
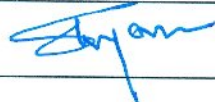


Documentation Sheet

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Title <i>Particle Swarm Optimization for Square Split Ring Resonator Design</i>		
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Keywords Particle Swarm Optimization, SSRR, Metamaterial		
Abstract <i>Studies related to implementation of particle swarm optimization (PSO) has been carried out in this report for metamaterials. A literature survey of the PSO for metamaterial applications is followed by the basics of the PSO algorithm, along with the analogy with Nature towards its development. As a preliminary study, the PSO algorithm is implemented to optimize the structural parameter of a simple SSRR structure for a desired frequency of operation. The analysis of the SSRR is done using the equivalent circuit analysis method (ECA). The PSO optimized values are compared with the ECA data, and the error is observed to be within the acceptable limits.</i>		