

## **Modelling and Performance of a Wind Turbine**

The dynamics of wind turbine has to be studied carefully to avoid unpredictable outputs and to make sure that consistent and efficient power is supplied according to the load requirements. There is a great and urgent necessity to increase the efforts in the development of the researches of the renewable energy to decrease the dependency on the conventional ones. The objective of this research is to make a contribution to the ongoing wind turbine research in the area of modeling, which is the first step required for the control and implementation of wind turbines. The wind turbine transfer function is derived and its performance has been established using the MATHLAB Software. This research provided a different approach to wind turbine modeling methodology. The results of this research may be used in another step for completing the control process of the wind turbine