

Implementazione Di Un Algoritmo Di Ottimizzazione Basato Sulla Tecnica Del Bacteria Feeding Per La Soluzione Di Problemi Di Imaging-Elettromagnetico

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Abstract

Nell'ultimo decennio c'è stato un notevole interesse per quanto riguarda lo sviluppo di algoritmi di ottimizzazione basati su sciami intelligenti. Tali algoritmi presentano notevoli vantaggi rispetto agli algoritmi genetici (da anni impiegati con successo nella soluzione di complessi problemi ingegneristici). I vantaggi più evidenti risultano essere:

- 1) Facilità di implementazione e calibrazione.
- 2) Maggior velocità di convergenza.
- 3) Capacità di evitare il problema della stagnazione.

Recentemente tra gli algoritmi a sciami di particelle sta' riscuotendo un notevole interesse un algoritmo che imita le tecniche di alimentazione di semplici strutture cellulari quali agglomerati di batteri. Lo scopo del progetto è quello di progettare ed implementare un algoritmo di ottimizzazione a sciami intelligenti basato sulla tecnica del Bacteria Feeding e di customizzarlo per la soluzione di problemi elettromagnetici complessi.

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