

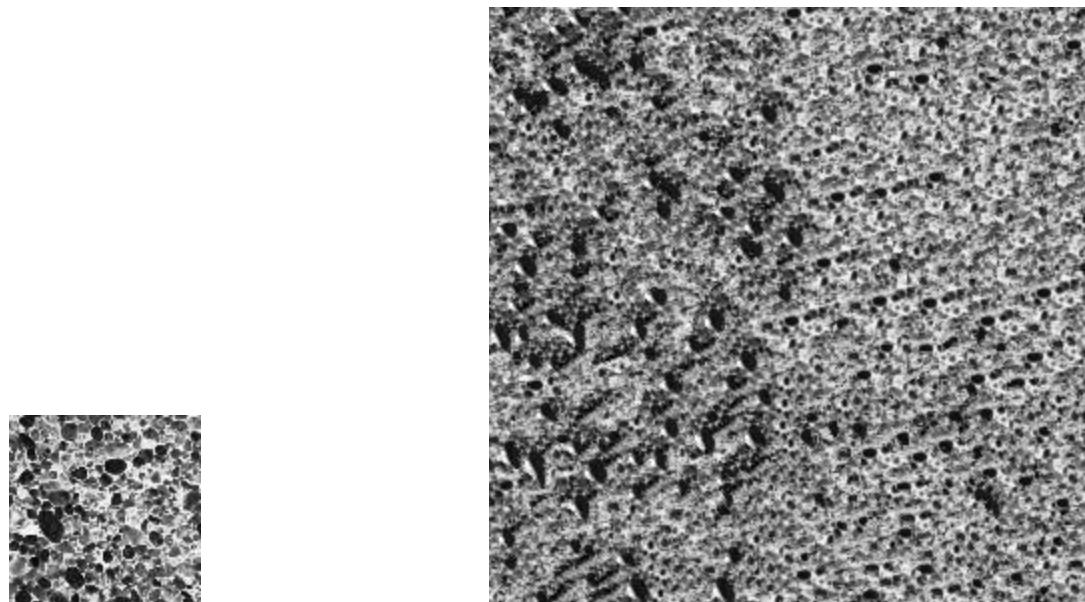
COL783 Digital Image Analysis

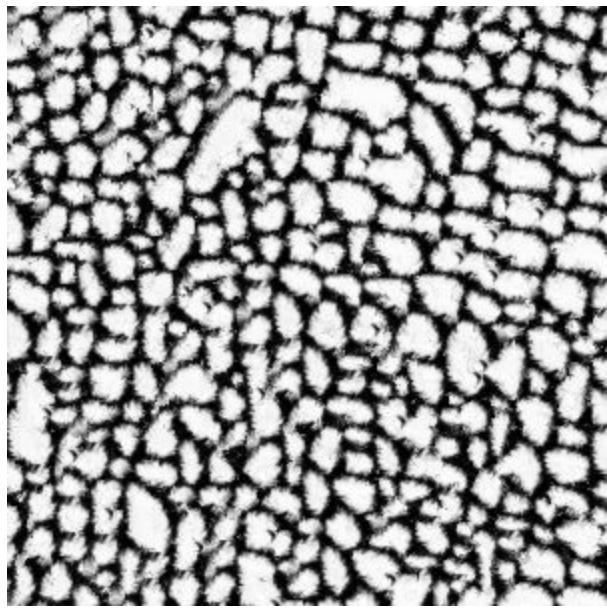
Assignment 5

Texture Synthesis

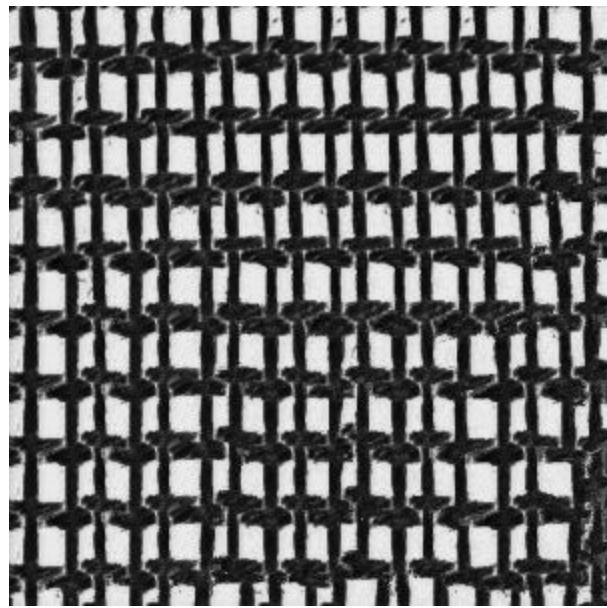
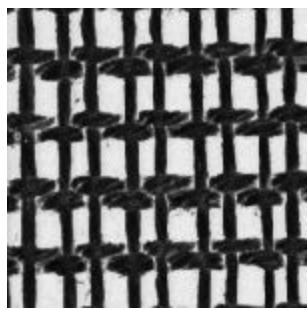
Submitted By - Vikram Kumar

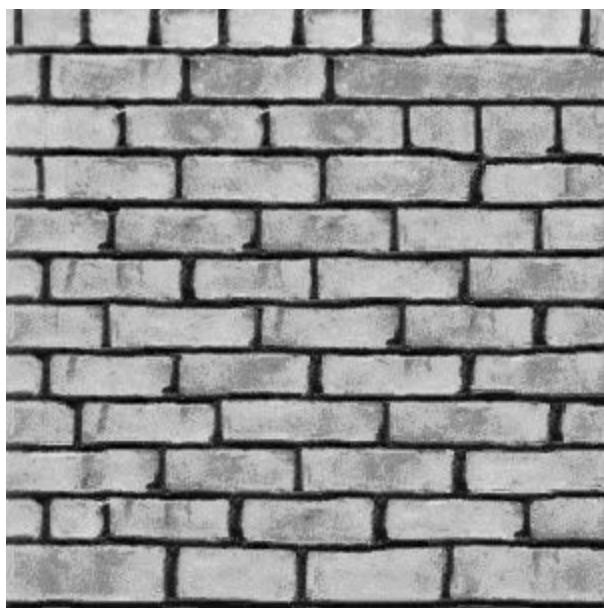
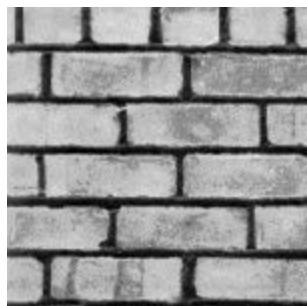
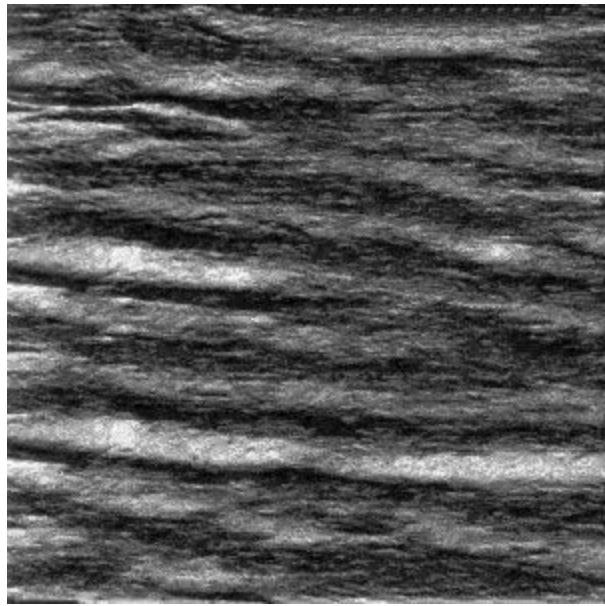
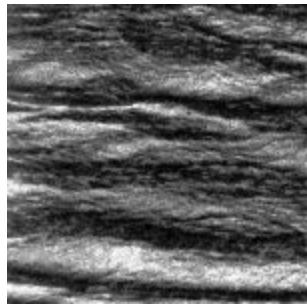
1. Non parametric Synthesis(Efros and Leung)

