List of abbreviations

AMD, DR, WHO,pdf,SDOG,MF,TPR,FPR,SE,VLSI,MFR,CT,CTA,QCT,QCA,QVA,HSA,MRI,MRA,I
MRI,MUGA,SPECT,PET,IMT,CEUS,Dual-Bootstrap ICP,SOM,4P-BA,FA,RF,DB-ICP,GDB-
ICP,NCC,TP,TN,FP,FN,Acc,SP,ROC,AUC,ROI,SSD,SPM,SAD,CC,VIR,RIU,PIU,MI,NMI,DRIVE,FC

Acronyms

AMD Age-related Macular Degeneration

VLSI Very Large Scale Integrated Circuit

MFR Matched Filter Response

CT Computerized Tomography

CTA Computerized Tomography used for Angiography

QCT Quantitative Computed Tomography

QCA Quantitative Coronary Angiography

QVA Quantitative Vascular Angiography

HSA Hip Structural Analysis

MRI Magnetic Resonance Imaging

MRA Magnetic Resonance imaging used for Angiography

DR Diabetic Retinopathy

DCE-MRI Dynamic Contrast-Enhanced Magnetic Resonance Imaging

MUGA MUlti-Gated Acquisition scan

SPECT Single Photon Emission Computed Tomography

PET Positron Emission Tomography

IMT Intimal-Media Thickness

CEUS Contrast Enhanced Ultra Sound

Dual-Bootstrap ICP Dual-Bootstrap Iterative Closest Point

SOM Self Organizing Map

4P-BA 4-Pass Bundle Adjustment

FA Fluorescein Angiogram

WHO World Health Organization

RF Red-Free

DB-ICP Dual-Bootstrap Iterative Closest Point

GDB-ICP Generalized Dual-Bootstrap Iterative Closest Point

NCC Normalized Cross Correlation

TP True Positive

TN True Negative

FP False Positive

FN False Negative

Acc Accuracy

SP Specificity

pdf probability distribution function

ROC Receiver Operating Characteristic

AUC Area Under the Curve

ROI Region of Interest

SSD Sum of Squares Differences

SPM Statistical Parametric Mapping

SAD Sum of Absolute Difference

CC Correlation Coefficient

VIR Variance of Intensity Ratio

RIU Ratio-Image Uniformity

PIU Partitioned Intensity Uniformity

SDOG Second-order Derivative Of the Gaussian

MI Mutual Information

NMI Normalization of MI

DRIVE Digital Retinal Images for Vessel Extraction

FOV Field of View

STARE STructured Analysis of the Retina

GLCM Gray Level Co-occurrence Matrix

PCA Principal Component Analysis

ELSSP Eigenvalue-weighted Linear Sum of Subspace Projection

CLAHE Contrast Limited Adaptive Histogram Equalization

SIFT Scale Invariant Feature Transform

MF Matched Filter

SURF Speed Up Robust Features

BRISK Binary Robust Invariant Scalable Keypoint

AGAST Adaptive and Generic Accelerated Segment Test

TPR True Positive Rate

FPR False Positive Rate

SE Structuring Element

List of Symbols

Σ	Sum
ε	Belongs to
$\cap$	Intersection
$\forall$	For all
σ	Variance used in Gaussian function
$\leq$	Less than or equal to
γ	Scale parameter used in Cauchy pdf
τ	Skewness
$\overline{X}$	Mean
μ	Location parameter used in Gumbel pdf
β	Scale parameter used in Gumbel pdf
θ_i	Orientation of kernel
T_h	Threshold value
σ_i	Standard deviation
∇	Direction vector