

Dr. ZAFFAR MEHMOOD

Address: New Lalazar, Rose Lane 7, CB-6171/G, Near Foundation University, Rawalpindi.

PERSONAL SIDE VIEW

Father's Name	MUHAMMAD ILYAS	CNIC No	61101-1977107-3
Date of Birth	October 5 th , 1979	Domicile	Punjab (RWP)
Nuptial type	Married	Nationality	PAKISTANI
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OBJECTIVE

Seeking an opportunity in a dynamic environment where I can fully utilize my potential and knowledge of subject in that environment, which can be challenging and progressive for me.

To obtain career oriented job in reputed organization; where I could utilize my abilities and skills to prove myself as an energetic and professional team leader for achieving the organization's business goals and objectives.

EDUCATIONAL CAREER:

- **PhD (Mathematics):** **HITEC University Taxila Cantt.**

Title of thesis: Two and Three Dimensional Boundary Layer Problems for Rheological Fluids

Modules include: Advanced ordinary differential equation and its applications, Advanced Numerical Analysis, Integral equation and its applications, Hilbert space and its applications.

- **MS/M.Phil (Mathematics) 2010–2012:** **HITEC University Taxila Cantt.**

Title of thesis: Analytical Techniques to Solve Initial & Boundary Value Problems

Modules include: Advanced Partial Differential Equation, Numerical Linear Algebra, Boundary Value Problems, Numerical Solution of Partial Differential Equations, Perturbation Methods, Viscous Fluid, Computational Fluid Dynamics.

- **M.Sc (Mathematics) 2001–2004:** **University of Punjab Lahore**

Modules include: Real Analysis, Complex Analysis, Mathematical Physics, Mathematical Statistics, Operational Research, Numerical Analysis, Mechanics, Group Theory.

- **B.Sc (1999–2001):** **University of Punjab Lahore**

Modules include: Mathematics, Physics.

- **F.Sc (1996–1999):** **FBISE Islamabad**

Modules include: Mathematics, Physics and Chemistry.

- **Matric (Science) 1994–1996:**

BISE Rawalpindi

Modules include: Mathematics, Physics, Biology and Chemistry.

PROFESSIONAL EDUCATION:

- **M.Ed (Science Education) 2014**

Allama Iqbal Open University Islamabad

Modules include: Educational Research, Foundations of Education, Computer in Education, Educational Measurement and Evaluation, Education in Pakistan, Teaching Strategies, Foundations of Science Education, Teaching Strategies in Science Education, Laboratory Organization and Safety Method, Assessment in Science Education, Curriculum Development and Instruction, Educational Psychology

- **B.Ed (Mathematics, Physics) 2005**

Allama Iqbal Open University Islamabad

Modules include: Teaching of Mathematics, Teaching of Physics, English, School Organization, Perspectives of Education, Evaluation Guidance and Research, Education Psychology and Curriculum, Islam, Pakistan and Modern World, Workshop

- **PGD (CS) 2004**

PMAS Arid Agriculture University Rwp

Modules include: Computer Programming, E-Commerce and Hypermedia System, Operating System and Computer Organization, Database System Fundamentals, Computer Networks, Writing and Communication Skills, Data Structure, Object Oriented Programming, Database System Programming, Software Engineering, Project

PUBLICATIONS:

