SINERGI

COVER LETTER

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[*May 8, 2023*]

Dear,

We wish to submit an original research article entitled "[**Using Particle Swarm Optimization for PSS and Energy Storage in the SMIB System Under Load Shedding Conditions**]" for consideration by SINERGI.

We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.
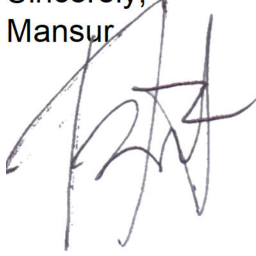
In this paper, we report on / show that:

Field	:	Electrical Engineering
Topic	:	Optimal Control with Artificial Intelligence
Brief Background	:	Optimal PSS and Energy Storage coordination can boost system performance, especially in dynamic load changes. Artificial intelligence techniques can replace traditional trial-and-error tuning techniques and assist in adjusting controller parameters. Based on the investigation's findings, PSO executes quick and accurate calculations for PSS and Energy Storage optimization. With the addition of a load-shedding instance, the case study utilized the Single Machine Infinite Bus (SMIB) technology. The frequency response and rotor angle of the SMIB system are shown via time domain simulation.
Research Problem	:	Problems with the SMIB system include: the coordination of control equipment is not optimal, especially when there is a change in load, and there is no proper coordination of control equipment, which causes stability problems.
Overview of Method	:	In this study, the SMIB system proposed the application of PSS and Energy Storage-based controls, with parameter optimization based on Particle Swarm Optimization (PSO). The objective function of PSO in computing is to optimize the Integral Time Absolute Error (ITAE).
Significant finding	:	The analysis's findings demonstrate that the controller combination can offer stability, reducing overshoot oscillations and enabling quick settling times.

We have no conflicts of interest to disclose.

Thank you for your consideration of this manuscript.

Sincerely,
Mansur

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AUTHORSHIP STATEMENT

We wish to submit an original research article entitled "[**Using Particle Swarm Optimization for PSS and Energy Storage in the SMIB System Under Load Shedding Conditions**]" for consideration by SINERGI.

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript.

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POTENTIAL REVIEWERS

Please submit 3 (three) potential reviewers (*that have not listed in SINERGI*) to speed up the review process that competent for the topic and has a good reputation in that area.

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