RM 码特征分析

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摘 要： 针对 RM 码的特征分析问题，通过线性变换确定等价系统码的生成矩阵，从而确定分析码字的码长和信息位长，结合对码长取值、生成矩阵行重的约束，假定分析数据采用 RM 编码，求出 RM 码阶数，得到 RM 码的生成矩阵，如等价系统码的生成矩阵可从 RM 码的生成矩阵通过行线性组合得到，则可确认采用了 RM 编码，且生成矩阵求解正确.实验仿真表明，在仅得到码编码数据序列的情况下，实际数据的编码参数识别分析结果和所设前提完全一致，表明了分析方法的正确性.

关键词： RM 码；生成矩阵；码重；线性变换

Research on RM code feature analysis

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Abstract： For the feature analysis problem of RM code, the generator matrix of the equivalent system code is determined by linear transformation, thereby determining the code length and information length of the analyzed codeword, combining the constraints on the row weight of the generator matrix, assuming that the analysis data is RM coded, the RM code order is obtained, and the generator matrix of the RM code is obtained.If the generation matrix of the equivalent system code can be obtained by linear combination of the generator matrix of the RM code, it can be confirmed that the RM code is used and the generator matrix is solved correctly. The experimental simulation shows that the recognition result of the coding parameters of the actual data is exactly the same as the premise of the RM code encoded data sequence, which indicates the correctness of the analysis method.

Key words： RM code；generator matrix；code weight；linear transform

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