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Adaptive Gait Generation for Humanoid Robot Using Evolutionary Neural Model Optimized with Modified Differential Evolution Technique

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HIGHLIGHTS

- A new walking gait generator for biped robot is optimally identified by modified differential evolution (MDE) algorithm, namely adaptive evolutionary neural model (AENM).
- Dynamic simulation of the biped locomotion combines inverse kinematics and ZMP principle.
- Modelling result demonstrates the novel AENM approach ensures high performance for a robust and precise biped gait pattern generation.

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