Assignment 3: Color Image Steganalysis Based on Steerable Gaussian Filters Bank
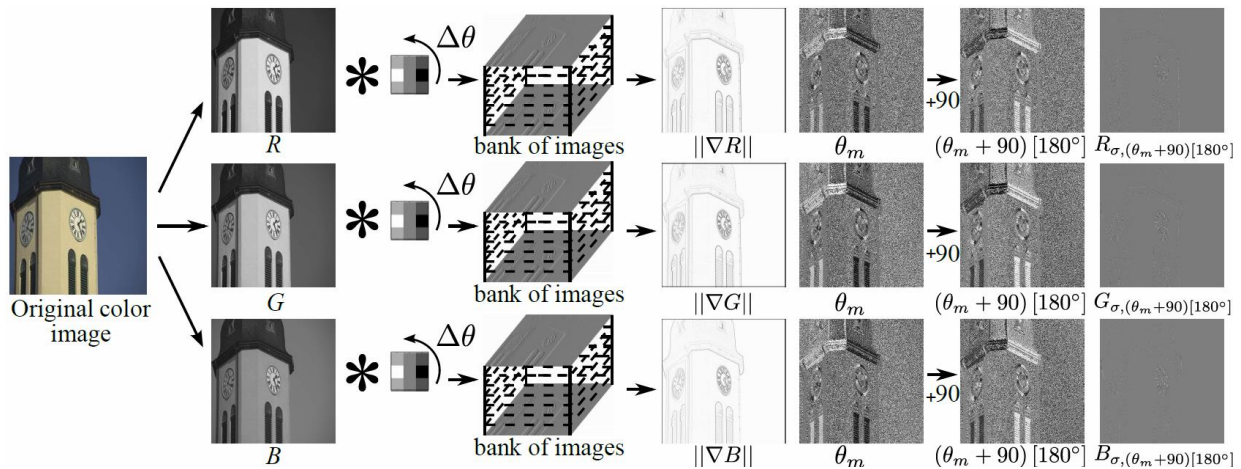
Introduction

Fig.1 Block-diagram of the color image steganalysis based on steerable Gaussian filters bank.
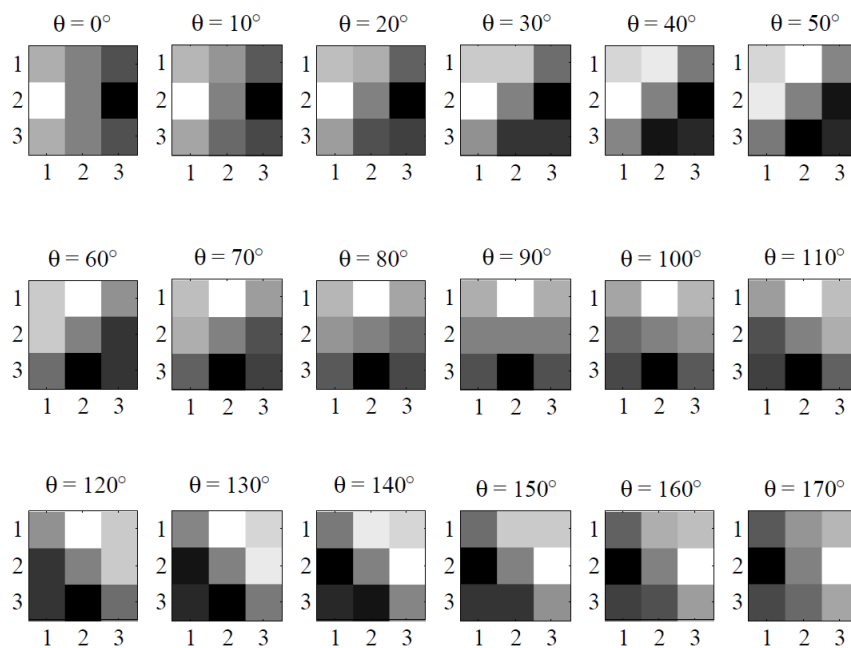

Fig.1 Steerable Gaussian Kernels

Task 1. Learn the procedure of feature extraction based on steerable Gaussian filters banks

Based on the given code to investigate the procedure of feature (kernel angles (var MaxI_{R,G,B}), gradient angles (var MaxI_angle_{R,G,B}), tangent derivatives (var {R,G, B}_theta_90)) extraction.

Task 2. Generation of stego images

To generate LSB stego images (see Lab 1) using Tower.bmp and Lake.bmp.

Task 3. Stego images detection

To detect the presence of stego message by comparison of the extracted by steerable Gaussian filter bank features.