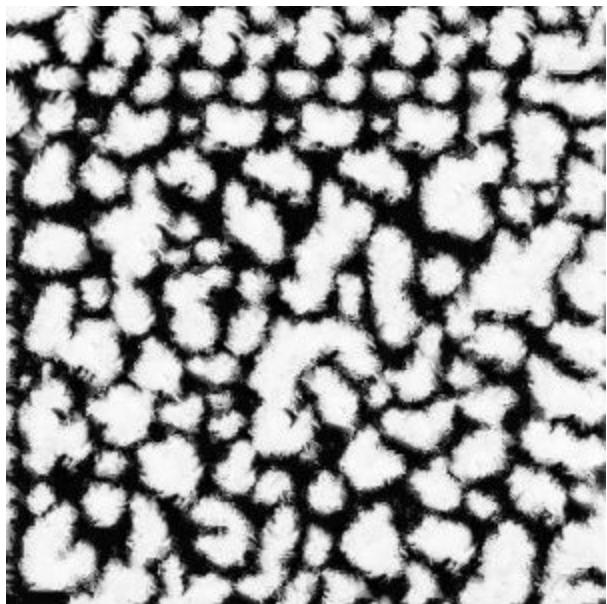
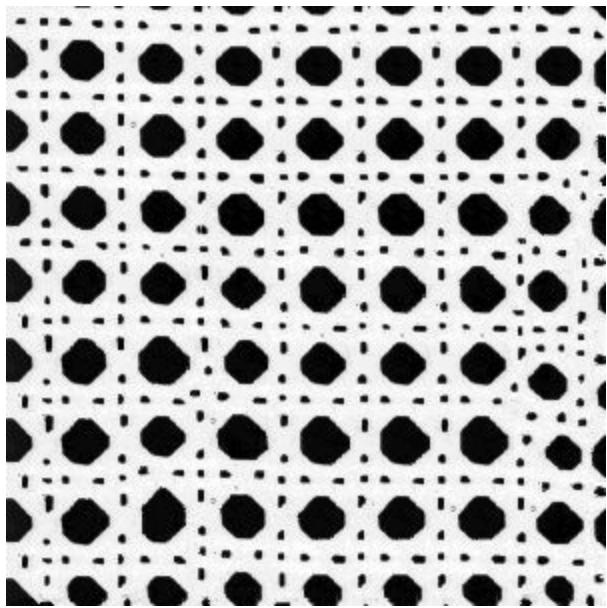
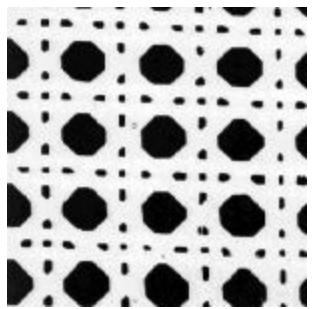


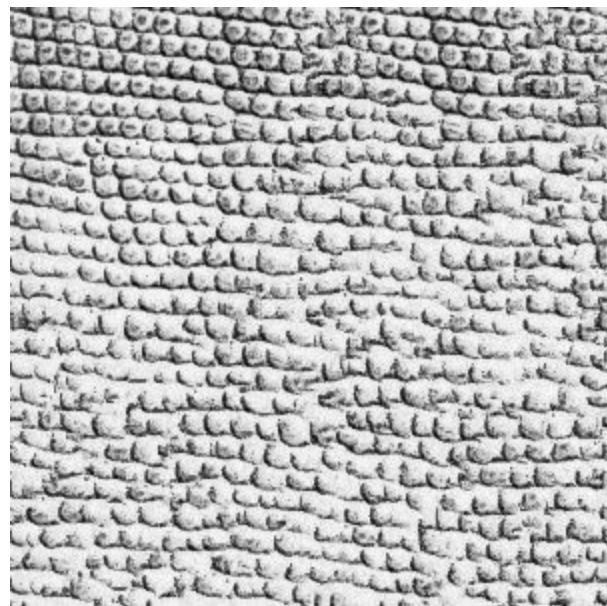
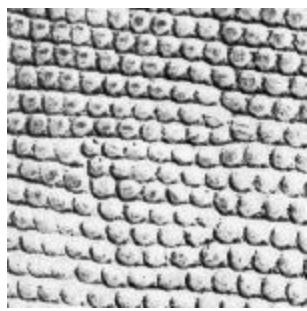
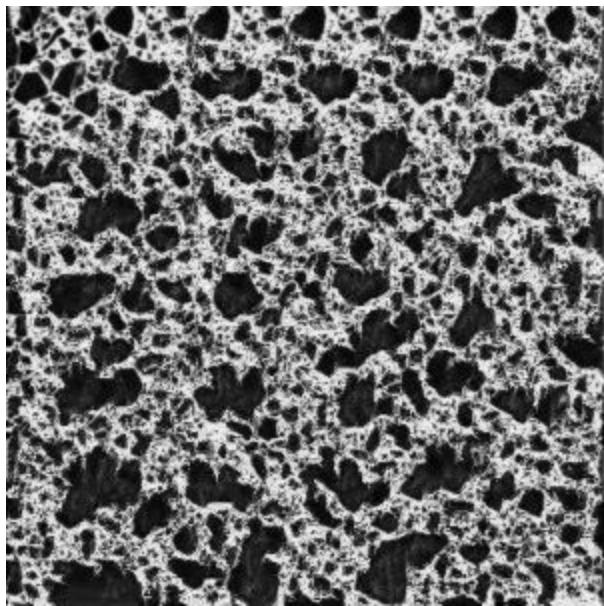
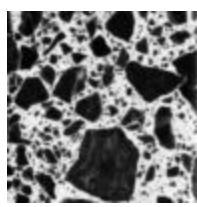


