

Maximum Power Point Tracking For Photovoltaic Systems: A Comparison between GAs and PSO Approaches

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Abstract : Particle Swarm Optimization (PSO) and Genetic Algorithms (GAs) are proposed in this paper to generate a duty cycle. The duty cycle (D) used in Pulse Width modulation (PWM) to reproduce control switch for the boost converter by the maximum power point tracking (MPPT) for a photovoltaic (PV) system. As results indicated, using particle swarm optimization (PSO) and Genetic Algorithms (GAs) are used for stabilization of a photovoltaic system (PV).

Keywords : Photovoltaic systems, Boost, PWM, MPPT, PSO, GAs