

List of Publications [Total 237]

(Books-4, Book Chapters: 8, Patents: 6, Innovation Disclosures: 8, Peer-reviewed journal papers-84, Peer-reviewed international conference papers-107, National conference papers-20)

Total citations: 6,389, h-index: 41, i10-index: 111

Books [Total 4]

- [1] **Mohd. Hasan Ali** (Editor), *Superconducting Magnetic Energy Storage in Power Grids*, Institution of Engineering & Technology (IET), February 2023, ISBN-13: 978-1-83953-500-0.
- [2] Md. Rabiul Islam, Md. Rakibuzzaman Shah, and **Mohd. Hasan Ali** (Editor), *Emerging Power Converters for Renewable Energy and Electric Vehicles*, CRC Press, Taylor & Francis Group, June 2021, ISBN 9780367528034.
- [3] **M. H. Ali**, *Wind Energy Systems: Solutions for Power Quality and Stabilization*, Taylor & Francis Group (CRC Press), February 2012, ISBN: 978-1-4398-5614-7.
- [4] **M. H. Ali**, Chinese Edition of the previously published book, China Machine Press, June 2013, ISBN: 978-7-111-42316-4.

Book Chapters [Total 8]

- [1] M. Basnet and **M. H. Ali**, "A Deep Learning Perspective on Connected Automated Vehicle (CAV) Cybersecurity and Threat Intelligence," a chapter in the book titled *Deep Learning and Its Applications for Vehicle Networks* by CRC Press, Taylor and Francis group, 2023, ISBN 9781032041377.
- [2] **M. H. Ali**, "Introduction", A chapter in the book titled *Superconducting Magnetic Energy Storage in Power Grids*, Institution of Engineering & Technology (IET), February 2023, ISBN-13: 978-1-83953-500-0.
- [3] S. Ghosh and **M. H. Ali**, "SMES Control Methods", A chapter in the book titled *Superconducting Magnetic Energy Storage in Power Grids*, Institution of Engineering & Technology (IET), February 2023, ISBN-13: 978-1-83953-500-0.
- [4] M. H. Ali and N. L. Thotakura, "Smart Inverters and Controls for Grid-Connected Renewable Energy Sources," A Chapter in the book titled *Advances in Control Techniques for Smart Grid Applications*, Springer, Singapore, March 2022, https://doi.org/10.1007/978-981-16-9856-9_8.
- [5] **M. H. Ali** and M. D. Keshavarzi, "Mixed AC/DC System Stability Under Uncertainty," A chapter (9) in the book titled *Emerging Power Converters for Renewable Energy and Electric Vehicles*, CRC Press, Taylor & Francis Group, 2021, ISBN 9780367528034.
- [6] **M. H. Ali** and S. Ghosh, "Stability of Remote Microgrid: Control of Power Converters," A chapter (10) in the book titled *Emerging Power Converters for Renewable Energy and Electric Vehicles*, CRC Press, Taylor & Francis Group, 2021, ISBN 9780367528034.
- [7] S. Ghosh and **M. H. Ali**, "Optimal Reclosing Techniques for Power Quality Enhancement", A chapter (7) in the book *Advances in Electric Power Engineering*, pp. 121-152, Laxmi Book Publication, 2015, ISBN: 978-1-329-06197-2.
- [8] **M. H. Ali** and D. Dasgupta, "Effects of Time Delays in the Electric Power Grid", A chapter (11) in the book *Critical Infrastructure Protection (VI)*, pp. 139-154, Springer, 2012, ISBN: 978-3-642-35763-3.

[Earlier version was presented at *the Sixth International Conference on Critical Infrastructure Protection*, National Defense University, Washington DC, USA, March 19-21, 2012.]

Patents and Innovation Disclosures [Total 14]

- [1] **M. H. Ali**, "System and Method for Improving Transient Stability of Grid-Connected Wind Generator System, Patent Issued on May 21, 2024, US Patent no. 11,990,752.
- [2] **M. H. Ali** and M. DaviranKeshavarzi, "Triple-Function Battery Energy Storage System for Hybrid Microgrid System", Patent Issued on January 2nd, 2024, US Patent no. 11862979.
- [3] **M. H. Ali**, "System and Method for Improving Transient Stability of Grid-Connected Wind Generator System", Patent Issued on November 22, 2022, US Patent no. 11,509,138.
- [4] **M. H. Ali**, "Apparatus for Mitigation of Adverse Effects of Geomagnetically Induced Currents on Transformers," Patent Issued on January 07, 2020, US Patent no. 10530144.
- [5] **M. H. Ali**, "Apparatus for Mitigation of Adverse Effects of Geomagnetically Induced Currents on Transformers," Patent issued on March 26, 2019, US Patent number 10,243,346.
- [6] M. M. Hossain and **M. H. Ali**, "Wind Generator System with Multiple Turbines", Patent issued on March 21, 2017, US Patent number 9599092.
- [7] **M. H. Ali**, "Novel Design of Controlled DC-Link Capacitor for Grid-Connected Solar Photovoltaic System", Innovation Disclosure, December 2022.
- [8] **M. H. Ali**, "Electrical Power Generation from Falling Light Weight Stones/Marbles", Innovation Disclosure, August 2020.
- [9] **M. H. Ali**, "Novel Design of Grid-Connected Solar Photovoltaic System", Innovation Disclosure, October 2019.
- [10] **M. H. Ali**, "New Electric Circuit Design of Automated External Defibrillator for Sudden Cardiac Arrest Patient", Innovation Disclosure, October 2019.
- [11] **M. H. Ali** and M. DaviranKeshavarzi, "Three-in-One Battery Energy Storage System for Hybrid AC/DC Microgrid Resiliency Improvement", Innovation Disclosure, June 2019.
- [12] **M. H. Ali**, "Design and Operation of Utility Integrated Photovoltaic (PV) System as Supercapacitor Energy Storage", Innovation Disclosure, February 2018.
- [13] **M. H. Ali**, "Circularly Located Novel Wind Turbine System, Innovation Disclosure", February 2018.
- [14] **M. H. Ali**, "A Novel Cost-Effective Method for Improving Transient Stability of Grid-Connected Wind Generator System", Innovation Disclosure, June 2017.

