

# Sayed Huzaifa Mumit

Chittagong, Bangladesh | [sayedhmumit.github.io](https://sayedhmumit.github.io) | [shmumit.scientist@proton.me](mailto:shmumit.scientist@proton.me)

## Education

**University of Science and Technology Chittagong (USTC), Bangladesh** [Ongoing]

Major in B.S. (Hons.) in **Biochemistry and Biotechnology**

Supervisor: **Dr. Md. Monirul Islam**

Affiliation: Bangladesh Bioscience Research Group(BBRG)

UG Research : Computational Biology

### Courses

|                  |                       |                          |
|------------------|-----------------------|--------------------------|
| <b>Minors in</b> | Biophysical Chemistry | Biostatistics            |
|                  | Computer Science      | Pharmaceutical Chemistry |
|                  | Spectroscopy          |                          |

## Profile Summary

I am an undergraduate student in Biochemistry and Biotechnology with ongoing research involvement in RNA biology, genomics, immunology, and phytochemistry. Alongside my academic work, I have been independently exploring theoretical astrophysics since high school, focusing on gravitational dynamics, black hole behavior, and the relationship between spacetime geometry and matter. My goal is to build a solid mathematical foundation in classical mechanics, general relativity, and quantum theory so I can formalize these theoretical ideas into a testable framework. I have presented research in multiple national and international conferences and have experience publishing interdisciplinary projects in environmental sustainability and renewable energy. I am motivated by long-term curiosity, self-driven learning, and a commitment to connecting scientific understanding across fields.

## Research Experiences

**Bangladesh Bioscience Research Group -(BBRG)** October, 2024 - Present  
Undergraduate Research & Primary Affiliation

RNA Biology, Genomics & CRISPR, Immunology , Computational Biology.

**Independent Research** 2019- Present

| <b>PHY Course</b>     | <b>Focus</b>                                      |
|-----------------------|---|
| Classical Mechanics   | Lagrangian and Hamiltonian formalisms             |
| Electromagnetism      | Vector fields, Maxwell equations                  |
| Quantum Mechanics     | Operator formalism, Hilbert spaces, wave dynamics |
| General Relativity    | Spacetime curvature and gravity as geometry       |
| Differential Geometry | Manifolds, tensors, and curvature tools for GR    |
| Fourier Analysis      | Signal Processing & Time-Series Analysis          |

## Academic Volunteering

**Panelist , The Cambridge Panel : Academic,** October,2025- Present

Cambridge University Press (2025–Present) — Participating in shaping academic publishing practices through feedback on research and author experience.

## Digital Footprint

ResearchGate: [Sayed Huzaifa Mumit](#), Google Scholar: [Sayed Huzaifa Mumit](#),  
ORCID: [0000-0003-1048-4072](#), LinkedIn: [Sayed Huzaifa Mumit](#), GitHub: [sayedhmumit](#)  
Academia.edu: [Sayed Huzaifa Mumit](#), Web of Science: [Sayed Huzaifa Mumit](#)

## Publications & Preprints

- 1\* Methane Production via Sabatier Reaction Using Hydrogen from Rainwater Electrolysis and Captured Carbon Dioxide v1:(2023)|v2:(2025); DOI: <https://doi.org/10.33774/coe-2025-lk4r7>
- 2\* Eco-Friendly Water Purification Using Solar-Powered Distillation and Activated Carbon (2024) *[Expected Publication in 2026]*; Preprint: DOI: [10.33774/coe-2024-ztkpb](https://doi.org/10.33774/coe-2024-ztkpb)
- 3\* Reduction of Irrigation Water in Agriculture Using Eco-Friendly Biological Sponge from Luffa (2024); DOI: [10.13140/RG.2.2.17062.13123](https://doi.org/10.13140/RG.2.2.17062.13123)
- 4\* Sustainable Diapers and Pads from Water Hyacinth and Coconut Coir v1:(2024) | v2:(2025); DOI: [10.21203/rs.3.rs-5453339/v2](https://doi.org/10.21203/rs.3.rs-5453339/v2)
- 5\* Investigation of the Effectiveness of Using Luffa Cylindrica to Reduce Water Consumption in Agriculture (2024); DOI: [10.62622/TEIEE.024.2.4.18-27](https://doi.org/10.62622/TEIEE.024.2.4.18-27)

## Conference Papers (Presenting Author)

- 1\* **6th International Conference on Biotechnology in Health and Agriculture** by Global Network of Bangladeshi Biotechnologist- Prevalence of Iron Deficiency Anemia and Evaluation of Corrected Calcium as a Biochemical Parameter Among Young Adults in Chattogram, Bangladesh.
- 2\* **RURS 1st International Students Conference 2024** - Trends in Microbial Culture and Antibiotic Sensitivity in Pediatrics
- 3\* **XYLEM GLOBAL WATER CHALLENGE 2024, Stockholm, Sweden** - Using Sponge Gourd for Purifying Microplastics
- 4\* **Stockholm Junior Water Prize 2023** - Methane Gas Production from Rainwater and CO<sub>2</sub>
- 5\* **American Physical Society Physics Summit 2025, Anaheim, California, USA** - Graviton and Anti-Graviton Charges on Space-Time Curvature and Gravitational Dynamics [Acceptance only not attended]

