

Wavelet

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(wavelet)

Geooffice

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(FFT)

(FT)

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(WT)

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(FFT) (FT)

+∞ -∞

(FT)

(STFT)

(Non Stationary)

[1]

(CWT)

(DWT)

(CWT)

: [2]

$$CWT_a^{\phi}(\tau, S) = \frac{1}{\sqrt{|S|}} \int_{-\infty}^{+\infty} a(t) \psi^* \left(\frac{t - \tau}{S} \right) dt \quad (1)$$

S τ S τ

(Mother Wave) ψ(t)

(STFT)

(STFT)

$$a(t) = \frac{1}{C_\psi} \iint \frac{1}{s} CWT(\tau, s) \psi\left(\frac{t-\tau}{s}\right) d\tau ds \quad (1)$$

$$C_\psi = \int_{-\infty}^{+\infty} \frac{|\psi(\omega)|^2}{|\omega|} d\omega < \infty \quad (2)$$

(DWT)

$$DWT_a^w(k, j) = \frac{1}{\sqrt{s_o^j}} \int a(t) \psi\left(\frac{t - k s_o^j \tau_o}{s_o^j}\right) dt \quad (3)$$

(Down Sampling)

$$a(t) = C_\psi \sum \sum DWT_a^w(k, j) \psi_{k,j}(t) \quad (4)$$

$$C A_i \quad (5)$$

$$cD_i \quad (\quad) \quad -2$$

(Down Sampling)

$$cA_i \quad \cdot \quad cD_1 \quad cA_1$$

$$cA_i$$

[3]

(DWT)

(1)

$$\psi(t) = \begin{cases} 1 & 0 \leq t \leq 0.5 \\ -1 & 0.5 \leq t \leq 1 \\ 0 & \text{others} \end{cases}$$

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(2)

dbN :

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(2)

symN :

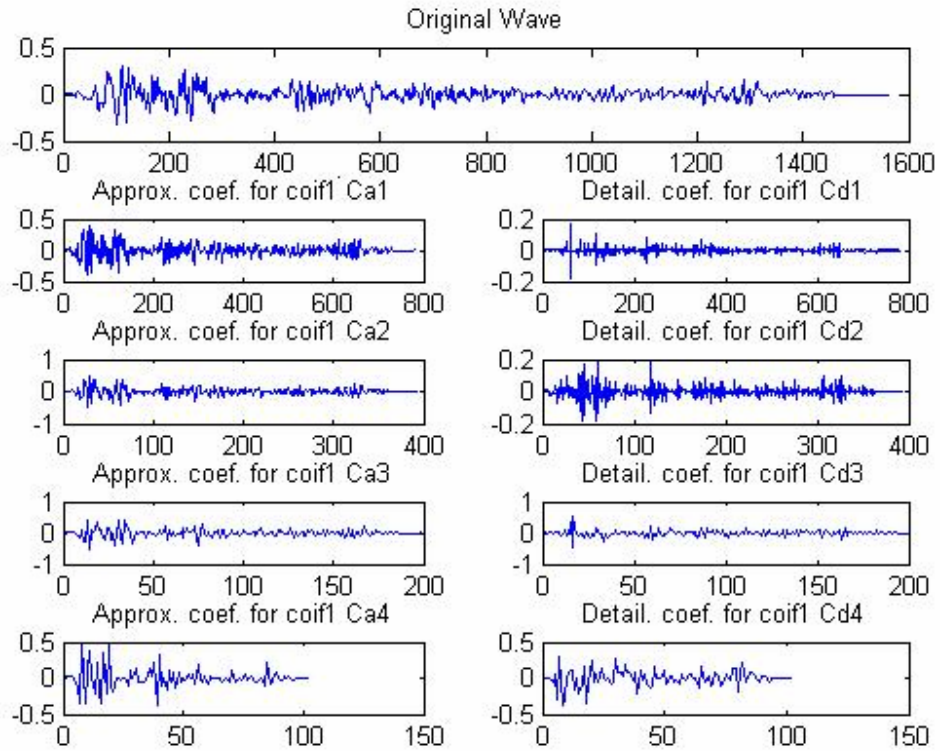
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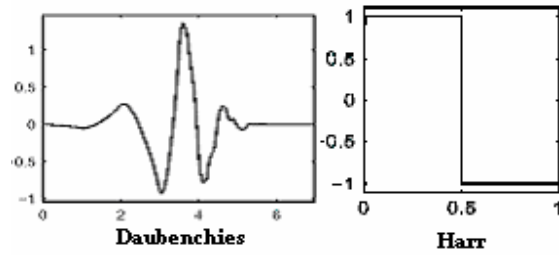
(3)

coifN

(3)



