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| **Title:** | Maximum Power Extraction Using Genetic Algorithm from Wind Energy System | | |
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| **Abstract:** |  |
| Wind power production is increasingly has become the predominant clean energy source. The energy consumed by the wind power conversion system is not only based on the wind, but also on the wind energy conversion management strategy used on the site. The construction of wind turbines around the world has been expanding steadily over the last decade, and wind energy has been a major factor in fostering sustainable growth. The production of wind turbines soon becomes the favored renewable source of electricity. There are several concerns with efficiency of wind energy systems with respect to optimal wind capacity. In order to extract the most energy from a wind turbine generator, the wind turbine must be powered at the correct speed for a certain wind level. This paper introduces the optimal power extraction for variable speed wind turbines (VSWT) through genetic algorithms. There is some control method to gain full power from the wind, but it’s not really effective. To make the progress, genetic algorithms done to improve the controller quite accurate adjustments. The MATLAB software has been used to conduct simulation analyses. The findings of the simulation show that optimum mechanical power can be derived quite adequately from the wind using the genetic algorithm. | |