Rapport
Travaux Pratiques 3

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```
ClearScreen ();
Calibrate (One_Pixel_per_Centimeter);
AreaCNVFactors[0..15] = 100.0 : 1.0 : -1.0 : 256.0 : 100.0 : 5.0 : 1.0 : -1.0 : -1.0 : 0.0 : 255.0 : -1.0 :
2.0 : 0.0 : 0.0;
REAL rPairs[,];
Histogram();
//Grab (3);
rPairs = GetAutoThreshold(ArROIHistogram,3,2,10.0,ActiveLuminanceRange,);
if ( rPairs && 1 < GetShape(rPairs)[0] )
{
        Threshold(rPairs[1,0]:rPairs[1,1]);
        GrayToBinary();
}
Delete(rPairs);

BINB_iIterations = 1;
//  Binary Closing [dilate then erode]
DilateFilter(,BINB_iIterations);
ErodeFilter(,BINB_iIterations);
Threshold ( 127.5:255.0 );

BINB_iIterations = 1;
//  Binary Opening [erode then dilate]
ErodeFilter(,BINB_iIterations);
DilateFilter(,BINB_iIterations);
Threshold ( 127.5:255.0 );

ActivateMeasurementSet("Area Morphometry Set");
RunMacro ("C:/PROGRAM FILES (X86)/OPTIMAS 6.5/MACSRC/PC/pps.mac");
PPS_CountMacro ();
CloseWindow("Particle Count");

// dÉfinitions des classes
CreateEmptyClass("clefs", 2, 'A'); // classe vide
GetOrSetField("clefs", 302, "clefs"); // le label
GetOrSetField("clefs", 306, "Ar_clefs_Member_A = ArCircularity > 80 && ArArea > 3500 && ArBreadth < 100 ;"); //
la dÉfinition

CreateEmptyClass("Ring", 2, 'B');
GetOrSetField("Ring", 302, "Ring");
GetOrSetField("Ring", 306, "Ar_Ring_Member_B = ArEulerNumber == 0 && ArNestNofParents ==0 && ArRectangularity >
0.65;");

CreateEmptyClass("Des_1", 2, 'C');
GetOrSetField("Des_1", 302, "DÉs_1");
GetOrSetField("Des_1", 306, "Ar_Des_1_Member_C = ArEulerNumber == 0   && ArNestNofParents  == 0 &&
ArRectangularity < 0.65 && ArCircularity < 30;");

CreateEmptyClass("Des_2", 2, 'D');
GetOrSetField("Des_2", 302, "DÉs_2");
GetOrSetField("Des_2", 306, "Ar_Des_2_Member_D = ArEulerNumber == -1   && ArNestNofParents  == 0 &&
ArRectangularity < 0.65 && ArCircularity < 30;");

CreateEmptyClass("Des_3", 2, 'E');
GetOrSetField("Des_3", 302, "DÉs_3");
GetOrSetField("Des_3", 306, "Ar_Des_3_Member_E = ArEulerNumber == -2   && ArNestNofParents  == 0 &&
ArRectangularity < 0.65 && ArCircularity < 30;");

CreateEmptyClass("Des_4", 2, 'F');
GetOrSetField("Des_4", 302, "DÉs_4");
GetOrSetField("Des_4", 306, "Ar_Des_4_Member_F = ArEulerNumber == -3   && ArNestNofParents  == 0 &&
ArRectangularity < 0.65 && ArCircularity < 30;");

CreateEmptyClass("Des_5", 2, 'G');
GetOrSetField("Des_5", 302, "DÉs_5");
GetOrSetField("Des_5", 306, "Ar_Des_5_Member_G = ArEulerNumber == -4   && ArNestNofParents  == 0 &&
ArRectangularity < 0.65 && ArCircularity < 30 ;");

CreateEmptyClass("Des_6", 2, 'H');
GetOrSetField("Des_6", 302, "DÉs_6");
GetOrSetField("Des_6", 306, "Ar_Des_6_Member_H = ArEulerNumber == -5   && ArNestNofParents  == 0 &&
ArRectangularity < 0.65 && ArCircularity < 30;");

CreateEmptyClass("Robotic_object", 2, 'I');
GetOrSetField("Robotic_object", 302, "Robot_objet");
GetOrSetField("Robotic_object", 306, "Ar_Robotic_object_Member_I = ArNestNofParents  == 0 && ArEulerNumber == 1
&& ArCircularity < 22 && ArCircularity > 18 && ArRectangularity > 0.65 ;");

CreateEmptyClass("Intrus", 2, 'J');
GetOrSetField("Intrus", 302, "Intrus");
GetOrSetField("Intrus", 306, "Ar_Intrus_Member_J = !Ar_clefs_Member_A && !Ar_Des_1_Member_C && !
Ar_Des_2_Member_D && !Ar_Des_3_Member_E && !Ar_Des_4_Member_F && !Ar_Des_5_Member_G && !Ar_Des_6_Member_H && !
Ar_Ring_Member_B && !Ar_Robotic_object_Member_I && ArNestNofParents == 0;");

// extraction des caractÉristiques et des Étiquettes
SetExport(mArCircularity,1,TRUE);
SetExport(mArEulerNumber,1,TRUE);
SetExport (mArNestNofParents, optExtractFlag, TRUE);
SetExport (ArNestNofParents, optExtractFlag, TRUE);
SetExport (mArRectangularity, optExtractFlag, TRUE);
SetExport (ArRectangularity, optExtractFlag, TRUE);
SetExport (mArBreadth, optExtractFlag, TRUE);
SetExport (ArBreadth, optExtractFlag, TRUE);
MultipleExtract(TRUE);
```

FIGURE 2.1 – Macro de reconnaissance de forme