

List of Symbols

Symbol	Description
$corr$	Bi-variate correlation coefficient
$cov(x, y)$	Co-variance between variables x and y
$Det(H)$	Determinant of Hessian matrix H
$D_{extrema}$	Threshold DOG for removing low contrast feature points
$DOG(x, y, \sigma)$	Difference-of-Gaussian function
EEM	Error energy matrix
F_r	Scaling factor
$F_{u,v}(x, y)$	2-D DCT basis function
$G(x, y, \sigma)$	Variable scale Gaussian function
H	Hessian Matrix
$I(x, y)$	Image of resolution $m \times n$
$M(x, y)$	Gradient magnitude of an Image $I(x, y)$
$\mu_{x,y}$	Local mean of image $I(x, y)$
μ_i	Mean of i^{th} class of an Image
μ_T	Total mean
v_K	Goodness-of-segmentation
$PSNR'$	Normalized PSNR
p_i	Probability of i^{th} ranked pixels in the block
R^K	K-dimensional Euclidean Space
$S(x, y, \sigma)$	Scale-space of an image
$\bar{\sigma}$	Second moment of a block of pixels
S_i	Weighted-variance
$\sigma(x, y)$	Deviation of the image $I(x, y)$
σ_K^2	Between class variance
σ_T^2	Total variance
T_F	Matrix of JPEG baseline quantization step
$\theta(x, y)$	Gradient orientation of Image $I(x, y)$
$T_r(H)$	Transpose of Hessian matrix H
$var(x)$	Variance of variable x
ω_i	Probability of i^{th} class occurrence
\bar{X}	First moment of a block of pixels

