

Energy storage based on maximum power point tracking in photovoltaic systems: A comparison between GAs and PSO approaches

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Abstract: In this paper, a comparison between GAs and PSO Approaches is considered to select and generate an optimal duty cycle which varies with photovoltaic parameter in order to extract the maximum Power from Photovoltaic System using real values of temperature and insolation. The energy storage has very important role in renewable energy. To illustrate the energy storage, we have used a battery type lead-acid simulated in Matlab/Simulink. The obtained simulation results show the effectiveness and the robustness of the proposed approaches.

Keywords : Photovoltaic systems, Chopper, MPPT, PSO, GAs, Energy storage