

Journal: Wind Energy Science

Manuscript: Fractal-based numerical simulation of multivariate typhoon wind speeds utilizing Weierstrass Mandelbrot function

Dear Editor:

We have carefully considered all the review comments and believe that we have revised the manuscript to the best of our ability. Listed below please find our written responses to the reviews' comments and the corresponding revisions which have been highlighted in yellow. We will look forward to hearing from you.

Yours Sincerely,

Mingfeng Huang

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CCI

General comments:

The paper sounds very interesting and timely.

The proposed approach based on non integer order time series, and in particular the used strategy is appealing and represents a new appealing approach for studying time series. The authors focused their attention to the wind time series, moreover the same approach could be very useful to volcano eruption time series. The authors could remark this idea and to cite the following contribution: Lava flow simulations using discharge rates from thermal infrared satellite imagery during the 2006 Etna eruption

Authors Annamaria Vicari, Alessia Cirauda, Ciro Del Negro, Alexis Herault, Luigi Fortuna Publication date 2009/9 Journal Natural Hazards Volume 50 Pages 539-550 Publisher Springer Netherlands.

Response: Thank you for your thoughtful review of our paper. We are pleased to hear that you found our approach interesting and timely. While our focus has been on wind time series in this work, we appreciate your suggestion regarding the potential application of our strategy to volcano eruption time series. The paper you mentioned, 'Lava flow simulations using discharge rates from thermal infrared satellite imagery during the 2006 Etna eruption' by Annamaria Vicari, Alessia Cirauda, Ciro Del Negro, Alexis Herault, and Luigi Fortuna, indeed appears relevant. However, to determine the suitability of our proposed approach for simulating volcano eruption time histories, a comprehensive investigation is necessary. The characteristics of volcano eruption data may differ from those of wind data, and the dynamics involved could present unique challenges. Therefore, we believe it is essential to conduct a detailed analysis and validation to ascertain the applicability of our method to volcano eruption time series. We appreciate your suggestion and consider it a valuable avenue for future research in understanding and simulating complex natural phenomena like volcanic eruptions.