

A Salp Swarm Algorithm to Improve Power Production of Wind Plant

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Abstract:

Currently, the main problem of wind plant power production is definitely the control system of a wind generator that is not able to cope with the impact of turbulence and thus weakens complete power output. In this paper a Salp Swarm Algorithm (SSA) is proposed as a data-driven method to improve the controller variable and thus optimize the complete power production of the wind plant. The SSA is among of the meta-heuristic technique and imitates the salps chain's swarm movement depending on the food placement. The model used in this study originates from Denmark's actual Horns Rev wind plant. The analysis result demonstrates the SSA generates significantly better total wind power production as opposed to the Spiral Dynamic Algorithm (SDA) and the Particle Swarm Optimization (PSO) technique.

Keywords : Activity Recognition; Wearable System; Accelerometer; Hand and Leg Assessments.

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