Sensor Arrays

Mobile Single Antenna Geolocation II

In this project, we propose to carry out in-depth research into techniques as well as indentifying constraints and limitations in the geolocation of emitters. The main objectives of this project are: 1) To investigate and study the problem of geolocation of emitters using the spatial diversity of a single antenna. The receiving system measures the total incoming signal power at the antenna at regular time instants; 2) To investigate the impact of multipath and methods to mitigate this; 3) To investigate the impact of multiple uncorrelated emitters on the geolocation accuracy of each of these emitters; 4) To investigate the impact of geolocation resolution afforded by the proposed techniques under different frequency bands.