Multi-Wavelet Decomposition

Level-**1** Decomposition

Level-(**m-1**) Decomposition

Level-**m** Decomposition

Level-**m** approximate coefficients

$v(x)$

$(r_{low}) \downarrow 2$

$(s_{high}) \downarrow 2$

$(r_{low}) \downarrow 2$

$(s_{high}) \downarrow 2$

$(r_{low}) \downarrow 2$

$(s_{high}) \downarrow 2$

Convolution on wavelet space

Level-1 detailed coefficients

Level-(**m-1**) detailed coefficients

Level-**m** detailed coefficients

Wavelet integral kernels

Reconstruction