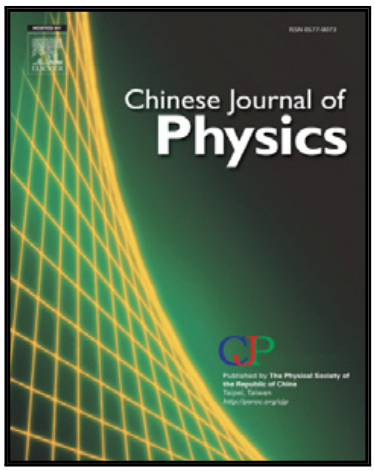

Stochastic Resonance Characteristic Analysis of New Potential Function under Levy Noise and Bearing Fault Detection

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November 18,2017

RE: “Stochastic Resonance Characteristic Analysis and Bearing Fault Detection of New Potential Function under Levy Noise” by Lifang He, Xicheng Zhou，Tianqi Zhang

Dear Editor,

Please consider this research paper for possible publication in Chinese Journal of Physics。Technology. The contribution of this paper is our original work and all authors have agreed to the submission of this work to Chinese Journal of Physics. The paper has not been published and is not under consideration for publication by another journal.

Sincerely yours,

Lifang He, PhD
Associate professor

Highlights

- Characteristic analysis of new potential function under Levy Noise is proposed.
- The theoretical signal-to-noise ratio driven by Levy noise is obtained.
- The laws of the system parameters under levy noise are explored.
- The performance of proposed system is better than classical stochastic resonance.
- The proposed system is used for bearings fault detection.