LIST OF ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS

CBIR - Content Based Image Retrieval
GHT - Generalized Hough Transform
EMD - Earth Mover Distance
FD - Fourier Descriptors
CSS - Curvature Scale Space
CSSD - Curvature Scale Space Descriptors
ZMD - Zernike Moment Descriptors
GD - Grid Descriptors
GCM - Generalized Co-occurrence Matrices
CDTM - Cross Diagonal Texture Matrix
DTU - Diagonal Texture Unit
CTU - Cross Texture Unit
PACS - Picture Archiving and Communication Systems
FIR - Finite Impulse Response
CIF - Combined Invariant Features
PCA - Principal Component Analysis
ED - Euclidean Distance
FV - Feature Vector
FCM - Fuzzy C-Means
MRI - Magnetic Resonance Imaging
CT - Computerized Tomography

SYMBOLS

\( X_n, Y_n \) and \( Z_n \) - Tristimulus values of the reference white color
\( x, y, x_c, y_c \) - image coordinates
\( r \) - radius
\( \theta, \beta, \phi \) - angles
\( \mu \) - Mean
\( \sigma \) - Standard Deviation
\( f(x,y) \) - representation of image pixel
\( I(x,y) \) - Intensity of pixel at \((x,y)\)
\( g_a \) - Gaussian function
\( g \) - Gabor function
\( G^l \) - Gabor function in frequency domain
\( U, V, W^l \) - Displacement in Frequency domain (Gabor)
\( U_b, U_h \) - Lower and Upper cut off frequency (Gabor)
\( F \) - Central Frequency (Gabor)
\( 'a' \) - Scale factor (Gabor)
\( m_{pq} \) - Moment
\( W \) - Window
\( F_k \) - Filtered image with moment filter
\( F_M \) - Feature vector obtained by moments
\( F_G \) - Feature vector obtained by Gabor filter
\( F_C \) - Feature vector combining \( F_M \) and \( F_G \)
\( \partial \) - Stabilizing function
\( \psi(x,y,s) \) - Gaussian wavelet function at scale \( s \)
\( \mathcal{R}_x^\theta(x,y,s) \) - Gaussian derivative function at scale \( s \) in the direction \( \theta \)
\( \Theta^\theta(x,y,s) \) - Crude wavelet features
\( R_i \) - Rotational Invariant features
\( S_i \) - Scale Invariant features
\( C_{n,k}^\rho \) - Wavelet packet coefficients
\( \mathcal{O}(x,y) \) - Orthogonal feature vector computed from the energies of \( C_{n,k}^\rho \)
\( \mathcal{CIF}(x,y) \) - Combined Invariant Feature Vector
\( F_a \) - Filter for computing spatial and spectral distribution
\( I_a \) - Filtered Image filtered by \( F_a \)
\( \mathcal{A}_c \) - Covariance Matrix
\( V_{eig} \) - Eigen vectors
\( D_{Echu}^{min} \) - the Euclidean distance function which returns the index of the minimum distance.
\( FV_q \) - Combined feature vector of the query image.
\( FV_{db} \) - Combined feature vectors of the images in the texture database.
\( fish \) - fisher criterion
\( T \) - Threshold
\( P_n \) - Probability of Non-edge pixels
\( P_e \) - Probability of Edge pixels
\( H_n \) - Entropy of the non-edge pixels
\( H_e \) - Entropy of the edge pixels
\( H \) - Table used in Hough Transform
\( G \) - Gradient