Algorithmic Art

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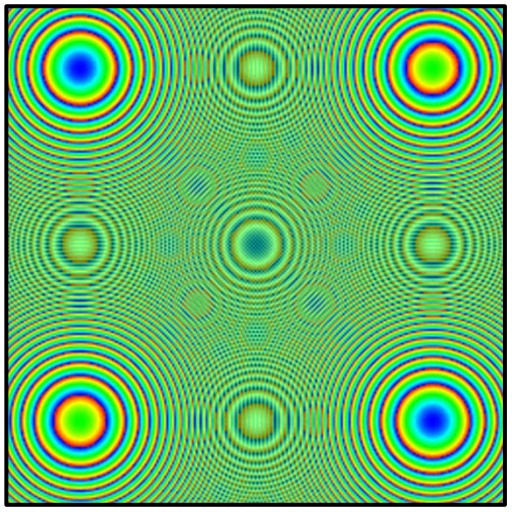

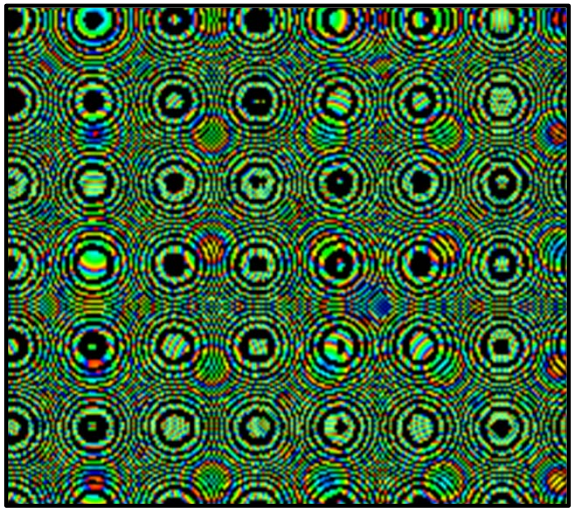

algart.glib

```
##OpenGL GLIB
Ortho -1. 1.  -1. 1.
LookAt  0 0 1  0 0 0  0 1 0

Vertex   algart.vert
Fragment algart.frag
Program  AlgArt                    \
        uScreen <true>             \
        uColor {0. 0. 0. 1.}       \
        uMod  <1 2 8>              \
        uSide <.1 1. 3.>


QuadXY .2 2.
```

algart.vert

```
#version 330 compatibility

out float vX, vY;
out vec2 vST;

void
main( )
{
        vST = gl_MultiTexCoord0.st;
        vX = gl_Vertex.x;
        vY = gl_Vertex.y;
        gl_Position = gl_ModelViewProjectionMatrix * gl_Vertex;
}
```

algart.frag

```
#version 330 compatibility
uniform bool    uScreen;
uniform vec4    uColor;
uniform int     uMod;
uniform float   uSide;
in vec2          vX, vY;
in vec2          vST;

vec3
Rainbow( float t )
{       . . .       }

void
main( )
{
      vec2 xy;
      if( uScreen )
            xy = uSide * gl_FragCoord.xy;
      else
            xy = 200. * uSide * vST;

      float z = dot( xy, xy );      // z = x^2 + y^2
      int c = int( z );
     if( ( c % uMod ) != 0 )
      {
            //discard;
            gl_FragColor = vec4( uColor.rgb, 1. );
      }
      else
      {
            float t = float( c % 360 ) / 359.;
            vec3 rgb = Rainbow( t );
            gl_FragColor = vec4( rgb, 1. );
      }
}
```

This method is known as **Connett Circles**