

RESEARCH STATEMENT

Original Creative Work

Citation: Noel Patson 2010, Recorded or Rendered Work, Web Exhibition, *Abstract Art*, Wolfram Mathematica.

<http://demonstrations.wolfram.com/AbstractArt/>

Research Background

Voronoi diagrams have an organic quality about them because the tessellation of 2 dimensional spaces by convex polygons is aesthetically pleasing to the eye. A low resolution density plot depiction of a Voronoi diagram coloured using a predetermined artistic colour scheme generates instant abstract art.

The demonstration allows the user to manipulate randomly set initial points and add new points which are used to determine a Voronoi diagram which is displayed using a set resolution. When the resolution is low an image is generated reminiscent of abstract art in the cubist tradition. Different colour schemes can be chosen to give different effects. This method of creating art is appealing to both kinaesthetic and visual learners.

Research Contribution

- Innovation – This presentation is the first time abstract art has been created using this approach. The demonstration indicates the connection between art and mathematics.

Research Significance

The demonstration has been through a rigorous review process[†].

[†] <http://demonstrations.wolfram.com/FAQ.html>

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