COMPARISON OF ARTIFICIAL IMMUNE SYSTEM (AIS) AND MULTIAGENT IMMUNE EVOLUTIONARY PROGRAMMING (MAIEP) IN SOLVING ECONOMIC DISPATCH PROBLEM

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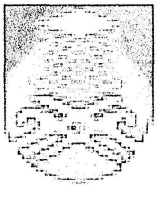

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ABSTRACT

Economic dispatch problem solution involves the determination of optimal generation power that offered the lowest cost while satisfying systems constraints. In this research, two optimization techniques, known as Artificial Immune System (AIS) and Multiagent Immune Evolutionary Programming (MAIEP) were engaged to solve the economic dispatch problem. Artificial Immune System has the characteristic such as ability of learning, memory, recognition, self-organizing and adaptive, while Multiagent Immune Evolutionary Programming is a combination of Multiagent System, Evolutionary Programming and Artificial Immune System. The results obtained from both techniques were then compared. Based on the analysis conducted IEEE-26-Bus Reliability Test System, MAIEP optimization technique shows better results compared to AIS in solving economic dispatch problem.

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