## Peer Reviewer

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International Peer-Reviewer of Manuscript for the International Journal 2025

Manuscript: Optimizing Sponge Gourd Cultivation: Effects of Chemical Hybridizing Agents on Morphological Traits and Flower Development

[E-Line](#) International Journal of Plant and Soil Science

## Books

- 1\* From Concept to Publication: A Comprehensive Guide to Preparing a High-Quality Research Manuscript for International Journals. [VISIT](#)
- 2\* Meta Analysis of Skills An All Inclusive Manual. [VISIT](#)

## Skills :*Status:Underway*

| Soft                | Hard                   | Computational Tools            |
|---------------------|------------------------|--------------------------------|
| Leadership          | Research               | R & Python                     |
| Public Speaking     | Phytochemical Analysis | Linux/UNIX Shell               |
| Conflict Resolution | Molecular Docking      | LaTeX                          |
| Adaptability        | Network Pharmacology   | Cytoscape, AutoDock, SwissADME |

## Languages

| English                  | Bengali        | Chittagonian   | Arabic              |
|--------------------------|----------------|----------------|---------------------|
| Intermediate Proficiency | Native Fluency | Native Fluency | Reading Proficiency |

## Entrepreneurial & Leadership Experience

- 1\* Co-Founder, A TimesM Global - A Multiple Sector Based Startup.
- 2\* Co-Founder, Manoshota (2021-2022) - Contributed to global mental health consulting, assisting 5,700 individuals in 13 hours.

## Scholarships & Fellowships /Grant

- 1\* APS Diversity Forum Scholarship | American Physical Society (2024)
- 2\* Wiki Scientist Summer Program Scholarship | Wikipedia (2024)
- 3\* Oxbridge Scholarships | University of Oxford & Cambridge (2022 & 2023)
- 4\* Academia Engineering Publication Grant (2024)
- 5\* Trends in Ecological & Environmental Engineering Journal (2024)
- 6\* AB Memorial Fellowships (2022)

## Awards & Recognitions :*(Selective-only)*

- 1\* Medalist, 16th National Bangladesh Astro-Olympiad (2022)
- 2\* Finalist, Stockholm Junior Water Prize (2023)
- 3\* Top-Ranked, People's Choice - Xylem Global Innovation Challenges (2024)
- 4\* Jamboree Award, 10th Bangladesh & 3rd South Asian Association of National Scouts Jamboree.

## Professional Memberships

| National   | International   |
|--|---|
| Graduate Member, BYLC Graduate Network (2021–Present)        | Member, Astrophysics Division, American Physical Society (2024–Present) |
| Alumni Member, House of Volunteers Bangladesh (2023–Present) | Member, Biophysical Society (2025–Present)                              |
|  | Wiki Scientist, Wikimedia Foundation (2024–Present)                     |
|  | Member, American Society for Microbiology (2024–2025)                   |
|  | Singapore Global Network (2025– present)                                |

## Special Academic Acceptances

- 1\* Aspire Leaders Program, Harvard University (2024)
- 2\* Wiki Scientist Summer Program, APS (2024)
- 3\* Oxbridge Scholars Program, University of Oxford & Cambridge (2022 & 2023)

## Teaching

- 1\* APS Wiki Scientist, Wikipedia (2024-Present)
- 2\* IAU OAO Venture Translator, International Astronomical Union (2024)
- 3\* Academic Olympiad Trainer, Deviation Scientific Society (2023-Present)
- 4\* Senior Patrol Leader, Chattogram Metropolitan Scouts (2018-2021)

## Competitions & Research Challenges

Actively participated as a contestant in multiple national and international competitions and research challenges. Selected highlights include:

- 1\* International Contestant at MIT SOLVE 2024
- 2\* International Contestant at CERN Beamline for Schools (BL4S) 2024
- 3\* International Contestant at 3rd SAANSO & 10th Bangladesh Scouts Jamboree (2019)
- 4\* Regional Round, Bangladesh Mathematical Olympiad
- 5\* Regional Round, Bangladesh Physics Olympiad

## References

### **Dr. Md. Monirul Islam**

Faculty Member, Biochemistry & Molecular Biology, NSTU, Bangladesh.  
Postdoc, Aichi Medical University, Japan.  
Tutor and Supervisor in College & Research.  
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[monirul.bmb@nstu.edu.bd](mailto:monirul.bmb@nstu.edu.bd)

### **Dr. Jeffrey M. Keefer**

Adjunct Assistant Professor,  
Project Management &  
Information Technology Education,  
New York University, USA.  
Advisor at Wikipedia | Mentored during  
APS Wiki Scientist Course.  
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### **Md. Monsurul Islam**

Assistant Professor, Department of Physics,  
Satkania Govt. College, Chittagong, Bangladesh.  
PhD Candidate, University of Nottingham.  
Taught Physics in 12th grade.  
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