

理论研究

采样正弦信号的时延估计

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收稿日期 2007-10-22 修回日期 2008-3-3 网络版发布日期 2008-9-27 接受日期

摘要 提出了一种正弦信号的时延估计算法, 它涉及采样和多重相关。该方法可以大大降低时延估计的复杂程度, 提高估计的范围和估计的灵活性。并且它可以减小噪声干扰, 适用于高频信号, 有利于高频数字接收机的实现。仿真显示该算法的性能和优势非常明显。

关键词 [时延估计](#) [估计范围](#) [采样正弦信号量](#)

分类号

Time-delay estimation for sub-sampling sinusoidal signals

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Abstract

To the problem of time-delay estimation for sub-sampling sinusoidal signals, this paper proposes a novel method composed of multi-period sampling and multi-layer correlation. This method can reduce the complexity of estimation and improve the range of time-delay estimation and its stability. It also has an excellent performance to reduce the effect of noise and interference. The important contribution of this new method is that it adapts to high frequency signal processing such as in radar, electronic warfare, etc. It will accelerate the digital receiver realization of HF system. Simulations presented in this paper show that the performance and advantage of the new method is obvious.

Key words [time-delay estimation](#) [the range of estimation](#) [sub-sampling sinusoidal signals](#)

DOI: 10.3778/j.issn.1002-8331.2008.28.026

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