LIST OF NOTATIONS

Symbols	Definition
$\| p - p' \|$	Distance of two object of points
d_{min}	Minimum distance
$(C_{i,}, C_j)$	Cluster
Img_x	Image on each channel of X
x	Colour channel Red, Green, and Blue
$h_x(i)_n$	Histogram of each channel x for specified intensities i with the total number of n to N images
$\bar{s}_x(i)$	Average intensities i of each channel x
I	Intensities value
M	Maximum numbers of Intensities
N	Maximum number of Images
Hst_x	*Intensity Curve* as result of averaging intensities from N images on each channel x
Tr_x	Threshold line of frequency as the result from averaging set of frequency value on *Intensity curve (Hst)* of each channel x
$T1_x$	Minimum threshold of intensities value sets
$T2_x$	Maximum threshold of intensities value sets
Tr'_x	Optimum range of Region of Interest (RoI) on each channel
Img'	Binary image as result of histogram threshold
$\boldsymbol{A \ominus B}$	Erosion of A by structuring element B
$\boldsymbol{A \oplus B}$	Dilation of A by structuring element B
$\boldsymbol{A \circ B}$	Opening morphology of A by structuring element B
$\boldsymbol{A \cdot B}$	Closing morphology of A by structuring element B
B_z	Blobs size

Symbols	Definition
P_r	Current Pixel position
$\boldsymbol{d_{8r}}$	Distance value in 8 times radius value positions/directions
RG	Region Growing
$RegA_{r\ldots}\ RegD_r$	Region A to Region D at r times iterations
$m(Radius_r)$	Set of member value in certain r *Radius*
Ths	Threshold size of windows scanner
Ws	Windows scanner
cP_i	Current pixel position
cP_{i+1}	Next pixel position
cTp	Candidate of Peak Point
$ScTp$	Status Candidate of Peak Point
P_i	Points at index i
lco	List of candidate object
lv	Level Hierarchy
lf	Leaf hierarchy
j	Index of labels
k	Index of point
l	Index of point
co	Candidate of Object
ht	Hierarchy table
rC	Result of pattern filter process
eO	Each position of candidates object
trA	Threshold of number candidate of interest object
$P(x,y)$	Pixel position
w,z	Index of leafs
q	Index of Hierarchy table
$d(P_i, P_j)$	Distance of each point
Adj	Adjacency matrix
$D(lf_1, lf_2)$	Minimum distance of each adjacency point
td_A	Hierarchy threshold
σ	Standard deviation