Abstract

The Genetic algorithm optimization method is used in this paper for the synthesis of antenna array radiation pattern in adaptive beamforming. The synthesis problem in this paper discussed
is to finding the weights of the antenna array elements that are optimum to provide the radiation pattern with maximum reduction in the sidelobe level. This technique proved its effectiveness in improving the performance of the antenna array.

Reference

Synthesis of Linear Antenna Array using Genetic Algorithm to Maximize Sidelobe Level Reduction


- C.L.Dolph, “A current distribution for broadside arrays which optimizes the relationship between beam width and side-lobe level,” Proc IRE 34 pp3335-348 June 1946

Index Terms

Computer Science Wireless Communication
Key words

- Adaptive Beamforming
- Genetic Algorithm
- Linear antenna array
- Pattern synthesis
- convergence
- Array factor
- Sidelobe level