

Md. Morsalin

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EDUCATION

- **B.Sc. (Engineering) in Electrical and Electronic Engineering**,
Hajee Mohammad Danesh Science and Technology University, 2021 – 2024
Dinajpur-5200, Bangladesh Graduated: September 2026
CGPA: 3.843 / 4.00 [Ranked 1st in the batch]

EXPERIENCES

- **Industrial Training**, June 2026 – July 2026
Sympa Solar Power Limited
[\[Credential\]](#)
- **Research Intern**, May 2025 – Nov 2025
UniV — Research and Development (Science School) Unit
[\[Credential\]](#)

RESEARCH INTERESTS

Renewable Integrated Power System Stability, Intelligent Control Strategies for Grid Stability

TECHNICAL SKILLS

Programming Languages:	MATLAB, Python, C, C++
Simulation Tools:	Simulink, PLECS, PSCAD, SCAPS-1D, DFT
Analysis & Plotting:	OriginPro, MS Excel
Writing Tools:	L ^A T _E X, MS Word, PowerPoint

PUBLICATIONS

- Mohammed A. Albadrani, Ragab A. Sayed, Sabry Allam, Hossam Youssef Hegazy, **Md. Morsalin**, Samia Abdel Fattah, and Mohamed H. Abdelati, “Performance Comparison of Intelligent Energy Management Strategies for Hybrid Electric Vehicles with Photovoltaic Fuel Cell and Battery Integration,” *Batteries*, vol. 12, no. 147, 2026. doi: [10.3390/batteries12040147](https://doi.org/10.3390/batteries12040147) [Q1, SCI]
- **Md. Morsalin***, Ragab A. Sayed, Md. Sazedur Rahman, Md. Ferdous Wahid, and Mohammad Salah, “Performance Investigation and Efficiency Enhancement of Eco-friendly Tin-based CH₃NH₃SnI₃ Perovskite Solar Cell via SCAPS-1D,” *IIUM Engineering Journal*, vol. 27, no. 1, 2026. doi: [10.31436/iiumej.v27i1.3898](https://doi.org/10.31436/iiumej.v27i1.3898) [Q3, SCI]
- Rony Tota, Tarikul Islam Tasin, Shak Mahmudul Hasan, **Md. Morsalin**, Md. Zamil Sultan, Md. Muien Ahmed Arnob, Mehedi Hasan Tanim, and Najiba Abedin Sajan, “Performance Enhancement of Lead-Free K₂TiI₆-Based Perovskite Solar Cells Using SCAPS-1D Simulation Study,” *Journal of Materials Science and Chemical Engineering*, vol. 13, no. 10, Oct. 2025. doi: [10.4236/msce.2025.1310002](https://doi.org/10.4236/msce.2025.1310002)
- Md. Sazedur Rahman, Ibnul Zarrah, **Md. Morsalin**, Md. Moshir Rahman, and Pritom Mojumder, “Area-Efficient FPGA Implementation of Elliptic Curve Point Multiplication for Cryptography,” in *2025 2nd International Conference on Next-Generation Computing, IoT and Machine Learning (NCIM)*, Gazipur, Bangladesh, 2025, pp. 1–5. doi: [10.1109/NCIM65934.2025.11160183](https://doi.org/10.1109/NCIM65934.2025.11160183) [SCI]
- Rony Tota, Tarikul Islam Tasin, **Md. Morsalin***, Ragab A. Sayed, Sheeraz Iqbal, Shak Mahmudul Hasan, Md. Zamil Sultan, and Md. Muien Ahmed Arnob, “Performance Improvement of Lead-Free

- CsSnCl₃-Based Perovskite Solar Cell Using Multiple ETLs: A SCAPS-1D Simulation Study,” *Clean Technologies and Recycling*, vol. 6, no. 1, pp. 33–55, 2026. doi: [10.3934/ctr.2026002](https://doi.org/10.3934/ctr.2026002)
- Rony Tota, **Md. Morsalin**, and Ragab A. Sayed, “Performance Investigation of Robust Fixed Diagonal Loading-Based Narrowband Near-Field Optimal Beamformer,” *JES. Journal of Engineering Sciences*. (**Manuscript under review**)
 - Muhammad Usman, Babar Hussain, **Md. Morsalin***, Muhammad Zeeshan, Muhammad Rasheed, Ragab A. Sayed, and Ayman Flah, “Dynamic Stability Enhancement of High-Renewable Energy Penetration Power System Using Coordinated Support Mechanisms,” *Electrical Engineering*. (**Manuscript submitted**)

