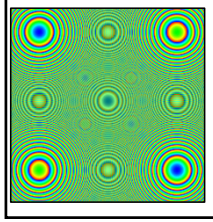
Algorithmic Art



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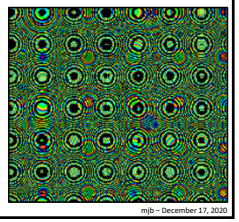

1

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;
}
```


2

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**

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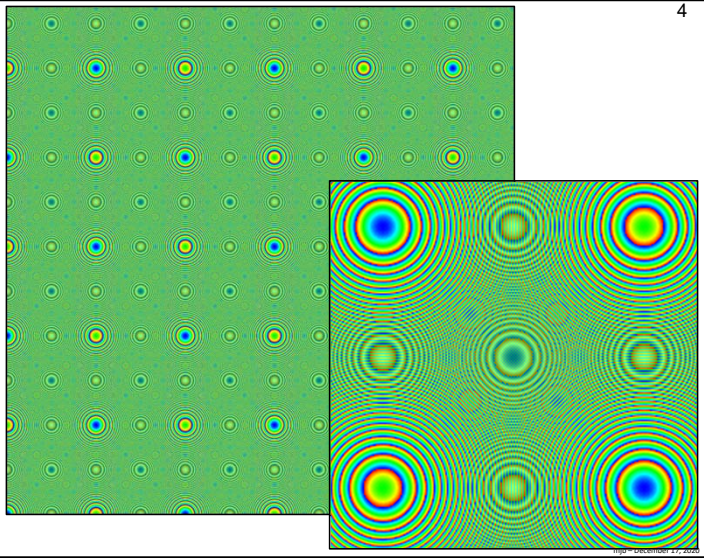

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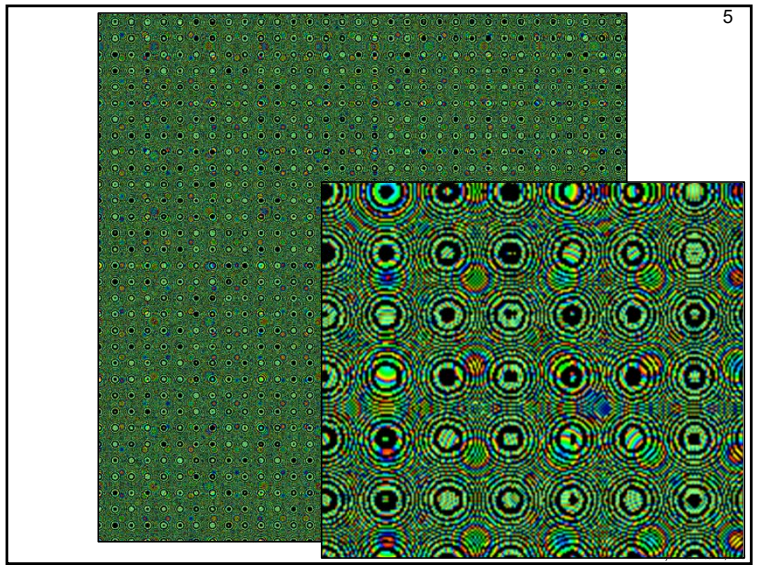

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