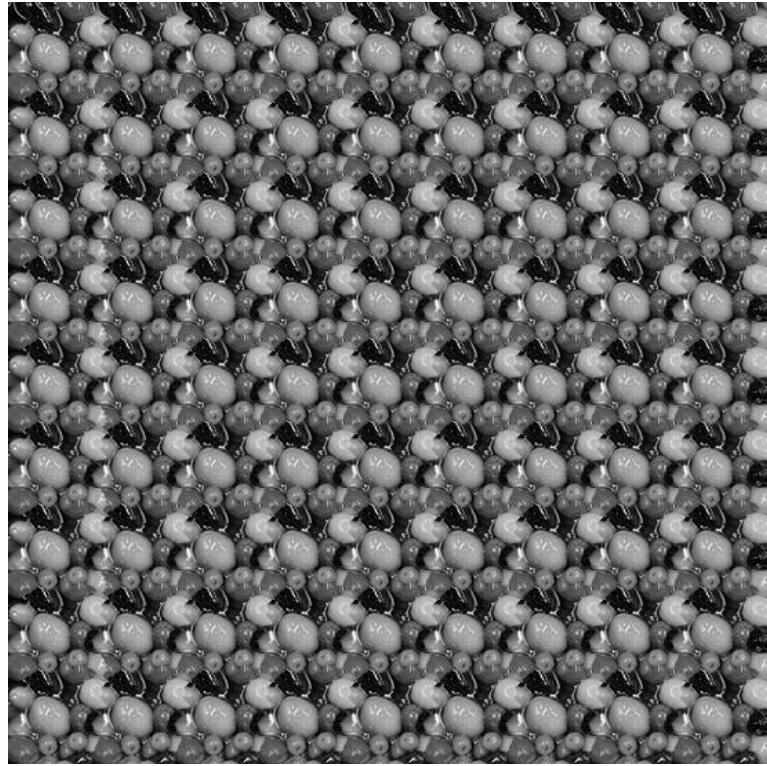
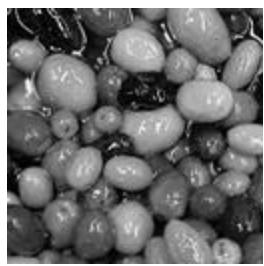
B. Multi Resolution Texture Synthesis(Wei and Levoy)

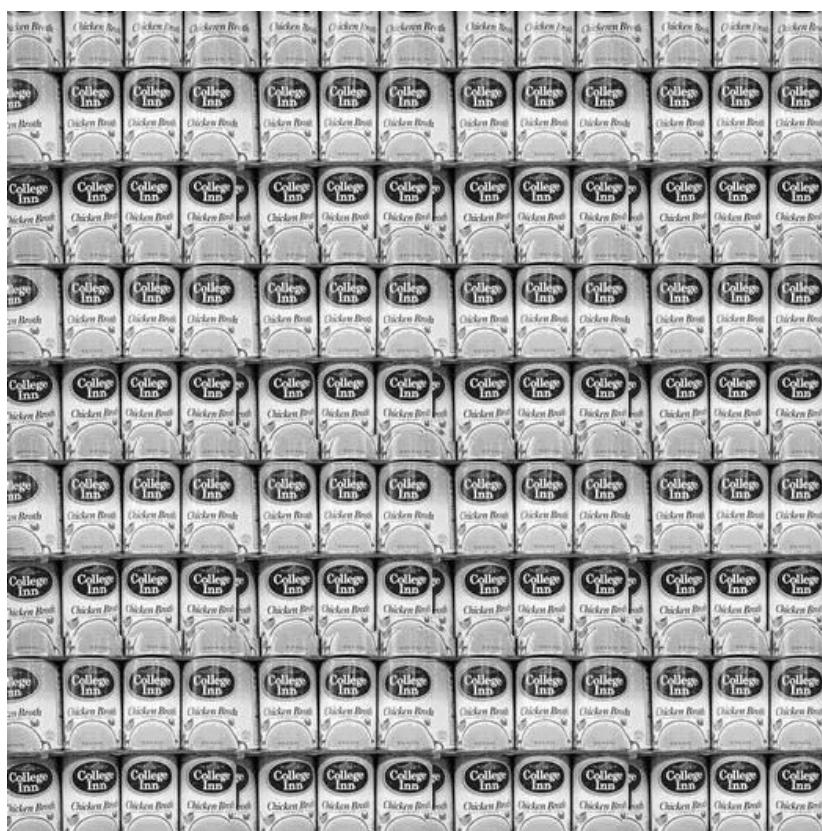
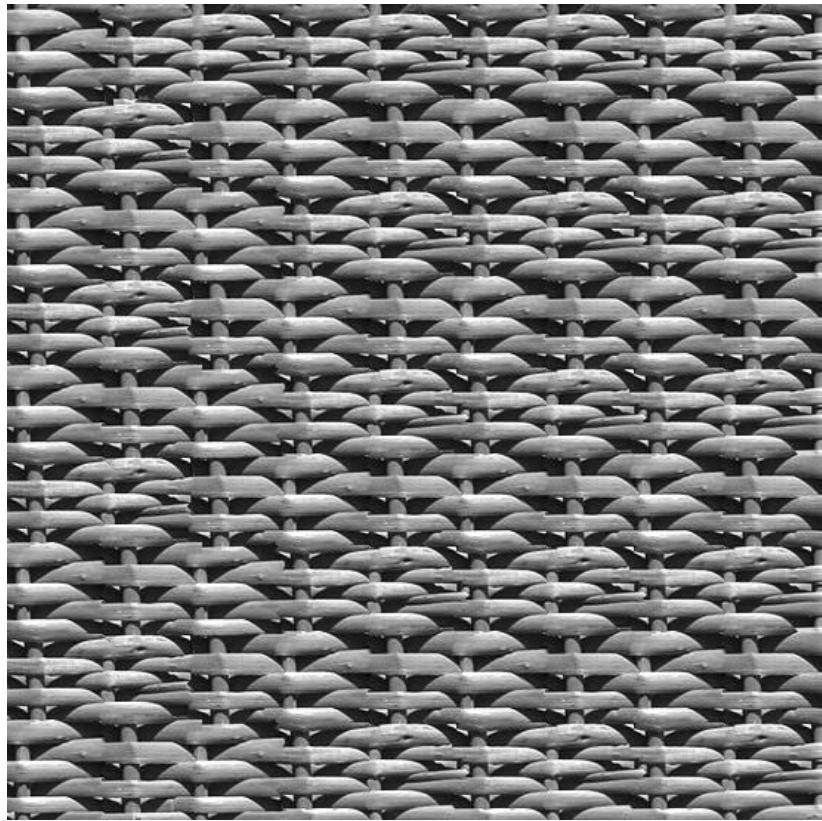
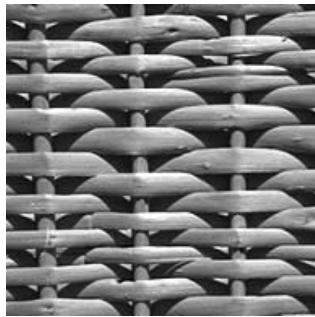


