier Transform And Its Properties, Mathematica Montisnigri, Vol LI (2021)

40. Abdur Rab, Abdul Rehman, Zahida Khan, Non-Newtonian Fluid Flow through Cylindrical Surface in Presences of Porous Material, European Academic Research, IX (10) (2022) 6428-6438

41. Naheed Abdullah, Saleem Iqbal, Asma Khalid, Amnah S. Al Johani, Ilyas Khan ,Abdul Rehman, Mulugeta Andualem, The Fractional Hilbert Transform on the Real Line, Mathematical Problems in Engineering, Volume 2022, Article ID 5027907, 11 pages,

https://doi.org/10.1155/2022/5027907

42. Muhammad Saleem, Naveed Sheikh, Abdul Rehman, Muhammad Rafiq, Shah Jahan, Real-Time Object Identification Through Convolution Neural Network Based on YOLO Algorithm, Mathematics and Computer Science, 2023; 8(5): 104-111

43. Muhammad Rafiq, Abdul Rehman, Naveed Sheikh, Muhammad Saleem, Muhammad Umar Farooq, Numerical Study of the Boundary Layer Flow Problem over a Flat Plate by Finite Difference Method, Applied Engineering, 2023; 7(2): 27-36

44. Shakoor Muhammad, Waqar Ali, Fazal Haq, Abdul Rehman, Taimur Ali, Yousaf Khan, Application of goal programming for optimal routing investment: A case study in Pakistan Railways, Journal of Xi'an Shiyou University, Natural Science Edition ISSN: 1673-064X, 19 (12) (2023) 498-510

GOOGLE SCHOLAR CITATIONS

As of 11th August 2025

Citations	1104
Publications	**39**
h-index	19
i-10 index	25