用于麦克风阵列的阵元筛选方法研究

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摘 要：

在使用TDOA算法进行被动声定向时，为精确获取麦克风阵列阵元之间接收声源信号的时间差，进而计算目标的方位角，麦克风阵元之间必须保持较高的相位一致性。而从论文与专利检索来看，目前还没有有效方法筛选出符合要求的麦克风阵元。针对此问题，本文基于麦克风阵列阵元相位一致性的指标，设计出麦克风阵元筛选系统，通过实测数据分析表明：一致性较高的麦克风更适合组建麦克风阵列。

关键词：传感器；麦克风阵列；阵元筛选；TDOA；一致性；匹配

Research of array element screening method for microphone array

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Abstract:

Using TDOA algorithm in passive sound orientation，Higher phase consistency must be maintained in order to get time difference of the sound signal between each microphone array elements and then calculate the azimuth of the target accurately. From the papers and patent search, there is no effective way to filter out the microphone array at present.For this problem, microphone array element screening system is designed. Experimental results show that the high consistency of the microphone is more suitable for the formation of the microphone array.

Keywords: Sensor;Microphone array;Array element screening;TDOA;Consistency;Matching

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