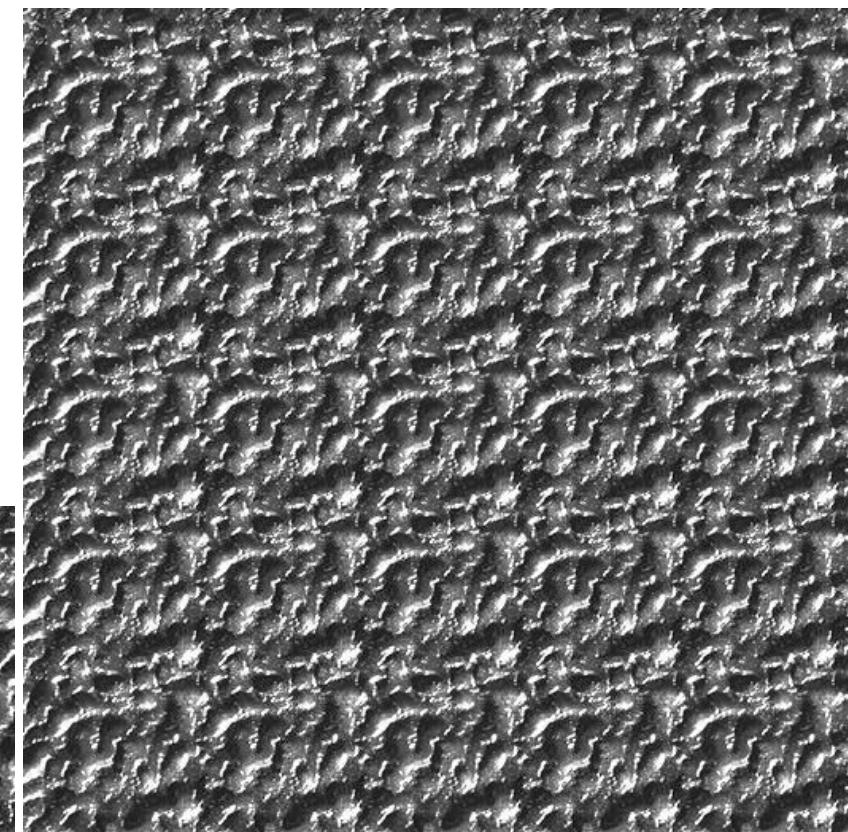
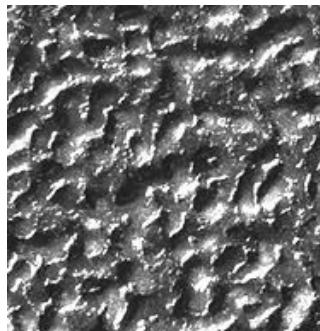
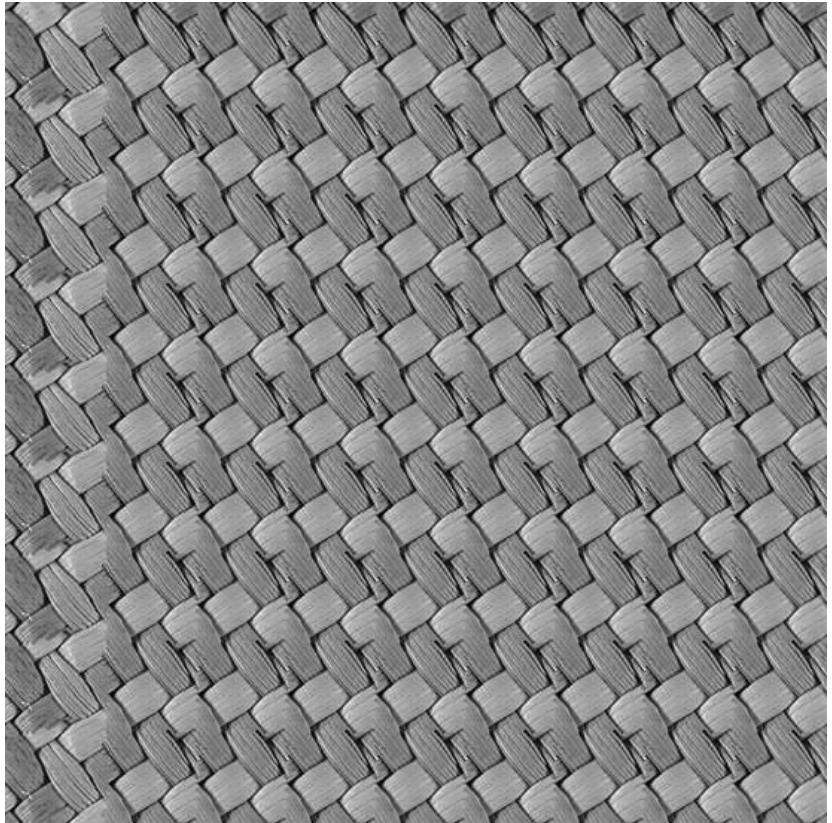






