

1. Title:

2. Abstract:

This paper proposes an improved modelling approach for the two-diode model of photovoltaic (PV) module. The main contribution of this work is the simplification of the current equation, in which only four parameters are required—compared to six or more in the previously developed two-diode models. This is achieved by equating the values of the series and parallel resistances, and subsequently computing them using fast iterative method. To validate the accuracy of the proposed model, six PV modules of different types (multi-crystalline, mono-crystalline and thin-film) from various manufacturers are tested. The performance of the model is evaluated against the popular single diode models. It is found that the proposed model is superior when subjected to irradiance and temperature variations. In particular the model matches very accurately for all important points of the I-V, i.e. by less than 1%. The modelling method is useful for PV power converter designers and circuit simulator developers who require simple, fast yet accurate model for the PV module.

Objective

Merit

Idea

Procedures

Results

Implications

3. Keywords:

4. Introduction:

General statement

Problem Statement

Related works (finding the gap)

Objective, novelty, proposed approach

Structure of the paper

5. Theory@Related work:

Deep learning theory, theory on the method used

6. Methodology:

Dataset: what type? Total samples? How many train & test samples?

Flowchart

7. Result and Analysis:

Graph, table and discussion on each graph and table

8. Conclusion:

Conclude the findings

9. Acknowledgement:

The authors would like to thank Universiti Teknikal Malaysia Melaka (UTeM), Centre for Telecommunication Research & Innovation (CeTRI) and Ministry of Higher Education (MOHE), Malaysia for sponsoring this work under project FRGS/2018/FKEKK-CERIA/F00363 and the use of the existing facilities to complete this project.

10. References