Abstract

In this Paper a new designing method is proposed for Circular Patch Micro strip Antenna (MSA) using an artificial search Algorithm named Particle swarm Optimization (PSO). It needs two stages for designing. Firstly circular patch MSA antenna needs modelling using some benchmark function. Then in second stage it’s require inverse modelling using an artificial search algorithm (PSO) with some constraints. According to above steps first bandwidth of MSA is modelled using bench mark function as an input and resulted output are in form of frequency range, circular patch radius (r), ground plane length, substrate thickness, electrical thickness and dielectric loss tangent using Artificial search method. This paper presents the strategy that at the starting process cognition-learning random factor has more effect then social learning
random factor. Gradually social learning random factor has more impact after learning cognition random factor to find out global best. The aim is to find out under above circumstances these modifications in PSO (Swift PSO) can give better result for optimization of Micro Strip Antenna (MSA).

Reference

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Index Terms

Computer Science Evolutionary Computation
Key words
Artificial Search Algorithm      inverse modelling      Particle
Swarm Optimization
Cognition Factor
Social Learning Factor
Local Search
Global Search
Micro Strip Antenna