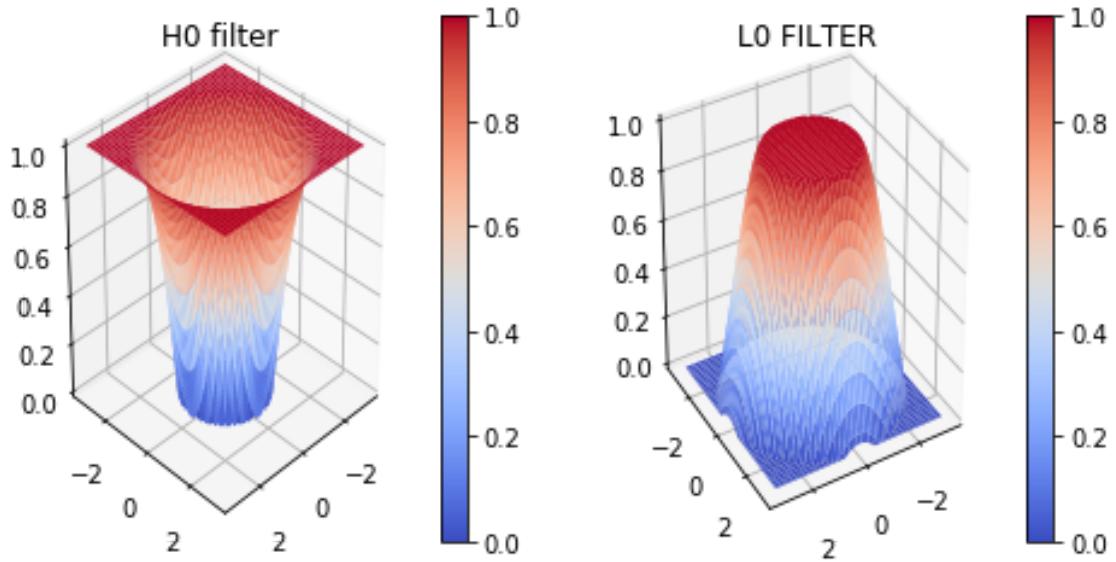




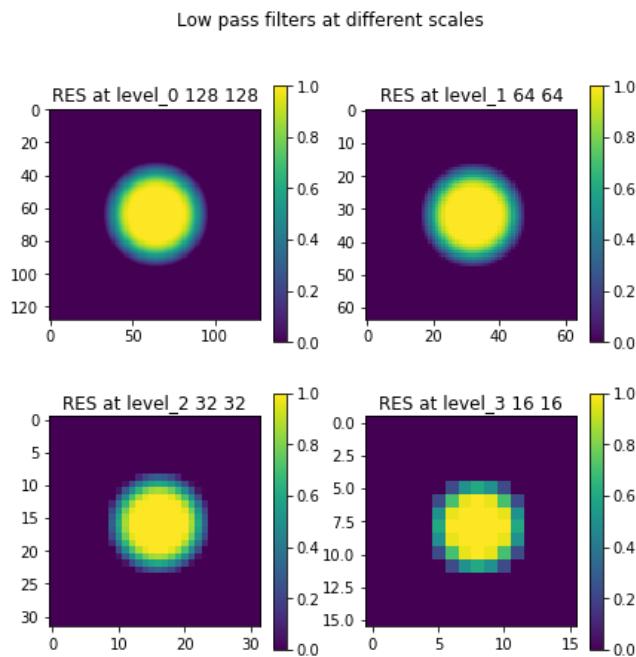


Steerable Pyramid (Portilla and Simoncelli)

H0 AND L0 filters

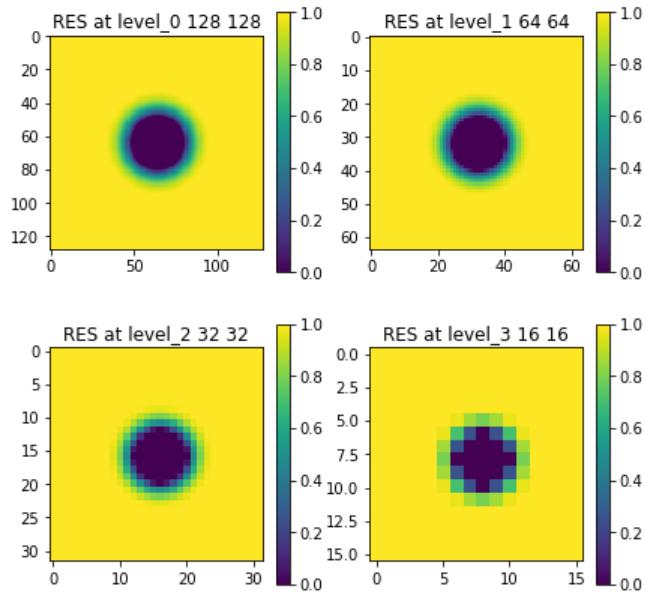


Low pass filters



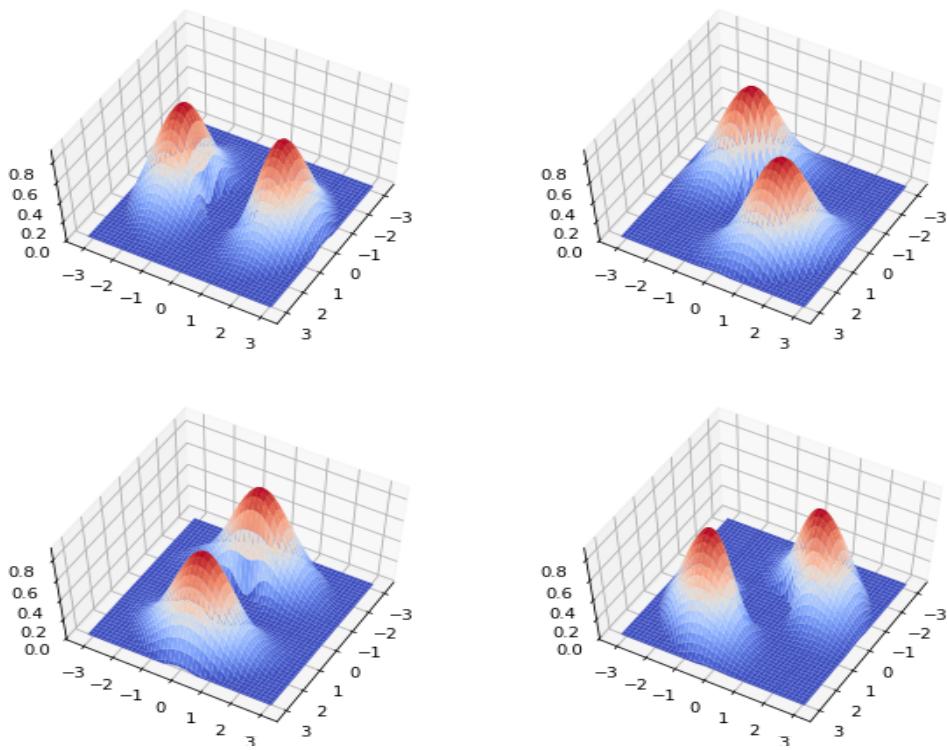
High pass filters at different scales

High pass filters at different scales



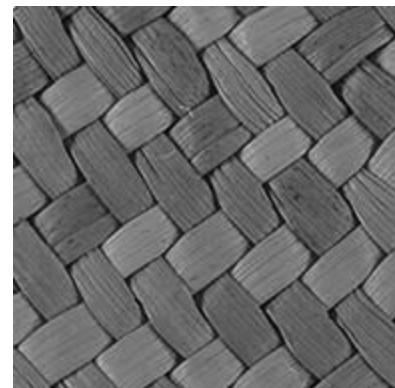
Band Pass filters at 4 different orientation

