

论文

## 一种新的非平稳信号分析方法—局域波分析

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摘要

该文介绍一种新的非平稳信号分析方法—局域波分析。该方法源于瞬时频率的概念,它能把动态信号的局部特征正确地在时频域内予以描述。局域波分解的基不是固定的,而是随动态信号波形的变化而变化,具有自调节自适应的特征。与传统的时频分析方法相比,局域波分析有很多优点,它是分析非平稳信号的一般方法。该文讨论了局域波分析的应用,指出了该方法需进一步研究的有关问题。

关键词 [非平稳信号](#) [瞬时频率](#) [局域波分析](#) [局域波分解](#) [基本模式分量](#) [时频分析](#)

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## A new method for analyzing nonstationary signal-local wave analysis

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Abstract

A new method for analyzing nonstationary signal designated as local wave analysis is introduced. It stems from the concept of instantaneous frequency, and it can describe accurately the local properties of dynamic data in the time-frequency plane. The basis of local wave decomposition is not fixed but changeable with the changing wave shape of the dynamic data. The decomposition is adaptive, and therefore highly efficient. Compared with the available time-frequency analysis methods, this method has many advantages. It is commonly used for analyzing nonstationary signal. The application of this method is discussed, and the related problems in this field that need further study are pointed out, too.

Key words [Nonstationary signal](#) [Instantaneous frequency](#) [Local wave analysis](#) [Local wave decomposition](#) [Intrinsic mode function](#) [Time-frequency analysis](#)

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