

Vasavi College of Engineering
Department Of Computer Science & Engineering

**A Report on Guest Lecture on “Application of Artificial Neural Network”
(Conducted Under TEQIP-II)**

A Guest Lecture on “**Applications of Artificial Neural Network** ” was delivered by Dr. K. S. Madhavan , Deputy General Manager , Corp. R & D BHEL Hyderabad on Dec 17th, 2012 for the students of M. Tech (CSE) .

The objective of the Guest Lecture was to enlighten the students with the practical applications of Neural Network.

Dr. K. S. Madhavan started off with brief introduction to Artificial intelligence, Data mining, Artificial neural networks concepts and its use in Research and Development.

- Incipient fault diagnosis of Transformers using Dissolved Gas Analysis and Neural Networks (PNN)
- Partial Discharge Classification of 145 kV GIS (PNN)
- Fault identification of Rotating Machinery (GRNN)
- Estimation of Degree of Polymerization and Residual Age of Transformers Based on Furfural Levels in Insulating Oil Through Generalized Regression Neural Networks
- Evaluation of Gas turbine Control Constants Boiler Performance Analysis



He discussed the construction of the neural network, its architecture , different algorithms and the importance of it with examples in the fields as follows

- Character Recognition using neural networks
- Plant Health Monitoring System
- Time Series prediction of boiler drum level parameter using recurrent neural networks.



The speaker has also focused on how to build neural network in finding the parameter values in the power generation field, by explaining the need of preprocessing and post processing of the data.



The speaker concluded the lecture by conveying upcoming research topics like

- Neural edge detector
- Online neural controller
- Evolutionary computation
- Generic Programming
- Swarm intelligence
- Artificial Life
- Differential Evolution etc.,