Algorithm 1 Wavelet Transform: Vector - Matrix Method: Row Transform

Require: Wavelet Pair
Require: Temporary Vector S
Require: Matrix, $A \in \mathbb{R}^{M \times N}$
  for $i = 0$ to M **do**
    load S from A_i where A_i is the row vector at row i
    $S \xrightarrow{\psi_1} R$
    Load R into result matrix α at α_i
  end for
  Return α

Algorithm 2 Wavelet Transform: Vector - Matrix Method: Column Transform

Require: Wavelet Pair
Require: Temporary Vector S
Require: Matrix, $A \in \mathbb{R}^{M \times N}$
  for $j = 0$ to N **do**
    load S from A_j where A_i is the column vector at column j
    $S \xrightarrow{\psi_1} R$
    Load R into result matrix α at α_j
  end for
  Return α