

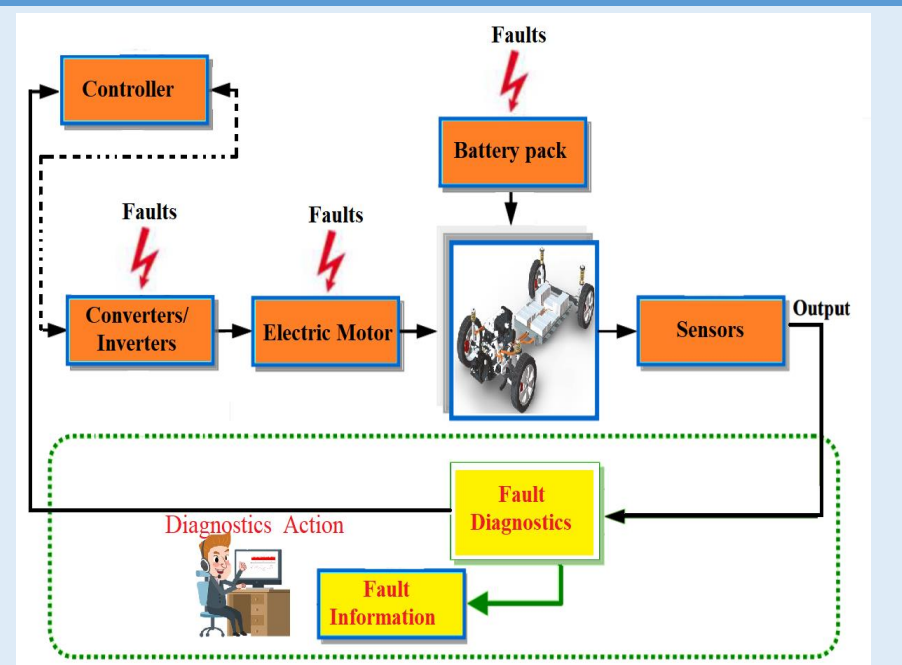
Fault Diagnostics and Prognostics of Induction Motor Drive using Hybrid Schemes for Electric Vehicles Application



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Fault diagnostics of induction motor in electric vehicles (EVs) have received much attention of researchers due to their high efficiency and reliability of construction. This allows for timely detection of the faults in induction motor can save time, efforts, and maintenance cost of EVs. Owing to the demand and influence of fault diagnostics of induction motor EVs application a hybrid schemes is introduced to reduce the operational, maintenance costs and extend the lifetime of induction motors. In this interdisciplinary approach, vibration monitoring has inherent problems like physical mounting on the machine, adjustment and calibration. Similar the Infrared thermography is limited by the modality captured by single sensor. Hence, within this multi sensor that not only vibration, infrared thermography, but also motor current signature and magnetic flux analysis for automatic fault diagnosis system. Furthermore, feature extraction and classification is followed by the deep learning algorithms to an inherent adaptive design to diagnose the induction motor faults.