

# 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: [10.1103/2cq-qgsr5](https://doi.org/10.1103/2cq-qgsr5)

\* These authors contributed equally to this work.

## CO-CURRICULAR ACTIVITIES

**1. Internship Coordinator**, Institution for Theoretical and Computational Physics Research ([ITCPR](#))

*Feb 2025–Present*

**2. Volunteer**, Bangladesh Astronomy and Astrophysics Olympiad ([BDOAA](#))

2024

Organized Olympiad events in Khulna Region.

**3. Volunteer**, Bangladesh Youth Environmental Initiative ([BYEI](#))

2023

Promoted environmental and science education events.

**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** (×4) 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: \_\_\_\_\_