

## عنوان مقاله:

A Novel Intelligent Water Drops Optimization Approach for Estimating Global Solar Radiation

## محل انتشار:

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## خلاصه مقاله:

Measurement of the solar radiance requires utilization of expensive devices. To address this issue, estimator models are used to facilitate the measurement process. In this paper, a new method based on the empirical equations is introduced to estimate the monthly average of daily global solar radiation on a horizontal surface. The proposed method takes advantages of an intelligent water drops algorithm as a swarm-based nature-inspired optimization technique. This algorithm has been implemented in the MATLAB software. The best obtained coefficients of linear and nonlinear empirical models and global solar radiation are employed for the measurement of the six different climate regions of Iran. Performance of this approach has been compared to the other existing techniques. The result reveals the superiority of the proposed method in term of accuracy for estimating the monthly average daily global solar radiation

## کلمات کلیدی:

Intelligent Water Drops Algorithm , Global Solar Radiation , Empirical Coefficients , Statistical Regression Techniques , Empirical Models , Intelligent Models

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/406345>

