

## عنوان مقاله:

A NOVEL METHOD OF MODELING EARTH IN GROUND FAULT STUDIES OF DISTRIBUTION NETWORKS

## محل انتشار:

دهمین کنفرانس منطقه ای سیرد (سال: 1401)

تعداد صفحات اصل مقاله: 6

## نویسندگان:

Kasra Farzaneh - *Center of Excellence for Power System Automation and Operation (CEPSAO), Iran University of Science and Technology (IUST), Tehran, Iran*

Seyed Mohammad Shahrtash - *Center of Excellence for Power System Automation and Operation (CEPSAO), Iran University of Science and Technology (IUST), Tehran, Iran*

## خلاصه مقاله:

Electrical network ground resistance in the traditional method is considered and simulated only with an equivalent resistance placed in the fault point. In this paper, a new model for the contribution of earth in a line-to-ground fault in distribution networks with OHL (overhead line) or cable is proposed, which is based on the fundamentals of current field distribution in the earth. The model can be applied to simulate line to ground faults, as well as step voltages near to the faulted point on earth and finding proper setting of E/F relays to provide safety for human/animal lives. This line-to-ground fault model relates the step voltage to the fault current dispersed in earth in isolated/high impedance grounded networks and can be used as a tool for reducing the step voltage and providing a proper safety.

## کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1611026>

