

Review of: "Design of an intelligent controller for improving the solar system efficiency"

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Potential competing interests: No potential competing interests to declare.

The authors have done a good job in conducting an insightful study on optimizing photovoltaic system performance through intelligent maximum power point tracking control.

The extensive simulations comparing classic and adaptive MPPT algorithms have generated valuable findings that will advance the field. The authors' meticulous approach in modeling the system and thoughtfully analyzing the results has led to a robust assessment.

However there are a few areas of considerations:

Major Comments:

1. The introduction provides good background on MPPT methods, but could be strengthened by more clearly stating the objectives, contributions, and outline of the current study.
2. More details are needed on the simulation model and parameters used, such as the PV panel specifications, boost converter design, etc.
3. The explanations of the P&O and fuzzy logic MPPT algorithms could be expanded, with visuals or pseudocode to clearly illustrate the methods.
4. The results presentation is quite brief. More in-depth analysis and discussion of the simulation results would make the comparative assessment more convincing.
5. Add some results on the dynamic performance of each method under rapidly varying conditions.
6. The conclusion summarizes the main findings but could be enhanced by discussing limitations, future work, and specific recommendations.

Minor Comments:

1. Proofread to fix minor typos, grammatical errors.
2. Add axes labels to all figures.