1. R.M. Khan, N. Imran, **Zaffar Mehmood** and M. Sohail, A Petrov–Galerkin finite element approach for the unsteady boundary layer upper-convected rotating Maxwell fluid flow and heat transfer analysis, *Waves in Random and Complex Media*, (2022) 1-18.
2. A. Kamran, E. Azhar, N. Akmal, **Zaffar Mehmood** and Z. Iqbal Finite Difference Approach for Critical Value Analysis to Describe Jeffery–Hamel Flow toward an Inclined Channel with Microrotations, *Arabian Journal for Science and Engineering*, (2022) 1-8.
3. M. Faisal, K. Naganthran, E. Azhar, **Zaffar Mehmood**, S. Mukhopadhyay, R. Nazar, A. Jamaludin, D. Baleanu, K.S. Nisar, and I. Khan, Unsteady nano-bioconvective channel flow with effect of nth order chemical reaction, *De Gruyter, Open Physics* 18 (2020) 1011–1024.
4. Z. Iqbal, E. Azhar, **Zaffar Mehmood**, and Abid Kamran, Unsteady transport of MHD mixed convection inspired by thermal Radiation and Partial Slip Performance: Finite Difference Approach, *Thermal Science: International Scientific Journal*, 23 (2019) 1875-1887.
5. Z. Iqbal, E.N. Maraj, **Zaffar Mehmood**, E. Azhar, Effectiveness of Magnetic Dipole and Framing the Performance of Fe_2O_4 in Rotating Transport Influenced by Viscous Dissipation, *Arabian Journal for Science and Engineering*, (2018) 1-8.

6. Z. Iqbal, **Zaffar Mehmood**, A Numerical Study of Viscous Dissipative Transport of Viscoplastic Fluid Influenced by Induced Magnetic Field, *Arabian Journal for Science and Engineering*, (2018) 1-9.
7. Z. Iqbal, E. Azhar, E.N. Maraj, and **Zaffar Mehmood**, A Numerical Investigation of Nanocomposite of Copper and Titanium Dioxide in Water Based Fluid Influenced by Instigated Magnetic Region, *Communication in Theoretical Physics*, 70 (2018) 239–248.
8. Z. Iqbal, **Zaffar Mehmood**, B. Ahmad, Numerical study of entropy generation and melting heat transfer on MHD generalised non-Newtonian fluid (GNF): Application to optimal energy, *Pramana*, 90 (5) 64 (2018).
9. **Zaffar Mehmood**, Z. Iqbal, E.N. Maraj and E. Azhar, Impact of Oblique Magnetic Viscous Dissipative Transport on Chemically Reactive Micro Rotations Submerged in Porous Medium, *Canadian Journal of Physics* (96) 12 (2018) 1349-1358.
10. E. Azhar, Z. Iqbal, **Zaffar Mehmood**, Application of neural network for computing heat performance in axisymmetric viscoelastic transport: Hybrid meta-heuristic techniques, *Results in Physics*, 8 (2018) 1076-1085.
11. E.N. Maraj, Z. Iqbal, E. Azhar, **Zaffar Mehmood**, A Comprehensive Shape Factor Analysis using Transportation of MoS₂-SiO₂/H₂O Inside an Isothermal Semi Vertical Inverted Cone with Porous Boundary, *Results in Physics*, 2018, 8, 633-641.
12. Z. Iqbal, E. Azhar, **Zaffar Mehmood** and E. N. Maraj, Unique Outcomes of Internal Heat Generation and Thermal Deposition on Viscous Dissipative Transport of Viscoplastic Fluid over a Riga-Plate, *Communications in Theoretical Physics*, 69 (2018) 68-76.
13. Z. Iqbal, E.N. Maraj, E. Azhar and **Zaffar Mehmood**, A novel development of hybrid (MoS₂ – SiO₂/H₂O) nanofluidic curvilinear transport and consequences for effectiveness of shape factors, *Journal of the Taiwan Institute of Chemical Engineers* 81 (2017) 150–158.
14. E.N. Maraj, Z. Iqbal, **Zaffar Mehmood** and E. Azhar, Viscous dissipative transport of a ferrofluid (Fe₃O₄) over a moving surface influenced by magnetic dipole and thermal deposition: Finite difference algorithm, *European Physical Journal Plus* 132(11), DOI: 10.1140/epjp/i2017-11772-5.
15. Z. Iqbal, R. Mehmood and **Zaffar Mehmood**, Thermal Deposition on Magnetohydrodynamic Nanofluidic Transport of Viscoplastic Fluid with Microrotations, *Journal of Molecular Liquids*, 243 (2017) 341-347.
16. Z. Iqbal, E.N. Maraj, E. Azhar and **Zaffar Mehmood**, Framing the Performance of Induced Magnetic Field and Entropy Generation on Cu and TiO₂ Nanoparticles by using Keller Box Scheme, *Advanced Powder Technology*, 9 (28) (2017) 2332-2345.
17. Z. Iqbal, E. Azhar, **Zaffar Mehmood** and Mirza Muhammad Sabir, Neural Based Hybrid Metaheuristic Technique for Computing Rotating Transport of Falkner-Skan Flow, *Alexandria Engineering Journal* 57 (2017) 2123-2132.
18. Z. Iqbal, **Zaffar Mehmood** and B. Ahmed, Elastic Deformation Analysis on MHD Viscous Dissipative Flow of Viscoelastic Fluid: An Exact Approach, *Communication in Theoretical Physics*, 67 (5) (2017) 561-5687.
19. T. Manzoor, **Zaffar Mehmood**, M.A. Zahid, S.T. Mohyud-Din, H. Manzoor and S. Hashmi, A note on fractional order in thermo-elasticity of shape memory alloys’ dampers, *International Journal of Heat and Mass Transfer* 114 (2017) 597–606.
20. **Zaffar Mehmood**, R. Mehmood and Z. Iqbal, Numerical investigation of Micropolar Casson Fluid over a stretching sheet with Internal Heating, *Communication in Theoretical Physics*, 67 (4) (2017) 443–448.
21. Z. Iqbal, R. Mehmood, E. Azhar and **Zaffar Mehmood**, Impact of induced magnetic field on micropolar Casson fluid using Keller box algorithm, *The European Physical Journal Plus*, 132: 175, DOI 10.1140/epjp/i2017-11443-7.