Bandpass Filters at level 0(Bandpass*LO)



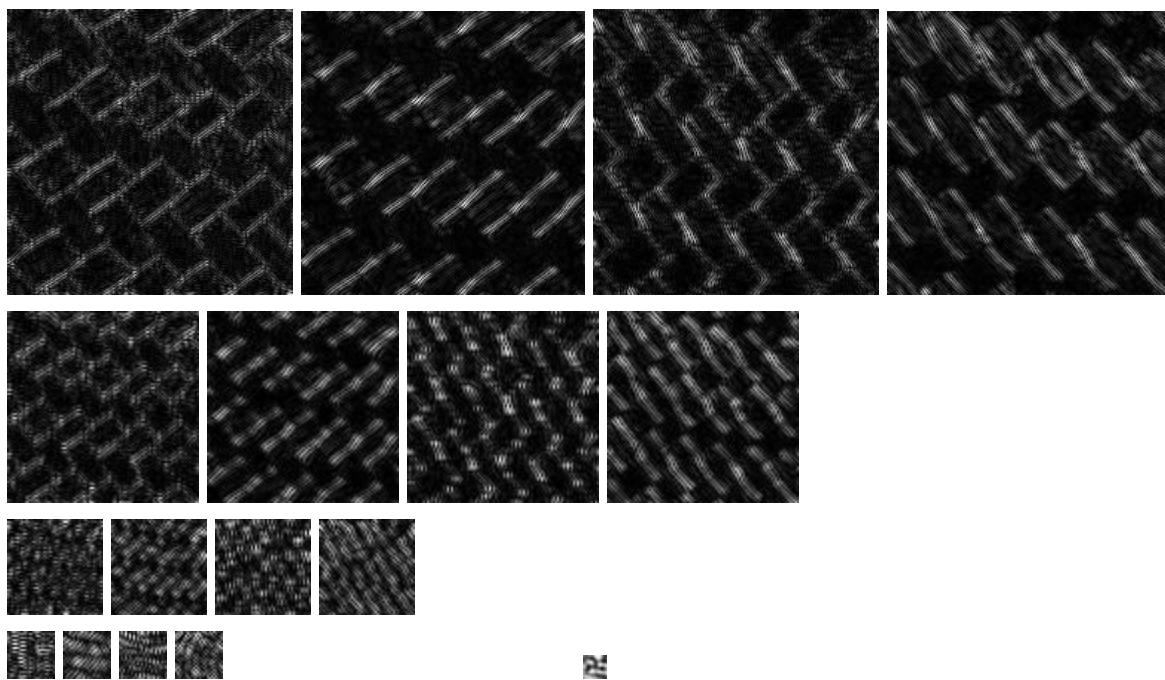


Original Image



reconstructed image

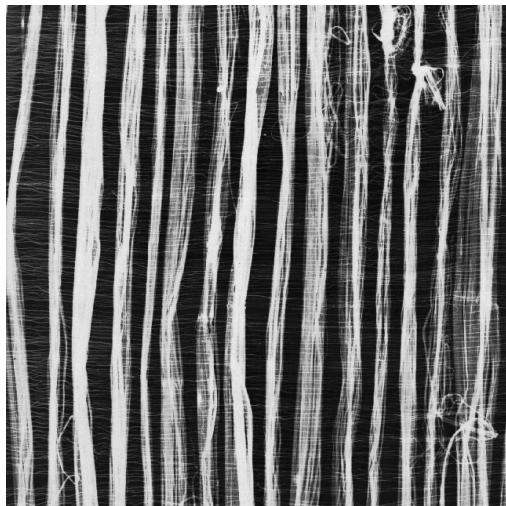
Pyramid levels



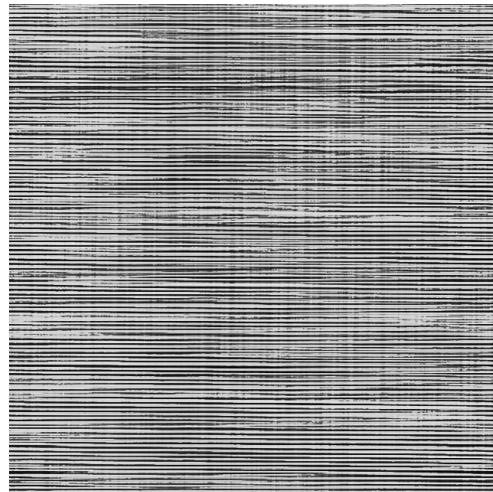
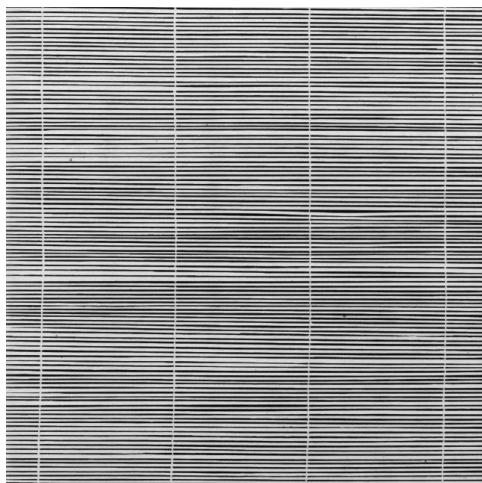
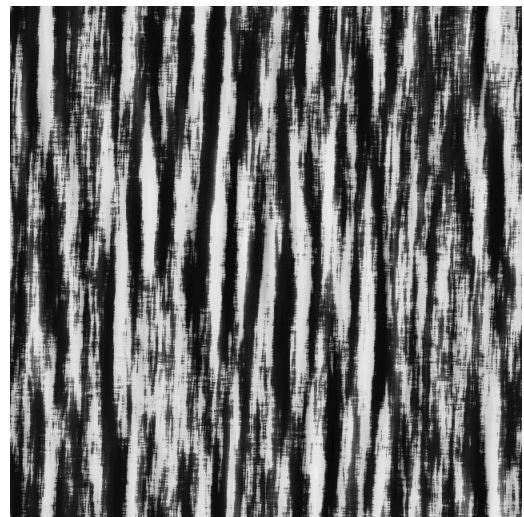
4- stage and 4-orientation steerable pyramid

