**List of Abbreviations**

ANN  Artificial Neural network  
BDA  Biased Discriminant Analysis  
BIRADS  Breast Imaging Reporting and Data Systems  
BWT  Binary Wavelet Transform  
CAD  Computer Aided Diagnosis  
CBIR  Content Based Image Retrieval  
CBMIR  Content Based Medical Image Retrieval  
CC  Craniocaudal  
CLAHE  Contrast Limited Adaptive Histogram Equalization  
CT  Computed Tomography  
DCIS  Ductal Carcinoma In Situ  
DPF  Dynamic Partial Distance Function  
DWT  Discrete Wavelet Transform  
ELM  Extreme Learning Machine  
FCM  Fuzzy C-Means  
FFDM  Full Field Digital Mammography  
FWT  Fast Wavelet Transform  
GA  Genetic Algorithm  
GLDS  Grey Level Difference Statistics  
ICMR  Indian Council for Medical Research  
IDC  Invasive Ductal Carcinoma  
ILC  Invasive Lobular Carcinoma  
IUGR  Intrauterine Growth Restriction  
IBC  Inflammatory Breast Carcinoma  
KNN  K-Nearest Neighbour  
LBP  Local Binary Pattern  
LCIS  Lobular Carcinoma In Situ  
LDA  Linear Discriminant Analysis  
LRM  Local Range Modification  
LTP  Local Ternary Pattern  
LPQ  Local Phase Quantization  
MIAS  Mammographic Image Analysis Society
MLP  Multi Layer Perceptrons
MLO  Mediolateral Oblique
MQSA Mammography Quality Standards Act
MRI  Magnetic Resonance Imaging
mRMR Minimum Redundancy Maximum Relevance
MRMD Multi Resolution Manifold Distance
MRS  Magnetic Resonance Spectroscopy
MSE  Mean Squared Error
NGTDM Neighbourhood Grey-Tone-Difference Matrix
NTF  Negative Tensor Factorization
PACS Picture Archiving and Communication Systems
PCA  Principal Component Analysis
PDE  Partial Differential Equation
PET  Positron Emission Tomography
PSNR Peak Signal to Noise Ratio
Ref  Reference
ROC  Receiver Operator Characteristic
ROI  Region of Interest
RMSE Root Mean Squared Error
RST  Rough Set Theory
SCG  Scaled Conjugate Gradient
SFM  Statistical Feature Matrix
SGLDM Spatial Grey-Level-Dependence Matrix
SMMS Symmetric Maximized Minimal Distance
SMO  Sequential Minimal Optimization
SLFN Single Hidden Layer Feedforward Neural Network
SNR  Signal to Noise Ratio
SSIM Structural Similarity Index
STFT Short-Term Fourier Transform
SVM  Support Vector Machine
SVR  Support Vector Regression
UQI  Universal Quality Index