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Using Gaussian Process in Wind Power Forecasting

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Abstract : The wind is a random variable difficult to master, for this, we developed a mathematical and statistical methods enable to modeling and forecast wind power. Gaussian Processes (GP) is one of the most widely used families of stochastic processes for modeling dependent data observed over time, or space or time and space. GP is an underlying process formed by unrecognized operator’s uses to solve a problem. The purpose of this paper is to present how to forecast wind power by using the GP. The Gaussian process method for forecasting are presented. To validate the presented approach, a simulation under the MATLAB environment has been given.

Keywords : wind power, Gaussien process, modelling, forecasting
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