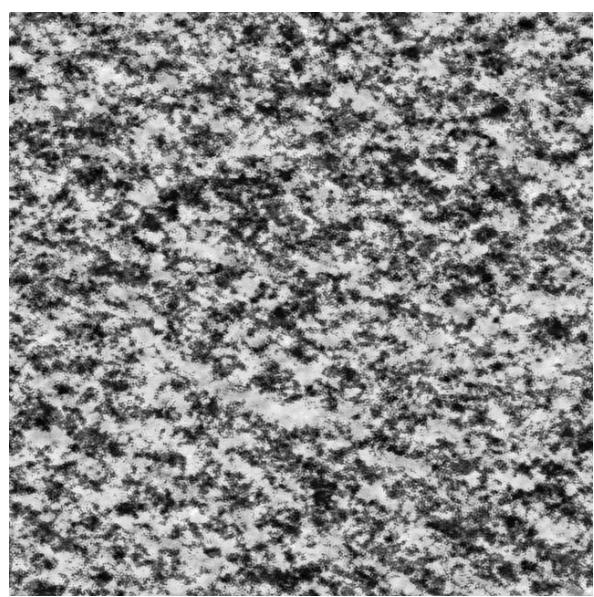
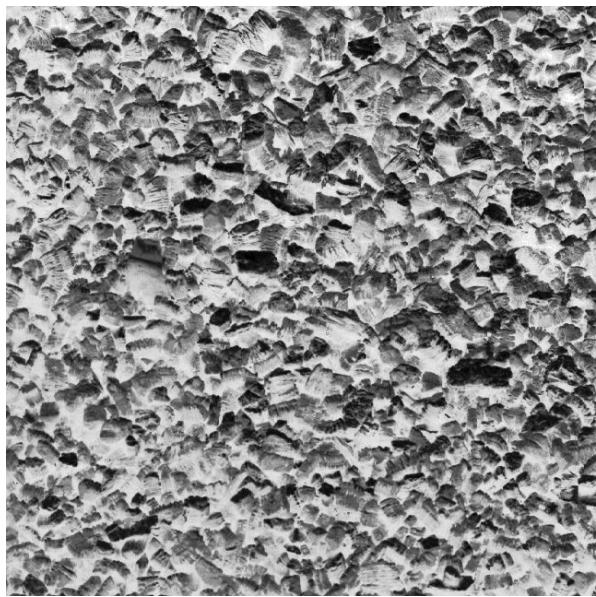
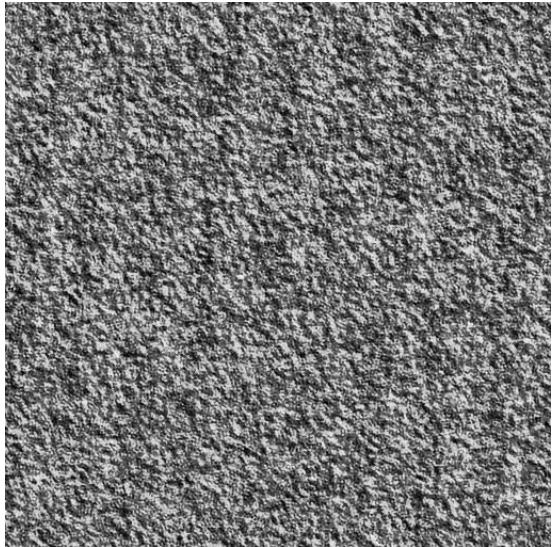
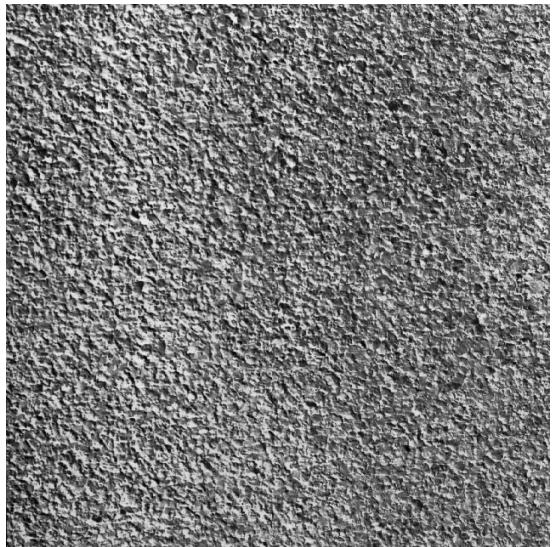
Texture Synthesis(Heeger and Bergen)

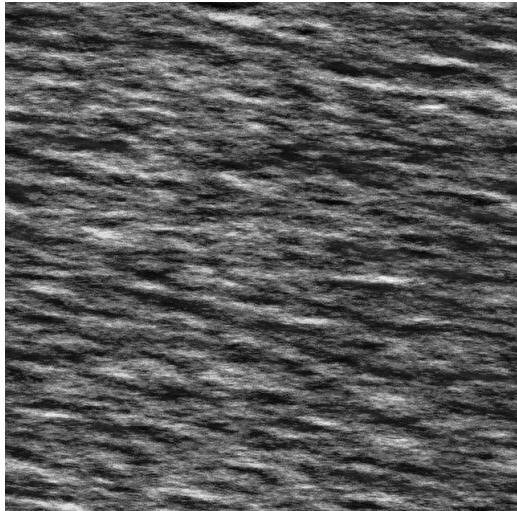
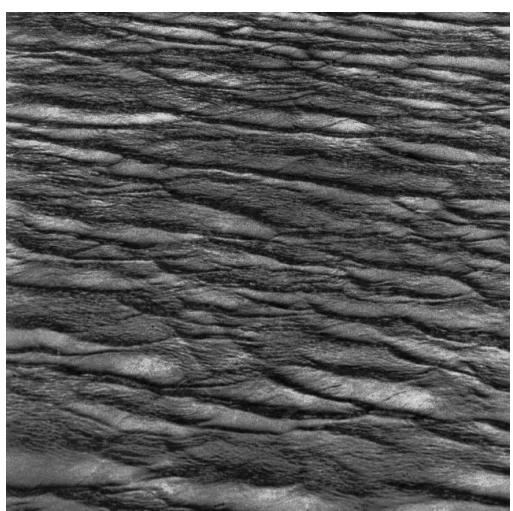
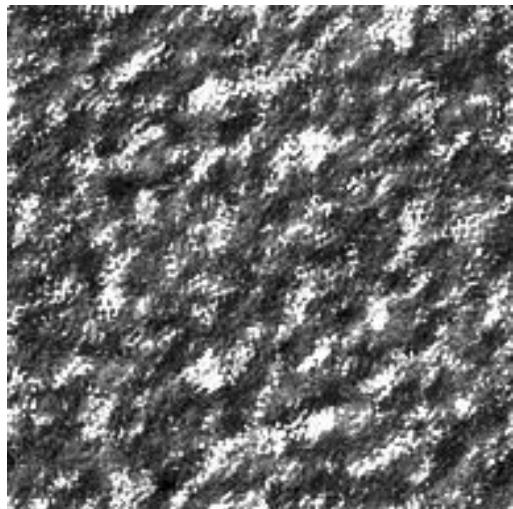
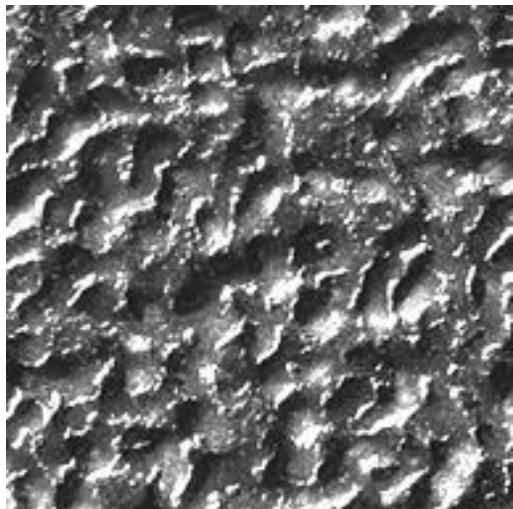
Input Image

