

List of Abbreviations

The following abbreviations are used in the thesis:

<u>Abbreviations</u>	<u>Descriptions</u>
BER	Bit Error Rate
CC	Correlation Coefficient
DCT	Discrete Cosine Transform
DE	Decimal Equivalent
DS	Dual Image based Steganographic Scheme
DSGN	Dual Image Based Steganographic Scheme using Graph Neighbourhood
DSWM	Dual Image Based Steganographic Scheme using Weighted Matrix
DWT	Discrete Wavelet Transform
HS	Histogram Shifting
IDCT	Inverse Discrete Cosine Transform
IDWT	Inverse Discrete Wavelet Transform
LSB	Least Significant Bit
MSE	Mean Square Error
NCC	Normalized Correlation Coefficient
PCB	Pixel Category Block
PVD	Pixel Value Difference
PSNR	Peak Signal to Noise Ration
RDH	Reversible Data Hiding
RLE	Run Length Encoding
RS	Regular Singular
PE	Prediction Error

<u>Abbreviations</u>	<u>Descriptions</u>
SD	Standard Deviation
SHA-512	Secure Hash Algorithm-512
SS	Single Image Based Steganographic Scheme
SSIM	Structural Similarity Index Measurement
SSDCT	Steganographic Scheme using DCT
SSDWT	Steganographic Scheme using DWT
SSGN	Single Image Based Steganographic Scheme using Graph Neighbourhood
SSPVD	Single Image Based Steganographic Scheme using Pixel Value Difference

List of Common Symbols

The following symbols are used in the thesis:

<u>Symbols</u>	<u>Descriptions</u>
bpp	Bits Per Pixel
Cov	Co-variance
δ, ξ, κ	Shared Secret Key
gcd	Greatest Common Divisor
lb	Lower Boundary of the Sub - Range of Range Table (R)
mod	Modulus Operation
ω	Data Embedding Position
\otimes	Entry - wise Multiplication Operation
\oplus	Bitwise Exclusive OR
ub	Upper Boundary of the Sub - Range of Range Table (R)
ρ	Correlation Coefficient
σ	Standard Deviation
wb	Width of the Sub - Range of Range Table (R)

List of Notations

The following notations are used in the thesis:

<u>Notations</u>	<u>Descriptions</u>
BS	Secret Bit Stream
C	Cover Image
CI1	Interpolated First Cover Image
CI2	Interpolated Second Cover Image
CD1	First Dual Image
CD2	Second Dual Image
DI	Dual Image
IP	Interpolated Pixel
NB	Neighbourhood Degree Block
OP	Original Pixel
PB	Pixel Block
PCB	Pixel Category Block
PM	Pixel Matrix
POS	Position in a Matrix
QF	Quality Factor
RM	Resultant Matrix
R_M	Number of Regular Group with Mask M
R_{-M}	Number of Regular Group with Mask (-M)
S	Secret Image
SI	Stego Image

<u>Notations</u>	<u>Descriptions</u>
SI1	First Stego Image
SI2	Second Stego Image
S_M	Number of Singular Group with Mask M
S_{-M}	Number of Singular Group with Mask (-M)
SUM	Sum of Elements of a Matrix
WM	Weighted Matrix