Application of Support Vector Machines in Fault Detection and Diagnosis of Power Transmission Lines

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Abstract : A developed approach for the protection of power transmission lines using Support Vector Machines (SVM) technique is presented. In this paper, the SVM technique is utilized for the classification and isolation of faults in power transmission lines. Accurate fault classification and location results are obtained for all possible types of short circuit faults. As in distance protection, the approach utilizes the voltage and current post-fault samples as inputs. The main advantage of the method introduced here is that the method could easily be extended to any power transmission line.