

FRACTAL MOVIE PROJECT

This project involves morphing one fractal image into another. The images you'll begin and end with are created the same way your first project was created. A sample movie file can be downloaded from Day 17 on the course website.

For this assignment, you should provide two sets of affine transformations, such as

$$f_1 \begin{pmatrix} x \\ y \end{pmatrix} = \begin{bmatrix} 1/2 & 0 \\ 0 & 1/2 \end{bmatrix} \begin{pmatrix} x \\ y \end{pmatrix} \qquad f_2 \begin{pmatrix} x \\ y \end{pmatrix} = \begin{bmatrix} 1/2 & 0 \\ 0 & 1/2 \end{bmatrix} \begin{pmatrix} x \\ y \end{pmatrix} + \begin{pmatrix} 1/2 \\ 0 \end{pmatrix}$$

$$f_3 \begin{pmatrix} x \\ y \end{pmatrix} = \begin{bmatrix} 1/2 & 0 \\ 0 & 1/2 \end{bmatrix} \begin{pmatrix} x \\ y \end{pmatrix} + \begin{pmatrix} 0 \\ 1/2 \end{pmatrix} \quad \text{Add more as necessary....}$$

The first will be what the image starts as, and the second will be how the movie ends. Call the second set of transformations g .

Of course there are many ways to make movies, and you may use the method of your choice. The simplest way is to download Processing (open source), and make sure you have the extension for Python mode (unless you really like programming in Java...). The sample file I provided is written for Python mode.

The prompt is essentially like the prompt for the first project: be creative! You can add more transformations, change background colors, represent different transformations with different colors, etc. If all you do is change the numbers in my code, you will NOT earn a passing grade! I need to see that you've put some thought into the project! When in doubt, ask the internet...that's how I learned Processing. In fact, I just tried typing "change background color in processing" in Google, and there it was....

In addition to the two sets of transformations, your one- or two-page document should include one screenshot of your movie – pick the most interesting one!

Finally, you should include a few brief paragraphs about artistic considerations. That is, talk about your choice of colors, backgrounds, etc.

And in addition, send me your actual Processing code. Upload your file to Canvas, and make sure your filename INCLUDES YOUR LAST NAME AND FIRST INITIAL. So, my filename would include the string "vmatsko."

Due Monday, April 10 at the beginning of class. Hand in a *color* .pdf document done in L^AT_EX, and upload your Processing file to Canvas. NO EXTENSTIONS!