

List of Tables

<i>Table</i>	<i>Title</i>	<i>page</i>
1.1	Content preserving operations and Content changing operations .	4
1.2	Different objective metrics for perceptual image hashing.	7
3.1	NHD for the set of different image processing attacks.	41
3.2	Normalized hamming distance between image pairs.	43
4.1	Normalized Hamming distance of different standard test images.	48
4.2	Content-Preserving Operation with Different Parameter Details.	50
4.3	Collision Probabilities for Different Thresholds (λ)	53
4.4	Time complexity of different hashing algorithms.	56
4.5	Estimated performance of different hashing algorithms.	56
4.6	Comparative analysis between proposed and existing algorithms.	57
4.7	Content sensitivity analysis among different algorithm.	58
5.1	Mathematical definitions of objective metrics used in perceptual security analysis.	67
5.2	Perceptual Security Analysis for experimental images.	68
5.3	Key Sensitivity Analysis for All Medical Images.	68
5.4	Edges similarity between the original and encrypted image for different threshold value.	69
5.5	Correlation Coefficients of Two Adjacent Pixels for All Medical Images.	73
5.6	Edge based comparison of proposed scheme with existing schemes.	74
5.7	Comparison of proposed scheme with existing scheme in terms of NC and UIQI.	75
5.8	Comparison of proposed scheme with existing scheme in terms of SSIM and PSNR.	76
6.1	Bit error rate and correlation coefficients of extracted watermarks at different gain factor.	80
6.2	Imperceptibility of host images at different gain factor.	81
6.3	Estimated correlation coefficient and threshold values in watermark extraction.	84
6.4	Estimated bit error rate (BER) in watermark extraction.	85
6.5	Detailed Comparison of proposed technique with existing techniques.	86
6.6	Comparative Analysis of proposed technique with existing techniques.	87
6.7	The nomenclature and details of the attacks.	91
7.1	Imperceptibility of the proposed technique.	103
7.2	Correlation coefficient and the number of iterations for the convergence of DSR.	107
7.3	Nomenclature (and the involved parameters) used for the composite distortions.	109
7.4	Correlation coefficients of the extracted watermarks after the series of attacks on the watermarked image.	110
7.5	Confusion matrix for the false-positive test where both singular vectors are from non-existent watermark.	110
7.6	Confusion matrix for the false-positive test where only left singular vector is from non-existent watermark.	110
7.7	Confusion matrix for the false-positive test where only right singular vector is from non-existent watermark.	111
7.8	Computational time complexities of the proposed technique.	112

7.9	Detailed Comparison of proposed technique with existing techniques.	113
7.10	Suitability of watermark with respect to host image	115