

```

1 96 [dMeshCol, dMeshRow] = meshgrid(-K:K,-K:K);
1 97 distMap = sqrt((dMeshRow.^2) + (dMeshCol.^2));
98
99 % Initiation
1 100 outPic = zeros(size(inPic));
< 0.01 1 101 [numRowExt, numColExt] = size(inPicExt);
102
103 % Calculate new pixelevalue, pixel by pixel
1 104 for iRow = 1+K : numRowExt-K
177 105     for iCol = 1+K : numColExt - K
106
107         % Local Neighbourhood
0.73 126024 108         inPicLocal = inPicExt(iRow-K : iRow+K, iCol-K
109
110         % Calculate local weightmatrix, wLocal
0.58 126024 111         wLocal = (wCenter - distMap*quotaWeightExt(iR
1.02 126024 112         wLocal = round(max(wLocal,0)); % negative 2 z
0.93 126024 113         sumW = sum(wLocal(:));
114
115         % Sort
3.10 126024 116         [sortInPicLocal index] = sort(inPicLocal(:),
117
118         % Calculate median (output value)
< 0.01 126024 119         newPxPos = (sumW+1)/2;
< 0.01 126024 120         sumW = 0;
0.11 126024 121         for iPos = 1:sqrN
0.03 5169838 122             sumW = sumW + wLocal(index(iPos));
0.18 5169838 123             if sumW >= newPxPos
< 0.01 126024 124                 break
125
0.19 5043814 126             end
< 0.01 126024 127             yWM = sortInPicLocal(iPos);
< 0.01 126024 128             outPic(iRow - K, iCol - K) = yWM;
0.34 126024 129         end
177 130     end
131
132 % Development graphs
1 133 if graphs == 1
134     quota = quotaWeight./c;
135     figure('Name',['AWMF: Development graphs, c = ' n
136         ', K = ' num2str(K) ...
137         ' ( ' num2str(N) '*' num2str(N) ') ']'...
138         ', wCenter = ' num2str(wCenter) ],'NumberTitl
139     subplot(3,2,1),imagesc(inPic);
140         title('InPic'); colormap gray; axis image; co
141     subplot(3,2,2),imagesc(outPic, [min(inPic(:)) max
142         title('outPic');colormap gray; axis image; co
143     subplot(3,2,3),imagesc(quota);
144         title('variance/mean quota');colormap gray; a
145     subplot(3,2,4),imagesc(quotaWeight);
146         title('c*variance/mean quota');colormap gray;
147     subplot(3,2,5),imagesc(abs(inPic - outPic));
148         title('|inPic - outPic|'); colormap gray; axi
149     subplot(3,2,6),imagesc(distMap);
150         title('distMap'); colormap gray; axis image;
151     end
152

```