Manuscript : NODY-D-14-00799

Title : Fault Diagnosis of Variable Pitch for Wind Turbines Based on Multi-innovation Forgetting Gradient Identification Algorithm

Authors : Dinghui Wu; Yiyang Li;

Reviewer #1:

Sections 2.1 and 2.2 are not carefully written, they cite many equations, which are well known to specialized readers and, without a clearer introduction including also more explicative figures, almost of no use for the rest of the audience. These two sections should be revised and/or moved to the appendix.

The authors’ response: Thank you for your positive comments. We have moved section 2.1 and section 2.2 to the appendix.

In section 3.2 the proposed algorithm is introduced without any simple yet explicative example of how it works in practice. More generally, without a comparative analysis, it is not completely clear how this work fits into the, vast, existing literature and which are the novelties brought in this field. It is not clear which is the expertise required for the fine-tuning of the Forgetting Factor and Innovation Length the parameters, which paly a determinant role for the fruitful the application of the proposed technique.

The authors’ response: Thank you for your comments. We have add the analysis of how the algorithm be ported to the system in section 3.2.

The authors should perform comparative analysis with other existing techniques, such as [2, 3] based on Hilbert Huang transformation method [1], which have shown good performances for the structural health monitoring of civil structures [2, 3] without any fine tuning of key parameters and which do not require the knowledge of historical data.

The authors’ response: Thank you for your comments. We have add the analysis of Hilbert huang transformation in the second paragraph of the introduction.

Reviewer #2:

1. Some methods about parameter estimation widely exist in the literature and some important work should be addressed.

The authors’ response: Thank you for your positive comments. We have add more literature in the second and fourth paragraph of the introduction. See [9, 10, 19]

1. Should cite some recent Nonlinear Dynamics papers as references.

The authors’ response: Thank you for your positive comments. We have add 2 recent Nonlinear Dynamics papers in the second paragraph of the introduction part. See [5, 6]

3. Carefully check grammar errors.

The authors’ response: Thank you for your comments. We have improved the grammar of the paper.