Presenting a Model for Comparison of Bayesian Networks and Decision Tree Algorithms in Intrusion Detection Systems-Based on Data Mining

Fazli-Maghsoudi H. and Momeni H.

ABSTRACT:

By development of information technology, network security is considered as one of the main issues and has great importance. In this paper, we used a machine learning algorithm named J48 for the detection of abnormal packets. The results of simulation suggest that J48 algorithm has the highest precision of 85.49% for the intrusion detection system.

Key words: abnormal packet, Bayesian networks, data mining, intrusion detection systems, normal packet.

Performance Comparison of STATCOM & SVC in Reactive Power Control Strategy For Wind Farm

Original Research, C2
Ahmadi Kamarposhti M.

ABSTRACT:

In this paper the wind farm reactive power control strategy using STATCOM & SVC is introduced which is used to control the reactive power of the Doubly-Fed Induction Generator (DFIG) Wind Turbine.

Key words: Doubly-Fed Induction Generator (DFIG), Wind Farm.
Performance Evaluation of Three-Phase Induction Motor Fed by unbalanced voltage Combined with Over- or Under Voltage Using Finite Element Method

Original Research, C3
Ebadi A., Mirzaie M., Gholamian S.A.

ABSTRACT:
Unbalanced voltages can exist anywhere in a three-phase power distribution system. Thus, investigation of their effects is of utmost concern. This paper evaluates the performance of a three-phase induction motor under unbalanced voltage conditions using the finite element method. The complex voltage unbalance factor (CVUF) is used to represent the unbalance in the present work.

Key words: CVUF, Efficiency, Induction Motor, Losses, Torque.

Conceptual comparison of Line-Start Permanent Magnet Synchronous and Induction Machines for Line-fed of different conditions

Original Research, C4
Hosseinzadeh Soreshjani M., Sadoughi A.

ABSTRACT:
This study presents a comparative analysis of an Induction Machine (IM) and its Line-Start Permanent Magnet Synchronous (LSPMSM) for line-fed operations under different voltage sag conditions. The LSPMSM is shown to have a better steady-state response compared to the IM, although issues related to synchronization must be addressed.

Key words: Line-Start Permanent Magnet Synchronous Motor (LSPMSM), Induction Motor (IM), Line-fed, Voltage sag conditions.
Voltage Sag Evaluation during Induction Motors Starting Using Artificial Neural Network

Sadoughi A., Sadeghkhani I.


ABSTRACT:
One of the most important concerns in electrical systems is to deliver energy to the consumers with high power quality. As one of the power quality problems, voltage sag is an important concern that can affect the performance of electrical equipment. In this paper, the authors evaluate the magnitude and duration of voltage sag using an artificial neural network (ANN). Both multilayer perceptron (MLP) and radial basis function (RBF) structures have been analyzed. Six learning algorithms, backpropagation (BP), delta-bar-delta (DBD), extended delta-bar-delta (EDBD), directed random search (DRS), quick propagation (QP), and levenberg marquardt (LM) were used to train the MLP. The simulation results show that the proposed technique can estimate the voltage sag characteristics with good accuracy. It is also shown that the LM and EDBD algorithms present better performance for evaluating the magnitude and duration of voltage sag.

Key words: Induction motors, multilayer perceptron, motor cable, radial basis function, voltage sag.