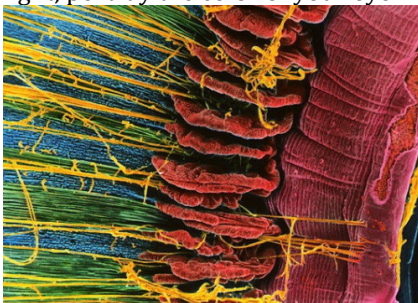


Annie Thompson
MAT115-LOGO

I am interested in a variety of ways of artistic expression, including photography. I decided to incorporate that aspect of myself into the logo that represents me. When taking this picture, I wanted to capture a close up image of the iris to show the magnificent patterns the iris's fibers create. The human eye in itself is a piece of art. What I found interesting about these patterns were how much they resembled fractals. I did some research on the human eye, and found compelling information regarding fractals. A fractal is defined as a structure in which similar patterns reoccur at progressively smaller scales and in a partly random phenomena. A world within a world. The image below shows a microscopic view of the human iris, where you can identify the specific fractal patterns created by the fibers. Two layers of fibers construct these patterns, and when exposed to light, portray the color of your eye.



I study communication, and psychology and recently found an article that discussed the use of fractals as a potential non-pharmaceutical approach to reducing our societies stress. Experiments indicated that fractals activate distinct regions of the human brain that are associated with the regulation of emotions. Perception experiments performed on hundreds of participants showed that certain fractals have the ability to reduce our physiological response to stress by as much as 60%. "This stress-reduction is triggered by a physiological resonance that occurs when the fractal structure of the eye matches that of the fractal image being viewed. Fractals are now being incorporated in different types of art therapy.

Another study I found discusses how retinal implants should be adapted to the human eye's unique structure. This research states that retinal neurons are fractals in structure, and creating tiny

clusters of material that self assemble into fractals could help with strengthening the connections between the implant and the patients healthy neurons in tact.

Lastly, I have always been fascinated with astronomy. When I see a photo of an iris I can't help but relate them to nebulas. A nebula is an interstellar cloud of dust, hydrogen, and helium and other ionized gases. The fiber structures in our eyes are uniquely our own, and resemble fractal nebula patterns in space. This verifies its fractal property of being a universe within another universe.