Papers in Refereed Journals [Total 84]

- [1] **M. H. Ali** and S. R. Akhter, "Nonlinear Controller-Based Mitigation of Adverse Effects of Cyber-Attacks on the DC Microgrid System," MDPI Journal of Electronics, 2024, 13(6), 1057; <https://doi.org/10.3390/electronics13061057>.
- [2] S. I. Taheri, M. Davoodi, and **M. H. Ali**, "A Modified Modeling Approach of Virtual Power Plant Via Improved Federated Learning," International Journal of Electrical Power and Energy Systems, Volume 158, 2024, 109905, ISSN 01420615, <https://doi.org/10.1016/j.ijepes.2024.109905> (<https://www.sciencedirect.com/science/article/pii/S0142061524001261>).

- [3] S. M. Mahfuz Alam and **M. H. Ali**, "Load Scheduling of Smart Net-Zero Residential Buildings Based on Pandemic Situation," *MDPI Journal of Electronics*, 2024, 13(5), 863; <https://doi.org/10.3390/electronics13050863>.
- [4] S. I. Taheri, M. Davoodi, and **M. H. Ali**, "Mitigating Cyber Anomalies in Virtual Power Plants Using Artificial Neural Network-based Secondary Control with Federated Learning-Trust Adaptation," *MDPI Journal of Energies*, 2024, 17(3), 619; <https://doi.org/10.3390/en17030619> (registering DOI).
- [5] N. Farrar and **M. H. Ali**, "Cyber Resilient Converter Control System for DFIG Based Wind Turbine Generator," *MDPI Journal of Electronics*, 2024, 13(3), 492; <https://doi.org/10.3390/electronics13030492>.
- [6] S. M. Mahfuz Alam and **M. H. Ali**, "Residential Load Forecasting by PSO Tuned ANFIS2 Method Considering the COVID-19 Influence" *Frontiers in Energy Research*, section Smart Grids, Volume 11 - 2023, pp. 01-14, 08 January 2024, | <https://doi.org/10.3389/fenrg.2023.1292183>.
- [7] M. Basnet and **M. H. Ali**, "Deep Reinforcement Learning-Driven Mitigation of Adverse Effects of Cyber-Attacks on Electric Vehicle Charging Station," *MDPI Journal of Energies*, 6(21), 7296, 2023, <https://doi.org/10.3390/en16217296>
- [8] S. I. Taheri, M. Davoodi, and **M. H. Ali**, "A Simulated-Annealing-Quasi-Oppositional Teaching-Learning Based Optimization Algorithm for Distributed Energy Resources Allocation," *MDPI Journal of Computation*, 1(11), 214, 2023, <https://doi.org/10.3390/computation11110214>.
- [9] S. Vodapally and **M. H. Ali**, "Overview of Intelligent Inverters and Associated Cybersecurity Issues for Grid-Connected Solar Photovoltaic System," *MDPI Journal of Energies*, 2023, 16(16), 5904; <https://doi.org/10.3390/en16165904>.
- [10] G. Rashid and **M. H. Ali**, "FRT Capability Enhancement of Offshore Wind Farm by DC Chopper," *MDPI Journal of Energies*, 2023, 16, 2129. <https://doi.org/10.3390/en16052129>.
- [11] N. O. Farrar, **M. H. Ali**, and D. Dasgupta, "Artificial Intelligence and Machine Learning in Grid Connected Wind Turbine Control Systems: A Comprehensive Review" *MDPI Journal of Energies*, 2023, 16(3), 1530; <https://doi.org/10.3390/en16031530> (registering DOI).
- [12] S. Vodapally and **M. H. Ali**, "A Comprehensive Review of Solar Photovoltaic (PV) Technologies, Architecture, and its applications to Improved Efficiency" *MDPI journal of Energies*, 2023, 16(1), 319; <https://doi.org/10.3390/en16010319>.
- [13] M. Hayman and **M. H. Ali**, "A Novel Model for Wind Turbines on Trains," *MDPI journal of Energies*, 2022, 15(20), 7629; <https://doi.org/10.3390/en15207629>.
- [14] M. A. H. Sadi, D. Zhao, T. Hong, and **M. H. Ali**, "Time Sequence Machine Learning-Based Data Intrusion Detection for Smart Voltage Source Converter-Enabled Power Grid," *IEEE Systems Journal*, 29 July 2022, pp. 1-12, DOI: 10.1109/JSYST.2022.3186619.
- [15] K. Dahal and **M. H. Ali**, "A Hybrid GAN-Based DL Approach for Automatic Detection of Shockable Rhythms in AED for Solving Imbalanced Data Problem," *MDPI Journal of Electronics*, 2023, 12(1), 13; <https://doi.org/10.3390/electronics12010013>.
