

Md. Morsalin

Dinajpur-5200, Bangladesh

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Portfolio: www.mdmorsalin.com

SUMMARY

Currently pursuing B.Sc.(Engineering) in Electrical and Electronic Engineering at Hajee Mohammad Danesh Science and Technology University, with a strong academic record (CGPA above 3.80). Passionate about research in renewable energy, power systems, and Hybrid Electric Vehicle (HEV). Skilled in MATLAB, Simulink, DFT, SCAPS-1D, PSCAD, PLECS and OriginPro; actively engaged in research projects with faculty members and collaborators. Dedicated to continuous learning and innovation, with aspirations for higher studies.

EDUCATION

Bachelor of Science (Engineering) in Electrical and Electronic Engineering
Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh
📅 January 2022 - Present [Expected date of graduation: **August 2026**]
Result: final year ongoing: CGPA 3.84 out of 4 (upto 3rd year)

EXPERIENCES

Research Intern
UniV [Research and Development (Science School) Unit]
📅 May 2025 - November 2025 [[Credential](#)]

RESEARCH INTERESTS

Renewable Energy, Hybrid Electric Vehicle (HEV), Power Electronics

TECHNICAL SKILLS

Programming languages:	MATLAB	Python	C	C++
Software Tools:	Simulink, PLECS	PSCAD	DFT, SCAPS-1D	OriginPro
Writing Tools:	L ^A T _E X	MS word	PowerPoint	MS excel

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*, 2026, 12, 147, doi: [10.3390/batteries12040147](https://doi.org/10.3390/batteries12040147) [Q1, SCI]
- **Md. Morsalin**, Ragab A. Sayed, Md. Sazedur Rahman, Md. Ferdous Wahid, Mohammad Salah, "Performance Investigation and Efficiency Enhancement of Eco-friendly Tin-based CH₃NH₃SnI₃ Perovskite Solar Cell Via SCAPS-1D", *IJUM Engineering Journal*, 27(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, 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, Pritom Mojumder, "Area-Efficient FPGA Implementation of Elliptic Curve Point Multiplication for Cryptography", *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*, 2026, 6(1): 33-55, 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, Ayman Flah "Dynamic Stability Enhancement of High-Renewable Energy Penetration Power System Using Coordinated Support Mechanisms", *Electrical Engineering* (**Manuscript submitted**)
- **Ongoing Research** "Performance Assessment of Perovskite Absorber CsSnI₃-based Solar Cells via SCAPS-1D and MATLAB"
- **Ongoing Research** "A Comprehensive Performance Analysis of an Eco-Friendly Cs₂AgAuBr₆-Based Double Perovskite Solar Cells: DFT And SCAPS-1D Simulation Approach"
- **Ongoing Research** "An extensive charge transport layer optimization of eco-friendly Sn-based Cs₂AgInBr₆ double perovskite solar cells via SCAPS-1D"

CONFERENCES

- **Md. Morsalin**, Md. Sazedur Rahman, 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*, February 4-6 2025, KFUPM, Dhahran, Saudi Arabia.[\[Credential\]](#)
- Ragab A. Sayed, Sabry Allam, **Md. Morsalin**, 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)*, 04-05 December 2025, Southeast University (SEU), Dhaka, Bangladesh.[\[Credential\]](#)
- **Md. Morsalin**, 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*, July 18-19 2025, HSTU, Dinajpur, Bangladesh.[\[Credential\]](#)
- **Md. Morsalin**, Md. Sazedur Rahman, 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)*, April 24–26, 2025, El Jadida, Morocco.[\[Credential\]](#)
- Md. Sojibur Rahman, Md. Sazedur Rahman, **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)*, April 24–26, 2025, El Jadida, Morocco.

HONORS AND AWARDS

- **Dean's List Award**
Received for 2nd year academic excellence, achieved CGPA above 3.75 in both semesters.
Issued by: Faculty of Computer Science and Engineering (CSE)
Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh
- **Conference and Travel grants**
Received from *Global Students Research (GSR) Conference 2025*
Issued by: KFUPM, Saudi Arabia. [\[Credential\]](#)
- **Dean's List Award**
Received for 1st year academic excellence, achieved CGPA above 3.75 in both semesters.
Issued by: Faculty of Computer Science and Engineering (CSE) [\[Credential\]](#)
Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh
- **Best Working Star Award**
Received from *3rd International Poster Competition for Young Researchers 2025*
Issued by: UniV [\[Credential\]](#)

LANGUAGES

- English (**Duolingo** score 130)
Professional working proficiency

LEADERSHIP AND VOLUNTEERING

- **Venture Craft KFUPM**
Position: **Global Ambassador** [ID: 45]
March 2026 – Present
- **IEEE Power and Energy Society (PES) HSTU SBC**
Position: **Chair**
Feb 2025 – Jan 2026
- **IEEE Photonic society HSTU SBC**
Position: **Vice Chair**
Feb 2025 – Jan 2026
- **IEEE PES DAY 2025**
Position: **Ambassador** [ID: IEEEPESDAY274]
Mar 2025 – April 2025

LICENSES AND CERTIFICATIONS

- **GSR conference 2025**
Certificate of Appreciation
Issued Feb 2025, [KFUPM](#)
- **Simulink Onramp**
Issued Jan 2025, [MathWorks](#)
- **MATLAB Onramp**
Issued Dec 2024, [MathWorks](#)
- **Intermediate Python**
Issued Nov 2024, [DataCamp](#)

PROFESSIONAL MEMBERSHIPS

- **IEEE (Institute of Electrical and Electronics Engineers)**
Student Member (Feb 2025 – Present)
Member number: 101071134
[Certification](#)
- **IEEE Power and Energy Society (PES)**
Member (Feb 2025 – Present)
[Certification](#)
- **IEEE Photonic Society**
Member (Feb 2025 – Dec 2026)
[Certification](#)

SEMINARS

- **Speaker**, Seminar on **"GETTING STARTED WITH RESEARCH AT UNDERGRADUATE: Insights from the student-led Global Students Research (GSR) Conference"**, Organized by *IEEE HSTU SB*, April 24, 2025, HSTU, Dinajpur-5200, Bangladesh.

REFERENCES

- [1] **Rony Tota**
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- [2] **Md. Ilius Hasan Pathan**
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