

# Dr. Muhammad Samad Khan



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## MY LIFE PHILOSOPHY

**Education is the most powerful tool you can use to change the world – Nelson Mandela**

## SUMMARY

Dedicated Assistant Professor (Ad hoc) with extensive experience of teaching Undergraduate courses, including Calculus, Differential Equations, Linear Algebra and Numerical Methods with Engineering Applications, as well as Master level courses such as Computational Fluid Dynamics, Advanced Engineering Mathematics, and Applied Mathematics. Consistently recognized for effective and interactive teaching methodologies, receiving top feedback from students. Demonstrates expertise in developing comprehensive course material, mentoring students in academic research, and supervising independent projects with a focus on Fluid Dynamics. Committed to advancing academic excellence and driving innovative learning methodologies.

## ACADEMIC QUALIFICATION

**October 2023**

**Doctor of Philosophy in Applied Mathematics**  
*NED University of Engineering and Technology*

**December 2014**

**Master of Science in Applied Mathematics**  
*NED University of Engineering and Technology*

**December 2007**

**Bachelor of Engineering in Electrical Engineering**  
*NED University of Engineering and Technology*

## WORK EXPERIENCE (ACADEMIC AND ADMINISTRATIVE)

**November 2023 – Date**

**Assistant Professor (Ad hoc), Department of Mathematics**  
*NED University of Engineering and Technology*

**September 2024 – Date**

**Area Coordinator, Department of Mathematics**  
*NED University of Engineering and Technology*

**September 2024 – Date**

**Secretary Board of Studies, Department of Mathematics**  
*NED University of Engineering and Technology*

**December 2024 – Date**

**Quality Management Auditor (Internal)**  
*NED University of Engineering and Technology*

<b>May 2016 – November 2023</b>	<b>Lecturer, Department of Mathematics</b> <i>NED University of Engineering and Technology</i>
<b>July 2018 – July 2021</b>	<b>Former member of University Syndicate and Senate</b> <i>NED University of Engineering and Technology</i>
<b>May 2017 – August 2018</b>	<b>Class Advisor</b> <i>NED University of Engineering and Technology</i>
<b>December 2014 – May 2016</b>	<b>Cooperative Teacher on Contract, Department of Mathematics</b> <i>NED University of Engineering and Technology</i>
<b>October 2009 – July 2014</b>	<b>Project Manager</b> <i>FrontLine Communications</i>
<b>September 2008 – August 2009</b>	<b>Management Trainee</b> <i>Pak Telecom Mobile Ltd. (Ufone)</i>

## **THESIS AND PROJECT**

### **Ph.D. Thesis | Author | 2023**

- **Heat Transfer and Transient Rectilinear Flows Analyses of Dissipative Fluids**  
*NED University of Engineering and Technology*

### **Masters Thesis Supervision | Supervisor | 2024**

- **Shahzaib Shoaib, Numerical Investigation of a Non-Newtonian Fluid subjected to Magnetic Field Over a Porous Plate**  
*NED University of Engineering and Technology*
- **Saima Furqan, Numerical Investigation of a MHD Nanofluid flow on a Porous Stretched Plate**  
*NED University of Engineering and Technology*

## **CERTIFICATIONS**

- **Effective Ph.D. Supervision held by Advanced Studies & Research Board and Quality Enhancement Cell**  
*NED University of Engineering and Technology, **October 2024***
- **Faculty Training for STEM Education held by UK-Pakistan Science & Innovation Global Network (UPSIGN)**  
*NED University of Engineering and Technology, **April 2024***

- Faculty Development Program held by Quality Enhancement Cell  
NED University of Engineering and Technology, *December 2018*

## SKILLS AND PROFICIENCIES

**Core Competencies:** Effective Teaching and Curriculum Development, Innovative Pedagogical Strategies, Communication and Interpersonal Skills, Career Mentorship, Professional Development Coaching, Networking and Relationship Building, Strategic Goal Setting, Conflict Resolution, Entrepreneurial Skills, Project Management, Strategic Planning, Financial Management, Negotiation Skills, Problem Solving, Time Management, Decision-Making, Legal and Regulatory Knowledge, Adaptability and Resilience

**Softwares:** Excel, Maple, Mathcad, MATLAB, Power BI

**Languages:** Urdu (native), English (fluent), Arabic (Basic)

## PUBLICATIONS

1. Yimiao Zhang, Muhammad Idrees Afridi , Muhammad Samad Khan & Amanullah, Investigating an Approximate Solution for a Fractional-Order Bagley–Torvik Equation by Applying the Hermite Wavelet Method, Mathematics, <https://doi.org/10.3390/math13030528>; 2025
2. Muhammad Idrees Afridi, Muhammad Samad Khan, Yimiao Zhang & Mubashir Ali Siddiqui, Numerical simulation of Darcy–Brinkman oscillatory flow of dissipative fluid: Utilization of finite difference method, Numerical Heat Transfer, Part B: Fundamentals, <https://doi.org/10.1080/10407790.2024.2372678>; 2024
3. Muhammad Idrees Afridi, Yimiao Zhang, Ali J. Chamkha & Muhammad Samad Khan, Frictional heating effects on entropy generation with nonlinear Rosseland radiation: Implementation of generalized differential quadrature method, Numerical Heat Transfer, Part B: Fundamentals, <https://doi.org/10.1080/10407790.2024.2343330>; 2024
4. Muhammad Samad Khan, Mubashir Ali Siddiqui & Muhammad Idrees Afridi, Finite Difference Simulation of Nonlinear Convection in Magnetohydrodynamic Flow in the Presence of Viscous and Joule Dissipation over an Oscillating Plate, Symmetry 2022, 14(10), 1988, <https://doi.org/10.3390/sym14101988>; 2022