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Review

Angular resampling for vibration analysis in wind turbines under non-linear speed fluctuation

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ABSTRACT

This work presents the development of an angular resampling algorithm for applying in conditions of high speed variability, as occurs in wind turbines, and the results obtained when applied to simulated signals, bearings diagnostic test-beds and wind turbines. The results improve the accuracy of similar resampling algorithms offered by the consulted bibliography. This algorithm is part of the wind turbine diagnostic system developed by the authors.

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1. Introduction

Predictive maintenance in wind turbines is being used to reduce costs and maintenance time. Such maintenance is based on monitoring the status and condition of the machinery throughout the life of the equipment [1].

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