

# Journal of Electric Power System Relay Protection



## Overview

This article verified the effectiveness of the knowledge base based relay protection fault handling process in improving the safety, stability, and fault handling efficiency of power systems through experimental results and discussions. Although traditional relay protection systems can play a certain protective role, they have some limitations, such as the inability to. With the development of new power systems and the continuous increase in the proportion of new energy installed capacity, the application scale of power electronic equipment as a means to support renewable energy grid connection, transmission and flexible control is constantly expanding. In view of this, this article proposes an enhanced Faster R-CNN algorithm to diagnose the relay protection devices based on image monitoring. The proposed algorithm uses ResNet50 as the main tool to recognize features from input images to generate feature maps. Meanwhile, to improve the image. The relay operation algorithm has been validated using MATLAB SIMULINK software. The results confirm the effectiveness of the proposed smart electronic relay in various sections of the smart grid system, including transformers, transmission and distribution Citation: Nasrallah M, Abdelaleem A.

IEEE/IAS/I&CPSD Protection & Coordination WG Chair Jacobs Canada, Calgary, AB rasheek.com IEEE Southern Alberta Section PES/IAS Joint Chapter Technical Seminar - November 2016 Protective Relays - Technical Seminar Nov 2016 - Copyright: IEEE 2 Abstract: Protective relays and devices. Recognized under 2(f) and 12 (B) of UGC ACT 1956 (Affiliated to JNTUH, Hyderabad, Approved by AICTE - Accredited by NBA & NAAC - 'A' Grade - ISO 9001:2015 Certified) Maisammaguda, Dhulapally (Post Via. Kompally), Secunderabad - 500100, Telangana State, India To introduce all kinds of circuit.

## Journal of Electric Power System Relay Protection



Developing and applying intelligent relay protection systems has become an important way to improve the safety and reliability of power systems. This article explored the relay protection strategies and ...



In this study, an experimental setup was designed to monitor electrical quantities and protect the system in the event of a fault. The system design employed an energy analyzer to ...



The experimental results show that this method can effectively analyze the operation characteristics of power system relay protection, and can accurately check whether the relay ...



Therefore, relay protection is the core and key technology that should be broken through in the new power systems. Please define the scope and purpose of the Special Issue and its relationship to ...



This article will specifically analyze the strengthening of relay protection technology in HVDC transmission lines, and improve the power system safety level by improving the performance of relay ...



This study focuses on enhancing the reliability and self-healing capabilities of smart systems through a backup protection system that operates ...



These are just a few examples of primary protection relays, and many more specialized relays exist to address specific protection needs in power systems. Each relay plays a critical role in safeguarding ...



In view of this, this article proposes an enhanced Faster R-CNN algorithm to diagnose the relay protection devices based on image monitoring. The proposed algorithm uses RestNet50 as the ...



Focusing on directional overcurrent relays, the study examines optimization-based methods for tuning key relay parameters, which include the pickup current and the time multiplier setting, to minimize the ...



As the protected components of the electrical systems have changed in size, configuration and their critical roles in the power system supply, some protection aspects need to be revisited (i.e. the use of ...



This study focuses on enhancing the reliability and self-healing capabilities of smart systems through a backup protection system that operates after primary protection systems like ...

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