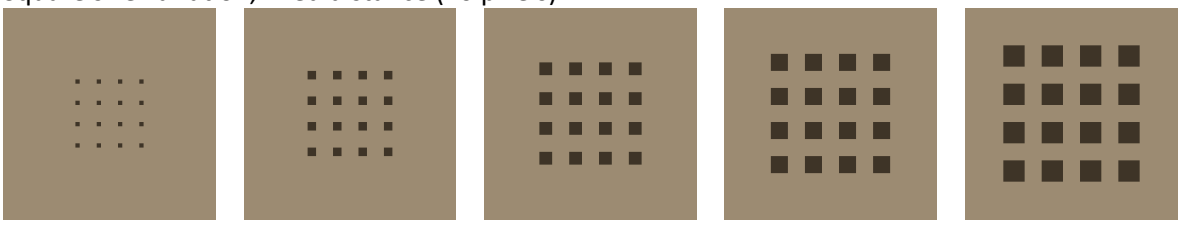
Dataset Description

I. Binary pseudo-artificial dataset

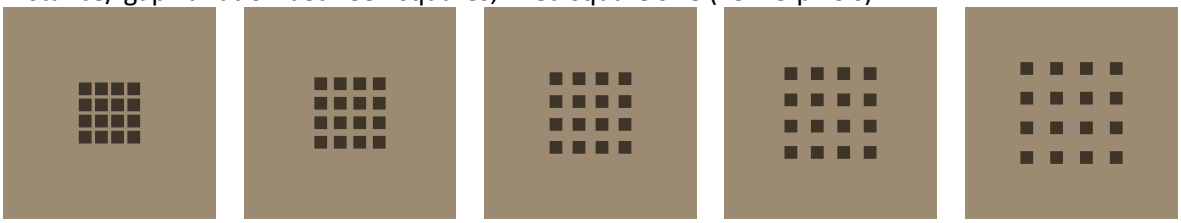
Each image in the dataset comes as a single .zip file, containing 1) a header file .hdr, 2) spectral image file .img, and 3) a color image .png. All images are of 250x250 pixels, and 186 spectral bands. Details of the bands are available in the header file. In these images, all pixels in the square objects have an identical spectrum, likewise for the background pixels.

Square size variation, fixed distance (20 pixels)



5x5	10x10	15x15	20x20	25x25
File: BIN-w5-g20	BIN-w10-g20	BIN-w15-g20	BIN-w20-g20	BIN-w25-g20

Distance/ gap variation between squares, fixed square size (15x15 pixels)



4	8	12	16	20
File: BIN-w15-g4	BIN-w15-g8	BIN-w15-g12	BIN-w15-g16	BIN-w15-g20

II. Textured pseudo-artificial dataset

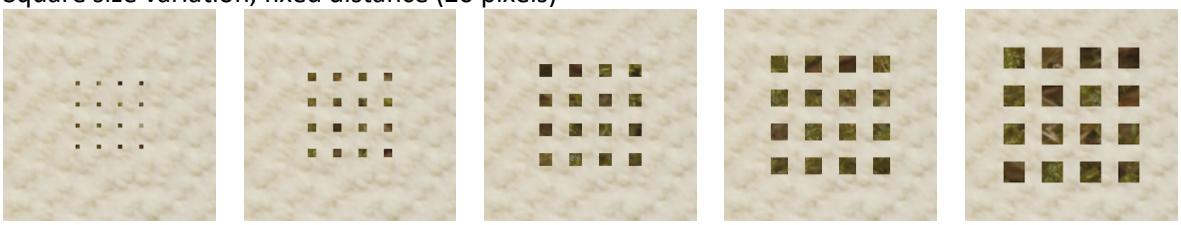
The difference between images in this dataset and the binary one lies in the content of the square objects in the foreground and the background. The contents are taken from hyperspectral images of textured surfaces. The origins of these content are as depicted in the color images below. Note that the hyperspectral images of the origin of the contents are not part of the dataset, and therefore not published together with the dataset.

Parchment, BG	Mixture of grass and moss, FG-W	Woolen fabric, FG-G

The parchment image is used as the background (BG) of two texture sets: 1) Varying in square width (W) and 2) varying in square distance or gap (G). The image of mixture of grass and moss is used as

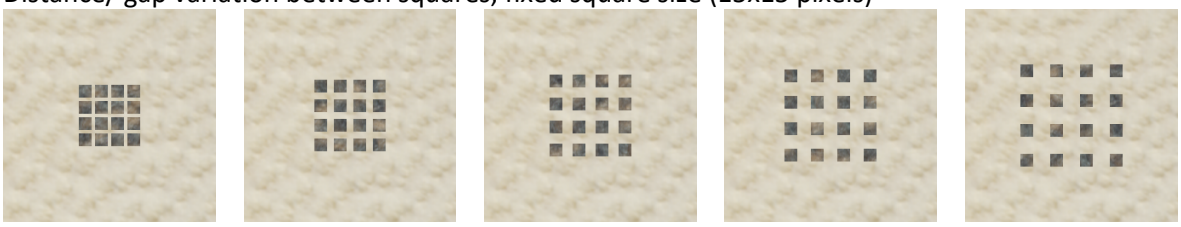
the source of the square patches (foreground/FG) in the W image set, while the woolen fabric image in the G image set.

Square size variation, fixed distance (20 pixels)



5x5	10x10	15x15	20x20	25x25
File: fpTEX-2-10-w5	fpTEX-2-10-w10	fpTEX-2-10-w15	fpTEX-2-10-w20	fpTEX-2-10-w25

Distance/ gap variation between squares, fixed square size (15x15 pixels)



4	8	12	16	20
File: fpTEX-2-5-g4	fpTEX-2-5-g8	fpTEX-2-5-g12	fpTEX-2-5-g16	fpTEX-2-5-g20