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LIST OF PUBLICATIONS

Patent

1. S.K.Singh, R. K. Singh, R. K. Misra, **Anantha Padmanabhan N K**, and A. K. Pratihasta "SYSTEM AND METHOD FOR REMAINING USEFUL LIFE ESTIMATION OF A SUPERCAPACITOR USING HYBRID DEEP LEARNING". (**Application Submitted with Application No. 202511061916**)

Refereed Journal Papers

1. **Anantha Padmanabhan. N. K**, J. R. V. M. Rithish, A. G. Nath, S. K. Singh and R. K. Singh, "An Interpretable Electric Vehicles Battery State of Charge Estimation Using MHDTCN-GRU," in IEEE Transactions on Vehicular Technology, vol. 73, no. 12, pp. 18527-18538, Dec. 2024, doi: 10.1109/TVT.2024.3447228.

2. **Anantha Padmanabhan. N. K**, A. K. Pratihasta, N. Tanwar, R. K. Singh, R. K. Misra and S. K. Singh, "Interpretable Hybrid CDTCN-GRU Model for Supercapacitor Life Prediction," in IEEE Sensors Journal, vol. 25, no. 14, pp. 26970-26978, July 15, 2025, doi: 10.1109/JSEN.2025.3573331

3. **Anantha Padmanabhan. N. K**, S. V. Mate, R. K. Singh and S. K. Singh, "Explainable MFDWA-GRU Model for Battery State of Health Estimation," in IEEE Journal of Emerging and Selected Topics in Industrial Electronics, doi: 10.1109/JESTIE.2025.3618621.

4. **Anantha Padmanabhan. N. K**, A. K. Pratihasta, R. K. Singh, R. K. Misra and S. K. Singh, "Temporal Convolutional Transformer for Supercapacitor Degradation Prediction" (Under Review)

Conference Proceeding

1. **Anantha Padmanabhan N K**, Rajeev Kumar Singh, and Sanjay Kumar Singh,

"Explainable Hybrid Deep Learning Model for State of Charge Estimation in real-World Driving Cycles," 2025 IEEE Energy Conversion Conference and Expo (ECCE 2025).**(Accepted for Presentation in Philadelphia, PA, USA from October 19-23, 2025)**

2. **Anantha Padmanabhan. N. K**, A. Kumar, V. Chitransh, R. K. Singh, V. N. Lal and S. K. Singh, "AI-Enabled Cyber Physical System And Battery Life Estimation For Smart Grid Applications," IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society, Singapore, 2023, pp. 01-06, doi: 10.1109/IECON51785.2023.10312224

3. A. Kumar, **Anantha Padmanabhan. N. K**, R. K. Singh, V. N. Lal and S. K. Singh, "Hybrid AI Model for Enhanced Battery RUL Prediction in Electrolytic Capacitor-Less Solar-Battery Integrated Power Processor," 2025 IEEE Energy Conversion Congress Exposition Asia (ECCE-Asia), Bengaluru, India, 2025, pp. 1-6, doi: 10.1109/ECCE-Asia63110.2025.11112204.