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电力系统

基于卡尔曼滤波的电能质量分析方法综述

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摘要：

首先对电能质量问题及其分析检测方法进行简单介绍；然后主要综述了常规卡尔曼滤波、扩展卡尔曼滤波和无迹卡尔曼滤波这3种卡尔曼滤波的基本原理，并对其在电能质量分析中的应用进行了系统的总结，对比分析了各种方法的利弊；最后对卡尔曼滤波方法现存的问题及今后的发展趋势进行了展望。

关键词：

A Survey on Kalman Filtering Based Methods for Power Quality Analysis

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Abstract:

An outline of power quality and its analysis and detection methods is given; then basic principles of three kinds of Kalman filtering, i.e., traditional Kalman filtering, extended Kalman filtering and unscented Kalman filtering, are surveyed and the application of these methods in power quality analysis is summarized; the comparative analysis on advantages and disadvantages of these methods are performed; finally, the existing defects in Kalman filtering are pointed out and the development trend of Kalman filtering is prospected.

Keywords:

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