

Abstract

Null Steering in Partially Adaptive Antenna Array by Solving Linear Equations Directly

Partially adaptive antenna arrays are designed to reduce the effect of interference signals. In this paper a simple technique, based on solving linear equations directly, for steering nulls in the radiation pattern to suppress interferences and unwanted signals is proposed. This is done by controlling the weight coefficients of some or all array antenna elements. This technique is applied when information about the number of the interference signals and their direction of arrival is available. This technique is easy to implement and no iterations are required. Satisfactory results of this technique are obtained via computer simulation results.