22. Z. Iqbal, **Zaffar Mehmood** and E.N. Maraj, Oblique Transport of Gyrotactic Microorganisms and Bioconvection Nanoparticles with Convective Mass Flux, *Physica E: Low-dimensional Systems and Nanostructures*, 88 (2017) 265-271.
23. Z. Iqbal, **Zaffar Mehmood**, E. Azhar and E.N. Maraj, Numerical Investigation of Nanofluidic Transport of Gyrotactic Microorganisms Submerged in Water towards Riga Plate, *Journal of Molecular Liquids*, 234 (2017) 296-308.
24. Z. Iqbal, E. Azhar, **Zaffar Mehmood**, E.N. Maraj and A. Kamran, Computational Analysis of Engine-oil Based Magnetite Nanofluidic Problem Inspired with Entropy Generation, *Journal of Molecular Liquids*, 230 (2017) 295-304.
25. Z. Iqbal, E. Azhar, **Zaffar Mehmood**, and E.N. Maraj, Melting heat Transport of Nanofluidic Problem over a Riga Plate with Erratic Thickness: Use of Keller Box Scheme, *Results in Physics*, 7 (2017) 3648-3658.
26. **Zaffar Mehmood**, E. Azhar, Z. Iqbal and E. N. Maraj, Nanofluidic Transport over a Curved Surface with Viscous Dissipation and Convective Mass Flux, *Zeitschrift für Naturforschung A*, 72 (2017) 223-230.
27. **Zaffar Mehmood** and Z. Iqbal, Interaction of induced magnetic field and stagnation point flow on bioconvection nanofluid submerged in gyrotactic microorganisms, *Journal of Molecular Liquids*, 224 (2016) 1083–1091.
28. **Zaffar Mehmood**, R. Mehmood, A. Yildirim, S.T. Mohud-din, Homotopy Analysis Method for Fractional Reaction-Diffusion Equation with Ecological Parameters, *Walailak Journal of Science and Technology (WJST)*, 11 (2014) 179-189.

