



Wavelets (Winter 08/09)

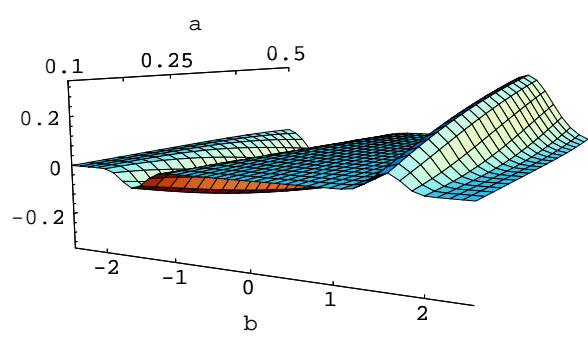
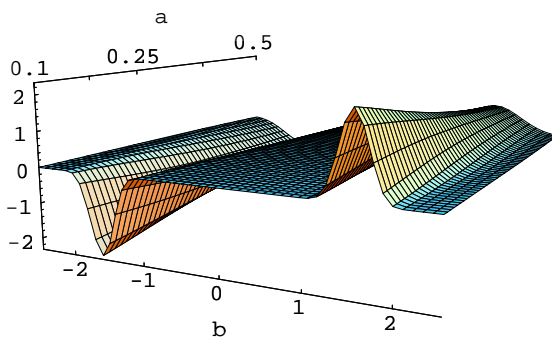
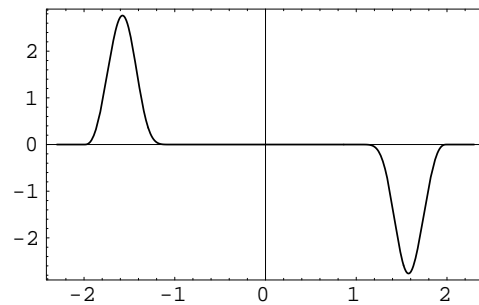
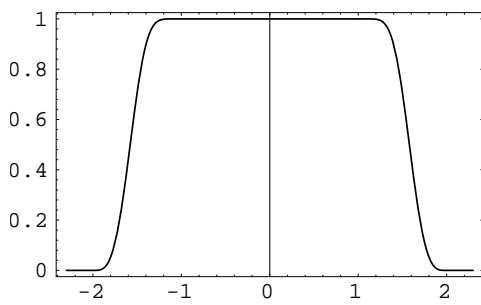
Approximation properties of wavelet transform

$$\lim_{a \searrow 0} a^{-3/2} \sqrt{c_\psi} W_\psi f(a, b) = \mu f'(b)$$

or

$$W_\psi f(a, b) \approx a^{3/2} c_\psi^{-1/2} \mu f'(b) \quad \text{for } a > 0 \text{ small}$$

where $\mu = \int_{\mathbb{R}} t\psi(t)dt \neq 0$.



Here: $\mu = -1$