

DALGACIK DÖNÜŞÜMÜ

SÜREKLİ DALGACIK DÖNÜŞÜMÜ (CONTINUOUS WAVELET TRANSFORM - CWT)

$$C(\text{ölçek}, \text{konum}) = \int_{-\infty}^{+\infty} x(t) \cdot \psi(\text{ölçek}, \text{konum}, t) \cdot dt$$

$$W(a, b) = \frac{1}{\sqrt{a}} \int_{-\infty}^{+\infty} x(t) \cdot \overline{\psi\left(\frac{t-b}{a}\right)} \cdot dt$$

$$\psi_{a,b}(t) = \frac{1}{\sqrt{a}} \psi\left(\frac{t-b}{a}\right) \rightarrow W(a, b) = \int_{-\infty}^{+\infty} x(t) \cdot \overline{\psi_{a,b}(t)} \cdot dt$$

$$x(t) = \frac{1}{C_\psi} \int_{-\infty}^{+\infty} \int_{-\infty}^{+\infty} \frac{1}{a^2} \cdot W(a, b) \cdot \psi_{a,b}(t) \cdot da \cdot db, \quad C_\psi = \int_{-\infty}^{+\infty} \frac{|\hat{\psi}(\omega)|^2}{\omega} d\omega < \infty$$

Süreklî analiz	Ayrık analiz
$W(a, b) = \frac{1}{\sqrt{a}} \int_R x(t) \cdot \overline{\psi\left(\frac{t-b}{a}\right)} \cdot dt$	$W(a, b) = \frac{1}{\sqrt{a}} \int_R x(t) \cdot \overline{\psi\left(\frac{t-b}{a}\right)} \cdot dt$
$a \in R^+ - \{0\}, \quad b \in R$	$a = 2^j, \quad b = k \cdot 2^j = k \cdot a, \quad j, k \in Z^2$

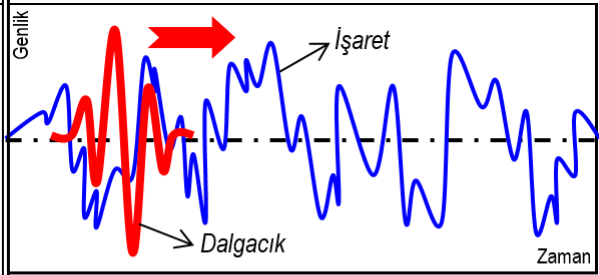
DALGACIK DÖNÜŞÜMÜ

$$W(a, b) = \frac{1}{\sqrt{a}} \int_{-\infty}^{\infty} x(t) \cdot \overline{\psi\left(\frac{t-b}{a}\right)} \cdot dt$$

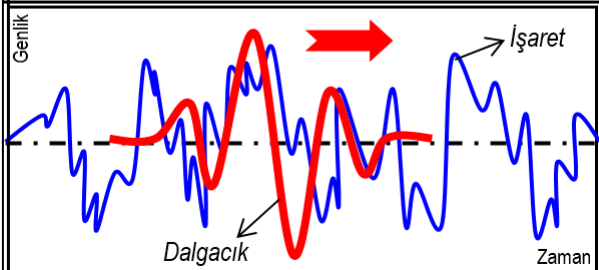
$$\psi_{a,b}(t) = \frac{1}{\sqrt{a}} \psi\left(\frac{t-b}{a}\right)$$

Ötele

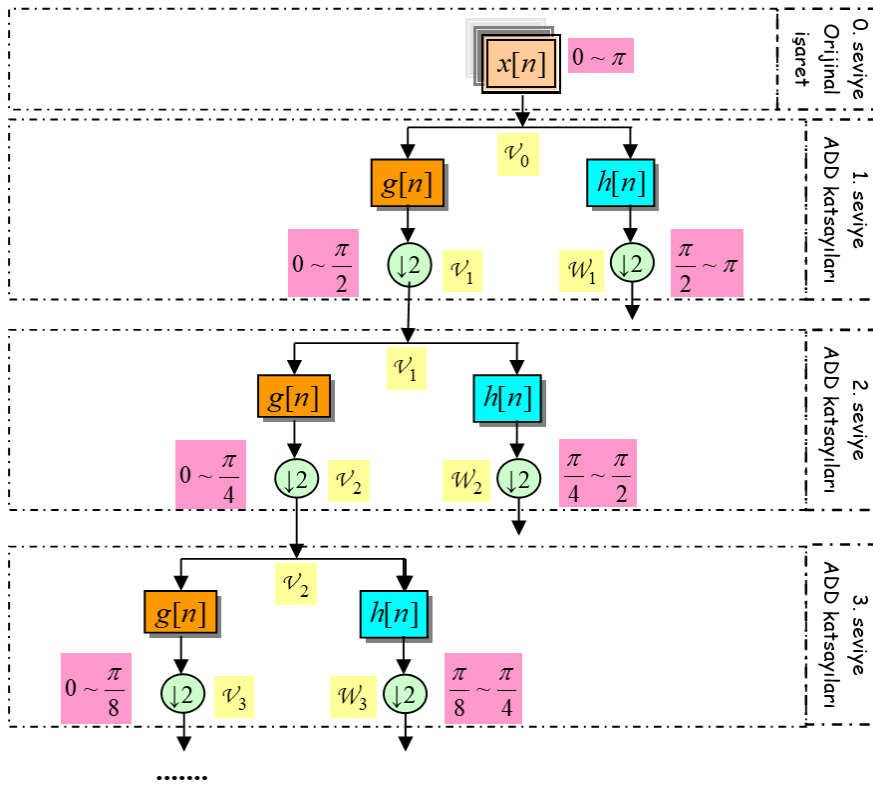
Ölçekle



İşareti; farklı ölçek ve konumlardaki dalgacıkla tara



AYRIK DALGACIK DÖNÜŞÜMÜ (DISCRETE WAVELET TRANSFORM - DWT)



DALGACIK PAKET DÖNÜŞÜMÜ (WAVELET PACKET TRANSFORM - WPT)

