实数域中的投影法及其在单次快摄阵处理中的应用

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PROJECTION METHOD WITH APPLICATIONTO ARRAY PROCESSINGOFSINGLESNAPSHOTIN REALREGION

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摘要	参考文献	相关文章

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摘要 阵列处理中计算简单的投影法避免了矩阵特征分解(ＥＶＤ)的庞大计算量,然而仍需进行复数计算。为了进一步减小计算量,提出一种实数域中的投影法,它将投影矩阵及空间谱的计算均简化为实数的计算,从而。使阵处理的计算量大大减少,而且使估计性能保持不变。计算机模拟与实际外场实验数据的计算结果表明了算法的有效性。

关键词： 阵列处理　空间谱估计　雷达信号处理

Abstract： Computationally simple projection methods are proposed to avoid a lot of computa-tions of eigenvalue decomposition (EVD)in array proeessing.However,the complex computa-tions are still needed in projection methods.To reduee computations further,a projection method in real region is presented.The computations of the proposed method are redueed greatly,be-cause the real computations are used in the proposed method instead of the corresponding com-plex computations Also the perfonnance of the complex projection method is kept.Computer simulation and practical experiment results show the effectiveness of the proposed method.

Keywords： array processing   spatial spectrum estimation   radar signal processing