Special Issue

Artificial Intelligence Techniques Applications on Power Systems

Message from the Guest Editor

A continuous, reliable, and definitive supply of electricity is essential in today's modern and advanced society. Power systems are showing a continual increasing trend throughout geographical regions with the addition of assets and the introduction of new technologies for the generation, transmission, and distribution of electricity. Moreover, modern power systems operate close to their limits due to ever-increasing energy consumption and the extension of extant electrical transmission networks and lines. Since the early–mid-1980s, most research in power system analysis has turned to the less rigorous and less tedious techniques of artificial intelligence (AI). Consequently, AI techniques have become popular for solving different problems in power systems: economic load dispatch, load forecasting, optimization of generation and scheduling, transmission capacity and optimal power flow, real and reactive power limits of generators, bus voltages and transformer taps, load demand in interconnected large power systems and their protections, etc. The application of these techniques in solving several power system problems can overcome the drawbacks of traditional solutions.

Guest Editor

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The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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