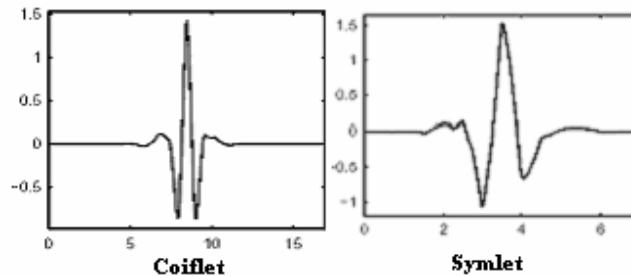
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(Daubechies)

(Harr)

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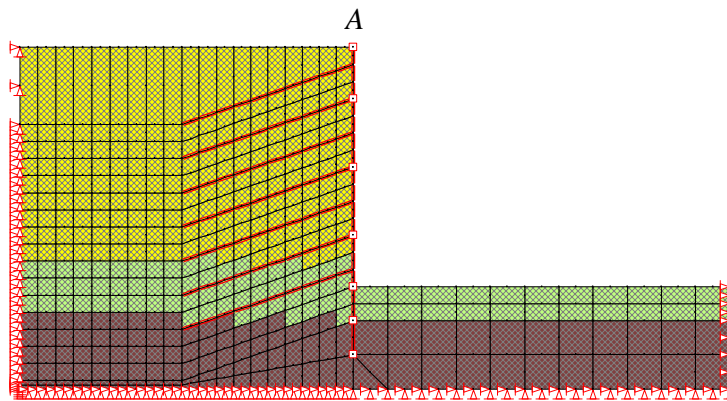
(Coif Let)

(Sym)

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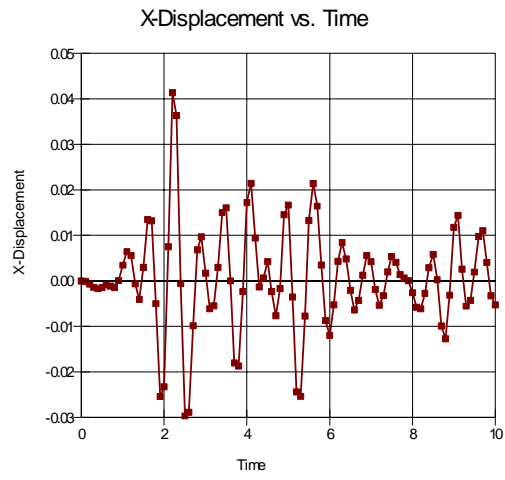
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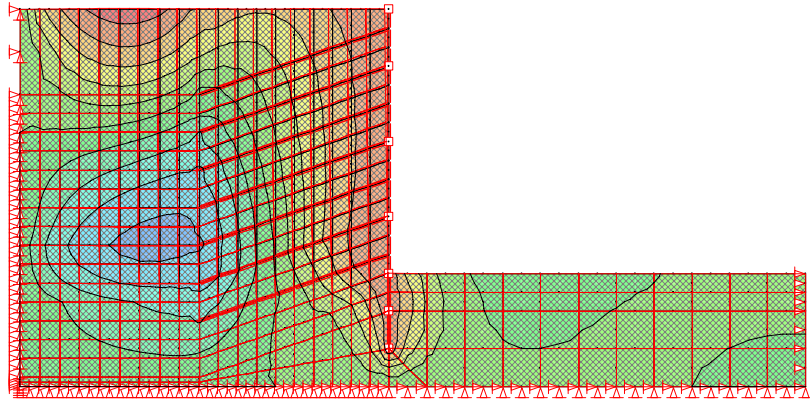
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stage	Bior ,	Harr	Coif	SYM	EXACT
	UX(m)	UX(m)	UX(m)	UX(m)	UX(m)
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	/	/	/	/	



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(20) (0)

γ

Bior ,

(γ)

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stage	Naghan	Tabas
	UX(m)	UX(m)
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	/	/
	/	/
	/	/
EXACT	/	/

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Bior ,

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