

Mohammad Abu Jasem

Physics Discipline, Khulna University, Khulna-9208, Bangladesh

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RESEARCH INTERESTS

- | | | |
|---------------------------|---------------------------|----------------------------|
| 1. Spintronics | 3. FM, SAF, nonlinear AFM | 5. Spin-Orbit Torque (SOT) |
| 2. Magnetization dynamics | 4. LLG Equation | 6. Domain wall dynamics |

EDUCATION

Khulna University, Khulna, Bangladesh

2022–2025

BSc in Physics

CGPA: **3.66/4.00**

Coursework: Electricity and magnetism, Classical mechanics, Quantum mechanics(I-III) Crystallography, Solid state physics(I,II), Mathematics I–IV, Chemistry, Programming (C, MATLAB), Statistics, Economics, Sociology.

Milestone College, Dhaka, Bangladesh

2020

Higher Secondary Certificate (Science)

GPA: 5.00/5.00

RESEARCH PROJECTS

1. Reversal of noncollinear antiferromagnets with octupole moment by chirped spin-orbit torque

Authors: *M. T. Islam**, **Mohammad A. Jasem***, YaDong Liu, X. S. Wang, *et al.*

Journal: Physical Review B

Published: 17 January, 2026

DOI: [10.1103/2cqq-gsr5](https://doi.org/10.1103/2cqq-gsr5)

* These authors contributed equally to this work.

CO-CURRICULAR ACTIVITIES

1. Internship Coordinator, Institution for Theoretical and Computational Physics Research ([ITCP](#)) Feb 2025–Present

2. Volunteer, Bangladesh Astronomy and Astrophysics Olympiad ([BDOAA](#)) Organized Olympiad events in Khulna Region. 2024

3. Volunteer, Bangladesh Youth Environmental Initiative ([BYEI](#)) Promoted environmental and science education events. 2023

4. Divisional Coordinator, National Earth Olympiad ([NEO](#)) 2023

SEMINARS & WORKSHOPS

1. Attended “**3rd Workshop on Relativity**”, University of Dhaka, organized by Community of Physics. (*Oct 2022*)
2. Instructed “**Workshop on MATLAB and Python**”, organized by Fermion Physics Club, Khulna University. (*Sept 2024*)
3. **National Conference on Physics for the 21st Century**, organized by Physics Discipline, Khulna University, Khulna–9808, Bangladesh. (*May 2024*)

EXPERIENCE

1. **Research Assistant**, Spintronics Lab, Khulna University, Khulna–9208. *Oct 2024–Present*
Supervisor: Prof. Dr. Md. Torikul Islam.
2. **Instructor & Technician**, [Fermion Physics Club](#), Khulna University. *Feb 2023–Aug 2024*
Delivered academic workshops and tutorial sessions covering:
 - Vector Analysis
 - Waves and Oscillations
 - Mathematical Methods
 - Ordinary Differential Equations
 - Multivariable Calculus

SOFTWARE SKILLS

Operating Systems: Windows, Linux

Simulation: MuMax3 (micromagnetic), Vampire (atomistic)

Programming: Python, MATLAB, JavaScript, LaTeX

Data Analysis & Plotting: Matplotlib, Pandas, OriginLab, Gnuplot

Microsoft Office: MS Word, MS Excel, MS PowerPoint

Graphics & Visualization: VESTA, Blender, Adobe Illustrator (basic)

Web Development: HTML, CSS, JavaScript

See the projects on [GITHUB](#)

CERTIFICATES & AWARDS

1. **Silver Honor – International Astronomy and Astrophysics Competition** [[Certificate](#)] *2023*
2. **University Merit Scholarship (x4)** *2022–2025*
3. *From the Big Bang to Dark Energy – University of Tokyo* [[Certificate](#)] *2023*
4. *Introduction to Programming with MATLAB – Vanderbilt University* [[Certificate](#)] *2023*
5. *Getting Started with Python and Python Data Structures – University of Michigan* [[1](#)], [[2](#)] *2023*

LANGUAGES

- Bengali (Native)
- English (Intermediate)

REFEREES

Dr. Md. Rashedur Rahman

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Signature

Date: _____