Abstract

The progression of the human race and technological advancements has imposed burgeoning levels of energy demand. Also, due to the rapid development of the industrial and agricultural sector added with the lust for the luxury of the human population, pollution has become one of the major reasons for the deterioration in the overall health of human beings. For both of this aspect, the role of renewable sources of energy, as a possible alternative to fossil fuels, was increasingly becoming significant. But due to the uncertainty in availability and cost involved for
conversion the popularity of such type of energy is limited. That is why in various places, the potential of hybridizing two different sources of renewable energy was investigated which was found to be impacted by different location dependent factors. It appears that selection of location has become significant in the success of hybridized power plants. Unfortunately, there is a lack of adequate and reliable methods for selection of location objectively without any human influence for hybrid power plants. The present study proposes a new model for estimation of location suitability for a hybrid Wind Wave Power Plant. The results encourage the authors for further application of the new method. Wind and wave hybrid renewable energy system is a newly introduced system in the renewable energy field. This system involves the integration of two energy system that will give continuous power supply. In this hybrid system electricity is generated by the system in which wind energy system and wave energy system works simultaneously to compensate for time. When one of them is not available we can use other one and vice versa. Wind energy when combined with any other alternative source of energy it can provide a reliable supply of electricity with minimal impact on the environment. So the efficiency of the plant also depends on the location if the location is not suitable it will affect adversely. Availability of the sources can be different in different locations. This paper deals with the combination of wind and wave hybrid energy system which lead to generate electricity without deleterious the environment. This present study discuss the development of location suitability model with the help of group method data handling which used the decision forest algorithm for modeling.

References


**Index Terms**

Computer Science

Applied Mathematics

**Keywords**

Group Method Data Handling (gmdh)  Decision Forest  Hybrid Energy System