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- [17] H. Ranjbarzadeh, S. M. M. Tafreshi, **M. H. Ali**, A. Kouzani, and S. Khoo, "A Probabilistic Model for Minimization of Solar Energy Operation Costs as well as CO₂ Emissions in a Multi-Carrier Micro Grid (MCMG)," *MDPI journal of Energies*, 2022, **15**(9), 3088; <https://doi.org/10.3390/en15093088>.
- [18] M. Basnet and **M. H. Ali**, "Exploring Cybersecurity Issues in 5G Enabled Electric Vehicle Charging Station with Deep Learning," *Journal of IET Generation, Transmission & Distribution*, 2021.
- [19] M. D. Keshavarzi and **M. H. Ali**, "Performance Analysis of Hybrid AC/DC Microgrid Under Influence of Battery Energy Storage Location" *International Transactions on Electrical Energy Systems*, 2021.
- [20] M. D. Keshavarzi and **M. H. Ali**, "Dynamic Performance Enhancement of Power Grids by Operating Solar Photovoltaic (PV) System as Supercapacitor Energy Storage," *MDPI journal of Energies*, 2021.
- [21] F. Mohammadi, B. M.-Ivatloo, G. B. Gharehpetian, **M. H. Ali**, W. Wei, O. Erdinc, and M. Shirkhani, "Robust Control Strategies for Microgrids: A Review," *IEEE Systems Journal*, June 2021, doi: 10.1109/JSYST.2021.3077213.
- [22] F. Mohammadi, , K. Rouzbehi, M. Hajian, K. Niayesh, G. B. Gharehpetian, H. Saad, **M. H. Ali**, and V. K. Sood, "HVDC Circuit Breakers: A Comprehensive Review," *IEEE Transactions on Power Electronics*, vol. 36, no. 12, pp. 13726-13739, Dec. 2021, doi: 10.1109/TPEL.2021.3073895.
- [23] S M Mahfuz Alam and **M. H. Ali**, "Analysis of COVID-19 Effect on Residential Loads and Distribution Transformers ," *International Journal of Electrical Power and Energy Systems*, 129, 106832, 2021.
- [24] S M Mahfuz Alam and **M. H. Ali**, "Equation Based New Methods for Residential Load Forecasting," *MDPI Journal of Energies*, 2020, 13, 6378.
- [25] M. D. Keshavarzi and **M. H. Ali**, "A Novel Bidirectional DC-DC Converter for Dynamic Performance Enhancement of Hybrid AC/DC Microgrid," *MDPI Journal of Electronics*, 2020, 9(10), 1653.
- [26] S. Ghosh and **M. H. Ali**, "Minimization of Adverse Effects of Time Delay on Power Quality Enhancement in Hybrid Grid", *IEEE Systems Journal*, vol. 13, no. 3, pp. 3091-3101, September 2019.
- [27] G. Rashid and **M. H. Ali**, "Fault Ride Through Capability Improvement of DFIG Based Wind Farm by Fuzzy Logic Controlled Parallel Resonance Fault Current Limiter" *Journal of Electric Power Systems Research*, Vol. 146, pp. 1-8, May 2017.
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- [29] G. Rashid and **M. H. Ali**, "Nonlinear Control-Based Modified BFCL for LVRT Capacity Enhancement of DFIG Based Wind Farm," *IEEE Transactions on Energy Conversion*, vol. 32, Issue 1, pp. 284-295, March 2017.
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- [31] M. A. H. Sadi and **M. H. Ali**, "A Fuzzy Logic Controlled Bridge Type Fault Current Limiter for Transient Stability Augmentation of Multi-Machine Power System," *IEEE Transactions on Power Systems*, vol. 31, no. 1, pp. 602-611, January 2016.

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- [33] M. M. Hossain and **M. H. Ali**, "Transient Stability Improvement of DFIG Based Variable Speed Wind Generator Using DC Resistive Fault Current Limiter," *Journal of IET-Renewable Power Generation*, vol. 10, issue 2, pp.150-157, February 2016.
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- [40] H. A. Mohammadpour, A. Ghaderi, **M. H. Ali**, and J. Shin, "Low Voltage Ride-Through Enhancement of Fixed-Speed Wind Farms Using Series FACTS Controllers", *Journal of Sustainable Energy Technologies and Assessments*, vol. 9, pp. 12–21, March 2015.
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