传统EMD嵌入方法通常只能利用1为起始的连续组合数和0作为秘密信息表达范围，同时也仅能给出有限的几种EMD嵌入方法，对于简单EMD、EMD-2和EMD-3，只能通过*n*个载体数据中调整1个、2个和*n*个来嵌入秘密信息，不仅限制了秘密信息的表达范围也限制了EMD的适用面.针对以上问题，结合无权值向量，提出了一种EMD(*n*,*m*)嵌入模型，所提模型通过计算*n*个载体数据中最多调整*m*个数据的秘密信息组合数来形成嵌密元素调整表，通过选取嵌密元素调整表行来对载体数据进行调整以嵌入秘密像素(信息).为进一步提高安全性，给出了一种基于EMD(*n*,*m*)的数字图像密写方法，首先将载体图像扫描为1维序列，通过用户密钥结合混沌映射来随机指派嵌密元素数量和最多调整的嵌密元素数量并生成秘密信息组合数和嵌密元素调整表；然后依据嵌密元素数量和秘密组合数分别从载体元素序列和2进制秘密信息序列截取载体元素和2进制秘密信息比特；最后通过对秘密信息比特所映射的置乱嵌密元素调整表行来对截取的载体元素进行调整以嵌入秘密信息.理论和实验表明，与传统的EMD嵌入方法相比，改进的EMD(*n*,*m*)模型避免了权值向量设置的有限性所导致的（嵌入）容量受限,并可最大化嵌入容量提高EMD嵌入方法的适用面，同时通过与载体和密钥相关的嵌入提取环节来进一步增强嵌入信息的安全性.

Traditional EMD method can only use the continuous number which starts with 1 and 0 as the scope of secret information, Meanwhile it contains limited embedding method, simple EMD embeds secret information by changing 1 carrier in n carriers, EMD-2 changing 2 carriers, and the EMD-3 changing 3 carriers. These embedded methods not only limit the range of the secret information but also limit EMD’s application. In order to solve above problems, this paper proposed an EMD (n, m) embedding model combining with non-weight vector, The model form the embedding adjustment table by calculating the most m carriers which will be changing in n carriers, By selecting the row of the embedding adjustment table to adjust the n carriers to embed information. In order to further security this paper proposed an algorithm of digital image steganography based on EMD (n, m) model, The algorithm firstly scan the carrier image to 1d sequence and form the embedding adjustment table by generating n carriers and the most changed m carriers randomly with chaotic map and user keys, Then cut out carriers elements according to the sum of embedding carriers and information bits according to the sum of the secret information combinations. Finally adjust the carrier elements to embed information by the row of the scrambled embedding adjustment table mapped by secret information. Theory and experiments show that compared with traditional EMD method improved EMD (n, m) model avoid the limited embedding capacity from the limited scope of the weight vector and maximize the application of the EMD method, at the same time enhance the embedding safety through the embedding- extraction process related with the carrier and the key.

[Based](javascript:void(0);) [on](javascript:void(0);) [the](javascript:void(0);) non- [weight](javascript:void(0);) [vector](javascript:void(0);)  [EMD](javascript:void(0);) ( [n](javascript:void(0);) , [m](javascript:void(0);) ) [model](javascript:void(0);) [and](javascript:void(0);) [its](javascript:void(0);) [application](javascript:void(0);) [in](javascript:void(0);) [image](javascript:void(0);) [steganography](javascript:void(0);)

Steganography

# [Based](javascript:void(0);) [on](javascript:void(0);) [the](javascript:void(0);) non- [weight](javascript:void(0);) [vector](javascript:void(0);) [EMD](javascript:void(0);)( [n](javascript:void(0);) , [m](javascript:void(0);) ) [model](javascript:void(0);) [and](javascript:void(0);) [its](javascript:void(0);) [application](javascript:void(0);) [in](javascript:void(0);) [image](javascript:void(0);) [steganography](javascript:void(0);)

EMD(*n*,*m*) model

Title