Special Issue

Advances in Power Flow Analysis of Power System

Message from the Guest Editors

The distributed generation, manly connected to the MV networks, has stretched its effect to the LV distribution networks. In addition to the type of classical loads, electric vehicles (EV) are an emergent kind of loads, that start to have expression, connected to electric greed, influencing the operation of transmission systems. All this contributes for the emergence of new uncertainty sources inside the electric systems, which must be accounted in the analysis of power systems. In this framework, power flow calculations are one of the most significant and capable tools for power system planning and operation. The existence of such uncertainties has led, over the time, to the development of power flow models that are able to account for the existent uncertainties such as the probabilistic power flow (PPF) or the fuzzy power flow (FPF). The study of power flow also is necessary for further analysis such transient stability, dynamic stability or emergency states. Considering the current challenges imposed to the electrical power system, it is important to check the advances in power flow analysis of power systems.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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