

How scalogram computed from the complex wavelet:

$x(t)$ is the original time-series

$w(a)$ some weighting function I assume specific to the wavelet

$$T(a, b) = w(a) \int_{-\infty}^{+\infty} x(t) \psi^*\left(\frac{t-b}{a}\right) dt$$

$|T| = \sqrt{\text{Re}(T)^2 + \text{Im}(T)^2}$ is the norm for the complex number T which is then colour mapped into the Scalogram as a Real scalar.