

FREEDM SYSTEMS CENTER

Journal Publications

1. A. Anurag, S. Acharya, N. Kolli and S. Bhattacharya, "Gate Drivers for Medium-Voltage SiC Devices," in *IEEE Journal of Emerging and Selected Topics in Industrial Electronics*, vol. 2, no. 1, pp. 1-12, Jan. 2021, doi: 10.1109/JESTIE.2020.3039108.
2. A. Anurag, S. Acharya, S. Bhattacharya, T. R. Weatherford and A. Parker, "A Gen-3 10 kV SiC MOSFETs based Medium Voltage Three-Phase Dual Active Bridge Converter Enabling a Mobile Utility Support Equipment Solid State Transformer (MUSE-SST)," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, doi: 10.1109/JESTPE.2021.3069810.
3. A. Chakraborty. Hierarchical Reinforcement Learning for Data-Driven Wide-Area Control of Power Systems. *IEEE Electrification Magazine*, vol. 9(1), March 2021.
4. A. Shirsat and W. Tang, "Data-driven stochastic model predictive control for DC-coupled residential PV-storage systems," *IEEE Transactions on Energy Conversion*, vol. 36, no. 2, pp. 1435–1448, 2021.
5. A. Shirsat and W. Tang, "Quantifying residential demand response potential using a mixture density recurrent neural network," *International Journal of Electrical Power & Energy Systems*, vol. 130, 2021, 106853.
6. A. Vukojevic and S. Lukic, "Microgrid Protection and Control Schemes for Seamless Transition to Island and Grid Synchronization," in *IEEE Transactions on Smart Grid*, vol. 11, no. 4, pp. 2845-2855, July 2020, doi: 10.1109/TSG.2020.2975850.
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8. B. Xu, H. Tu, Y. Du, H. Yu, H. Liang and S. Lukic, "A Distributed Control Architecture for Cascaded H-Bridge Converter With Integrated Battery Energy Storage," in *IEEE Transactions on Industry Applications*, vol. 57, no. 1, pp. 845-856, Jan.-Feb. 2021, doi: 10.1109/TIA.2020.3039430.
9. C. R. Teeneti, U. Pratik, G. Philips, A.N. Azad, M. Greig, R.A. Zane, C. Bodine, C. Coopmans, and Z. Pantic, "System-Level Approach to Designing a Smart Wireless Charging System for Power Wheelchairs," in *IEEE Transactions on Industry Applications*, 2021.
10. D. Khachariya, D. Szymanski, M. H. Breckenridge, P. Reddy, E. Kohn, Z. Sitar, R. Collazo, and S. Pavlidis, "On the characteristics of N-polar GaN Schottky barrier contacts with LPCVD SiN interlayers," *Appl. Phys. Lett.*, vol. 118, no. 12, p. 122103, Mar. 2021, doi: 10.1063/5.0039888.
11. D. Khachariya, D. Szymanski, R. Sengupta, P. Reddy, E. Kohn, Z. Sitar, R. Collazo, and S. Pavlidis, "Chemical treatment effects on Schottky contacts to metalorganic chemical vapor deposited n-type N-polar GaN," *J. Appl. Phys.*, vol. 128, no. 6, p. 064501, Aug. 2020, doi: 10.1063/5.0015140.

12. Dayerizadeh, H. Feng and S. M. Lukic, "Dynamic Wireless Charging: Reflexive Field Containment Using Saturable Inductors," in *IEEE Transactions on Industry Applications*, vol. 56, no. 2, pp. 1784-1792, March-April 2020.
13. Douglas C Hopkins, Utkarsh Mehrotra, Praveen J, Narasimha Raju BL, "Neutralized CMV Inverter (NCI) for Electrical Vehicle Applications," Dogga Raveendhra, *IEEE Trans. on Transportation Electrification*, submitted for review 14th July 2021.
14. F. Xie, C. McEntee, M. Zhang, B. Mather and N. Lu, "Development of an Encoding Method on an Co-simulation Platform for Mitigating the Impact of Unreliable Communication," in *IEEE Transactions on Smart Grid*, doi: 10.1109/TSG.2020.3039949.
15. G. Jing, H. Bai, J. George, and A. Chakraborty. Model-Free Optimal Control of Linear Multi-Agent Systems via Decomposition and Hierarchical Approximation. *IEEE Transactions on Control of Network Systems*, 2021.
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17. H. Feng and S. M. Lukic, "Reduced-Order Modeling and Design of Single-Stage LCL Compensated IPT System for Low Voltage Vehicle Charging Applications," in *IEEE Transactions on Vehicular Technology*, vol. 69, no. 4, pp. 3728-3739, April 2020,
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19. H. Feng, R. Tavakoli, O. C. Onar and Z. Pantic, "Advances in High-Power Wireless Charging Systems: Overview and Design Considerations," in *IEEE Transactions on Transportation Electrification*, vol. 6, no. 3, pp. 886-919, Sept. 2020.
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Conference Proceedings

1. A. Agarwal, Y. Prabowo and S. Bhattacharya, "Analysis and Design Considerations of Input Parallel Output Series-Phase Shifted Full Bridge Converter for a High-Voltage Capacitor Charging Power Supply," 2021 IEEE 12th Energy Conversion Congress & Exposition - Asia (ECCE-Asia), 2021, pp. 1068-1075, doi: 10.1109/ECCE-Asia49820.2021.9479247.
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