3rd International Conference on Automation, Computing and Renewable Systems, ICACRS 2024 - Proceedings •
Pages 360 - 366 • 2024 • 3rd International Conference on Automation, Computing and Renewable Systems, ICACRS 2024 • Pudukkottai • 4 December 2024through 6 December 2024 • Code 206195

Document type
Conference Paper

Source type
Conference Proceedings

ISBN
979-833153242-0

DOI
10.1109/ICACRS62842.2024.10841579

Publisher
Institute of Electrical and Electronics Engineers Inc.

Original language
English

View less

Maximum Power Generation of PV system using ADO Algorithm for Different Load Conditions

Selvam P.[a] ; Devarajan R.[a] ; Faarooq N.[a] ; Venkatesh R.[b] ; Shyamalagowri M.[c] ; Sasikala K.[d]

Save all to author list

[a] Vinayaka Mission's Kirupananda Variyar Engineering College, Vinayaka Mission's Research Foundation (Deemed to be University), Tamil Nadu, Salem, India

[b] Annapoorna Engineering College, Tamil Nadu, Salem, India

[c] Erode Sengunthar Engineering College, Tamil Nadu, Perundurai, India

[d] R P Sarathy Institute of Technology, Salem, India

Full text options Export

Abstract
Author keywords
Indexed keywords
Sustainable Development Goals
SciVal Topics

Abstract

Today's high demand of electricity is focused onto the renewable energy source such as solar energy using PV panel because of its maximum production level. So this paper describes the maximum electricity production from PV panel even in low irradiance, climate change by using the Adaptive Dingo optimizer (ADO). ADO is combination of Dingo Optimizer (DO) and Arithmetic Optimization Algorithm (AOA) uses to get maximum power from photo voltaic panel based on behavior of dingo and arithmetic calculation. This maximized solar panel is simulated, justify the efficiency of this system results are carried out using MATLAB software. Various simulation results generated output. This paper is well-known for its maximum power generation in low irradiance and les temperature and also the stability is more in any type of loads. © 2024 IEEE.

Author keywords

Adaptive Dingo optimizer (ADO); MPPT

Indexed keywords

Sustainable Development Goals

SciVal Topics

References (10)

View in search results format >

All

Text export | Print | E-mail | Save to PDF

Create bibliography

1 Reza Tousi, S.M., Moradi, M.H., Basir, N.S., Nemati, M.

A function-based maximum power point tracking method for photovoltaic systems

(2016) *IEEE Transactions on Power Electronics*, 31 (3), art. no. 7095608, pp. 2120-2128. Cited 50 times.
http://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=4712525
doi: 10.1109/TPEL.2015.2426652

View at Publisher

2 Freitas, A.A.A., Tofoli, F.L., Sá Júnior, E.M., Daher, S., Antunes, F.L.M.

High-voltage gain dc-dc boost converter with coupled inductors for photovoltaic systems

(2015) *IET Power Electronics*, 8 (10), pp. 1885-1892. Cited 110 times.
https://ietresearch.onlinelibrary.wiley.com/journal/17554543
doi: 10.1049/iet-pel.2014.0520

View at Publisher

3 Sharma, D.K., Purohit, G.

Differential power algorithm based maximum power point tracking for a standalone solar PV system

(2015) *Journal of Energy in Southern Africa*, 26 (2), pp. 103-109. Cited 3 times.
http://www.erc.uct.ac.za/jesa/Volume26/26-2-jesa-sharma-purohit.pdf
doi: 10.17159/2413-3051/2015/v26i2a2203

View at Publisher

4 Femia, N., Petrone, G., Spagnuolo, G., Vitelli, M.

Optimization of perturb and observe maximum power point tracking method

(2005) *IEEE Transactions on Power Electronics*, 20 (4), pp. 963-973. Cited 2663 times.
doi: 10.1109/TPEL.2005.850975

View at Publisher

5 Choudhary, D., Saxena, A.R.
DC-DC Buck-Converter for MPPT of PV System
(2014) *International Journal of Emerging Technology and Advanced Engineering*, 4 (7). Cited 31 times.

6 Atallah, A.M., Abdelaziz, A.Y., Jumaah, R.S.
Implementation of Perturb and Observe MPPT of PV System With Direct Control Method Using Buck And Buck- boost Converters
(2014) *Emerging Trends in Electrical, Electronics and Instrumentation Engineering*, 1 (1). Cited 106 times.

7 Anto, E.K., Asumadu, J.A.
PID-based P&O MPPT Controller for Off grid Solar PV Systems Using Ziegler-Nichols Tuning Method to Step, Ramp and Impulse Inputs
(2016) *Journal of Multidisciplinary Engineering Science Studies*, 2, pp. 669-680. Cited 10 times.

8 Thankakan, R., Nadar, E.R.S.
Investigation of a novel multi-input-singleoutput DC-DC converter topology with GWO based MPPT controller for energy harvesting using Seebeck generators at different thermal gradients (Open Access)

(2020) *IET Power Electronics*, 13 (17), pp. 4098-4111. Cited 6 times.
https://ietresearch.onlinelibrary.wiley.com/journal/17554543
doi: 10.1049/iet-pel.2020.0775

View at Publisher

9 Batunlu, C., Albarbar, A.
Strategy for enhancing reliability and lifetime of DC-AC inverters used for wind turbines

(2018) *Microelectronics Reliability*, 85, pp. 25-37. Cited 8 times.
doi: 10.1016/j.microrel.2018.04.006

View at Publisher

10 Devarajan, R., Prabakaran, N., Vinod Kumar, D., Umasankar, P., Venkatesh, R., Shyamalagowri, M.
IoT Based Under Ground Cable Fault Detection with Cloud Storage

(2023) *Proceedings of the 2023 2nd International Conference on Augmented Intelligence and Sustainable Systems, ICAISS 2023*, pp. 1580-1583. Cited 2 times.
http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=10250420
ISBN: 979-835032579-9
doi: 10.1109/ICAISS58487.2023.10250651

View at Publisher

Selvam, P.; Vinayaka Mission's Kirupananda Variyar Engineering College, Vinayaka Mission's Research Foundation (Deemed to be University), Tamil Nadu, Salem, India; email:selvamp@vmkvec.edu.in

About Scopus

What is Scopus

Content coverage

Scopus blog

Scopus API

Privacy matters

Language

日本語版を表示する

查看简体中文版本

查看繁體中文版本

Просмотр версии на русском языке

Customer Service

Help

Tutorials

Contact us

ELSEVIER