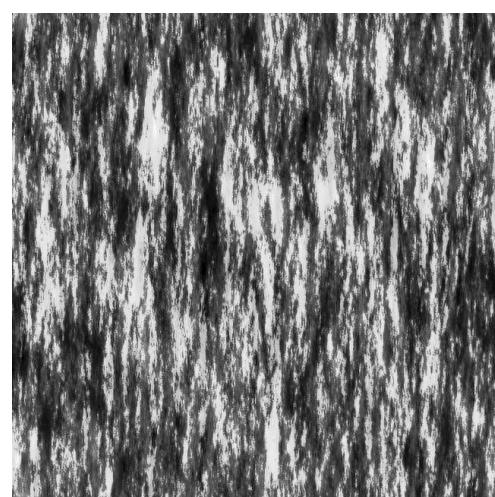
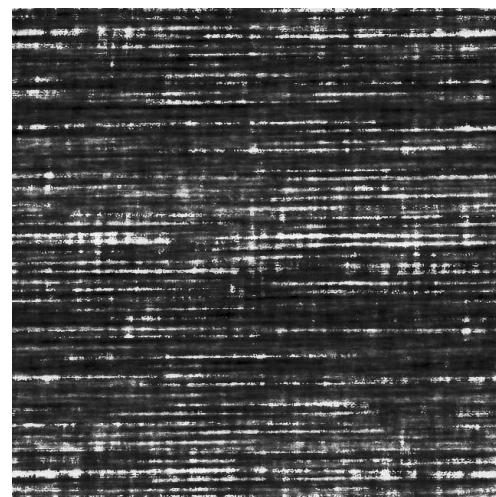
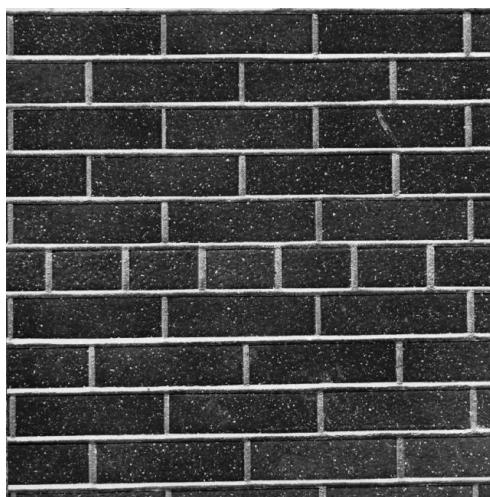
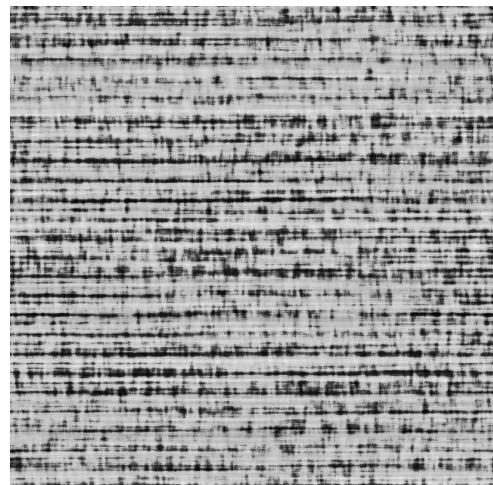
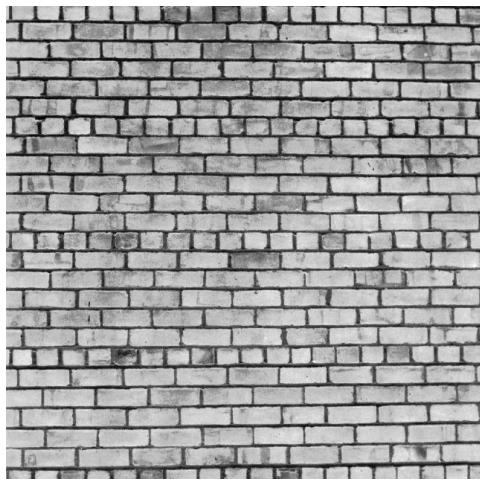


Synthesized Image



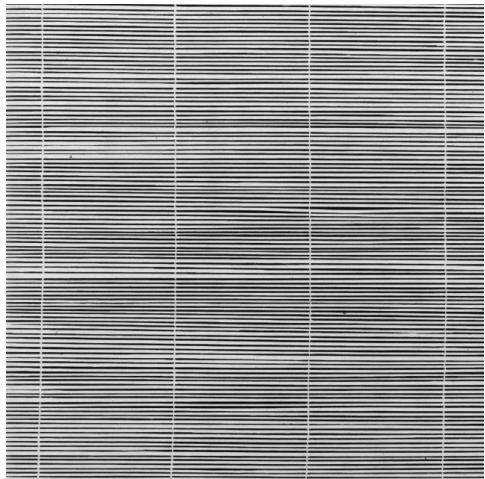






Random Phase Noise -

Input Image



Synthesized Image

