

عنوان مقاله:

A Traveling-Wave Fault Location Technique for Three-Terminal Lines Based on Wavelet Analysis and Recurrent Neural Network using GPS Timing

محل انتشار:

کنفرانس فناوری شبکه‌های الکتریکی هوشمند (سال: 1391)

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خلاصه مقاله:

One of the most important features of smart distribution networks is handling fault situations in an efficient way. This paper describes a fault location algorithm for threeterminaltransmission lines based on wavelet transform and Artificial Neural Network (ANN). Because of small size database, Recurrent Neural Network (RNN) was utilized and for thepurpose of synchronized time tagging, the Global Positioning System (GPS) with the highly-accurate timing capabilities isused. All the possible fault types are generated using the ATPEMTP and results are discussed. Extensive simulation studiesindicate that proposed network estimate fault location in different conditions with average error percentage less than 0.15% though practical limitations

کلمات کلیدی:

Power System, Smart Grids, Three- Terminal Lines, Fault Location, Traveling Wave,Wavelet Transform, GPS Timing, Artificial Neural Network

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