NOOR ALAM

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RESEARCH INTERESTS

Applied Mathematics, Fluid Dynamics, Mathematical Physics, Partial Differential Equations

EDUCATIONAL QUALIFICATION

Comilla University, Cumilla, Bangladesh. **June 2017 - September 2018**
M.Sc. in Mathematics ***CGPA: 3.93/4.00 (Rank: 3/50)***
Thesis Dissertation: Unsteady MHD flow over an inclined porous plate thermal and mass diffusion in the presence of radiation.

Comilla University, Cumilla, Bangladesh. **January 2012 - April 2017**
B.Sc. in Mathematics ***CGPA: 3.72/4.00 (Rank: 3/50)***
Project Title: Numerical Study for Solving Initial Value Problems in Ordinary Differential Equations by using Single-step and Multi-step Methods.

TEACHING EXPERIENCES

Bangabandhu Sheikh Mujibur Rahman University, Kishoreganj. **October 2023 - Present**
Lecturer, Department of Mathematics.

Dhaka Commerce College, Mirpur, Dhaka, Bangladesh. **March 2022 - October 2023**
Lecturer, Department of Mathematics.

Primeasia University, Banani, Dhaka, Bangladesh. **May 2019 - February 2022**
Lecturer in Mathematics, Department of Basic Science.

German University Bangladesh, Gazipur, Bangladesh. **February 2019 - May 2019**
Lecturer in Mathematics, Department of Computer Science and Engineering.

PUBLICATIONS

- **N. Alam**, S. Poddar, M. E. Karim, M. S. Hasan, G. Lorenzini, "Transient MHD Radiative Fluid Flow over an Inclined Porous Plate with Thermal and Mass Diffusion: An EFDM Numerical Approach", *Mathematical Modelling of Engineering Problems*, IIETA, September 2021. [Paper]
- **N. Alam**, W. X. Ma, M. S. Ullah, A. R. Seadawy, M. Akter, "Exploration of soliton structures in the Hirota–Maccari system with stability analysis", *Modern Physics Letters B*, World Scientific, July 2024. [Paper]
- **N. Alam**, A. Akbar, M. S. Ullah, M. Mostafa, "Dynamic waveforms of the new Hamiltonian amplitude model using three different analytic techniques", *Indian Journal of Physics*, Springer, September 2024. [Paper]
- **N. Alam**, M. S. Ullah, T. A. Nofal, H. M. Ahmed, K. K. Ahmed, M. A. A. Nahhas, "Novel dynamics of the fractional KFG equation through the unified and unified solver schemes with stability and multistability analysis", *Nonlinear Engineering*, De Gruyter, October 2024. [Paper]
- **N. Alam**, M. S. Ullah, J. Manafian, K. H. Mahmoud, H. M. Ahmed, K. K. Ahmed, S. Alkhatib, "Bifurcation analysis, chaotic behaviors, and explicit solutions for a fractional two-mode Nizhnik-Novikov-Veselov equation in mathematical physics", *AIMS Mathematics*, AIMS Press, November 2024. [Accepted]
- **N. Alam**, M. S. Ullah, "Soliton, stability, and multistability analysis of the Zoomeron model with two modified methods", *Journal of Applied Mathematics and Physics*, Birkhauser Verlag Basel, October 2024. [Under review]
- **N. Alam**, M. S. Ullah, "Bifurcation, chaos, multistability, sensitivity, and dynamic properties to the third fractional WBBM equation", *Heliyon*, Elsevier B.V., December 2024. [Under review]

SELECTED AWARDS & ACHIEVEMENTS

NST Fellowship'18: Awarded to facilitate the M.Sc. dissertation from the Ministry of Science and Technology of Bangladesh.
Student Scholarship: Received university yearly scholarship for outstanding results.
Scholarship for Entrance Exam: Received scholarship for achieving the top position in the undergraduate entrance exam.

TECHNICAL SKILLS

- **Programming Languages:** Mathematica, Maple, FORTRAN, MATLAB, Python.
- **Microsoft Office:** Word, Excel, PowerPoint.
- **Developer Tools:** LaTeX, PyCharm, Jupyter Notebook, Spyder.
- **Operating System:** Linux, Windows.

Activities & Services

Chief Advisor: Pie Club (2024-Present), Department of Mathematics, Bangabandhu Sheikh Mujibur Rahman University, Kishoreganj.
Mentor: Math Olympiad Team (2020-2021), Department of Basic Science, Primeasia University, Dhaka.
Executive Member: Mathematics Club (2013-2017), Department of Mathematics, Comilla University, Cumilla.