SEMESTER PROJECTS:

- Numerical techniques to solve physical flow problems
- Metaheuristic techniques to solve physical flow problems
- Finite difference approximations to solve BVP.

EXTRA CURRICULAR:

- Academic experience
- Assignment, Presentation and Research experience

WORKING EXPERIENCE AS FACULTY MEMBER:

- **Fatima Jinnah Women University, Rawalpindi (2022 to 2023)**

Assistant Professor (Visiting Faculty): Faculty of Public Administration

Course taught: Mathematics-1

- **PMAS Arid Agriculture University, Rawalpindi (2015 to date)**

Assistant Professor (Visiting Faculty): Faculty of University Institute of Information Technology

Course taught: Calculus with analytical geometry, Multivariable Calculus, Numerical Analysis, Differential Equations and Applications, Linear Algebra, Discrete Structures, Statistics and Probability.

- **Riphah International University (Riphah International College) (Feb to July 2021)**

Assistant Professor (Visiting Faculty): Faculty of Mathematics

Course taught: Mathematics of Business.

- **Barani Institute of Management Sciences, Rawalpindi (2019 to 2021)**

Assistant Professor (Visiting Faculty): Faculty of University Institute of Information Technology

Course taught: Calculus with analytical geometry, Multivariable Calculus, Numerical Analysis, Differential Equations and Applications, Linear Algebra, Discrete Structures.

- **Gomal University (Campus ILM College, Islamabad) (2019-2020)**

Assistant Professor (Visiting Faculty): Faculty of University Institute of Information Technology

Course taught: Mechanics, Set theory, Theory of Dynamics.

- **National University of Science and Technology (NUST) (2017-18)**

Lecturer: Faculty of School of Electrical Engineering and Computer Science (SEECS)

Course taught: Linear Algebra and Ordinary Differential Equations

- **Indus College of Commerce and Science (2016 to 2017)**

Lecturer: Lecturer in mathematics.

Course taught: Calculus and Analytic geometry, Mathematical Methods, Vector Analysis, Mechanics, Group Theory, Theory of Collisions.

Level: Degree Level University of Punjab Lahore (B.Sc Classes)

- **ICMC Campus AIOU Rawalpindi (2009-10)**

Lecturer: Faculty of Mathematics

Course taught: Numerical Analysis

- **Imran College of Accountancy (2007 to 2008)**

Lecturer: Lecturer in mathematics.

Course taught: Business Mathematics

Level: Degree Level (Chartered Accountancy Classes)

- **Jinnah Institute of Informatics and Commerce (2006 to 2008)**

Lecturer: Lecturer in mathematics.

Course taught: Calculus and Analytic geometry, Algebra and Trigonometry

Level: Higher Secondary Level (First and Second Year Classes)

- **Super Tech College (2004 to 2006)**

Lecturer: Lecturer in mathematics.

Course taught: Calculus and Analytic geometry, Algebra and Trigonometry

Level: Higher Secondary Level (First and Second Year Classes)

KEY SKILLS:

Aptitude:

- Teaching of Mathematics particularly at Graduation / Masters Level.

Personal:

- Strong motivation, competitive work ethic and commitment for achievement. Experienced in managing pressurized circumstances, working to strike deadlines, setbacks and situation of professional difficulty.
- Able to work with others and contribute to team success as well as having the ability to be independent and take my on individual initiative.
- Excellent communication skill, notably written and verbal communication, contributed to by work related and academic experience. Willingness to learn any required languages.
- Acute interpersonal sensitive and effective in interaction with others.
- Fluent: English, Urdu and Punjabi.

Software Command:

- Have strong command on mathematical programming in C++, MAPLE, MATHEMATICA and MATLAB.
- Ability to work on MS office.

INTERESTS:

- Sports: Badminton and Table Tennis.
- Research work in fluid mechanics.
- Reading – Subjects (Mathematics, Statistics and Physics) and related research articles.

REFERENCES:

Can be provided on demand.