

广义差集与几乎完美序列

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摘要 提出了广义差集的概念, 并且给出了广义差集的一些初等性质. 从应用的角度讲, 广义差集就是使得其 δ -特征序列的自相关函数是(最多)三值的一种组合结构. 因此, 广义差集不仅仅是在概念(理论)上的推广, 它还具有深层次的应用背景. 事实上, 给出了一些广义差集, 它不是可分差集, 也不是相对差集. 同时也给出了一类广义差集存在的一些必要条件, 使得这些广义差集对应的 δ -特征序列成为几乎完美序列. 并举例说明本文中的方法是有效的.

关键词 [广义差集](#), [几乎完美序列](#), [相关函数](#).

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Generalized Difference Sets and Almost Perfect Sequences

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Abstract The concept and some preliminary properties of generalized difference sets are proposed. In view of application, generalized difference sets are such a kind of combinatorial structures whose δ -characteristic sequences have (at most) triple-valued autocorrelation functions. Therefore, generalized difference sets are not only a generalization in the respect of conception, but also have some application backgrounds. In fact, some examples are given, which show that there are some generalized difference sets such that they are neither divisible difference sets, nor relative difference sets. Moreover, some examples are presented here to illustrate that our methods works for obtaining almost perfect sequences.

Key words [Generalized difference sets](#) [almost perfect sequences](#) [correlation functions](#).

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