Abstract

There has been a flourishing prospect of UWB technology in recent years in both communication and other purposes like microwave imaging and radar applications. In the next generation of wireless communications, Multiple Input Multiple Output (MIMO) communication system will be a key technology to enhance the communication efficiency. The popular method for estimation the direction of arrival of sources impinging on an array of MIMO sensors is Multiple Signal Classification (MUSIC) method is a which is a problem of great interest in MIMO communication system. In this work, we proposed structure of UWB antenna based genetic algorithm and based on the design of single UWB antenna from previous stage, we form a 10x1 UWB MIMO array antennas to estimation direction of arrival for sources. The proposed UWB MIMO array antennas exhibit good UWB characteristics. In this work, we used MIMO array antennas for application MUSIC method to estimation UWB signals

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Index Terms
Keywords

Ultra Wideband (UWB); Antenna; Multiple-Input-Multiple-Output (MIMO); Direction of Arrival (DOA)