

PUBLICATIONS

Journals:

1. **S. Hazra**, P. Kamat, S. Bhattacharya, W. Ouyang, and S. Englebretson, "Power Conversion With a Magnetically-Geared Permanent Magnet Generator For Low-Speed Wave Energy Converter," *IEEE Trans. Ind. Appl.* (IF: 3.488), vol. 56, no. 5, pp. 5308-5318, Sep.-Oct. 2020.
2. **S. Hazra** et al., "High Switching Performance of 1700-V, 50-A SiC Power MOSFET Over Si IGBT/BiMOSFET for Advanced Power Conversion Applications," *IEEE Trans. Power Electron.* (IF: 6.373), vol. 31, no. 7, pp. 4742-4754, Jul. 2016. ([2016 IEEE Power Electronics Transactions Second Prize Paper Award](#))
3. **S. Hazra**, S. Madhusoodhanan, G. K. Moghaddam, K. Hatua, and S. Bhattacharya, "Design Considerations and Performance Evaluation of 1200-V 100-A SiC MOSFET-Based Two-Level Voltage Source Converter," *IEEE Trans. Ind. Appl.* (IF: 3.488), vol. 52, no. 5, pp. 4257-4268, Sep.-Oct. 2016.
4. **S. Hazra** and S. Bhattacharya, "Modeling and Emulation of a Rotating Paddle Type Wave Energy Converter," *IEEE Trans. Energy Convers.* (IF: 4.501), vol. 33, no. 2, pp. 594-604, Jun. 2018.
5. **S. Hazra** and S. Bhattacharya, "An Active Filter-Enabled Power Architecture for Oscillating Wave Energy Generation," *IEEE J. of Emerg. Sel. Topics Power Electron.* (IF: 4.728), vol. 5, no. 2, pp. 723-734, Jun. 2017.
6. **S. Hazra** and P. Sensarma, "Vector Approach for Self-Excitation and Control of Induction Machine in Stand-Alone Wind Power Generation," *IET Renew. Power Gener.* (IF: 3.605), vol. 5, no. 5, pp. 397-405, Sep. 2011.
7. **S. Hazra** and P. Sensarma, "Self-Excitation and Control of an Induction Generator in a Stand-Alone Wind Energy Conversion System," *IET Renew. Power Gener.* (IF: 3.605), vol. 4, no. 4, pp. 383-393, Jul. 2010.
8. A. K. Tripathi, K. Mainali, S. Madhusoodhanan, A. Kadavelugu, K. Vechalapu, D. C. Patel, **S. Hazra**, S. Bhattacharya, and K. Hatua, "A Novel ZVS Range Enhancement Technique of a High-Voltage Dual Active Bridge Converter Using Series Injection," *IEEE Trans. Power Electron.* (IF: 6.373), vol. 32, no. 6, pp. 4231-4245, Jun. 2017.
9. S. Dutta, **S. Hazra**, and S. Bhattacharya, "A Digital Predictive Current-Mode Controller for a Single-Phase High-Frequency Transformer-Isolated Dual-Active Bridge DC-to-DC Converter," *IEEE Trans. Ind. Electron.* (IF: 7.515), vol. 63, no. 9, pp. 5943-5952, Sep. 2016.
10. K. Mainali, A. Tripathi, S. Madhusoodhanan, A. Kadavelugu, D. Patel, **S. Hazra**, K. Hatua, and S. Bhattacharya, "A Transformerless Intelligent Power Substation: A three-phase SST enabled by a 15-kV SiC IGBT," *IEEE Magz. Power Electron.*, vol. 2, no. 3, pp. 31-43, Sep. 2015.
11. A. K. Tripathi, K. Mainali, D. C. Patel, A. Kadavelugu, **S. Hazra**, S. Bhattacharya, and K. Hatua, "Design Considerations of a 15-kV SiC IGBT-Based Medium-Voltage High-Frequency Isolated DC-DC Converter," *IEEE Trans. Ind. Appl.* (IF: 3.488), vol. 51, no. 4, pp. 3284-3294, Jul.-Aug. 2015.
12. S. Madhusoodhanan, A. Tripathi, D. Patel, K. Mainali, A. Kadavelugu, **S. Hazra**, S. Bhattacharya, and K. Hatua, "Solid-State Transformer and MV Grid Tie Applications Enabled by 15 kV SiC IGBTs and 10 kV SiC MOSFETs Based Multilevel Converters," *IEEE Trans. Ind. Appl.* (IF: 3.488), vol. 51, no. 4, pp. 3343-3360, Jul.-Aug. 2015.

Selected Conferences:

1. **S. Hazra**, K. Vechalapu, S. Madhusoodhanan, S. Bhattacharya, and K. Hatua, "Gate Driver Design Considerations for Silicon Carbide MOSFETs Including Series Connected Devices," *IEEE Energy Convers. Congr. Expo. (ECCE)*, Cincinnati, OH, 2017, pp. 1402-1409. ([2017 IEEE PELS TC6 Emerging Technology Best Paper Award](#))

2. **S. Hazra** and S. Bhattacharya, "Minimizing Reactive Current of a High Gain Dual Active Bridge Converter for Supercapacitor Based Energy Storage System Integration," *IEEE Energy Convers. Congr. and Expo. (ECCE)*, Portland, OR, 2018, pp. 1407-1414.
3. K. Vechalapu, **S. Hazra**, U. Raheja, A. Negi, and S. Bhattacharya, "High-speed medium voltage (MV) drive applications enabled by series connection of 1.7 kV SiC MOSFET devices," *IEEE Energy Convers. Congr. and Expo. (ECCE)*, Cincinnati, OH, 2017, pp. 808-815.
4. **S. Hazra** and S. Bhattacharya, "Stator Flux Active Damping by Optimal Rotor Current Injection for Grid Tied Doubly-Fed Induction Generator," *IEEE Int. Elect. Mach. & Drives Conf. (IEMDC)*, Coeur d'Alene, ID, 2015, pp. 1895-1901.
5. **S. Hazra**, A. G. Dean, and S. Bhattacharya, "Doubly-Fed Induction Generator Enabled Power Generation in Ocean Wave Energy Conversion System," *IEEE Energy Convers. Congr. Expo. (ECCE)*, Montreal, QC, 2015, pp. 6978-6985.