CONFERENCES

- **Md. Morsalin**, Md. Sazedur Rahman, and Md. Ferdous Wahid, “Performance Analysis of WSe₂-based Heterojunction Solar Cell with Non-toxic ZnSe Buffer Layer: A Numerical Simulation Approach,” *Global Students Research (GSR) Conference*, KFUPM, Dhahran, Saudi Arabia, February 4–6, 2025. [\[Credential\]](#)
- Ragab A. Sayed, Sabry Allam, **Md. Morsalin**, and Mohammad Salah, “Theoretical Analysis of the Performance of a Hybrid Fuel Cell/Battery Powertrain Test Bench for Automotive Applications,” *2025 IEEE International Conference on Power, Electrical, Electronics and Industrial Applications (PEEIACON)*, Southeast University (SEU), Dhaka, Bangladesh, December 4–5, 2025. [\[Credential\]](#)
- **Md. Morsalin** and Ragab A. Sayed, “Optimizing the Energy Management System of a Photovoltaic Fuel Cell Battery Hybrid Electric Vehicle Using PID Control System,” *IEEE CS BDC Summer Symposium*, HSTU, Dinajpur, Bangladesh, July 18–19, 2025. [\[Credential\]](#)
- **Md. Morsalin**, Md. Sazedur Rahman, and Md. Ferdous Wahid, “Performance Analysis of WSe₂-based Thin-film Solar Cell with Non-toxic ZnSe Buffer Layer Using SCAPS-1D Simulation Approach,” *First International Conference on Sustainable Energy Systems (ICoSES-2025)*, El Jadida, Morocco, April 24–26, 2025. [\[Credential\]](#)
- Md. Sojibur Rahman, Md. Sazedur Rahman, and **Md. Morsalin**, “Performance Analysis of Lead-free Cs₂PtI₆-Based Double Perovskite Solar Cell With and Without Hole Transporting Layer Using SCAPS-1D Simulation Software,” *First International Conference on Sustainable Energy Systems (ICoSES-2025)*, El Jadida, Morocco, April 24–26, 2025.

HONORS AND AWARDS

- **Dean’s List Award** (4th Year) — Faculty of Computer Science and Engineering (CSE), HSTU, Dinajpur. Awarded for academic excellence with CGPA above 3.75 in both semesters.
- **Dean’s List Award** (2nd Year) — Faculty of Computer Science and Engineering (CSE), HSTU, Dinajpur. Awarded for academic excellence with CGPA above 3.75 in both semesters.
- **Conference and Travel Grant** — *Global Students Research (GSR) Conference 2025*, KFUPM, Saudi Arabia. [\[Credential\]](#)
- **Dean’s List Award** (1st Year) — Faculty of Computer Science and Engineering (CSE), HSTU, Dinajpur. Awarded for academic excellence with CGPA above 3.75 in both semesters. [\[Credential\]](#)
- **Best Working Star Award** — *3rd International Poster Competition for Young Researchers 2025*, issued by UniV. [\[Credential\]](#)

LANGUAGES

- **English** — Professional working proficiency (Duolingo English Learning score: 130)
- **Bengali** — Native proficiency

LEADERSHIP AND VOLUNTEERING

- **Global Ambassador**, GSR Conference 2026, KFUPM

September 2026 – October 2026

- **Global Ambassador [ID: 45]**, Venture Craft KFUPM *March 2026 – Present*
- **Chair**, IEEE Power and Energy Society (PES), HSTU SBC *February 2025 – January 2026*
- **Vice Chair**, IEEE Photonics Society, HSTU SBC *February 2025 – January 2026*
- **Ambassador [ID: IEEEPESDAY274]**, IEEE PES DAY 2025 *March 2025 – April 2025*

LICENSES AND CERTIFICATIONS

- **Certificate of Appreciation**, GSR Conference 2025 — [KFUPM](#) *February 2025*
- **Simulink Onramp** — [MathWorks](#) *January 2025*
- **MATLAB Onramp** — [MathWorks](#) *December 2024*
- **Intermediate Python** — [DataCamp](#) *November 2024*

PROFESSIONAL MEMBERSHIPS

- **IEEE (Institute of Electrical and Electronics Engineers)** *February 2025 – Present*
Student Member #101071134 [\[Certification\]](#)
- **IEEE Power and Energy Society (PES)** — Member *February 2025 – Present*
[\[Certification\]](#)
- **IEEE Photonics Society** — Member *February 2025 – December 2026*
[\[Certification\]](#)

SEMINARS and WORKSHOPS

- **Speaker** at Seminar on “*Getting Started with Research at Undergraduate: Insights from the Student-led Global Students Research (GSR) Conference*,” organized by IEEE HSTU SB, HSTU, Dinajpur-5200, Bangladesh. *April 24, 2025*
- **Mentor** at Workshop on “*Solar Energy Research Using SCAPS-1D: Towards a Sustainable Future*”, organized by IEEE Power and Energy Society HSTU SBC, HSTU, Dinajpur-5200, Bangladesh. *April 9, 2026*

REFERENCES

[1] **Md. Hassanul Karim Roni**

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Faculty of Computer Science and Engineering (CSE)
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[2] **Md. Ilius Hasan Pathan**

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