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Teaching Learning Based Optimization Neural Networks for Waveguide Filter Modeling

Chahrazad Erredir, Mohamed Lahdi Riabi, Halima Ammari, Emir Bouarroudj

Abstract : Artificial neural networks (ANN) provide fast and accurate models for the modeling, simulation, and optimization of microwave component. In this paper, an efficient optimization method, called teaching learning-based optimization (TLBO) is proposed for training artificial neural networks (ANN). Then, the trained networks are applied to modeling waveguide filter structures .The results obtained using teaching-learning based optimization neural networks (TLBO-NN) algorithms are validated by comparing them with those obtained using particle swarm optimization neural networks (PSO-NN).

Keywords : neural networks, Teaching Learning Based Optimization, modeling, Waveguide Filter